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Population Health for Nurses

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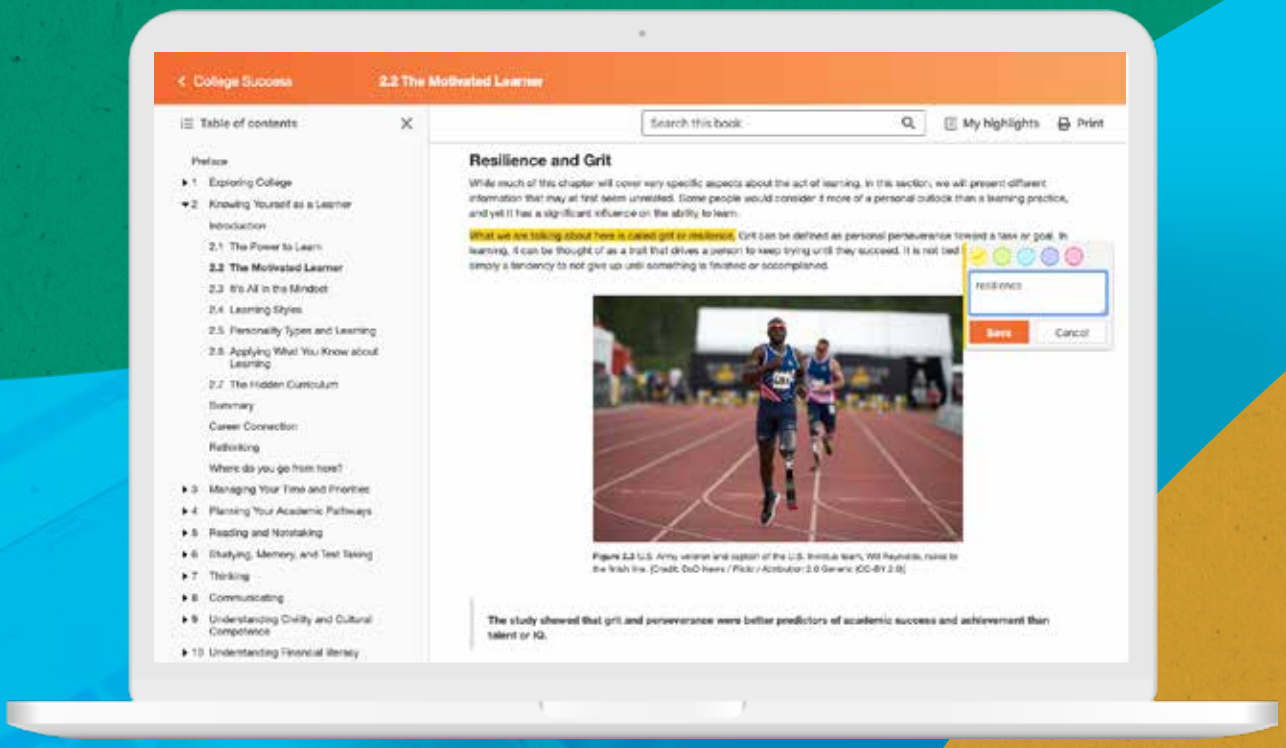
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PREFACE

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About *Population Health for Nurses*

Summary

OpenStax *Population Health for Nurses* frames foundational knowledge nurses need to practice in the traditional fields of community and public health nursing—defining the breadth of the discipline, its methods and theories, and the central concept of health equity as well as incorporating the nursing process—all within the context of population health. The text prepares nurses to develop interventions, policies, and practices in collaborative

partnerships that promote health equity and improved health outcomes across the health care delivery continuum, which includes public health, acute care, ambulatory care, transitional care, and long-term care.

Population Health for Nurses emphasizes the social determinants of health and health inequities and how nurses can plan and implement health promotion and disease prevention interventions to address them. It takes a holistic perspective, connecting human health behavior to the dynamic, ongoing interactions of the person, social factors, and the physical environment in which people are born, live, learn, play, work, and age. The text encourages the critical analysis of implicit biases and practices that contribute to health inequities and presents strategies for designing culturally and linguistically appropriate programs. It challenges students to reflect on and critique their own biases, stereotypes, prejudices, and assumptions and to prioritize client self-determination in order to work effectively within each client's cultural context.

Pedagogical Foundation

OpenStax *Population Health for Nurses* uses a logical, thematic organization that breaks down content into manageable chunks. The text defines and distinguishes among the interrelated nursing areas of population health, public health, and community health nursing, providing both historical context and up-to-date research to help students make connections across content that can inform practice. The text takes a holistic approach that applies theoretical concepts to the practical assessment, diagnosis, planning, implementation, and evaluation steps of client care and community-tailored interventions.

Organizational Framework

Population Health for Nurses presents content in 35 chapters, organized into seven thematic units.

- **Unit 1: Preserving the Health of Populations and Communities** lays the foundation for the text. The opening chapters introduce the concept of population health and the interrelated practice specialties of public health and community health nursing. A description of the current health status of the U.S. population follows, along with a discussion of the role nurses play in creating a culture of health by promoting actions to achieve good health and well-being across geographic, demographic, and social sectors.
- **Unit 2: Issues and Challenges of Population Health** focuses on factors affecting access, delivery, and quality of care. The unit begins by describing current demographic and societal trends affecting health care and how those trends are rooted in and affected by structural racism and systemic inequities. The unit then goes on to discuss the major impacts of policies, regulatory conditions, and social determinants on population health and examines how they produce health disparities.
- **Unit 3: Population-Based Practice and the Tenets of Public Health** describes the specializations and methods that form the foundation of community and public health nursing practice, including elements integral to assessment, diagnosis, intervention, planning, and evaluation. These elements are presented together so that students can formulate a holistic perspective of human health behavior and the dynamic, ongoing interactions of the person, social factors, and physical conditions of their environment.
- **Unit 4: Merging Public Health Principles with the Nursing Process** teaches students how to apply the nursing process in a community setting. While nursing programs typically introduce students to the nursing process relatively early in the curriculum sequence, the concept is usually taught in the context of caring for an individual. The transition from caring for an individual to caring for a community or population requires students to view health and health needs through a different lens. This text helps students make this transition so that they can develop a holistic perspective of the social factors and physical conditions of the environment that should be taken into consideration when planning care for communities and populations.
- **Unit 5: Culturally Congruent Care** begins with an exploration of the cultural factors that influence client health beliefs and behaviors. It then describes perspectives on and approaches to providing culturally and linguistically appropriate care that can lead to positive health outcomes. Strategies for designing culturally and linguistically appropriate programs are discussed, and the unit ends with a chapter that focuses on how individual nurses can manage the dynamics of difference to create an atmosphere of trust and mutual respect. The chapters in this unit emphasize the importance of self-awareness and of prioritizing client self-determination.
- **Unit 6: Caring for Populations and Communities** focuses on the nurse's many roles in caring for populations and communities across the lifespan. Chapters in this unit address specific populations and care settings and place special emphasis on caring for vulnerable populations, including members of the LGBTQIA+ community

and clients affected by mental illness, substance misuse, violence, and displacement. The final chapter in this unit addresses the public health nurse's role in disaster management.
- **Unit 7: The Nurse's Role as Advocate and Leader** challenges students to think critically about how they can use their position as nurses to promote social justice and health equity. Chapters in this unit highlight the importance of nurses' contributions as leaders in practice and policy issues aimed at achieving health for all.

***Population Health for Nurses* Features**

To further enhance learning, *Population Health for Nurses* includes the following features:

- **Case Reflections** present a hypothetical client scenario, including pertinent information about the client's current health status and the demographic, social, and environmental factors that affect it. The scenario is followed by two or more open-ended questions about appropriate health promotion and disease prevention interventions across the health care delivery continuum, including public health, acute care, ambulatory care, and long-term care.
- **Unfolding Case Studies** present a hypothetical client scenario that unfolds in two or more parts throughout the chapter, with each subsequent part presenting new information on the same client. In each part of an unfolding case feature, the scenario is followed by two multiple-choice questions that require students to apply their knowledge of evidence-based client care. The answers to these questions, with explanations, are included in the Answer Key for students at the end of the book.
- **Healthy People 2030** features highlight Healthy People 2030 priority areas and objectives related to chapter topics.
- **The Roots of Health Inequities** features alert students to the root causes of inequities in the distribution of disease, illness, and death experienced by the population and/or community of focus.
- **Theory in Action** features use video clips, web links, and other media to demonstrate the application of a theory to nursing practice. These features help students see the practical purposes theory serves in their work with clients and their collaborations with other professionals. They include open-ended follow-up questions that can be used for individual student reflection or in-class discussion.
- **Conversations about Culture** features focus on culturally responsive nursing practice and diverse populations within the community. They often make use of one or more video clips, and each includes critical thinking and reflection questions aimed at challenging students to analyze how they solve problems, consider alternative solutions, and critically appraise actions to promote self-understanding and to evaluate their perceptions, beliefs, values, and behavior.
- **Client Teaching Guidelines** list points nurses should emphasize when providing client education, such as how to recognize signs of food poisoning and steps to take in case of a suspected drug overdose.
- **Additional Video, Podcast, and Hyperlinked Interactive Features** provide students with real-world examples, applications, and opportunities for critical thinking, reflection, and self-assessment.

Pedagogical Features

To support student learning, *Population Health for Nurses* includes the following standard elements:

- **Learning Outcomes.** Every major chapter section begins with a set of clear and concise student learning outcomes. These outcomes are designed to help the instructor decide what content to include or assign and to inform students of what they can expect to learn and be assessed on.
- **Review Questions.** This end-of-chapter feature presents 10 multiple-choice questions that require students to apply what they have learned and integrate chapter concepts. Answers to each question, with explanations, are included in the Answer Key for students at the end of the book.
- **Chapter Summary.** Chapter summaries assist both students and instructors by recapping the primary subtopics addressed within the chapter.
- **Key Terms.** Key terms are bolded and explained the first time they appear within the chapter. Definitions of these terms are listed at the end of each chapter.
- **References.** Chapter references are listed at the end of the book.

About the Authors

Senior Contributing Authors



Senior Contributing Authors: Jessica Ochs (left), Sherry L. Roper (center), and Susan M. Schwartz (right)

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Dr. Ochs is a Professor of Nursing at Endicott College and is a certified family nurse practitioner devoted to improving client health through clinical practice, education, program development, and research. She earned her DNP from Northeastern University and holds an MS degree from the University of Massachusetts. In her role as an advanced practice registered nurse, Dr. Ochs works with a diverse client population in primary care, urgent care, and community health. She is a Distinguished Scholar Fellow in the National Academies of Practice, and her research interests include social determinants of health and social change, interprofessional collaborative practice and education, and creating inclusive and engaging learning environments. Dr. Ochs's recent publications include an interprofessional public policy call for action, decreasing health disparities by addressing structural racism, and an innovative incorporation of the social determinants of health. Dr. Ochs maintains an active role in the National League for Nursing, the National Academies of Practice, Sigma Theta Tau International, and the American Association of Colleges of Nursing. The National League for Nursing awarded Dr. Ochs Nurse Educator of the Year in 2022, and in 2023, Dr. Ochs was presented with the Faculty of the Year Award at Endicott College.

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Dr. Roper is Associate Professor at California State University, Stanislaus, where she serves as the Assistant Director of the School of Nursing and the RN to BSN Program Director. She earned her BSN and MSN degrees from Pennsylvania State University and a distinguished PhD from the University of Tennessee, Memphis. Dr. Roper is a certified Small Group Facilitator of Improving Cultural Competency for Behavioral Health Professionals. Her research focuses on client-centered care, exploring the impact of potential biases on client outcomes, and addressing health disparities within the LGBTQIA+ community. Dr. Roper's published research highlights deficiencies in nursing education regarding the care of members of the LGBTQIA+ community, and she advocates for cultural humility to bridge the gaps in LGBTQIA+ health care. Dr Roper's current research involves a comparative analysis of LGBTQIA+ health content in nursing education across the United States, the United Kingdom, and the Republic of Ireland. In addition, she leads a Collaborative Online International Learning (COIL) course that aims to enhance intercultural competence in addressing health disparities within the LGBTQIA+ community. Dr. Roper is an active member of the Transcultural Nursing Society, Sigma Theta Tau International Honor Society, and the American Association of Colleges of Nursing.

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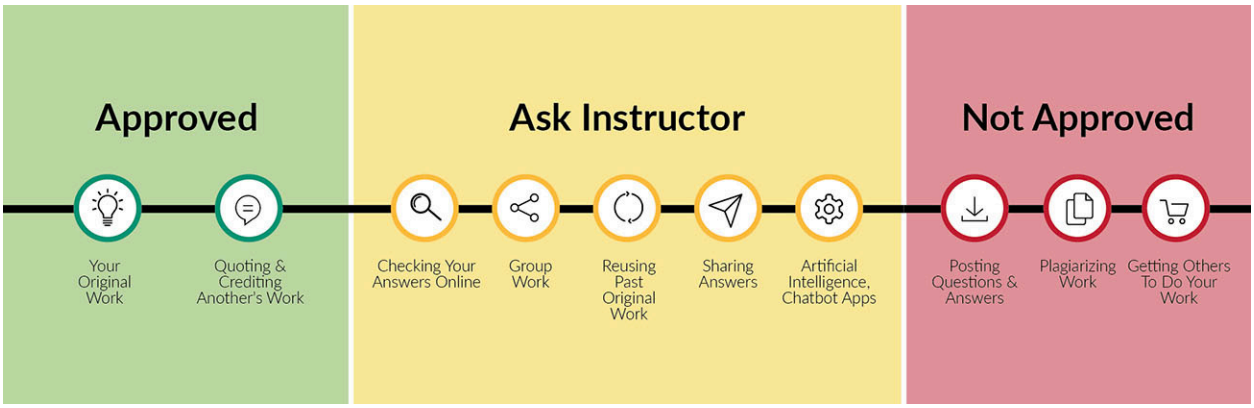
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CHAPTER 1

What Is Population Health?



FIGURE 1.1 The family pictured here is enjoying a fishing expedition. Clean, safe outdoor space where people can go to exercise, socialize, and relax is important to health promotion and risk reduction. (credit: modification of work "Family fishing Leesylvania State Park" by Virginia State Parks/Flickr, CC BY 2.0)

CHAPTER OUTLINE

1.1 Defining Population Health
1.2 Why Population Health Is Important
1.3 Population-Based Practice in Nursing

INTRODUCTION Alexandra Lee, a 37-year-old day care teacher, works from 8:00 a.m. to 4:30 p.m. five days a week. Alexandra wakes up early to prepare breakfast for her husband and two children, then commutes to work via public transportation. She is currently 30 weeks pregnant. Thus far, her blood pressure readings have been healthy throughout her pregnancy. Keeping her stress level low has been challenging, as her husband, Christopher, recently lost his job, and few employers are hiring. As a Black woman, Alexandra is at risk for experiencing adverse pregnancy outcomes resulting from systemic racism and bias in the health care system. For example, Black pregnant people are four to five times more likely to die of a pregnancy-related cause than White pregnant people (Petersen et al., 2019). One potential cause of death is preeclampsia, a condition involving dangerous elevations in blood pressure. Black pregnant people, like Alexandra, have a higher prevalence of preeclampsia and its devastating complications than White pregnant people, and anti-Black racism in the health care system is one contributing factor (Ukoha et al., 2022; Zhang et al., 2020). Chapters 1, 2, and 3 will follow Alexandra Lee and her family to explore how population, public, and community health impact their well-being.

Nurses play a central role in advancing population health; however, many nurses and the public may be unaware of the vital contributions of population health to client well-being. When considering where nurses work, many people think about hospitals and clinics. They might think about clients who need surgery, have broken a bone, are having a baby, or are not feeling well when they think of the people for whom nurses provide care. In addition to caring for

clients with acute illnesses and chronic conditions in care centers, however, nurses advance health, lead change, and impact society through contributions to population health, public health, and community health. These three areas may sound similar, as though they are interchangeable terms for the same work; however, population health is similar to but distinct from public health and community health nursing practice. In brief, population health nursing focuses on the health status and health outcomes of groups of people, while public/community health is a broad discipline that consists of organized efforts to develop, implement, evaluate, and revise policies and programs to support the well-being of all people. Public health extends beyond nursing; its principles provide the foundation for population health and for public health and community health nursing practice. Chapters 2 and 3 will discuss public health and community health theory and practice in more detail.

Chapters throughout this text will introduce Healthy People 2030 goals and initiatives in boxes like the one that appears below. Healthy People 2030 is an important U.S. government program that addresses health topics involving population, public, and community health. The U.S. Department of Health and Human Services (USDHHS) sets Healthy People objectives every 10 years. In 2020, the USDHHS introduced 358 measurable health objectives that it hopes to achieve by the year 2030. It also identified health areas needing further development or research. The broad health areas identified in Healthy People 2030 include goals related to chronic diseases, health behavior, the environment, maternal-child health, violence prevention, and mental health, among others. The Healthy People 2030 program regularly shares updates regarding the progress toward these goals, so some chapter notes about this program may differ from what is available online based on the current status of the goals at the time of this text's publication. Be on the lookout for boxes in each chapter labeled Healthy People 2030 to learn more about these national population health priority areas.

HEALTHY PEOPLE 2030

Increase Core Clinical Prevention and Population Health Education in Nursing Schools

Healthy People 2030 includes a developmental goal of increasing the inclusion of core clinical prevention (https://openstax.org/r/healthgovhe) and population health concepts in undergraduate and graduate nursing programs. This is a *developmental* goal because there were not enough baseline data before the Healthy People 2030 program regularly began to report how many nursing programs were already including such content. However, there are enough data to say that, for the nation's health, future health care professionals must be ready to address population health and prevention in their work. Similarly, the Healthy People 2030 program has developmental goals for increasing clinical prevention and population health content for medical, physician assistant, pharmacy, and dental programs, as well as interprofessional prevention education content for health profession programs in general.

1.1 Defining Population Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 1.1.1 Define population health.
- 1.1.2 Explain the origin of the population health approach.
- 1.1.3 Identify the components of population health.
- 1.1.4 Discuss the global application of population health.

Population health is a comprehensive approach that spans the entire health care continuum, from public health prevention to disease management. Population health aims to support the health of people through diverse activities, including care coordination, health care research, population-level data analysis, and health programming. Activities carried out to improve population health generally support the health status and health outcomes of groups of people rather than one client at a time. Population health interventions take a more holistic approach than those that are generally used in the care of individual clients. Population health considers the impact of public policy and law as well as environmental, social, behavioral, and other factors that might facilitate or hinder health for all people. The requisite knowledge of these disciplines and health areas comes together to address many factors that can influence health.

Consider tobacco use, which, as the leading cause of preventable death (https://openstax.org/r/cdcgovtobacco) in

the United States, kills an estimated 1,300 Americans each day. Individual counseling and interventions such as prescription medications and nicotine gum can help individuals quit smoking. While a population health approach to addressing tobacco smoking cessation would support the availability of individual tools, it would also consider the broader factors contributing to smoking rates and smoking uptake across the population. A population health approach to smoking cessation might include the following:

- Developing community-wide antismoking campaigns
- Advocating for schools, businesses, restaurants, and other public places to develop smoke-free policies
- Researching the reasons that community members start or do not quit smoking
- Analyzing population-level data to identify trends in smoking
- Passing legislation to increase taxes on tobacco products to discourage their purchase and fund population health programs focused on cessation

Overall, a population health approach that considers the multifaceted facilitators and deterrents of smoking can help reduce smoking rates, thereby improving the health of smokers and the population at large.

Drunk driving is another example of a serious public health problem. The National Highway Traffic Safety Administration (https://openstax.org/r/nhtsagovri) estimates that in the United States, one person is killed due to drunk driving every 39 minutes. Drunk driving impacts not only the life of the victim but also the lives of their friends, family, and community, and those of the driver as well. Individual-level interventions that work to improve the health of drivers and of community members to whom a driver may pose a risk include individual counseling, installing breathalyzer car ignition devices, and levying fines or revoking driver's licenses to hold drivers accountable and prevent future drunk driving occurrences. Population health interventions go beyond those aimed at specific drunk drivers. A population health approach to drunk driving reduction could include the following:

- Developing and implementing stricter laws and regulations regarding alcohol use and driving
- Leading campaigns to raise awareness about the dangers and penalties of drunk driving
- Collaborating with taxi companies and ride-share programs on weekends and holidays to offer free or reduced rides
- Training servers, bartenders, and liquor store employees on the responsible service and sale of alcohol
- Identifying high-risk areas for drunk driving accidents to increase signage and safety checks in these areas

In nursing, a **population** is a group of people that may receive care in various settings at the local, regional, national, and global levels (American Association of Colleges of Nursing [AACN], 2021). Examples of populations include all students at a specific college campus (local), all people who live or work in Northern California (regional), all residents of the United States (national), or all children with asthma across nations (global). The **health care continuum** encompasses public health, acute care, ambulatory care, and long-term care to collectively address a population's diverse health needs. The health care continuum and the role of nurses will be discussed further later in the chapter.

Population health involves collaborative efforts among health care professionals, communities, industries, academia, and governmental organizations to improve health outcomes among a population (AACN, 2021). A myriad of efforts in population health can explain or address why some populations are healthier than others and help determine how resources might be allocated to have the greatest impact on improving health across the population. As the smoking cessation and drunk driving examples illustrate, population health approaches focus on implementing education, policy, and programming that provide optimal outcomes for the money, time, and other resources invested. Nurses working in many settings—such as hospitals, schools, homes, communities, industries, and businesses—not only support but also shape population health across the United States (Ariosto et al., 2018). Nurses are critical in advocating for policies, implementing interventions, and ensuring that diversity, equity, inclusion, justice, and ethics are prioritized to achieve population health goals focused on health promotion, disease prevention, risk reduction, and emergency preparedness (AACN, 2021).

There is no definitive history of exactly when population health emerged and evolved into what health care providers, teams, and organizations know it as today (Szreter, 2003). Scholars note several defining moments from the 18th century through the modern day, such as observations of differences in health conditions between the wealthy and the impoverished, among people employed in various industries, and between those with and without access to clean water (Bynum, 1983; LaBerge, 1993; Porter, 1991). These historical moments allowed for

recognition of the relationship between a healthy human population and a healthy, functioning society. Although population health concepts and principles have been relevant to professional nursing practice for centuries, in the United States the passage of the Patient Protection and Affordable Care Act (ACA) in 2010 is credited with beginning to shift the focus of health care services from treating diseases in individual people to promoting health among populations (Ariosto et al., 2018). Emphasizing preventive efforts and proactively facilitating health instead of reactively treating diseases as they occur is a central tenet of population health. The shift is essential, as many recognize that a U.S. health care system that spends an estimated 75 to 90 percent of its resources addressing diseases and hospitalizations and invests very little in preventive efforts is a system that is failing (Raghupathi & Raghupathi, 2018; Shrank et al., 2019; Centers for Disease Control and Prevention [CDC], 2023). By shifting the focus from reactive disease treatment to proactive health promotion, population health offers a more positive path forward. Under a population health–focused system, health care professionals are encouraged to work collaboratively to promote early intervention, provide health education, empower clients, and effect social change to reduce the burden of disease for individuals and the health care system at large.

The Quintuple Aim

Population health can impact numerous specific conditions, diseases, and health risks through interventions that cross disciplines and support a great breadth and depth of positive health change. As a field of study and practice, population health works toward specific aims developed by the Institute for Healthcare Improvement (IHI). In 2007, the IHI developed a framework called the Triple Aim (https://openstax.org/r/ihiorgE) to support optimal performance of the health care system (Berwick et al., 2008). In 2014, the IHI updated the framework to the Quadruple Aim to acknowledge that the health of providers and other health care professionals must be supported to achieve population health goals (Bodenheimer & Sinsky, 2014). Today, the four aims consist of:

1. improving the client experience of care (including quality and satisfaction),
2. improving the health of populations,
3. reducing the per capita cost of health care, and
4. improving the well-being of health care professionals.

Recently, experts have suggested a revision to create the Quintuple Aim (https://openstax.org/r/ihiorgcom), which would include a fifth aim of advancing health equity. In both the fourth and suggested fifth aim expansions, experts have posited that improving population health, client experience, and health cost would be impossible without addressing provider health and burnout or health equity (Bodenheimer & Sinsky, 2014; Nundy et al., 2022). Concepts of the Quintuple Aim can guide evaluations of population health programs and initiatives. For example, telemedicine connects to the goals of improving the health of populations, improving the well-being of health care professionals, and advancing health equity. Its services offer several conveniences to clients and clinicians, such as the flexibility to dial in from home and save on commuting fees. These services also remove barriers to receiving care and increase equity in opportunity for clients to see primary care providers and specialists. This can help reduce inequities and disparities with regard to receiving screenings, diagnoses, and treatments for health conditions, which in turn can help improve population health. Telehealth is a growing initiative across health care globally; please see Care Transition and Coordination Across the Community for more information on telehealth. Recently, one research team determined that pediatric telehealth has advanced pediatric care in general so that it has become a better-performing, more equitable system (Cahan et al., 2020). Whether a population, community, or health system elects to use the version with three, four, or five aims, this framework encourages consideration of the interplay among the different aims and innovative approaches to improving health and health outcomes for the population.

Components of Population Health

Population health takes a comprehensive approach that accounts for the complex dynamics among differences in health status, community resources, personal characteristics, familial circumstances, and other factors that can trigger or aggravate health conditions. By recognizing the complex interplay of these numerous and wide-ranging factors, population health takes a holistic view to promote the well-being of all.

Regardless of the situation or specific factors, a guiding theme of population health is the importance and value of taking proactive rather than reactive approaches to improving health. An analogy to summarize population health involves an overflowing sink. Imagine a kitchen faucet is left running unattended, creating a giant puddle on the

floor. Better get a mop! Without population health, much of health care focuses on "mopping the floor" instead of "turning off the faucet" (Kaminski, 2021). In other words, health care as a system largely deals with floods—that is, helping clients who are already sick—instead of turning off the water, or addressing the situations and circumstances that make clients sick in the first place. Health care providers, nurses, policymakers, and the health care system at large should focus on the *causes* of health problems to prevent them before they occur, instead of focusing primarily on treating diseases as they happen. Of course, clients, families, and communities need access to treatment for their health conditions—but what if there was a way to prevent the conditions from happening in the first place?

Four key health concepts have been essential in advancing population health: outcomes, disparities, determinants, and risk factors.

Outcomes are all possible results. Health outcomes are indicators or data points that reflect the degree to which health interventions, care, policies, and behaviors are effective in supporting the health status of populations. Examples of health outcomes include mortality rates, life expectancy, disability rates, birth rates, health care costs, and health-related quality of life measures. Outcomes may come from exposure to interventions that aim to prevent or treat a condition, or they may result from exposure to health risks or situations detrimental to health. For example, creating a policy that allows people under a certain income level to have free health insurance may produce a range of outcomes, including insuring a greater percentage of the population and increasing the number of people who attend wellness exams—and, consequently, increasing the number of people who smoke who may be offered smoking cessation resources. On the other hand, removing or relaxing policies that prohibit smoking in public places may produce quite a different range of outcomes, including making it more difficult for people to quit smoking, exposing more people to secondhand smoke, and increasing rates of children who start smoking.

Disparities are inequalities or differences. A related concept is **health inequities**, which are avoidable inequalities related to health that stem from a form of injustice (Kawachi et al., 2002; McCartney et al., 2019). For example, children attending the Lincoln School may have higher rates of asthma than children attending the Washington School. The children are all the same age and have the same racial and ethnic distribution, but the parents of children at the Washington School have a higher average income and donated money so that each classroom could have an air conditioner. There is a disparity in access to clean air, as well as in rates of asthma, between children at these two schools. Health Disparities covers this topic in greater detail.

Determinants are the innumerable factors that influence health and generally include nonmedical events, characteristics, or other entities that change a health condition or the level of a health problem (Kindig, 2007; Office of Disease Prevention and Health Promotion, 2022). Within population health, determinants of interest include medical care, public health interventions, income, education, employment, social support, culture, clean air and water, outdoor space, genetics, and behavior (Kindig, 2007). Determinants can interact with each other to bolster health or worsen a problem (Figure 1.2). For example, when a client is unable to finish high school, they may not qualify for a full-time job that pays a living wage and offers access to a health insurance plan. Such a situation would undoubtedly impact the client's ability to seek care when needed and to engage in health promotion efforts.

Social determinants of health are additional factors that influence the health of populations, families, and individuals. **Social determinants of health** are conditions and social factors that affect outcomes and risk related to health, functioning, and quality of life. Conditions or factors in hospitals, clinics, workplaces, homes, towns and cities, schools, and beyond influence health outcomes for the population. Economic stability, education access and quality, health care access and quality, neighborhood and built environment, and social and community context are five domains that shape the social determinants of health (Office of Disease Prevention and Health Promotion, 2022). Please see Social Determinants Affecting Health Outcomes for a comprehensive discussion of social determinants of health.

Risk factors are aspects of personal behaviors, lifestyle choices, exposures, or attributes that generally increase the likelihood of acquiring or the severity of a health condition. Risk factors are similar to determinants but tend to be more specific. Consider respiratory disease determinants and risk factors. Air quality and environmental pollution are determinants of respiratory disease, while smoking is a risk factor for respiratory disease. Some determinants may be risk factors; however, other determinants may reduce health risk.



FIGURE 1.2 This photo was taken during the 2018 Klondike Fire in Oregon. In addition to threatening human lives and homes, wildfires severely impact air quality, release harmful pollutants, and devastate wildlife and ecosystems. (credit: "Forest road 2512 and smoke-filled air, Klondike Fire" by U.S. Forest Service-Pacific Northwest Region/Flickr, Public Domain)

HEALTHY PEOPLE 2030

Tobacco Use

Healthy People 2030 developed 25 measurable objectives, one developmental objective, and one research objective to address tobacco use. Since creating these objectives (https://openstax.org/r/healthgovhealth), three targets have been met or exceeded: reducing cigarette smoking in adolescents, reducing the use of smokeless tobacco products among adolescents, and reducing the lung cancer death rate.

SOCIAL DETERMINANTS OF HEALTH

Access multimedia content (http://openstax.org/books/population-health/pages/1-1-defining-population-health)

Social determinants affect how environments where people live, work, and play impact health and well-being for all. This video explains different social determinants of health in depth.

Watch the video, and then respond to the following questions.

1. What is the greatest risk to economic stability in the community around your nursing school?
2. How does your nursing school support educational access and quality?
3. Do clients in the community by your nursing school have adequate access to health care?
4. Can you identify three risks and three supports in the neighborhood and built environment around your nursing school?
5. In your nursing school, what experiences do you participate in that contribute to the growth of the social community and context?

Additionally, population health focuses on upstream, midstream, and downstream approaches to improve health outcomes (Figure 1.3) (Salmond & Allread, 2019).

- **Upstream** interventions involve enacting policies that change regulations, increase access, or provide economic incentives to impact health across a population. Examples include policy changes regarding the fast

food or tobacco industry, provision of universal health care, and compensation for hospitals with lower inpatient admission rates (Porter et al., 2022).

- **Midstream** approaches are those that happen within specific organizations. For example, a workplace may provide healthy lunches to employees each day (Porter et al., 2022).
- **Downstream** interventions focus on the behavior of individual people to modify the risk of disease, prevent illness, or manage chronic conditions (Brownson et al., 2010; Fornili, 2022). For example, a nurse might counsel a client with hypertension about consuming a low-salt diet.

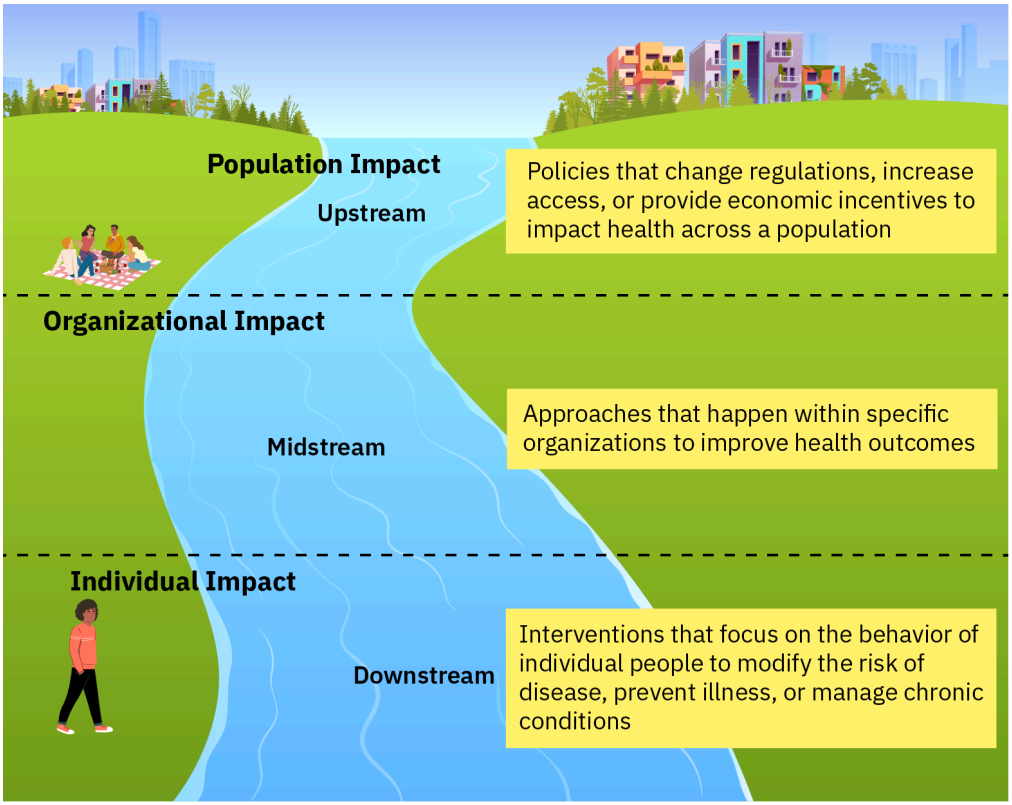


FIGURE 1.3 Population health involves the complex interactions of upstream, midstream, and downstream interventions. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

These key components interact in complex and evolving ways as population health and the health status of the population change over time. By employing upstream interventions, such as policy changes and universal health care, population health addresses the societal factors that impact the health of the population on a broad scale and ultimately the health of individual clients. Midstream approaches can contribute to fostering healthier environments in diverse settings. Downstream interventions, such as those that focus on individual behavior to support health, are also important in a population health model, as members of the population will never be fully free of health conditions requiring treatment. Together, upstream, midstream, and downstream approaches offer a framework for population health programming and interventions that can create positive health outcomes.

CASE REFLECTION

Components of Population Health

Read the scenario, and then respond to the questions that follow.

Forty-year-old Christopher Lee has hypertension. Although he has not attended a health checkup in a few years, he feels that his blood pressure might be lower since he lost his job. Being unemployed has been stressful, but as a Korean American, he experienced anti-Asian sentiment and discrimination from his coworkers during the COVID-19 pandemic. The Lees' 5-year-old daughter, Sunshine, just started kindergarten and has an EpiPen for a life-threatening nut allergy. She attended an after-school arts and crafts program twice a week but stopped going when

Christopher lost his job. The Lees' 2-year-old son, Woody, is generally healthy and attends the day care where Alexandra works. Christopher's parents live in South Korea and will visit the United States in a few months to help when the Lees' new baby is born.

1. Based on what you now know about the Lee family, what are some possible health challenges they may face?
2. What are some possible upstream factors influencing their actual or potential health challenges? Are there any midstream and downstream factors that might support or harm their health?

Global Population Health

The need to address the factors and components of population health is a global one, and given the interconnected nature of the health status of people around the world, nurses should prioritize and actively contribute to enhancing global population health in addition to advancing local and national population health programs, goals, and outcomes. Many people around the world face significant challenges to promoting their health, receiving treatments, and reducing health risks. Health outcomes, disparities, determinants, risk factors, and upstream, midstream, and downstream influences are all relevant and crucial to improving global population health. The health status of people as far away as a different continent on other side of the equator can impact the health of clients locally, and nurses have a responsibility to support efforts that advance population health worldwide (Hong & Lee, 2021; Wilson et al., 2016). Nurses have a duty to extend their care, genuine concern, empathy, and compassion to those in need beyond their immediate surroundings. To that end, a global advisory panel on the future of nursing proposed a definition of global nursing:

> **Global nursing** is the use of evidence-based nursing processes to promote sustainable planetary health and equity for all people. Global nursing considers social determinants of health, [and] includes individual and population-level care, research, education, leadership, advocacy, and policy initiatives. Global nurses engage in ethical practice and demonstrate respect for human dignity, human rights, and cultural diversity. Global nurses engage in a spirit of deliberation and reflection in interdependent partnership with communities and other health care providers. (Wilson et al., 2016, p. 1537)

When nurses engage in global nursing, they can proactively contribute to bettering population health and reducing the global burden of disease, health conditions, disability, and disparities. By embodying a commitment to global nursing, nurses can positively impact and improve the lives of others and uphold the principles of the discipline. Almost any health issue, concern, condition, or topic can be a global population health problem needing solutions.

Climate Health

People living in the western United States may recall having "smoke days" off from school due to poor air quality from wildfire smoke, while those from the East Coast and Midwest may recall a few days in June 2023 when the skies were tinted orange and air quality was exceptionally poor due to wildfire smoke movement from Canada. That same summer, wildfires burning out of control across Greece caused the evacuation of 19,000 people (Smith & Chrisafis, 2023). Exposure to wildfire smoke and poor air quality impacts the health of humans and animals alike. It exacerbates respiratory conditions, may cause congenital anomalies, and can even contribute to lower academic performance for students (Amjad et al., 2021; Gan et al., 2020; Wen & Burke, 2022). Wildfires are one example of an extreme weather or climate event that causes significant harm to mental health and well-being and contributes to morbidity and mortality around the globe (Ebi et al., 2021).

In addition to causing wildfires, extreme weather—in the form of high temperatures, torrential rains, and prolonged drought—puts the health of the population at risk around the world. The levels of extreme heat that were experienced across Asia, Europe, and the United States during the summer of 2023 are enough to worsen existing respiratory conditions and cause heat stroke, a life-threatening emergency (CDC, n.d.). Heavy rains and flooding can contribute to the development of climate-sensitive infections like malaria, dengue, diarrheal diseases, and emerging infections, as disease-causing pathogens are able to thrive in the unusually wet conditions (Choisy et al., 2022). Global climate scientists are particularly concerned about the effects of climate change in Asia, where temperatures have been rising two times faster than in other parts of the world (Dabla-Norris et al., 2021). Climate health is truly a global health concern.

Supporting climate health is a key priority area in population health nursing; see Environmental Health. Participating

in global nursing allows nurses to address the impact of extreme weather events on the health of the global population. Nurses can provide care that mitigates the health effects of climate events, promote policies that support global climate health, and collaborate to ensure equitable access to a healthy local and global climate.

Vaccines

In the United States, COVID-19 vaccines were available to health care workers and older adults living in long-term care facilities in late 2020 and to the general public in spring 2021. The global population of health care workers, clients, and families did not have the same timely access to vaccines. High-income countries had purchased 54 percent of the world's available vaccine doses by March 2021, but 81 percent of the global adult population lives in low- and middle-income countries (Stephenson, 2021). Disparities in vaccine access were detrimental to immediate and long-term global population health outcomes and contributed to avoidable deaths. Nurses addressing global population health can advocate for equitable worldwide vaccine distribution, provide education on the importance of vaccination to those who require vaccines and those who determine where vaccine clinics may be located, and provide timely access to vaccine administration (Figure 1.4).



FIGURE 1.4 A health care worker vaccinates a client in a vaccine clinic in Colombia. The sign in the background reads *Vacuna es segura*, which means "The vaccine is safe." Beyond the challenges of quickly developing a vaccine, making enough for the global population, and handling logistics such as transportation and storage, a major barrier to global health in 2021—and to ending the COVID-19 pandemic—was informing the public that the vaccine was safe and effective. (credit: "Colombia COVID-19 Vaccine at Mobile Site" by USAID/Colombia/ Flickr, Public Domain)

Transportation

Access to health care can mean many things. Is there a provider or specialist in the client's area who can adequately address the client's health needs, and is that provider or specialist accepting new clients? Is a health care professional available who speaks the client's native language to facilitate clarity during a health visit? Can the client physically get to a location providing health care services? Researchers recently determined that 8.9 percent of the global population is not able to access a health care provider within one hour by vehicle (Weiss et al., 2020). The time it takes a client or family to reach a health care facility can impact whether the client receives preventive health care, emergency services, and management of chronic conditions. For example, accessibility to emergency care services has a great impact on the health of people who are having a stroke, as certain medical interventions must be implemented during specific time frames from the onset of stroke symptoms (Lee et al., 2021). To support population health outcomes related to care access, nurses should contribute to developing innovative solutions for improving transportation options to ensure that people can reach facilities for care needs across the continuum. Global population health is also supported when nurses bring health care to homes and communities with low access.

WHY SHOULD YOU CARE ABOUT GLOBAL HEALTH?

Access multimedia content (http://openstax.org/books/population-health/pages/1-1-defining-population-health)

In this video, Dr. Deboki Chakravarti, a science educator with the American Public Health Association, discusses global health. She addresses the major challenge in global health—helping people live the healthiest possible lives, regardless of where they live—and shares how some examples of global health problems, such as global disease eradication, food distribution, health access, and COVID-19 vaccine refrigeration, were solved via collaborative solutions.

Watch the video, and then respond to the questions that follow.

1. Can you name one way in which global nursing approaches may have supported the global health topics Dr. Chakravarti shares in the video?
2. What other global population health challenges are you aware of? What can nurses near to and far from the immediate health challenges do to address these problems?

1.2 Why Population Health Is Important

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 1.2.1 Discuss the importance of promoting the health of populations.
- 1.2.2 Examine the benefits of a healthy population.

Promoting the health of populations is essential to providing health care, not just illness care. Think back to the analogy about turning off the faucet or mopping the floor. Will clients and communities be best served when health care providers prevent illness and promote health (turn off the faucet) or when they treat conditions as they arise (mop the floor)? When population health is promoted, all can benefit from improved health outcomes, cost savings, social benefits, equity, and justice.

Health Promotion Outcomes

Health promotion activities and initiatives aim to improve health and well-being. These activities can be delivered to individuals (e.g., helping a client plot a safe walking route between home and work) or populations (examples are discussed later in this section). Health promotion involves a broad range of strategies, educational initiatives, interventions, and even health policies that empower populations to reduce health risks and engage in healthy behaviors, making it possible for them to achieve health. Health promotion outcomes involve changes in knowledge, skills, attitudes, and various health indicators. Outcomes are used to evaluate the efficacy, feasibility, cost-effectiveness, or success of health promotion interventions across the population. Identifying outcomes and collecting data related to those outcomes allow for measurement of progress and any needed program redesign and can support decisions to continue, broaden, or perhaps retire certain programs.

Health promotion and disease prevention efforts at the population level can raise national health indicators. National health indicators provide an overview or snapshot of the population's health status, enabling assessment of national trends. These indicators include general mortality, infant mortality, and life expectancy (U.S. Environmental Protection Agency, 2022).

- **General mortality** refers to the number of deaths across an entire large population, such as those living in a geographic region or a country. Reports of general mortality include information about leading causes of death across the population and estimates of years of potential life lost when people die prematurely. For example, firearm injuries are the leading cause of death of children and adolescents aged 1 to 19 years in the United States and contribute to a collective 1.26 million years of potential life lost per year (Goldstick et al., 2022; Klein et al., 2022).
- **Infant mortality** rates measure the number of infants who die before their first birthday. In 2020, the U.S. infant mortality rate was 5.42 infant deaths per 1,000 live births (Ely & Driscoll, 2022).
- **Life expectancy** is the average number of years that a newborn is expected to live if current death rates remain constant. U.S. babies born in 2022 have an estimated life expectancy of 76.33 years (Figure 1.5)

(Noguchi, 2022).

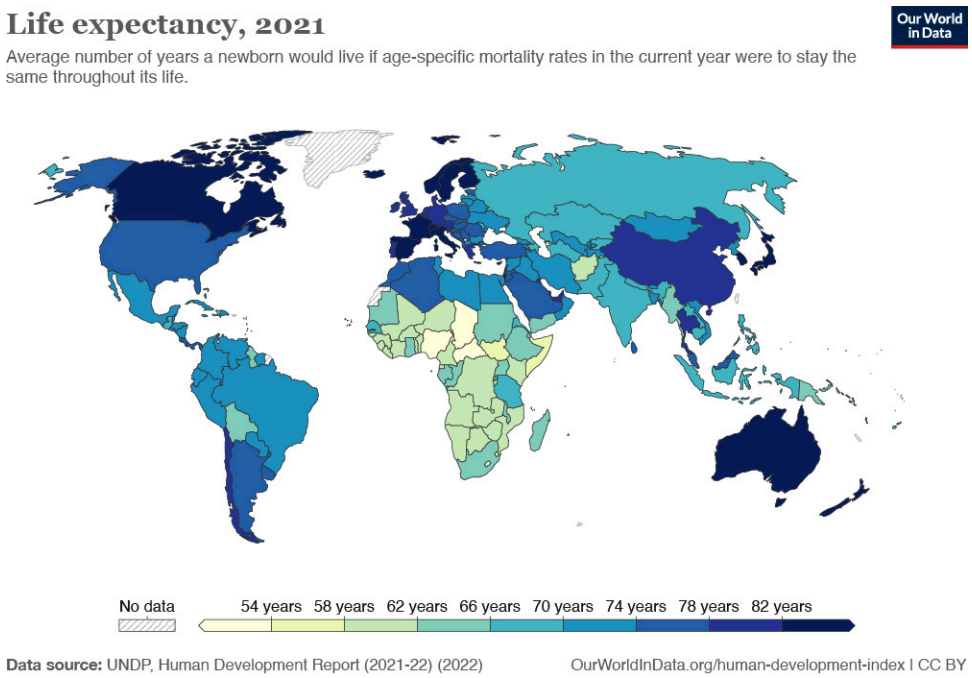


FIGURE 1.5 This map shows average life expectancy rates around the world for 2021. (credit: "Life expectancy, 2021" by Our World in Data, CC BY 4.0 International)

These national health indicators provide information at the macro level, offering a larger-scale perspective of the health system. National health indicators do not focus on individual behaviors or data relevant to one location or community. For example, knowing that firearm injuries are the leading cause of death in children and adolescents *alone* will not direct nursing practice on exactly how to prevent firearm injuries. However, knowing this fact can direct nurses of any specialty or practice area to recognize the critical importance of addressing firearm use and availability as part of a comprehensive approach to preventing tragic and avoidable deaths in the population of American children. Although these national health indicators are broad, analyzing them can allow for informed decisions on prioritization of public health interventions and resource allocation to support population health. There are many benefits of having a healthy population and improving the national health indicators of general mortality, infant mortality, and life expectancy. Beyond these three key outcomes, population health often focuses on the following outcomes:

- **Morbidity rate** reflects the prevalence or incidence of a specific health condition, disease, or diagnosis within the population. For example, approximately 1 in every 13 people in the United States has asthma (National Center for Health Statistics, 2021a, 2021b).
- **Health care utilization** helps report the extent to which a population accesses and uses different health care services. Data may include measurements of hospital admissions, lengths of stay, hospital readmissions, emergency room visits, acceptance of immunizations, completion of annual physicals, engagement with preventive screenings, and many other points of contact between the health system and members of the population. For example, one study found that 98.8 percent of adults seeking care for back pain in the United States do not have surgery. Though they avoid costly surgery, the total collective cost of their care per year is estimated at $1.8 billion (Kim et al., 2019).
- **Quality of life** measurements allow for a comprehensive, multidimensional evaluation of the physical, mental, and social well-being of the population. Combining measurements and perspectives from many different areas of life allows population health professionals to describe the enjoyment that individuals or populations experience and assess how satisfied people are with their health, relationships, activities, and life circumstances (Teoli & Bhardwaj, 2023).
- **Disability-adjusted life years** (DALYs) help describe the burden of diseases and conditions. This is an important measure, as mortality (death) is not the only negative outcome of ill health. Estimating the number of healthy years lost following premature death and disability associated with a condition provides a

comprehensive understanding of the impact that condition has on the population's health. Over a 16-year period in the United States, adults collectively lost 1.5 million years of healthy life from cancer, chronic obstructive pulmonary disease, congestive heart failure, diabetes, back pain, hypertension, hip fracture, myocardial infarction, arthritis, and stroke (McGrath et al., 2019).

Critical data points or measurements of interest that serve as outcomes for population health depend on the intervention, condition, disease, or health risk that is under study or being addressed. Population health approaches consider the health of a whole population and account for the broad social, environmental, economic, and systems-wide determinants of health. Addressing these broad areas can change the root causes of health problems for a nation or community instead of merely managing the consequences of ill health. Just as risks and negative outcomes can affect individual clients, families, communities, populations, and health systems, the benefits of positive population health outcomes can range from personal to far-reaching. A healthy population may enjoy benefits such as reduced morbidity and mortality, improved quality of life, economic stability, health care cost savings, improved health equity, and resilience to pandemics and other disasters. The Health of the Population provides more details on methods used to measure population health status.

Focusing on the health of the population and population-level interventions can help improve outcomes across many areas. For example, when diseases are prevented or managed adequately without numerous clinic visits or hospital admissions, both clients and the greater society can save money. In fact, some programs demonstrate cost earnings for every dollar invested in population health initiatives. Beyond preventing overdose deaths, one research team determined that safe injection sites could generate more than four dollars in societal earnings for every dollar invested (Hood et al., 2019). Population health activities can also reduce poverty, increase educational attainment, and improve the economic and social stability of populations. A population-level approach to health presents opportunities to address health inequities and promote social justice. Addressing factors of population health, such as determinants and disparities related to health, promotes health equity across the population.

Population health outcomes can be achieved through both medically focused and social approaches. Medically focused interventions aim to prevent and manage conditions through clinical initiatives and programs in the health care setting. Social interventions address social determinants of health through programming that ameliorates health inequities and creates healthier environments for the population. These two approaches are essential to supporting population health. Several recent examples demonstrate what population health initiatives are and the many ways in which they can benefit society.

Population Health Interventions: Medically Focused

One team of researchers studied population health approaches to improving colorectal cancer screening (Issaka et al., 2019). In 2016, the Community Preventive Services Task Force (CPTSF), part of the U.S. Department of Health and Human Services, recommended increasing the community demand for colorectal screening tests via education and client reminders, increasing community access by offering low-cost and home-based colorectal screening tests, and increasing providers' delivery of such screenings through incentives and reminders (Guide to Community Preventive Services, 2016). Researchers reviewed interventions that aimed to increase colorectal screenings and, following the CPSTF guidance, did not depend on one-on-one client and provider interactions to ensure that interventions could be applied at the population level. The most studied method of increasing screenings among the population, mailing home-based colorectal cancer screening kits to clients, proved most effective. Other interventions that effectively engaged the population in this testing included pre- and post-testing reminders, offering testing during encounters for immunizations, and reminding providers to offer the testing. Population health programs like this one can rapidly improve participation in cancer screenings, reducing rates of advanced or missed cancers across the population as well as inequities in care outcomes that result when cancer is undiagnosed or diagnosed at a late stage. When cancer is identified and addressed early, clients may require fewer medications and surgeries, avoid long hospital stays, and maintain their health, general abilities, and quality of life. Prioritizing population health approaches to promoting cancer screenings is crucial for improving overall health outcomes.

Individuals who experience migraine are another population that has benefited from population health interventions. Migraine is a painful neurological disorder that affects about 15 percent of the global population (Steiner & Stovner, 2023). In addition to pain, migraine leads to missing work and recreational opportunities. A research group developed an occupational health initiative that involved webinars, educational videos, and sharing of web-based migraine resources for employees of a public school district (Burton et al., 2022). Through educating

employees about migraine physiology, triggers, and treatment and ways to self-manage, the initiative enabled the employees to recognize migraine and address their pain more readily. Participating employees talked to their physicians about migraine and took steps to reduce migraine triggers and employ new stress management techniques. This initiative helped empower employees to take proactive steps in managing their health and well-being in the workplace, which can help create a healthier work environment. That the researchers offered the migraine educational program to all of the employees instead of only those who may have self-identified as having migraine reflects the population health goals of ensuring that health resources are broadly available to all members of a population. Finally, by preventing and managing migraine more effectively, employees could miss fewer workdays in the long run. This benefits each employee and their direct work department while reducing the economic burden on the greater population.

THEORY IN ACTION

Total Worker Health®

Access multimedia content (http://openstax.org/books/population-health/pages/1-2-why-population-health-is-important)

The National Institute for Occupational Safety and Health (NIOSH), a part of the Centers for Disease Control and Prevention (CDC), developed the concept of Total Worker Health®. Total Worker Health® is an approach to promoting the safety, health, and well-being of the working population across all industries by improving factors in and out of the workplace that impact health and population health outcomes.

Watch the video, and then respond to the following questions.

1. How do the principles of Total Worker Health® and population health align?
2. Which determinants of health can affect the health of employees while at work, in the community, and at home?

Population Health Interventions: Social

Population health approaches can address health problems and determinants that extend beyond medical diagnoses. Social interventions encompass a range of approaches aimed at addressing the social determinants of health that have a significant influence on the development or worsening of health conditions. Social interventions can aim to foster inclusive environments, support individuals' financial security, and promote well-being in communities to improve the overall health outcomes of populations.

Some cities in the United States and abroad have trialed universal basic income (UBI) or guaranteed income (GI) programs aimed at one of the key social determinants of health, economic stability. These programs are similar in that they both provide financial support to a population. UBI programs provide all members of a population with the same monthly stipend, regardless of their income, while GI programs provide population members with stipends based on their income and need level. Financial support is provided in the form of immediately accessible cash that recipients may use for any expense as they see fit. The idea behind UBI and GI programs is to help alleviate the consequences of poverty without some of the exclusive features of other public and social assistance programs. For example, in the United States, older adults and individuals with disabilities might receive Social Security payments, but they must qualify based on their age, level of disability, current income, and working status, among other characteristics (Ghuman, 2022). In 2019, the mayor of Stockton, California, implemented a GI pilot program in which 125 city residents with an annual income of $46,033 or less received $500 per month. Researchers studied the impact of the GI payments on the residents' health in comparison with residents at the same income level not receiving the payments (Ghuman, 2022). Food was the item recipients used GI funds to purchase most often, followed by merchandise such as clothes and shoes, and then utility bills. Researchers also found that GI fund recipients used the funds to help alleviate financial strain among friends and family in need. Addressing poverty is a complex population health issue, and UBI or GI programs may not ameliorate all the immediate and lasting effects of poverty. However, such programs contribute to broader population health goals and can help people address health needs that would otherwise go unmet due to financial constraints.

Many school-based population health initiatives aim to address the social determinants of health and promote greater health equity. The term *school-to-prison pipeline* refers to disciplinary policies in schools that

disproportionately harm BIPOC (Black, Indigenous, people of color) students by facilitating their entry into the criminal justice system (Aronowitz et al., 2021). Such policies negatively affect population health by impeding school safety, academic success, and school connectedness (Todić et al., 2020). School-based restorative justice programs are one example of how population health can be leveraged to disrupt the school-to-prison pipeline. Restorative justice programs involve "a whole school relational approach to building school climate and addressing student behavior through fostering belonging over exclusion, social engagement over control, and meaningful accountability over punishment" (Armour, 2014). One example of a restorative justice component is offering students peer mediation instead of suspension following a violation of a school rule or the student code of conduct. A 2020 study found that schools that used restorative justice supported the student population in missing fewer school days and achieving higher grades (Todić et al., 2020). Restorative justice programs are one population health approach that can create safe and supportive environments that contribute to health and well-being for school students and the broader school community.

Gay-straight alliances are another example of a school-based population health initiative. LGBTQ+ school students, and subsequently adults, experience many health disparities, including substance use disorders, cardiovascular diseases, cancers, and mental health conditions (Hafeez et al., 2017). LGBTQ+ students are bullied, feel sad or hopeless, and seriously consider suicide at rates that exceed those of their heterosexual and cisgender peers (CDC, 2019). A gay-straight alliance is a club for LGBTQ+ students and allies that can support an inclusive environment in the school and support the mental health of LGBTQ+ students. Researchers used population-level data to determine that gay-straight alliances made school feel like a safer place for LGBTQ+ students and benefited the mental health of students of any sexual orientation or gender (Li et al., 2019). While counseling, therapy, medications, and other interventions can be helpful to students who are bulled or victimized, feel lonely, or express suicidality, prevention and health promotion are key to avoiding these serious health issues altogether. Gay-straight alliances in schools can offer a preventive approach that benefits the entire population of students.

CASE REFLECTION

The Importance of Population Health

Read the scenario, and then respond to the questions that follow.

The Lee family lives in a two-bedroom apartment in a quiet, mostly residential neighborhood within walking distance of a playground complex. Valuing family and education, Alexandra and Christopher usually take the children to the playground at least twice per week and read them books nightly before bed. Although Sunshine loves her school, her parents are considering homeschooling her due to the threat of school-based gun violence. Christopher is unemployed, so he could provide instruction for Sunshine and child care for Woody. The family does not have a car and relies on public transportation to get to work, school, medical appointments, and job interviews. The grocery store is a 15-minute walk from their home, so each adult makes two or three trips to the store per week to manage carrying the grocery bags home. Lately, the family has been eating meals at the two fast-food restaurants in their neighborhood more often due to their convenience and lower cost compared to the grocery store.

1. What are some population health successes that support the health of the Lee family?
2. What are some population health misses that are not supporting the health of the Lee family?

1.3 Population-Based Practice in Nursing

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 1.3.1 Examine the paradigm shift in nursing practice from isolated care to the management of populations across health care systems.
- 1.3.2 Discuss the scope of population health.
- 1.3.3 Examine the competencies that define the knowledge, skills, and attitudes associated with the domain of population health.

Historically, elements within health care and nursing practice have been siloed, or separated and isolated, from one another. This isolation has resulted in specialists and providers of the same or different institutions failing to

communicate with each other effectively or efficiently. For example, suppose Mx. Smith has a primary care provider, diabetes specialist, and heart specialist. The primary care provider and heart specialist may provide care in one hospital, while the diabetes specialist is at a separate clinic. Both the primary care provider and the diabetes specialist may prescribe medications or adjust dosages of the diabetes medications without telling each other of the care plan changes. Mx. Smith may not realize that some prescriptions overlap. Sometimes, providers may initiate a prescription for the same medication using two different brand names, which can lead to unintentional overdosing. Similarly, the primary care provider and the heart specialist could order laboratory testing for the same health problems and might not tell each other that the testing has been ordered and completed. This duplication of care is burdensome to Mx. Smith, who needs to go to a laboratory for bloodwork more than once and pay for testing twice. This lack of communication can be especially dangerous when critical information is not communicated between providers or care facilities (Kelly et al., 2019).

Siloing can also refer to treating one client disease or condition at a time without considering the client's full picture of health, illness, and social situation. When care is siloed, Mx. Smith's heart specialist may make recommendations about heart health that do not consider dietary or activity limitations relevant to the health of their kidneys that the diabetes specialist and primary care provider are working to address. Health systems that are not effectively integrated or properly collaborative make health and illness experiences complex for clients (Storfjell et al., 2017).

While modern health care has not solved the problem of barriers between providers and specialists entirely, a shift to focusing on population health and health promotion has prompted changes in all the health professions in order to reduce such siloing. This paradigm shift has led to more collaborative approaches across health care. Providers and specialists are encouraged to work together to improve client outcomes. Work to reduce silos and focus on population health continues, as some barriers still exist between providers, specialists, and clients. With a continued shift in focus to collaboration, integration, health promotion, preventive services, and population health, providers can work together to deliver comprehensive, holistic, and respectful care to health care consumers.

Delivering Population Health

Moving away from siloed systems is a positive change. In a health care system that has siloed practices, providers react to the presence of symptoms and concerns instead of proactively preventing diseases and promoting wellness. Population-based practices in nursing focus on improving the health of populations through proactive approaches, an emphasis on preventative care, and finding opportunities for early intervention. They focus on effectively managing chronic conditions across the health care continuum—the spectrum of health services that includes public health and preventive care, acute care, ambulatory care, and long-term/chronic care in different settings for members of a population (Figure 1.6).

- Public health focuses on preventive health measures, health promotion, and population-level health interventions. These measures can prevent disease, reduce the impact of disease, and improve outcomes across a population.
- Acute care involves medical care provided in hospitals and emergency departments for sudden or severe health conditions and emergencies. It can also involve disaster management in events such as multivehicle traffic accidents, train derailments, natural disasters, and mass shootings. Delivery of acute care in a timely and effective manner helps prevent mortality and complications among population members.
- Ambulatory care includes health services provided on an outpatient basis in clinics and health centers. Annual physical exams and health visits related to management of ongoing conditions are examples of ambulatory care encounters. Ambulatory care can respond to population health needs through offering targeted clinics or specialized health services in areas where select conditions are noted to be common or especially burdensome in a population.
- Long-term care services are delivered in skilled nursing facilities, residential facilities, and client homes. People with chronic illness, disability, or functional limitations as well as those receiving palliative care and hospice services obtain support in the long-term care setting. A spectrum of population health outcomes and related goals of care, from minimizing disability to supporting a dignified death, are relevant in this setting. Long-term care can help clients and their families alike. The provision of long-term care supports family members and other familiar caregivers, as some caregiving burdens and stress may be alleviated.

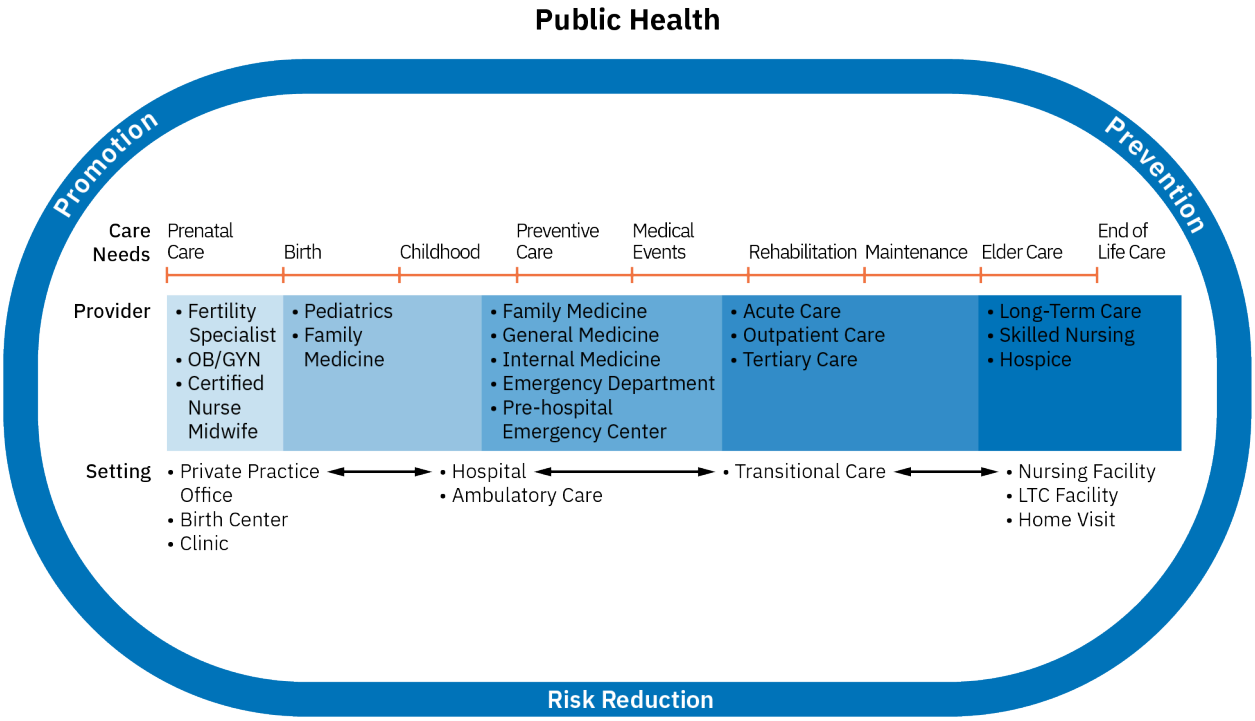


FIGURE 1.6 The health care continuum includes the range of health services that clients will utilize throughout the lifespan. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Thinking about health care as a continuum underscores the idea that health care does not just happen during annual physicals or when someone needs surgery or picks up a new prescription. The concept of the health care continuum affirms that health care services in the public health arena, outpatient settings, hospital units, rehabilitation centers, and family homes are all valid and necessary to population health. On the continuum, health care is comprehensive and coordinated across specialties, providers, facilities, and approaches.

What happens when clients need care in multiple areas along the continuum or move from receiving care in one area to receiving it in another? **Transitional care** involves coordination of clients as they move between care settings. Such coordination helps facilitate a smooth transition for the client or family and helps avoids harm or errors in the process. Transitional care activities may involve sharing of health care information between settings, client education, and support for needed follow-up encounters. These activities help maintain a critical link between settings, providers, and the client so that all may avoid barriers to good health and care delivery. Implementing transitional care across the population helps support healthy client outcomes, reduce health care costs and readmissions, and minimize the likelihood of adverse events during transitions. For example, a research group conducted a review of interventions to support the transition between pediatric health care and adult health care (Schmidt et al., 2020). For adolescents moving to an adult care provider, transitional care support helps achieve outcomes such as decreases in hemoglobin A1C levels (an important measure of diabetes control), increased participation in education and employment, improvements in disease self-management skills, and shorter lengths of hospital stays. The broad goals of population health align with those of transitional care, as professionals in both areas work to improve health outcomes for populations. Care Transition and Coordination Across the Community discusses this topic in more detail.

CASE REFLECTION

The Care Continuum

Read the scenario, and then respond to the questions that follow.

Alexandra, Sunshine, and Woody receive health insurance through a publicly funded state plan. As the plan only covers pregnant people and children, Christopher currently lacks health insurance. His hypertension is not being treated, and he has not seen a provider in a few years.

Although she has health insurance coverage, as a Black woman, Alexandra is at risk for experiencing adverse pregnancy outcomes due to systemic racism and bias in the health care system. She has had an uncomplicated pregnancy thus far, apart from experiencing frequent viral illnesses due to working in a day care center. She has taken time off to recover from these illnesses and has to take a day off every time she has a prenatal appointment due to the public transportation schedule, so she has missed a great deal of work recently.

1. Which locations across the care continuum is the Lee family currently accessing?
2. What locations across the care continuum would the Lee family benefit from that they are not currently accessing?
3. How could transitional care support help the Lee family?

Nurses drive change in population health through development of innovative programs and initiatives across health care settings. The work of nurses encompasses the entire health care continuum, from prevention to treatment, as well as transitional care to support positive population health outcomes. To recognize the work, leadership, determination, and contributions of nurses who are at the forefront of innovations in population health for clients in hospitals, clinics, residential settings, and communities, the American Academy of Nursing (AAN, 2023) created the Edge Runners program (https://openstax.org/r/aannetorg). The AAN annually recognizes nurse-designed models of care that reduce cost, improve care quality, promote health equity, and increase client satisfaction. These projects support moving away from siloed systems in health care and promote population-based practices in nursing. Concepts such as preventive care, early intervention, chronic condition management, and addressing social needs are commonplace among nurse-led population health innovations. As nurses are uniquely positioned to recognize the challenges of navigating several layers of the health care continuum and to address transitional care needs, population health contributions from nurses support client health and optimal population health outcomes. See Appendix E to learn more about the Edge Runners program.

THE ROLE OF NURSES IN POPULATION HEALTH

Access multimedia content (http://openstax.org/books/population-health/pages/1-3-population-based-practice-in-nursing)
This video explores the important role of nurses in population health.

Watch the video, think about the noted “visible” and “invisible” contributions of nurses, and then respond to the questions that follow.

1. How might nurses increase the visibility or public understanding of the “invisible” contributions of population health?
2. What traditionally “invisible” work of nurses might align with your future professional interests?

Population Health Nursing Competencies

Nurses play a crucial role in advancing population health, but they are not alone in this endeavor. Given the importance of a focus on population health and population-based approaches, several leading organizations have developed competencies for trainees and professionals across health disciplines that direct population health education and skills. These initiatives, aim to strengthen the population health competencies of students entering health. For example, the Public Health Foundation (https://openstax.org/r/phforgPa) has developed population health competencies to guide workforce development efforts, trainings, program curricula, job descriptions, and other resources to support population health professionals (Public Health Foundation, 2019). Similarly, Duke University developed a competency map that faculty of medical schools, medical residency programs, and physician assistant programs can use to support meaningful integration of population health in education (Kaprielian et al., 2013); these competencies continue to serve as an important framework (Johnson et al., 2020). In 2021, the American Association of Colleges of Nursing (AACN) approved new standards for nursing education, the *Essentials* (https://openstax.org/r/aacnnursingo), to define the curricular content and expected competencies of students completing pre-licensure and graduate nursing programs (AACN, 2021). The *Essentials* include a domain focused on population health, as the AACN recognizes the imperative role of nurses in advancing population health.

Some of the competencies related to population health that student nurses are expected to achieve by the time they

finish their pre-licensure program include assessing population health data, identifying ethical principles to protect the health and safety of diverse populations, demonstrating effective collaboration and mutual accountability with relevant parties, proposing modifications to or development of policy based on population findings, and articulating a need for change (AACN, 2021). Table 1.1 lists the population health competencies. These competencies help nursing students prepare to address the health needs of populations once they become licensed as nurses. The content and concepts of this textbook, along with the course instructor's expertise, activities, and assignments, will prepare each student to master the competencies.

Competency	Sub-competency
Manage population health.	Define a target population, including its functional and problem-solving capabilities (anywhere in the continuum of care).
	Assess population health data.
	Assess the priorities of the community and/or the affected clinical population.
	Compare and contrast local, regional, national, and global benchmarks to identify health patterns across populations.
	Apply an understanding of the public health system and its interfaces with clinical health care in addressing population health needs.
	Develop an action plan to meet an identified need(s), including evaluation methods.
	Participate in the implementation of sociocultural and linguistically responsive interventions.
	Describe general principles and practices for the clinical management of populations across the age continuum.
	Identify ethical principles to protect the health and safety of diverse populations.
Engage in effective partnerships.	Engage with other health professionals to address population health issues.
	Demonstrate effective collaboration and mutual accountability with relevant community partners.
	Use culturally and linguistically responsive communication strategies.
Consider the socioeconomic impact of the delivery of health care.	Describe access and equity implications of proposed intervention(s).
	Prioritize client-focused and/or community action plans that are safe, effective, and efficient in the context of available resources.
Advance equitable population health policy.	Describe policy development processes.
	Describe the impact of policies on population outcomes, including social justice and health equity.
	Identify best evidence to support policy development.
	Propose modifications to or development of policy based on population findings.
	Develop an awareness of the interconnectedness of population health across borders.
Demonstrate advocacy strategies	Articulate a need for change.
	Describe the intent of the proposed change.
	Define interested parties (stakeholders), including members of the community and/or clinical populations, and their level of influence.
	Implement messaging strategies appropriate to audience and other interested parties.
	Evaluate the effectiveness of advocacy actions.

TABLE 1.1 The Essentials: Population Health Competencies and Sub-competencies (adapted from AACN, 2021)

Competency	Sub-competency
Advance preparedness to protect population health during disasters and public health emergencies.	Identify changes in conditions that might indicate a disaster or public health emergency.
	Understand the impact of climate change on environmental and population health.
	Describe the health and safety hazards of disasters and public health emergencies.
	Describe the overarching principles and methods regarding personal safety measures, including personal protective equipment (PPE).
	Implement infection control measures and proper use of personal protective equipment.

TABLE 1.1 The Essentials: Population Health Competencies and Sub-competencies (adapted from AACN, 2021)

A focus on population health in a nursing program or a practicing nurse's work does not mean ignoring or no longer managing acute needs. While a shift to a population health paradigm supports the work of nurses in multiple settings, these competencies apply to nurses working in acute or tertiary care settings as well. For example, nurses working in emergency care provide lifesaving interventions, but they can also recognize and address the upstream, population, and system-wide factors that lead clients to require emergency care (Fawcett & Ellenbecker, 2015). Population health competencies allow a nurse to be well-versed in and ready to address the complex needs of clients so they may provide more effective and comprehensive care. The focus on population health within nursing programs and nursing as a broad discipline does not mean that acute or emergent health needs are no longer important. Adopting a population health framework builds on the work of nurses and expands their impact in all settings. The *Essentials* and their competencies are relevant to the work of nurses across the care continuum, and ensuring that nurses of the future frame their practice through a population health lens helps them address the complex needs and conditions of clients today.

CASE REFLECTION

Population-Based Practice

Read the scenario, and then respond to the questions that follow.

The Lee family's city has been experiencing a drinking water crisis for several years. Alexandra or Christopher must go to a city building once per week to obtain drinking water for the family. The family is also supposed to bathe in this water, but the city does not provide enough water for drinking, cooking, and bathing.

1. What are some population health concepts or components that are relevant to this problem?
2. Which of the population health competencies or sub-competencies specific to this problem could a nurse demonstrate to support the Lee family?

Chapter Summary

1.1 Defining Population Health

Population health is a comprehensive approach that considers the impact of various factors on health and involves collaborative efforts among health care professionals, communities, industries, academia, and governmental organizations. Nurses across all settings and specialties are critical advocates for achieving population health goals. Population health takes a proactive approach to addressing the root causes of health problems as a means of prevention. Critical components of public health include outcomes, determinants, disparities, and risk factors. Concepts of upstream, midstream, and downstream approaches to intervention interact and evolve as population health evolves, with upstream interventions offering the widest-reaching health benefits to the population. Population health extends to the global stage, involving global nursing, which aims to promote sustainable planetary health and equity for all individuals.

1.2 Why Population Health Is Important

Promoting health across a population is essential for improving health outcomes for individuals and society. Rather than treating individual illnesses as they arise, population health approaches aim to prevent conditions and manage diseases more effectively when they occur. National health indicators provide a macro-level perspective of a nation's health status, contributing to a comprehensive understanding of population health. Population health approaches improve cost savings, actualize social benefits, promote equity, facilitate social justice, and improve health outcomes.

1.3 Population-Based Practice in Nursing

A shift toward population health and health promotion in nursing has encouraged collaboration and meaningful integration of systems across the health system. Emphasizing preventive care, early intervention, and chronic disease management is a positive change under a population health paradigm within the entire health care continuum, which includes preventive care, acute care, long-term care, and transitional care. Nurses are driving change in population health and have developed many innovative, proactive care programs. Today, student nurses are expected to achieve competencies relevant to providing care at the population level and leading change that ameliorates upstream factors contributing to poor health outcomes in the United States.

Key Terms

determinants factors that influence health; can include events, characteristics, or other entities that change a health condition or the level of a health problem

disability-adjusted life years (DALYs) estimates the number of healthy years lost across the population due to premature death and disability from a select condition

disparities inequalities or differences

downstream describes interventions that focus on the behavior of individuals to modify the risk of disease, prevent illness, or manage chronic conditions

general mortality the number of deaths across a large population, such as a geographic region or country, reports of which include information about leading causes of death across the population and estimates of years of potential life lost when people die prematurely

global nursing the use of evidence-based nursing processes to promote sustainable planetary health and equity for all people

health care continuum the spectrum of health care services delivered in public health, acute care, ambulatory care, and long-term care settings

health care utilization the extent to which a population accesses and uses different health care services

health inequities avoidable inequalities related to health that stem from a form of injustice

infant mortality the rate of infants who die before their first birthday

life expectancy the average number of years a newborn is expected to live if current death rates remain constant

midstream describes interventions that occur within a specific organization

morbidity rate the prevalence or incidence of a specific health condition, disease, or diagnosis within the population

outcomes in a population health context, all possible results that may come from exposure to interventions aiming to prevent or treat a condition

population a group of people that may receive care in various settings at the local, regional, national, and global levels

population health an approach to supporting the health of people through research, data analysis,

and health programming that considers the impact of public policy and environmental, social, behavioral, and other factors that might facilitate or hinder health for all

quality of life indication of enjoyment and satisfaction people have, given their multidimensional experiences in health, relationships, activities, and life circumstances

risk factors aspects of personal behaviors, lifestyle choices, exposures, or attributes that generally increase the likelihood or severity of acquiring a health condition

social determinants of health conditions and social factors that affect outcomes and risk related to health, functioning, and quality of life

transitional care efforts aimed at coordinating health care as clients receive services in various areas of the health care continuum

upstream describes interventions that involve enacting policies that change regulations, increase access, or provide economic incentives to impact health across a population

Review Questions

1. Which activity would the nurse perform when engaged in population health activities?
   a. Treating an individual for a specific disease
   b. Improving health outcomes for groups of people
   c. Evaluating a family's ability to care for a child with diabetes
   d. Teaching a client health promotion behaviors

2. Which method would the nurse utilize when taking an individual-level approach to smoking cessation?
   a. Forming a smoking cessation support group
   b. Promoting an increase on taxes on the purchase of tobacco
   c. Providing nicotine gum to a client to substitute for an inhaled tobacco product
   d. Researching the reasons for initiation of tobacco use

3. Which central tenet of population health should the nurse include when planning population health priorities?
   a. Proactively promoting health among populations
   b. Reactively managing health conditions
   c. Treating diseases in individual people
   d. Focusing on increasing the number of hospitals

4. Which action by the nurse represents a midstream approach to improving population health outcomes?
   a. Advocating for policy changes regarding fast food
   b. Providing a workplace lunchtime walking program
   c. Encouraging a client to lose weight
   d. Starting a support group for smoking cessation

5. Which action by the nurse promotes population health?
   a. Providing treatment for chronic disease
   b. Conducting health education workshops
   c. Offering individual health consultations
   d. Administering medication for acute illnesses

6. Which data should the nurse utilize to determine the leading cause of death across the population?
   a. Infant mortality
   b. Life expectancy
   c. Morbidity rate
   d. General mortality

7. Which potential barrier of siloed health care should the nurse consider when planning health promotion activities?
   a. Providers and specialists working closely together to improve outcomes
   b. Treating one disease at a time without evaluating or addressing the full picture of health

c. Health systems becoming effectively integrated
d. An emphasis on population health and health promotion

8. Which action is a characteristic of population-based nursing practice?
a. Taking a proactive approach to promoting wellness and preventing disease
b. Emphasizing curative care rather than preventive care
c. Focusing on reactive approaches to managing acute illnesses
d. Providing care only outside of hospital settings

9. Which concept should the nurse utilize when planning transitional care for a population?
a. Providing care in multiple areas of the care continuum to address all client needs
b. Reactively managing health conditions during transitions between health care sites
c. Preventing hospital readmissions and adverse events
d. Coordinating clients as they move between care settings

10. Which health service along the health care continuum would the nurse utilize for a client with health care needs related to a chronic condition?
a. A preventive health program
b. An ambulatory care clinic
c. An acute care department
d. A long-term care facility

CHAPTER 2
Foundations of Public/Community Health



FIGURE 2.1 Increasing access to dental care is essential to maintaining good oral health, which is a crucial aspect of overall health and well-being. Support for mobile health units aligns with population health goals to achieve health equity and address social determinants of health. Follow this link (https://openstax.org/r/manchesternhaaaa) to read about the Manchester, New Hampshire, mobile dental program for schoolchildren. (credit: modification of work by Navy Medicine/Flickr, Public Domain)

CHAPTER OUTLINE

2.1 Defining Public Health
2.2 Historical Perspectives on Public/Community Health
2.3 The Importance of Public/Community Health
2.4 The Core Functions and Essential Services of Public Health
2.5 Levels of Prevention

INTRODUCTION Whether or not a public health department formally employs them, all nurses support public health in some capacity. Nurses working in specific public health roles may lead disease surveillance and investigations, promote health, and provide community education or perhaps develop health policy. Nurses working in schools, clinics, hospitals, colleges, private industry, or any other role impact public health by fulfilling their duty to promote and protect the population's health and well-being.

Public health is a distinct discipline that operates alongside and in support of nursing. Nursing and public health have overlapping areas of focus and collaboration. Similarly, public health and community health are two fields that operate in concert to improve population health. This chapter and the next will use the term "public/community health" because these closely related disciplines and concepts are interconnected in their goals and functions. In fact, in nursing, community health has long been viewed as indistinguishable from public health (American Nurses Association [ANA], 2022, p.3). However, it is important to acknowledge some of the differences between public and community health that members of health care disciplines may recognize:

- **Public health**: Health care professionals use research involving many people and large data sets to create policies and interventions meant to improve health. Public health efforts may target large populations or global concerns and can have far-reaching, long-term impacts on health. Generally, public health efforts prevent disease, promote and disseminate health interventions, and protect people from timely health threats such as pandemics, violence, climate change and environmental hazards, and substance misuse, to name a few.
- **Community health**: Health care professionals use research and data to inform their work, but they also work closely with community partners and local clients/families to understand health priorities and contextual factors specific to the community. Community health efforts focus on the health and risks of a specific locality or group of people and therefore usually have a more immediate impact on the community. In community health, the health status, health needs, resources, circumstances, and other factors specific to communities of people guide work aimed at supporting the health of individuals, families, groups, and organizations.

This chapter explores the goals and functions of public health, while Public/Community Health in Practice discusses the roles and responsibilities of public health nurses. As you read this chapter, think about Alexandra Lee, a daycare teacher expecting a baby, and her family, who were introduced in What Is Population Health?. The Lee family also includes Alexandra's husband, Christopher, who is currently unemployed and has hypertension; Sunshine, a kindergarten student with life-threatening allergies; and Woody, a generally healthy toddler. Chapters 1, 2, and 3 will follow the Lee family to explore how population, public, and community health impact their well-being.

2.1 Defining Public Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 2.1.1 Define public health.
- 2.1.2 Differentiate between upstream and downstream encounters.
- 2.1.3 Contrast public health with population health.

Public health supports the well-being of society through organized efforts to ensure health is attainable for all. It extends beyond nursing, although principles of public health provide the foundation or framework for public/community health nursing practice. Nurses and other public health professionals work to prevent health problems by implementing educational programs, recommending policies, administering services, conducting research, and limiting health disparities (CDC Foundation, 2023). To that end, public health efforts usually involve developing, implementing, evaluating, and revising policies and programs. Policies and programs can also contribute to controlling the spread or incidence of diseases and disorders, reduce rates of injury, and lessen disability or its impact on populations. Public health policies and programs are designed to promote health, prevent disease and injury, prolong life, support quality of life, and reduce health disparities. Ultimately, public health work ensures that populations can live in conditions where health is achievable (American Public Health Association [APHA], 2022).

This textbook discusses population, public, and community health mostly in the context of the United States. The health care systems in different nations and societies are markedly different. Despite different infrastructure, policies, and national views on health as a priority, nurses know that communities across the globe have a right to be healthy. To that end, nurses, clinicians, and others involved in public/community health may be involved in global health work. Global health (https://openstax.org/r/healthgovhealthaa) initiatives can address many pressing health areas, but the goal of such efforts is to improve health by preventing, detecting, and responding to public health events across the world (Office of Disease Prevention and Health Promotion [ODPHP], n.d.).

The world population exceeds eight billion people. Evaluating the health and health risks of all people is a significant undertaking, let alone actually addressing the health and health risks of such a large and diverse group. Health problems of the global community are not necessarily novel to those experienced by Americans; issues of communicable (e.g., tuberculosis) and noncommunicable (e.g., heart disease) diseases, access to water and nutrient-dense foods, safe housing, and gender equity transcend borders. It is critical to acknowledge that involvement of the U.S. government and American clinicians in global health initiatives can carry harm. Sometimes, support from one country to a developing nation to address a public health issue can carry colonial and paternalistic undertones. **Colonialism** refers to the practice of a powerful nation asserting control and exploiting another nation for political or economic purposes. **Paternalism** involves authority figures making decisions for others in a manner

that suppresses their identity and autonomy. Both colonialism and paternalism have been historically implemented in global health initiatives as well as one-to-one clinical care.

Health interventions and programming may be motivated by the values and priorities of more-developed nations without consulting local communities and partners to ensure which health issues need to be addressed and how. For example, sometimes health education materials made in the United States for American health care consumers are delivered abroad. Health education materials for managing hypertension might include messages such as "participate in physical activity" and "avoid processed salty foods like hot dogs." Materials delivered to a developing nation with limited access to processed foods, where most people have never eaten hot dogs and travel exclusively by foot, would not help educate community members about their specific risks for hypertension and would not offer reasonable solutions given the community context. This dynamic can disincentivize the involvement of communities, undermine their autonomy, and ultimately lead to harm. A global health arrangement that does not adequately involve local community members through problem identification, assessment, intervention planning, and implementation also leads to mistrust of global health programs (Gautier et al., 2022). Nurses in public/community health must work to foster genuine partnerships and consult local community members when supporting health abroad to have a positive impact and uphold health as a right for all. This is also true of local health initiatives: Nurses must involve community members to avoid paternalistic approaches. Future chapters will share strategies for meaningfully engaging community members in public health work.

Impact of Global Health on Domestic Wellness

Global health concerns, such as infectious diseases (e.g., pandemics like COVID-19), can directly affect the health of individuals in the United States, and public/community health nurses play a crucial role in addressing these influences. Global health crises, such as outbreaks or natural disasters in other countries, serve as lessons for improving emergency preparedness in the United States. Public health nurses contribute to domestic preparedness efforts by drawing insights from global experiences. Public health nurses are involved in surveillance efforts, monitoring international health trends, and helping identify potential threats. They play a key role in preparing for and responding to global health crises by ensuring effective disease control measures.

Immigration and refugee flows from around the world directly impact the health of communities in the United States. Public health nurses work to address the unique health needs of immigrant and refugee populations, including vaccinations, access to health care, and culturally sensitive care. Public health nurses engage in global health policy discussions and advocacy efforts. They work with international organizations, governmental agencies, and nongovernmental organizations to shape policies that influence global health and, in turn, have consequences for domestic health. They advocate for global health equity and apply principles of equity in their local practice, recognizing the interconnectedness of health issues across borders.

THEORY IN ACTION

What Is Public Health?

Access multimedia content (http://openstax.org/books/population-health/pages/2-1-defining-public-health)
In this video, members of the American Public Health Association (APHA) discuss public health and some current examples of public health initiatives.

Watch the video, and then respond to the following questions.

1. The narrator, Dr. Georges Benjamin, states that "only a small amount of what affects our health actually happens in the doctor's office." Think about the community, town, or city of your nursing school. What factors, outside of care at a hospital or clinic, are most impactful to the health of area residents?
2. APHA members provide examples of their work that contribute to public health. Which of the examples has impacted the health of you and your classmates over the last year?

Upstream and Downstream Encounters in Public Health

The causes of health problems are generally viewed through two lenses: 1) system or society-wide problems that precipitate unhealthy circumstances or 2) individual choices that lead to illness and disease. Responses to health

problems are, by definition, reactive—meaning a client must have a disease or condition before a clinician provides a prescription or a client engages in a healthy habit to cure or lessen its impact. Consider seasonal influenza (flu). A lack of paid sick time from work is a society-wide problem contributing to the spread of the flu, as clients will go to work sick and spread a virus rather than miss a day of pay. The client may interact with other people who have seasonal flu and do not practice good cough and sneeze hygiene. Once the client starts to feel ill or seeks care, depending on how early they contact a health care provider, they may receive a prescription for an antiviral medication to lessen the duration of their bothersome symptoms.

Consider the metaphor of "upstream-downstream" health factors (Dorfman & Krasnow, 2014; see What Is Population Health? for more information). Dr. John McKinlay introduced the metaphor to the medical community in 1975, defining downstream endeavors as responses to shifts from one health issue to the next, focusing on the short-term that does not solve any health problems (McKinlay, 2019). He argued that the health care community should focus on upstream work—that is, the sources of health problems or manufacturers of illness. Explained differently, downstream health initiatives are reactive actions taken to address the symptoms or consequences of diseases, while upstream initiatives address the root causes of health issues. Downstream interventions for the client with seasonal flu include providing recommendations for rest, hydration, and perhaps an antiviral prescription, plus a reminder to practice good handwashing and cough and sneeze into the elbow instead of the hands. Upstream interventions might involve community-wide messaging on the same healthy habits and the development of policies that support public health through offering compensated sick time so that clients do not need to decide between their health and the health of their colleagues and a much-needed paycheck.

Every client or health condition has upstream and downstream factors preceding diagnoses or preventing conditions. For example, diabetes is known to affect clients living in low-income neighborhoods (Hill-Briggs et al., 2021), and the percentage difference in diabetes rates for poor individuals (living 100 percent or more below the federal poverty level) compared to wealthy people is over 100 percent (Beckles & Chou, 2016). A downstream intervention for a client with type 2 diabetes mellitus may be the administration of metformin, insulin, or other anti-diabetic agents. But what about the neighborhood? Nothing in this intervention addresses how living in a low-income neighborhood precipitates diabetes. Upstream interventions address the community conditions and circumstances that impact health. Upstream interventions for those living in a low-income neighborhood might include supporting the availability of fresh produce over packaged or canned choices, funding a free community fitness center, or maintaining sidewalks for outdoor exercise for clients with and without mobility aids.

As another example, hypertension is more prevalent among Black adults than White adults (Centers for Disease Control and Prevention (CDC), 2023c; Huang et al., 2022). A downstream intervention for a client with hypertension may involve prescribing lisinopril (a medication used to treat high blood pressure) and quarterly clinic visits to monitor blood pressure. However, these sample interventions include nothing about a person's race placing them at higher risk of hypertension. In fact, considering a client's *race*, which is a social construct, in place of *biology and genetics*, is an unfavorable practice that contributes to disparities and harm (American Academy of Family Physicians, 2020). An upstream intervention related to hypertension might address institutional racism that leads to stress among people of color and fewer social, health, and economic opportunities across communities of color.

THE ROOTS OF HEALTH INEQUITIES

Racism and Cardiovascular Health in Black Moms

Pregnant clients are at risk for hypertensive disorders of pregnancy, including gestational hypertension, preeclampsia, and eclampsia. These disorders place the pregnant person and fetus at risk during gestation and impact both parties after birth. African, Caribbean, and Black women are more likely to experience hypertensive disorders of pregnancy, and they remain at risk for acute and chronic cardiovascular disorders for life. Racism is one modifiable factor that increases the risk of hypertensive disorders of pregnancy among Black mothers. It can contribute to daily stress, which compounds the physiologic stress that pregnancy places on the cardiovascular system. Experiences of racism in the medical setting may lead to missed health care appointments, decreasing opportunities to identify hypertensive disorders of pregnancy early and initiate treatment. While this is not a uniquely American problem, Black women born abroad have lower rates of hypertensive disorders of pregnancy than Black women born in America. While nurses and other clinicians need to provide personalized, attentive,

and respectful health care services to Black mothers, upstream education and policy-related factors must change to adequately address this avoidable health problem. Clinician education must be developed and implemented with an anti-racist framework. Clinicians and researchers need to promote the ideas, experiences, and opinions of Black mothers when conducting studies and developing policy and meaningfully involve them on teams working to address this health issue.

(See Baiden et al., 2022.)

CASE REFLECTION

Addressing Upstream and Downstream Factors

Read the scenario, and then respond to the questions that follow.

You are continuing to work with the Lee family. Think about their current health state or diagnoses:

- Alexandra, pregnancy: 37-year-old daycare teacher, works 5 days a week from 8 a.m. to 4:30 p.m. She wakes up early to prepare breakfast for her family and then commutes to work via public transportation. She is currently 30 weeks pregnant. Thus far, she and her care team have been pleased with her blood pressure readings. Still, she has found it challenging to keep her stress low as her husband Christopher recently lost his job, and few employers are hiring. As a Black woman, Alexandra is at risk for experiencing adverse pregnancy outcomes due to systemic racism and bias in the health care system.
- Christopher, hypertension: Although he has not attended a health check-up in a few years, he feels that his blood pressure might be higher since losing his job. Being unemployed has been stressful, but as a Korean American, he experienced a great deal of anti-Asian sentiment and discrimination from his coworkers during the COVID-19 pandemic.
- Sunshine, life-threatening allergy: Sunshine just started kindergarten and has an epi-pen for a life-threatening nut allergy. She was attending an after-school arts and crafts program two days per week but stopped going when Christopher lost his job.
- Woody, generally healthy.

1. What upstream factors may negatively affect Alexandra's pregnancy experience and outcome? What changes to upstream factors might improve her health and lower health risks?
2. What are some upstream factors contributing to or worsening Christopher's hypertension? What changes to upstream factors may have prevented or could contribute to ameliorating his hypertension?
3. Are there any upstream factors that can impact how Sunshine's life-threatening allergy is managed? Think about anaphylactic reactions that may occur at home, at school, or in the community.
4. What are some downstream factors the family is currently engaged in? Without changes to upstream factors, what additional downstream factors are needed? Which downstream factors would be obsolete with changes to the upstream factors?

Although upstream work can benefit individuals and populations, a great deal of work in health care is still taking place at the downstream level. The biomedical model of *treating* individuals and individual health conditions following diagnosis persists instead of focusing on *preventive* efforts that would improve the prevalence and severity of risk factors for the health conditions (Dopp & Lantz, 2020). A barrier to upstream work may be the scope of upstream issues and collective, systems-wide changes that must be made to properly address them. The upstream social structure factors include the economy, poverty, education, cultural values, discrimination and privilege systems, food, housing, criminal justice systems, and public policy (Dopp & Lantz, 2020). Due to the far-reaching impacts of disparities, injustices, and other experiences not aligned with health in these upstream factors, seemingly tiny steps toward improvement matter. Researchers have noted that even small changes in upstream factors result in greater improvements in health than downstream initiatives (Dopp & Lantz, 2020).

THEORY IN ACTION

What Is Public Health?: Episode 1 of "That's Public Health"

Access multimedia content (http://openstax.org/books/population-health/pages/2-1-defining-public-health)
Mighty Fine of the American Public Health Association discusses public health in this short video. He discusses public health and the emphasis on upstream factors.

Watch the video, and then respond to the following questions.

1. Downstream measures related to tobacco use, like taxes on cigarettes and images of diseased organs on packaging, have not changed tobacco use as a leading cause of death. What do you think of the upstream interventions suggested by the narrator? What other upstream ideas can you think of?
2. Mr. Fine also mentions that public health efforts can look like creating parks or repairing sidewalks. These are two upstream factors that are not obviously related to health. Can you think of programs in your community that might not look like health interventions but are actually public health upstream initiatives?

How Public Health Differs from Population Health

Both population health and public health aim to improve the health of populations. Both can optimize health care delivery and improve outcomes across the population. Both are essential in addressing the complex, interrelated, and intersectional factors that influence health in the modern world. Key differences between population health and public health are the ways in which the health of a population is changed, the focus, and the scope of work.

Population health

- focuses on the actions and initiatives of a health system and what is being done for a community (Bharel & Seth Mohta, 2020);
- carefully considers and emphasizes determinants of health, such as those in the environmental, social, economic, and educational domains, to achieve better health outcomes for the population; and
- assesses the health status of a population, identifies unique health challenges, and designs interventions to address the challenges.

Public health

- undertakes collective actions throughout society to ensure the conditions necessary for clients to maintain good health (Institute of Medicine (US) Committee on Assuring the Health of the Public in the 21st Century, 2002);
- organizes efforts in public policy, governance, and health services to protect and advance the health of the population; and
- implements strategies and interventions (e.g., policies, regulations, and guidelines) at a societal level to support favorable health conditions for all.

Considering the diabetes and hypertension examples discussed earlier with upstream and downstream factors, each has population and public health aspects. For the client with type 2 diabetes mellitus, living in a low-income neighborhood is a population health factor influencing the availability of fresh produce and nutrient-dense foods and having space to enjoy physical activity. If the city where the client resides approves a regulation that sets tax-generated public funds aside to repair sidewalks or build a free community fitness center, this would be a policy-related public health intervention. For the client with hypertension, racism and the accompanying injustices are a population health factor affecting the client's blood pressure. Many public health policies addressing institutional racism and health equity can ameliorate the impact of racism on cardiovascular health. For example, experts have recommended public health policies such as improving state-level race and ethnicity data collection, ensuring provider training to reduce bias and discrimination in health care, and increasing workforce diversity to address the upstream causes of racism in cardiovascular medicine (Javed et al., 2022).

2.2 Historical Perspectives on Public/Community Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 2.2.1 Describe historical factors relevant to shaping public/community health practice.
- 2.2.2 Discuss the textile industry as an exemplar for understanding historical and contemporary implications of public health.

Events throughout history have played a pivotal role in inspiring, shaping, and advancing the public health field. Several noteworthy accomplishments, such as the development of vaccines, sanitation and waste management reforms, the formation of public health departments, and the introduction of health plan mandates, have significantly influenced the public's health and the trajectory of public health as a specialty. The field of public health has evolved over time and has a longstanding history in the United States. In fact, as the nation formed during the American Revolution, the new nation's leaders believed that human health was supported by strong social institutions, and this view was fundamental to creating the American political structure (Rosen, 1976).

Approximately 100 years after the American Revolution, Louisiana and Massachusetts led a revolution in public health programs (Levine & Rosencrantz, 1972). Louisiana created a Bureau of Statistics and Board of Health in 1849 and 1855, respectively, with an advisory capacity. In 1869, Massachusetts became the first state to develop a State Board of Health with the power to enforce regulations to prevent deaths attributable to disease spread via unsanitary conditions. Around the same time, germ theory revolutionized approaches to public sanitation, personal hygiene, surgical practices, vaccination, and epidemiology (King, 1983; Tulchinsky & Varavikova, 2014). In the early 1900s, journalistic inquiry and publicization of unhealthy practices throughout industries (e.g., Upton Sinclair's novel, *The Jungle*, which was based on true events confirmed via investigation) led to calls for increased health regulations (Kantor, 1976). To learn about other notable events that have shaped population, public, and community health, see Epidemiology for Informing Population/Community Health Decisions and Pandemics and Infectious Disease Outbreaks.

The Industrial Revolution and the Development of the Modern Public Health System

Comparing health and safety during the Industrial Revolution to contemporary industrial practices provides insights into the similarities, challenges, and opportunities in the public health realm of yesterday and today. A global Industrial Revolution started during the late 1700s. During this time, producing goods and products moved from slow, labor-intensive, manual processes to those that could become more efficient and, at times, automated with the use of new machines. Using steam and water to power machines also emerged during this time, and using large factory systems in manufacturing was adopted.

Business and factory owners wanted to quickly create more products, such as textiles, to sell to the expanding population. Profits on textiles were higher than ever following industrialization and cheap labor (Library of Congress, n.d.). While this period may have been exciting for urbanization, technology, and businesspeople who owned the means of production, it was a dangerous time for laborers. Rapid industrialization and urbanization led to poor sanitation, overcrowding, and disease outbreaks, prompting the need for attention to the public's health and formation of public health infrastructure. By the early 1800s, Francis Cabot Lowell brought textile technologies to eastern Massachusetts, where he initially employed young women from nearby rural communities who would work for lower wages than men. By the 1860s, more than half the workers were immigrants (American Social History Project, n.d.). The workers were required to work long hours without breaks in factory rooms with poor air quality and no ventilation and to live in quarters with doors that were locked overnight (Bartlett, 1841; Beaudry & Mrozowski, 1989; Murphy et al., 2019). They were required to rent rooms in factory-owned housing with similarly unsafe and unsanitary conditions (Bartlett, 1841; Britannica Editors, 2023). These working and living conditions led to injuries, croup, lung inflammation, bleeding lungs, cholera, scarlet fever, measles, dysentery, and brain inflammation among the workers (Crane-Kramer & Buckberry, 2023; Murphy et al., 2019; Robinson, 2011). Additionally, the accelerated decline of environmental air quality from factory emissions complicated respiratory conditions (Fowler et al., 2020). Of 362 recorded deaths in the Lowell mills, 200 were girls under the age of 10 years (Murphy et al., 2019; Robinson, 2011).

Sanitation and worker safety reforms were implemented, and public health departments were established at local and state levels following global experiences that were similar to those of the mill workers of Lowell (Hanlon &

Pickett, 1984). Workers and other concerned parties did not necessarily know the cause of their ill health, but collective social actions helped advance public health (Figure 2.2). The reforms are not considered healthy (or legal) by today's standards, but they represent progress in public health. For example, regulations were put in place permitting only children over the age of 9 to work and for no more than 9 hours per day (Teleky, 2012). The environmental conditions also prompted a collective call for public health measures. Beyond acquiring illness and disease from issues with the disposal of bodily fluids and overcrowding, factory workers and citizens alike were motivated to create change in workplace and community sanitation due to unpleasant smells (Shryock, 1937). Reform movements concerning child labor, working conditions, the environment, and overcrowding of cities led to implementation of policies and regulations to protect the public's health.

This period in U.S. history and the efforts of workers to reform practices are credited with establishing the modern public health system. In fact, the Industrial Revolution period is referred to as "the great sanitary awakening" (Winslow, 1924). A societal objective of promoting cleanliness elevated health to priority status, resulting in collective efforts to protect health among the public (Institute of Medicine Committee for the Study of the Future of Public Health, 1988). During this time, the collection of public health data and vital statistics began paving the way for statistics to become a fundamental piece of public health work (Rosenkrantz, 1972).



FIGURE 2.2 Factory workers sew garments in the 1940s. Even after the Industrial Revolution, the workforce of garment workers was comprised largely of women who did tedious work in ergonomically unfriendly conditions at best. Windows in this factory are pictured as opened, which greatly improved spread and inhalation of dust, viruses, and other airborne health threats. (credit: "Women sewing at long tables next to tall windows in a garment factory" by Kheel Center/Flickr, CC BY 2.0)

Public Health in the United States from the 20th Century to the Present

Today, working conditions across industries are more regulated to support health. In the United States, public health policies regarding sanitation and air quality have advanced greatly since the Industrial Revolution. Government bodies, such as the U.S. Environmental Protection Agency (EPA), support public health through policies and regulations that enforce healthy air indoors. Pollutants such as carbon monoxide, mold, lead, asbestos, and pesticides can affect the health of workers and residents (EPA, 2023). The EPA recognizes health impacts such as eye irritation, headaches, respiratory disease, chronic conditions, and even a condition called sick building syndrome in which building occupants feel ill after entering a certain building and feel better once leaving (EPA, 2023).

While the post-Industrial Revolution establishment of national organizations focused on environmental health represented an improvement, experts argue that the EPA does not adequately protect people vulnerable to environmental health threats (Koman et al., 2019). Similarly, the working conditions of modern garment workers, both domestically and abroad, do not always support health (Figure 2.3). This has left some to question if public

health has made an impact since the Industrial Revolution and how public health can support health in this area. Although they have improved since the Industrial Revolution, public health policies and initiatives in the United States are either underdeveloped or under-enforced and do not protect all workers. For example, the report *Dirty Threads, Dangerous Factories* (https://openstax.org/r/garmentworkerce) (Garment Worker Center et al., 2016) identifies several unsafe and unhealthy conditions for garment workers in Los Angeles, California, such as:

- 60 percent of workers noted that excessive heat and dust accumulation in garment factories made it difficult to work and breathe;
- 47 percent of workers reported soiled and unmaintained bathroom facilities;
- 42 percent of workers stated that exits and doors in the factories were regularly blocked; and
- 89 percent of workers reported an injury to their employer, over half of whom had a negative reaction to their report of an injury.

Further, some public policies regarding working conditions are being revised to be unsupportive of public health. Federally, labor laws prohibit children under the age of 14 from working during certain hours or too many hours per week except for children working in agriculture (U.S. Department of Labor, 2023). Mid-2023 saw some states, such as Missouri and Iowa, approve public policies that permitted children aged 14 to 17 years to work more hours per week in an expanded group of possibly dangerous industries with less safety oversight (Bogage, 2023; Figueroa, 2023). The work of public health as a discipline is never truly complete, as consistent evaluation of the actual implementation and outcomes of policies and programs is needed as societal conditions evolve.

Despite ongoing challenges in areas such as worker safety, the population's health has largely improved thanks to public health initiatives. Public health efforts have contributed to advances in life expectancy, health promotion, and disease prevention and have reduced mortality rates. However, health disparities, inequities, and injustices still exist. Public health efforts must be supported to address health issues and improve the population's health.



FIGURE 2.3 This image reveals a large factory workspace with adult-appearing workers. While clean floors and glimpses of natural light create an initial positive impression, gauging the overall workplace health proves challenging. Notably, photos distributed to the public may be taken during official state/government visits. During planned visits, manufacturing facilities are often meticulously cleaned or staged to shield government officials and guests from witnessing unfavorable aspects such as child labor, forced labor, or unhealthy conditions. Unfortunately, this practice persists both domestically and abroad, where laborers work long hours for little pay and endure exposure to harmful chemicals; learn more by reading the following news story (https://openstax.org/r/nprorg). Nursing work relevant to public health, population health, global health, occupational health, maternal/child health, and other areas all intersect when working to address health in the textile industry. (credit: "President Tsai visits Taiwanese firm Roo Hsing Garment (Nicaragua) and learns about the factory's operation" by Taiwan Presidential Office/Flickr, CC BY 2.0)

Contemporary Public/Community Health Emergencies

Worker health and environmental protection are only two of many enduring public/community health challenges that nurses and other professionals work to address today. The most pressing contemporary public/community health issues may rise to the level of national or local emergency. In the United States, the secretary of the U.S. Department of Health and Human Services (HHS) or the president may declare federal **public health emergencies**, while state- or local-level officials like governors, mayors, and tribal councils may declare public health emergencies locally. Public health emergencies are illnesses or health conditions that pose a significant risk to communities that are either occurring or may imminently occur. As a recent example, COVID-19 was a public health emergency.

Similarly, the U.S. Surgeon General, who oversees the U.S. Public Health Service Commissioned Corps, may issue warnings or advisories about threats to public health. These statements are meant to raise awareness about a critical public health issue and offer recommendations for addressing it. For example, a May 2023 advisory (https://openstax.org/r/hhsgov) called attention to the mental harm that the near-universal use of social media may precipitate for youth in the United States (HHS, 2023b). Beyond government officials, professional associations may also identify and declare public health crises. For example, leading organizations such as the National Association of School Nurses, the American Heart Association, and the Association of Black Psychologists have declared racism a public health crisis (Kuehn, 2021; National Association of School Nurses, 2020; Vandiver, 2020).

New diseases, weather incidents, or concerning changes in data regarding a health condition may prompt officials at the federal level to explore a public health issue. Experts assess and evaluate the threat of the condition or incident to the public's health. To qualify as a public health emergency, the health threat must be imminent, significantly risk the public's health, and require a timely and comprehensive response. Declaring a public health emergency serves several purposes. First, the general public, health care workers, community partners, legislators, and others may become aware of important health issues. Additionally, public funding may be made available to support relief, recovery, and health improvement efforts related to the health problem. The HHS maintains a chronological Declarations of a Public Health Emergency (https://openstax.org/r/asprhhsg) listing of public health emergencies nationally and for specific states/territories.

Public health emergencies, crises, or matters of interest evolve over time in response to disease spread, sociopolitical climates, the impact of conditions on the community, and other factors. A public/community health nursing student could likely list 10 public health topics that are currently a threat to societal health and require intervention. As an example, the Surgeon General recently issued a warning about the impact of social media on the mental health of adolescents (HHS, 2023b). The warning, in part, served as a call to action for clinicians, lawmakers, families, educators, and all citizens and recommended ways to address this health threat that targeted different groups, such as legislators, social media companies, adolescents and their families, and researchers, with a goal of developing ways to maximize social media's benefits and minimize its harms. For some adolescents, time on social media can facilitate connection, provide a creative outlet, and serve as a source of support. For others, social media can promote disordered eating, body dissatisfaction, low self-esteem, depression, and anxiety (HHS, 2023b).

Social media and youth mental health is only one current public health problem drawing the attention and efforts of legislators, public/community health nurses, and other colleagues. Public health problems span a spectrum of challenges, such as infectious disease outbreaks, natural disasters, and pathologic diagnoses among community members. Public health problems can exceed available resources, disrupt community stability, and bring harm or risk to community members. A strong public health system, with nurses leading change and advancing community health, plays a pivotal role in ameliorating public health problems through facilitating collaboration, sharing accurate information, appropriately allocating resources, and providing direct care and intervention.

HOW PUBLIC HEALTH WORKS—AND WHY IT SOMETIMES DOESN'T

Access multimedia content (http://openstax.org/books/population-health/pages/2-2-historical-perspectives-on-public-community-health)

This *CBS Sunday Morning* news segment covers modern public health triumphs, problems, systems, and opportunities.

Watch the video, and then respond to the following questions.

1. The news clip features restaurant inspections and helmet use promotion as two public health interventions. What other public health interventions are happening in your area outside of hospitals and clinics?
2. Think of a public health policy. List at least one way that each of the organizations (federal agencies; state, tribal, local, and territorial health departments; government agencies; clinical care delivery systems; media; community-based organizations; private nonprofit associations; educational institutions; and private industry) displayed in the video are involved.

2.3 The Importance of Public/Community Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 2.3.1 Identify collaborative efforts across the U.S. public health system to improve the nation's health.
- 2.3.2 Explain the public health system's role in addressing population health needs.
- 2.3.3 Discuss public health funding and spending in the United States.

Public health operates as a large, interconnected network, at times referred to as the **public health system** (Figure 2.4). Several leading organizations collaborate with local public health departments to improve the nation's health. They include governmental organizations, nonprofits, colleges, universities, and community-based partners that share data, resources, expertise, and programs while working together to comprehensively improve health. Collaboration among public health agencies improves the efficiency and quality of public health via the synergy of resources and facilitates a holistic approach to improving health (Axelsson & Axelsson, 2006). Although some health organizations may differentiate their scope and practices to focus on specific health issues instead of public health broadly (Axelsson & Axelsson, 2006), the need for inter-organizational collaboration grows as health conditions and determinants become more complex. Caring Across Practice Settings explores public health governance and finance structures, agencies, and functions.

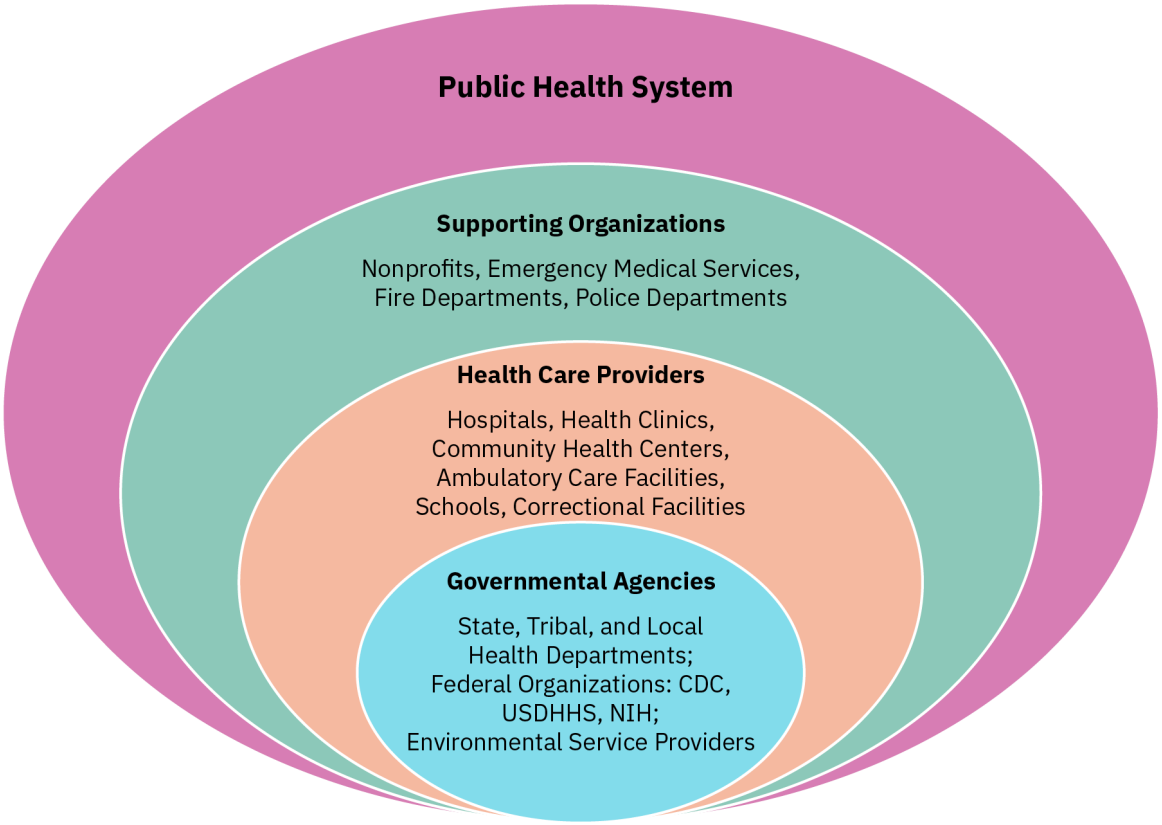


FIGURE 2.4 The U.S. public health system comprises many organizations at the national, state, and local levels. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Public/Community Health Funding

Robust public/community health programs are essential to the health of the community, a nation, and the global population. Public/community health programming can be expensive. Cumulatively, federal, state, and local governments are estimated to spend $93 billion per year on public health (Alfonso et al., 2021). Although this sum may seem sufficient to fund quality public health programs, experts have noted that due to previous budget reductions, the United States is ill-equipped to adequately respond to the COVID-19 pandemic with this amount of funding (Alfonso et al., 2021), let alone other public health programs that address ongoing national health concerns.

Public/community health professionals must be paid. They need physical space, such as offices and clinics, to conduct their work, which may also require costly or vast quantities of supplies to positively impact the community's health. Money may be needed to create flyers or other advertisements to inform community members about new health initiatives. Despite these costs, public health programs can demonstrate a positive return on investment, meaning each dollar invested in the public health program returns money to the larger economy. See What Is Population Health? for more discussion of cost savings and earnings. However, public health funding has been decreasing since as early as the early 2000s despite its benefits to population and economic health. (Kuehn, 2011). For example, in 2020, just as COVID-19 was declared a public health emergency, the U.S. federal government proposed a 16 percent reduction of funding to the CDC and a 40 percent decrease in the amount of money provided to the World Health Organization as well as cuts to public health and well-being assistance programs (Devi, 2020). Some lawmakers lack personal exposure to the advantages of public health, and it may not be apparent to them that their constituents benefit from robust public health systems. Nurses play a pivotal role in advocating for public and community health program funding, possessing a unique vantage point to create programs and observe their positive effects on the health of communities and the general public.

Strengthening Health Through Collaboration

Some popular initiatives for public health collaboration include coordinating health care services, applying a population perspective to clinical practice, identifying and addressing community health problems, and strengthening health promotion and health protection (Shahzad et al., 2019). Some examples of collaboration include the following:

- Centers for Disease Control and Prevention (https://openstax.org/r/cdcgova): The CDC collaborates with federal, state, and local public health partners to promote health, reduce risk, and prevent disease. The CDC has developed initiatives and programs for many health conditions that local public health departments may access, adapt, and disseminate. The CDC also provides disease surveillance and mitigation guidance in times of large-scale outbreaks or if a notifiable infectious disease occurs. **Notifiable infectious diseases** require health care providers to report the disease to public health officials. Reporting is mandated by law at state and local levels, whereas reporting to the CDC is voluntary. The notifiable infectious diseases are selected for mandated reporting for reasons of contagiousness, severity, or frequency (CDC, 2022). The CDC collects data from all 50 states, New York City, the District of Columbia, Guam, the Marshall Islands, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands (CDC, 2023b). Some examples of nationally notifiable or locally reportable infectious diseases are hepatitis A, chlamydia, anthrax, botulism, malaria, and rabies (CDC, 2023a). Client samples used to diagnose these reportable diseases must undergo further testing at a state laboratory or the CDC. In rural areas, transporting the samples in a timely manner for needed further testing can be difficult. Watch this video (https://openstax.org/r/cdcgovnnd) for an example of a CDC collaboration with courier services to support public health in Utah.
- Healthy People 2030 (https://openstax.org/r/healthgovheal): The Healthy People 2030 program is administered by the U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion (ODPHP). The program has identified priority actions and tactics that the country must take to improve health outcomes for the public over the next decade. The program objectives span all body systems and many determinants, requiring collaboration from diverse groups and agencies. In fact, a major factor in the success of the Healthy People programs over time has been collaborative efforts to elevate and sustain public health (Hasbrouck, 2021). Visit this blog (https://openstax.org/r/healthgovnews) to learn about collaborations between the Iowa Department of Health and Human Services and the Healthy People Program to improve public health in the state.

- National Association of County and City Health Officials (https://openstax.org/r/nacchoo): This organization supports and represents local public health departments nationwide. Member departments can network and collaborate on specific initiatives or share successes and challenges faced when implementing programming. The organization also provides education, resources, and advocacy for policies and practices that promote public health and maximize support and uptake of local offerings. They have over 50 formal partnerships (https://openstax.org/r/wwwnaccho) with other organizations that advance health for specific populations.
- National Institutes of Health (https://openstax.org/r/wwwnihgo): The NIH conducts research and supports researchers studying public health issues and testing interventions to improve public health. The NIH collaborates with hospitals, clinicians, colleges and universities, and other research sites to address important public health issues, develop programs and interventions, and promote public health practices based on the latest evidence.

HEALTHY PEOPLE 2030

Reduce Cases of Pertussis Among Infants

Pertussis (also known as whooping cough) is a nationally notifiable disease. It is a contagious illness that can cause cough, fever, and other symptoms. For some people, the illness may be mild; however, infants are at an increased risk for hospitalization and death from this virus, especially because they are not able to become vaccinated until they are 2 months old. A goal of Healthy People 2030 is to decrease the number of cases among infants (https://openstax.org/r/healthgovhealthaaa). Thus far, the goal has been met and exceeded. One reason for a decrease in pertussis among infants is encouraging vaccination among pregnant people in the third trimester and of close adult contacts of infants to prevent spreading the virus.

CASE REFLECTION

Collaborating to Support Client Health

Read the scenario, and then respond to the questions that follow.

You are learning more about the health and determinants that shape the health of the Lee family:

- The city where the Lee family lives has been experiencing a drinking water crisis for several years. Alexandra or Christopher must go to a city building once a week to obtain drinking water for the family. The family is also supposed to bathe in this water, but the city does not provide enough water for drinking, cooking, and bathing.
- Alexandra, Sunshine, and Woody receive health plan coverage through a publicly funded state plan. As the plan only covers pregnant people and children, Christopher does not have health plan coverage. His hypertension is not being treated, and he has not seen a clinician in a few years.

1. What agencies might collaborate to address the drinking water crisis?
2. Are there any organizations or resources for Christopher to obtain health care or health guidance? What is the role of public health in managing his hypertension and supporting adequate access to care?

Public Health as a Population Health Support

With a focus of improving health for the entire general public, the public health system plays a critical role in supporting population health. Remember, population health focuses on the health outcomes for groups of people with consideration for the environmental, economic, social, behavioral, and other factors that influence health. Public health focuses on population monitoring and policy and program development that are carried out to achieve positive population health outcomes.

Illness surveillance and monitoring are one way public health supports population health. Public health departments and organizations collect and analyze data on the population's health to build a complete picture of rates of disease, injury, contamination, contagiousness, health impact, and other variables or indicators. They collect data through various channels, including targeted surveys and formal surveillance systems, such as hospital or county reports. All of this is done to predict emerging health threats and determine which health conditions

require intervention via resource allocation, programming, or policy implementation. Data can also be used to identify disparities, address social determinants of health, and support equitable access to health services or a healthy life. See Pandemics and Infectious Disease Outbreaks for more information on surveillance and detection.

Another example of public health facilitating population health is in emergency preparedness and response. Public health emergencies might include disease outbreaks, pandemics, natural disasters, or terrorism. Public health organizations plan for emergencies and develop response plans that guide the actions of individual people, families, schools, and other community organizations. Public health organizations may also ensure that people can practice evacuation and survival tactics before an emergency occurs. See Principles of Disaster Management for more information on the nurse's role in emergency preparedness and response.

Public health efforts prevent disease, promote health, and reduce risk. The strategies and policies that public health systems develop, promote, or enforce, such as vaccine requirements, nutrition counseling, access to outdoor exercise, indoor smoking bans, and alcohol consumption guidelines, reduce the burden of disease and risk to individuals and the community to improve the health of the general population (Figure 2.5).



FIGURE 2.5 Public health policy efforts supporting population health led to smoking bans in public places. Before the mid-1990s, smoking was legal in schools, restaurants, airplanes, and hospitals. When indoor smoking bans took effect varied by state, but the health consequences for smokers and nonsmokers alike have improved. Check out this website (https://openstax.org/r/wwwcdcgovto) to read about the impact of indoor smoking bans on workers across industries. (credit: "GRCC Smoking Ban" by Becky Spaulding/Flickr, CC BY 2.0)

2.4 The Core Functions and Essential Services of Public Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 2.4.1 Identify the 10 Essential Public Health Services.
- 2.4.2 Explain how the 10 Essential Public Health Services serve as a framework for addressing systemic and structural barriers contributing to health inequities.
- 2.4.3 Identify the three core functions of public health.
- 2.4.4 Describe how the 10 Essential Public Health Services align with the three core public health functions.

The CDC has identified 10 Essential Public Health Services (https://openstax.org/r/wwwcdcgov) that all communities should use to protect and promote health. They include (CDC, 2023d):

1. Assess and monitor population health status, factors that influence health, and community needs and assets
2. Investigate, diagnose, and address health problems and hazards affecting the population

3. Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it
4. Strengthen, support, and mobilize communities and partnerships to improve health
5. Create, champion, and implement policies, plans, and laws that impact health
6. Utilize legal and regulatory actions designed to improve and protect the public's health
7. Ensure an effective system that enables equitable access to the individual services and care needed to be healthy
8. Build and support a diverse and skilled public health workforce
9. Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement
10. Build and maintain a strong organizational infrastructure for public health

Public health professionals use these essential services to address health issues across the United States and ultimately improve population health outcomes. The 10 Essential Public Health Services do not expressly focus on health inequities and disparities; however, applying these principles to public health activities can help facilitate health justice across the population.

The essential services align with the three core functions of public health (https://openstax.org/r/malphorgs). The three core functions of public health include assessment, policy development, and assurance (CDC, 2023d).

- Assessment involves collecting and evaluating data to identify the health needs of populations. Public health professionals monitor health trends, identify health disparities and injustices, and identify health problems requiring intervention and resource support. Public health nurses may conduct health surveys, collate epidemiological data, determine existing health infrastructure in a community, and identify health needs.
- Public health professionals also develop policies or work with lawmakers to ensure policies support public health. Nurses in public health may evaluate evidence and engage affected community members to develop policies considering local social, economic, political, and other contextual factors.
- Assurance is a core function that facilitates justice. When the full depth and breadth of public health services, encompassing everything from ensuring clean air to providing vaccines and empowering clients to participate in the policy process, is available to all clients, the public health system is actively working to ensure health is attainable for all.

The core functions of public health are carried out via activities specified in the 10 Essential Public Health Services. Please see Table 2.1, which displays connections between the 10 Essential Public Health Services and the core functions of public health as well as examples of activities public health professionals may employ to address systemic and structural barriers that contribute to inequities in health and care.

Essential Public Health Service	Core Function	Activity to Address Health Inequities
1. Assess and monitor population health status, factors that influence health, and community needs and assets	Assessment: Public health agencies and professionals collect, analyze, and evaluate data to understand the barriers, opportunities, and status of health in a population. Data are also used to identify health disparities and determine the need for resources to facilitate health and ameliorate injustices.	Identify inequities and monitor progress in ameliorating them
2. Investigate, diagnose, and address health problems and hazards affecting the population	Assessment, assurance: Public health agencies and professionals study data to understand health problems and health risks, identify causes, and determine the best interventions to address health issues.	Examine and describe the causes of health inequities, including social determinants, exclusive policies, or inequitable access to health services and programming

TABLE 2.1 Essential Public Health Services, Core Functions, and Activities to Address Health Inequities

Essential Public Health Service	Core Function	Activity to Address Health Inequities
3. Communicate effectively to inform and educate people about health, factors that influence it, and how it can be improved	Assessment, policy development, assurance: Effective communication raises awareness and secures support for public health issues. Through effective communication, public health information is shared with community members and affected groups. Healthy behaviors and engagement in current public health services can be promoted. Effective communication supports involvement of community members as they can access accurate and timely health information and services.	Provide accessible and evidence-based health information to all people to empower clients, families, and communities in their own health processes
4. Strengthen, support, and mobilize communities and partnerships to improve health	Policy development, assurance: Public health agencies and professionals collaborate with communities, organizations, affected groups, and other key parties to build partnerships and develop resources that address health needs and improve health outcomes.	Meaningfully involve community organizations, local leaders, or affected groups to identify barriers to health equity and develop strategies to address them that the community finds realistic, useful, and acceptable
5. Create, champion, and implement policies, plans, and laws that impact health	Policy development: Policies are developed with support from and in response to the public health data collected and to prevent disease, avoid harm, and reduce risk in the community.	Ensure policies, plans, and laws facilitate equitable distribution of health resources and promote health equity across communities
6. Utilize legal and regulatory actions designed to improve and protect the public's health	Policy development, assurance: Public health departments and other agencies may implement and enforce regulations that protect the health of the public.	Ensure compliance with policies and programs developed to improve health equity, from nondiscriminatory practices to those that support healthy environments for all communities
7. Ensure an effective system that enables equitable access to the individual services and care needed to be healthy	Assurance: Public health professionals work to ensure that all population members can access health services regardless of their current health, employment, education level, or other determinants. Public health agencies reduce barriers to care to facilitate equity in access and opportunity.	Remove barriers to accessing care through promoting the availability and access of health services, clinics, mental health services, social programs, and other resources
8. Build and support a diverse and skilled public health workforce	Assurance: The public health workforce must have strength in numbers to adequately address health needs and strength in diversity and inclusion so that the workforce approximates the characteristics of the community served.	Promote inclusion and belonging in the public health workforce to support a more comprehensive understanding and community-relevant response to problems from public health agencies

TABLE 2.1 Essential Public Health Services, Core Functions, and Activities to Address Health Inequities

Essential Public Health Service	Core Function	Activity to Address Health Inequities
9. Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement	Assessment, assurance: Public health agencies evaluate programs and policies continuously to determine effectiveness, identify areas for opportunity, and ensure that resources are properly allocated to support health.	Include measures of equity and access in ongoing evaluation to inform quality improvement initiatives that lead to better population health outcomes related to reducing health disparities
10. Build and maintain a strong organizational infrastructure for public health	Assurance: Public health organizations, agencies, or departments carry out many functions essential to the well-being of the population. Administrative systems; information technology; and professionals to assess, plan, deliver, and evaluate services are just a few essential departments and duties of a public health organization that require adequate funding, equipment, technology, space, and personnel.	Guide organizational planning with principles of justice, belonging, equity, and inclusion to ensure eliminating disparities and inequities is a priority in public health

TABLE 2.1 Essential Public Health Services, Core Functions, and Activities to Address Health Inequities

Public/Community Health in Practice will discuss how nurses in public/community health carry out the 10 Essential Public Health Services and three core functions of public health.

2.5 Levels of Prevention

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 2.5.1 Identify and differentiate between the five levels of prevention in public health.
- 2.5.2 Differentiate public health efforts according to one of the three levels of prevention.

Much of public health focuses on prevention—preventing injuries, preventing acute illnesses, preventing chronic conditions, even preventing unexpected death. The five levels of prevention in public health are primordial, primary, secondary, tertiary, and quaternary (Figure 2.6). Not all public health professionals or nurses may consider primordial and quaternary prevention in their work; the concepts of primordial and quaternary prevention entered the health care lexicon in 1978 and 1986, respectively, while the other three levels of prevention are familiar to generations of clinicians (Kisling & Das, 2023; Martins et al., 2018).

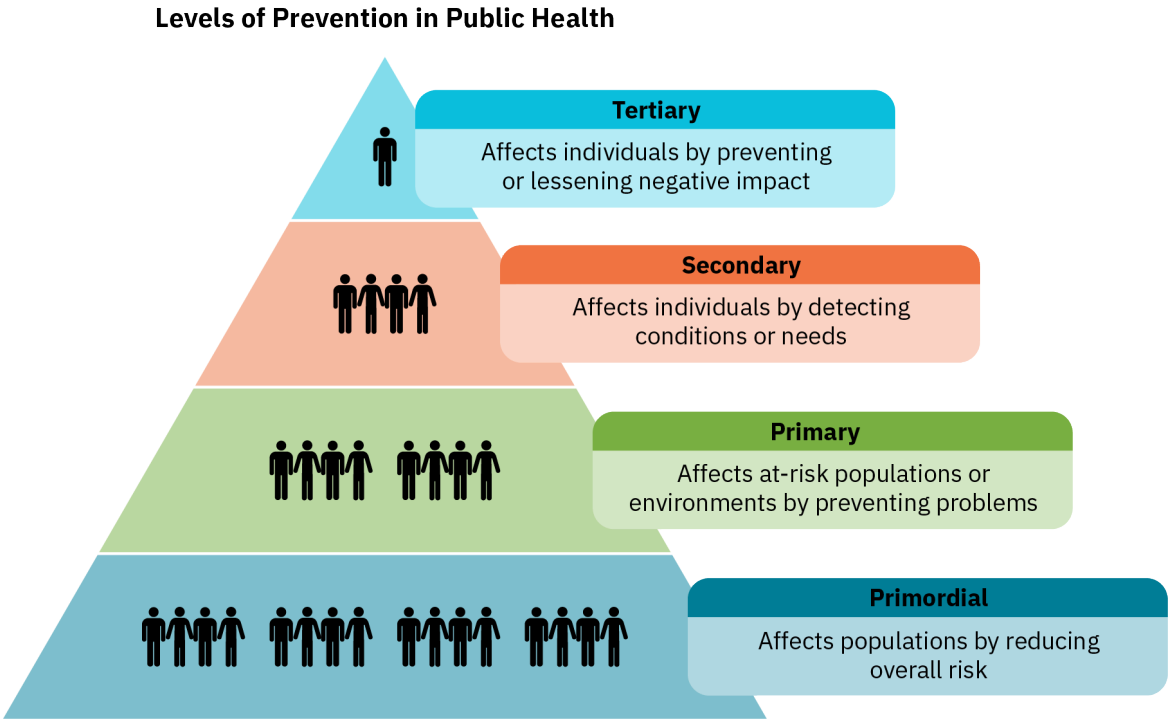


FIGURE 2.6 Levels of prevention in public health focus on different strategies to improve population health outcomes. (See U.S. Department of Health and Human Services, 2023a; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

- **Primordial prevention** focuses on risk factor reduction for an entire population and is usually carried out through large social changes and national policy (Falkner & Lurbe, 2020).
  - The American Heart Association has emphasized following the DASH diet (dietary approaches to stop hypertension), participating in physical activity, keeping a healthy body mass index, avoiding smoking, and consuming low or no alcohol as primordial prevention strategies to avoid risk factors for poor cardiac health (Lloyd-Jones et al., 2021).
- **Primary prevention** involves interventions to prevent an adverse health outcome from occurring. Primary prevention interventions may target the population, groups, and communities at high risk of a particular condition. Immunizations and education on healthy lifestyle factors are two examples of primary prevention strategies.
  - Medication overuse headache occurs when those who experience headaches take medications to address their pain but then have rebound headaches from using medications too often. A group of researchers designed and implemented an education campaign and guidance for primary care providers and clients on stopping overused medications to prevent this type of headache (Diener et al., 2019).
- **Secondary prevention** focuses on early disease detection to diagnose conditions early and promptly treat them to stop or slow progression and minimize impact. Screening is the primary activity in secondary prevention, but other activities may be conducted.
  - During an ischemic stroke, blood flow to part of the client's brain is blocked. Following identification of an ischemic stroke, a secondary prevention strategy includes surgical placement of a stent to help restore blood flow (Diener & Hankey, 2020).
- **Tertiary prevention** strategies aim to lessen the negative impact of a health condition and prevent complications. Treatment through medications, surgical procedures, complementary modalities, therapies, and rehabilitation approaches are tertiary prevention activities.
  - Researchers studied an intervention to help individuals who are unhoused during the transition to becoming housed. Over six months, youth who were unhoused received outreach-based case-management services, individual and group mental health support, and peer support. Following program participation, the youth displayed gains in employment, education, and connection to mental health services (Kidd et al., 2019).
- **Quaternary prevention** aims to protect clients from health interventions that might cause more harm than good (Martins et al., 2018). To carry out quaternary prevention, clinicians attempt to avoid conducting tests

and exams that are not essential to the client's plan of care or well-being. For social problems, public health professionals address the risks and harm associated with excessive intervention.

- For example, if a client presented to the urgent care clinic with a runny nose, cough, and no fever for three days with clear lung sounds, the clinician may reason that the client has a viral upper respiratory infection instead of a bacterial upper respiratory infection. Antibiotics would not be needed given the likely viral cause. Additionally, a viral panel to determine the causative agent would yield interesting results but would not change the client's plan of care. Regardless of the virus, the client would be asked to avoid other people and public spaces, possibly wear a surgical mask when around others, hydrate, get rest, and use over-the-counter medications as needed.

Table 2.2 provides some examples of the levels of prevention applied to different health conditions. Of note, quaternary prevention is not included in the table, as the quaternary activities are generally focused on what clinicians should *not* do.

Condition	Primordial	Primary	Secondary	Tertiary
Cervical cancer	Mandating health plan coverage of cervical cancer screening tests	HPV vaccine administration	Cervical cancer screening tests	Electrosurgical excision to remove diseased tissue from the cervix
Preeclampsia	Mandating health plan coverage of prenatal visits	Blood pressure monitoring and urine testing during pregnancy	Medications to control blood pressure	Immediate delivery of the baby on conversion to eclampsia
Migraine	Promoting migraine-friendly schools and offices	Educating individuals about migraine triggers	Medications for symptom relief and prevention	Specialized infusions for chronic pain management
Influenza	Use of masks, handwashing, and cough courtesy	Annual vaccine administration	Rapid influenza testing	Antiviral treatments
Food insecurity	Funding of social safety nets to reduce poverty and food inaccessibility	Food assistance programs and community gardens	Referrals to food banks and government assistance programs	Employment assistance, financial literacy, and budget training
Gun violence	Comprehensive gun control policies	Safe firearm storage education	Early identification of perpetrators and deployment of crisis response	Emergency care and support for victims
Youth social media and mental health	Positive digital citizenship and online behavior guidelines for students	Cyberbullying, privacy, safety, and screen time education	Twice-yearly mental health screenings in schools	Therapy programs to address mental health and promote coping strategies

TABLE 2.2 Levels of Prevention Examples

CASE REFLECTION

Levels of Prevention

Read the scenario, and then respond to the questions that follow.

You are working with the Lee family and focusing on the health of the children, Sunshine and Woody.

- Sunshine, life-threatening allergy: Sunshine just started kindergarten and has an epi-pen for a life-threatening nut allergy. She attended an after-school arts and crafts program twice a week but stopped going when Christopher lost his job. Her parents are considering home-schooling due to the increased incidence of school-based gun violence in America.
- Woody, toddler who is generally healthy and attends the daycare where Alexandra works.
- Sunshine and Woody love going to the park near their home with their parents. Both are excited to see their paternal grandparents, who will soon visit from South Korea.

1. What adverse health outcomes may occur but have not yet affected Sunshine and Woody? What are some related primary prevention interventions?
2. Based on their ages, what secondary prevention activities should be completed?
3. How may tertiary prevention activities be implemented for Sunshine's life-threatening allergy?
4. What primordial prevention efforts in the Lee family's city, state, or nation could positively impact their health?

Chapter Summary

2.1 Defining Public Health

Health should be attainable for all people. Public health facilitates health for all through organized efforts to prevent disease, reduce risk and disparities, and promote health. Educational programs, policies, health services, research, and direct care are all part of public health. While public health addresses the upstream and downstream factors of health conditions, its focus is upstream factors. Public health differs from population health in the focus and scope of work. Population health focuses on actions and initiatives of the health system to improve health outcomes. Public health involves collective action, public policy, governance, and health services to promote and protect the health of the population. Both specialty arms aim to achieve favorable health conditions for all.

2.2 Historical Perspectives on Public/Community Health

Historical events have shaped public health as a field and group of services. For example, the Industrial Revolution inspired changes to public health policies surrounding sanitation, workplace safety, and the existence of public health departments. Changes such as reforms in worker safety, sanitation, and establishing public health departments were driven by collective action and societal pressure. Concerns regarding environmental health threats and worker health remain, highlighting the need for ongoing public health efforts and a strong public health workforce. The work of public health in supporting health for all continues today. Public health activities, guidelines, policies, and regulations are essential in promoting health, reducing risk, preventing disease, and advocating for the health of all.

2.3 The Importance of Public/Community Health

Collaboration is needed to improve the nation's health. Different entities share data, resources, expertise, and programming to comprehensively improve public health. Collaborations may involve coordinating care services, applying the population perspective to clinical practice, identifying and addressing public health problems, and strengthening health promotion and risk reduction to provide a holistic approach to addressing complex health issues. Healthy People 2030 identifies priority actions and tactics for improving public health that are reviewed and used to shape local policies and programming. Public health plays a critical role in supporting population health. The strategies and policies that public health systems develop, promote, or enforce all reduce the burden of disease and risk to improve the general population's health.

2.4 The Core Functions and Essential Services of Public Health

The CDC identified 10 Essential Public Health Services that can be used to guide health promotion and protection activities. Essential services include assessing population health, investigating and addressing health problems, effective communication, community mobilization, policy development, legal actions, equitable access to care, building a skilled workforce, evaluation and research, and supporting organization infrastructure. The essential services align, and work in concert, with the three core functions of public health: assessment, policy development, and assurance. Assessment involves collecting and evaluating health data, policy development involves creating regulations supportive of health, and assurance supports access to services for everyone.

2.5 Levels of Prevention

The five levels of prevention in public health are primordial, primary, secondary, tertiary, and quaternary. Primordial prevention focuses on reducing risk factors for the public through social change and large-scale policy. Primary prevention aims to prevent adverse health outcomes, especially in high-risk populations or individuals. Tertiary prevention involves treatment to minimize the negative impact of a health condition and prevent complications. When professionals work to protect individuals from unnecessary interventions, they are engaging in quaternary prevention. Initiatives at each level contribute to promoting health and reducing the burden of disease.

Key Terms

colonialism the practice of powerful nations asserting control and exploiting other nations for political or economic purposes

community health a specialty area of nursing and health practice focused on the health and risks of a specific locality or community of people

notifiable infectious diseases diseases that, when identified, require health care providers to report

the occurrence to public health officials

paternalism authority figures making decisions for others in a manner that suppresses their identity and autonomy

primary prevention initiatives that aim to prevent an adverse health event from occurring, such as immunizations and health promotion education

primordial prevention initiatives that aim to reduce risk for a disease or condition across an entire population, such as social change and national policy

public health a specialty area of nursing and health practice focused on supporting the well-being of society through organized efforts to ensure health is attainable for all

public health emergencies illnesses or health conditions that pose a significant risk to communities that are either occurring or may imminently occur; the risk may be a substantial number of fatalities or disability

public health system a network of institutions, agencies, organizations, and resources that collaborate to promote, protect, and improve the health of populations and communities

quaternary prevention actions and decisions that protect overmedicalization of clients; protecting clients from interventions that might cause more harm than good

secondary prevention initiatives implemented to detect diseases or health conditions early on in their course so they can be diagnosed early and promptly treated to stop or slow progression and minimize impact; screening is the primary activity in secondary prevention

tertiary prevention initiatives that aim to lessen the negative impact of a health condition and prevent complications

Review Questions

1. Which action must the nurse take after a patient has been diagnosed with hepatitis A?
   a. Notify the Centers for Disease Control and Prevention
   b. Report the case to the local public health department
   c. Inform the National Institutes of Health
   d. Report the case to the primary care provider

2. Which of the following is an upstream intervention that a nurse may employ to address the high rate of sedentary lifestyles in a community?
   a. Counseling community members on the negative health effects of being sedentary
   b. Conducting body mass index screenings during a community health fair
   c. Obtaining funding for community walking trails
   d. Sending mailings with exercise tips to community residents

3. Which action describes a role of the nurse in public health?
   a. Improving individual outcomes
   b. Addressing racism in a community
   c. Performing a family assessment
   d. Recommending policies to prevent health problems

4. A community health nurse is teaching nursing students about the development of the modern public health system. Which reform movement will the nurse note as foundational to the modern public health system?
   a. Smoking tobacco indoors
   b. Child labor and working conditions
   c. Drinking water cleanliness
   d. Opioid prescribing

5. Which example demonstrates a nurse using public health data collection in support of population health?
   a. Surveying middle school children to identify which fruits and vegetables to include in school lunches
   b. Tracking attendance at a weekly blood pressure clinic at the local senior center to measure utilization
   c. Analyzing data from hospitals to identify the most common illnesses requiring emergency visits
   d. Interviewing a family living in an urban area to describe the emotional impact of gun violence

6. Which data would the nurse monitor when engaged in the public health core function of assessment?
   a. Blood pressure readings in an individual
   b. Health trends of a community
   c. Social supports of a family
   d. Immunization records of elementary school children

7. Which activity by the nurse supports the core function of assurance in public health?
   a. Surveying a population to determine health knowledge deficits
   b. Developing policies in collaboration with an interprofessional team
   c. Monitoring health data trends
   d. Ensuring access to health services for all

8. Which goal by a public health nurse is an example of quaternary prevention?
   a. Reducing the negative impact of a health condition and preventing complications
   b. Focusing on the early detection and treatment of disease to minimize impact
   c. Implementing policies to address the root cause of health issues and reduce disparities
   d. Protecting individuals from unnecessary interventions that may cause more harm than good

9. Which action by the community health nurse best describes tertiary prevention?
   a. Avoiding the overmedicalization of clients
   b. Reducing risk factors across a population
   c. Lessening the negative impact of health conditions
   d. Preventing an adverse health outcome from occurring

10. Which action by the nurse is a primary prevention strategy?
   a. Implementing a comprehensive education program for individuals with heart disease
   b. Designing a program to support the transition of young families to parenthood
   c. Recommending exercise programs to clients with degenerative joint disease
   d. Educating adolescents about reducing the risk of sexually transmitted infections

CHAPTER 3
Public/Community Health in Practice



FIGURE 3.1 A school nurse in a rural setting examines a client in collaboration with a nurse practitioner via telehealth. Community health nurses serve many roles and can bridge the gap between distant specialists and clinicians by providing essential care directly to people in their homes and communities. (credit: modification of work by Preston Keres/USDA/Flickr, Public Domain)

CHAPTER OUTLINE

3.1 Defining Public/Community Health Nursing
3.2 Public/Community Health Nursing Scope of Practice, Core Competencies, and Function
3.3 Public/Community Health Nursing Practice

INTRODUCTION Public/community health nurses act as change agents in their communities, working to support health outcomes for clients and the broader population. They play a pivotal role in advancing the health of clients, communities, and families and in achieving population health objectives. The actions of public/community health nurses align with the principles and functions of public health: assessment, assurance, and policy development. This chapter will explore historical perspectives on public/community health nursing, the foundation and functions of professional practice, and how public/community health nurses lead and deliver care across levels of prevention to show how the connection between nursing practice and public health supports population health.

As Foundations of Public/Community Health notes, the term "public/community health" is fairly common as the goals and functions of these closely related disciplines are interconnected. In nursing, community health has long been viewed as indistinguishable from public health (American Nurses Association [ANA], 2022, p.3.)

This chapter will continue to refer to Alexandra Lee and her family, whom the text has been following since What Is Population Health? to explore how population, public, and community health impact their well-being. Remember that the Lee family members include parents Alexandra, a daycare teacher who is pregnant, and Christopher, who has hypertension and is currently without a job or health plan coverage, and their children Sunshine, a full-time school student with a life-threatening allergy, and Woody, a generally healthy toddler.

3.1 Defining Public/Community Health Nursing

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 3.1.1 Define community health nursing practice.
- 3.1.2 Describe major historical events and factors that have shaped public health nursing practice.
- 3.1.3 Identify nurse leaders who have influenced public health practice.

Community health refers to a community's physical, mental, and social well-being and involves health promotion, risk reduction, and disease prevention efforts to support health. Nurses in community health care for an entire community. They identify, assess, and respond to the health needs of populations (Kulig, 2000). A **community** is a group of people with at least one characteristic in common. The characteristic may be a place, a personal attribute, or a common goal. Every community has individuals with health problems and health risks. For example, members of communities that lack access to clean drinking water share health risks related to the harmful chemicals in their water, dehydration, and concern about a water crisis. A community situated near a busy highway may notice increased rates of hearing loss. Yet another community may see high rates of gun violence, leading to fewer children engaging in outdoor play. All communities, regardless of location or their members' personal characteristics, have health risks and health needs and can benefit from the involvement of nurses with expertise in providing population health care. Remember, population health is an approach to supporting the health of people through research, data analysis, and health programming that considers the impact of public policy, environmental, social, behavioral, and other factors that might facilitate or hinder health for all.

CASE REFLECTION

Addressing a Water Crisis

Read the scenario, and then respond to the questions that follow.

The Lee family lives in a two-bedroom apartment in a quiet residential neighborhood. They can walk to a playground and walk or take public transit to other community spaces, but their city has a major problem. For years, the city has lacked adequate safe drinking water. Alexandra or Christopher must go to a city building once per week to obtain drinking water for the family. The family is supposed to bathe in this water, but the city does not provide enough water to satisfy drinking, cooking, and bathing needs.

1. What are the consequences of not receiving enough water to support drinking, cooking, and bathing?
2. Given the health status of Alexandra, Christopher, Sunshine, and Woody described in What Is Population Health? and Foundations of Public/Community Health, what risks do they face living in a city with a water crisis?
3. How can nurses contribute to addressing water crises?

Public/Community Health Nursing Historical Perspectives

In 1949, the National Organization of Public Health Nurses (the leading organization at the time) distinguished community health nursing from public health nursing (Kub et al., 2015). In a position statement, the organization stated that community health nursing involved caring for individuals and families with the latest available interventions of the post–World War II era, whereas public health nursing was primarily concerned with population-based strategies (Abrams, 2004). Some nursing experts consider that community health nursing fully emerged as a distinct specialty in the 1960s, describing the work of nurses who provided care not offered through government organizations (University of Maryland School of Nursing, 2023). Two decades later, the American Nurses Association (1980) convened an expert panel to develop a conceptual model of community health nursing. The panel defined community health nursing as a synthesis of general nursing practice and public health with a purpose of promoting and preserving the health of the population. Today, nurses who provide myriad services to communities across settings are recognized as community health nurses. Still, discourse continues within the nursing discipline regarding how public and community health nursing can be fully defined and distinguished as separate fields (Goodman et al., 2014; Kub et al., 2015; Schofield et al., 2011). As noted, the ANA (2022) views community and public health nursing as indistinguishable.

Many historical events have shaped public/community health nursing practice. Public/community health nurses have a role in responding to events that impact the population's health, whether the events center around war, struggle, progress, infectious diseases, or evolving social, cultural, and political influences. World War II, the emergence of HIV and AIDS, and the COVID-19 pandemic are three examples of events that presented opportunities for public/community health to change lives and for public/community health nurses to demonstrate their value.

World War II

In 1946, U.S. President Harry Truman described public/community health nurses as "one of the most important groups of health workers" following their contributions during the second World War (Associated Press, 1946). During that war nurses delivered care to the military and their families, the general public, and refugees. The independent nature and opportunities for leadership during combat care provision prompted many nurses to seek new professional roles with greater autonomy upon their return to the United States, and many found that public/community health nursing met this need (Barnum, 2011). Beyond the care nurses provided to manage acute and chronic health conditions, they educated the public to raise awareness of health and health issues, prevent the spread of diseases, and promote **vaccine uptake** (the proportion of the population receiving a vaccination).

The war era ushered in a baby boom, with 76 million births in the United States between 1946 and 1964 (Population Reference Bureau, 2023). This led to overcrowded labor and delivery units, and quick hospital discharges for birthing parents necessitated postpartum care as a part of public health. Public/community health nurses conducted home visits to provide postpartum care and led prenatal classes to support maternal/child health. Lawmakers and the public supported such nurse-led services due to a wartime rhetoric of maternal-child health as critical to military morale (Temkin, 1999).

Public/community health nurses were also critical in supporting veteran care and rehabilitation efforts following the war. As part of the national economic reconstruction, public/community health nurses became instrumental in addressing veterans' physical and emotional health needs (Buffum & Wolfe, 1995). As the oldest World War II veterans still need care, public/community health nurses continue to be involved in supporting community access, inclusion, and health for this population. From delivering care to promoting health through education and bringing care out of the hospital and to the public, public/community health nursing during this era highlighted the significant contributions of nurses in supporting a healthy population.

Legionnaires' Disease

Americans across the United States celebrated the nation's 200th birthday throughout 1976. The American Legion, a national nonprofit group supporting military veterans, held a convention of over 2,000 members in Philadelphia, Pennsylvania (Markel, 2018). Following the convention, several attendees sought care at the local Veteran's Administration hospital for a type of pneumonia that was unfamiliar to clinicians, was not diagnosed with typical testing, and failed to respond to antibiotics. Following four client deaths from this puzzling condition only 10 days after the convention ended, the hospital consulted the Centers for Disease Control and Prevention (CDC) for help in determining what was affecting the clients and why. In another two weeks, a total of 182 convention attendees (called *Legionnaires*) were ill, and 29 had died. In addition to the Legionnaires, a city bus driver, pedestrians who had been close to the convention hotel, and the hotel air-conditioning technician were ill. Ultimately, 182 people were infected and 29 died (Fraser et al., 1977). Investigations eventually identified a new deadly bacteria named *Legionella pneumophilia* (McDade et al., 1977). The bacteria were able to cause a particularly concerning level of harm because they could be aerosolized and spread via the air-conditioning system. Today, the CDC continues to monitor rates of Legionnaires' disease in the United States, which have been on the rise since 2000 (CDC, 2021).

HIV and AIDS

In the 1980s, the first recognized cases of human immunodeficiency virus (HIV) emerged in the United States (Dorwick et al., 2023). This new disease, about which little was then known, significantly impacted public/community health nursing, as the speed and reach of infections reached pandemic levels. Similar to Legionnaires' disease, clients initially presented with an atypical pneumonia that puzzled clinicians. The lack of knowledge about the disease and how it spread contributed to a great deal of fear, stigma, and homophobia among members of the public and the health care community. Public/community health nurses needed to learn as much as possible about the virus quickly to help prevent its spread and manage the condition. They also needed to combat the fear and misconceptions that led to social isolation, medical neglect, or worse for people with HIV or autoimmune deficiency

syndrome (AIDS) or those thought to be at risk for having or spreading HIV. Some clinicians and members of the public even refused to shake hands with a person who they thought might have contracted HIV or might have developed AIDS for fear of contracting it. Compassion and setting an example were key aspects of the work of public/community health nursing in response to the HIV epidemic. Public/community health nurses provided direct care to individuals who were living with HIV or had developed AIDS. They were also involved in developing centers and units dedicated to providing care for those with HIV or AIDS in a safe, supportive, and comprehensive manner.

Cliff Morrison, a nurse who was instrumental in collaborating with the public health department and developing the first unit for people with HIV or AIDS in San Francisco, has said, "This is a disease that is more geared toward nursing than anything else that we've ever seen because there isn't that much that medical science can do, but there's a lot that nurses can do . . .the most important thing we can do is to touch our patients" (Vieites, 2020, para 9). Cliff and his nurse colleagues were subjects of the documentary *5B* about this first HIV and AIDS unit. Today, treatments for both HIV and AIDS have improved, and the stigma associated with the disease in the United States has abated, but there is still progress to be made. Modern nurses have been called the "backbone" of the successful delivery of services to people living with both HIV and AIDS, especially in the most affected areas of the globe (Guilamo-Ramos et al., 2021). Public/community health nurses provide education to prevent HIV transmission and to promote testing, treatment monitoring, and counseling as part of the ongoing efforts to combat HIV and AIDS globally. Pandemics and Infectious Disease Outbreaks covers the HIV and AIDS pandemic in more detail.

COVID-19 Pandemic and Beyond

Public/community health nurses were pivotal in the U.S. response, adaptation, and continued flexibility to the COVID-19 pandemic. Public/community health nurses have provided care and guidance to affected clients and families, shared information about evolving knowledge and best practices for disease mitigation and management, and worked exceptionally hard to prevent the spread and impact of the virus (Edmonds et al., 2020). One key role of public/community health nurses during the first 18 months of the pandemic was **contact tracing** and **disease surveillance**. Disease surveillance may consist of many data collection activities that aim to inform a disease response plan. Contact tracing involves identifying the people who may have been around a client with a particular disease and are therefore at risk of acquiring or spreading it. As part of their role in contact tracing (https://openstax.org/r/whointnews), nurses identified community contacts of clients with COVID-19. Once they had identified the close contacts, nurses would inform them of their exposure to a person with COVID-19, review their risk of infection, and share information on the importance of testing and isolating.

Public/community health nurses were also instrumental in ensuring that as many Americans as possible could be protected, and protect others, from infection through COVID-19 vaccination. These nurses were at the forefront of disseminating information to the public about the importance and availability of vaccinations, managing pop-up vaccine clinics, and administering vaccines to millions. Public/community health nurses also addressed vaccine hesitancy and misinformation through public presentations and via social media to ensure clients were accurately informed and ready to become vaccinated (Jones & James, 2021). Throughout the COVID-19 pandemic, public/community health nurses advocated for policies supportive of health for community members and fellow clinicians. Many nurses used their collective voices to lobby policymakers and collaborate with elected officials to ensure organizations had proper guidelines to support disease mitigation, sufficient personal protective equipment, and exclusion and return policies in line with rapidly evolving evidence.

Today, public/community health nursing practice must remain flexible in the face of the changes that major events may bring about. The passage of the Affordable Care Act (ACA) in March 2013 marked a pivotal moment in American history and health care, aiming to increase care accessibility for all. Now, over a decade later, a record number of Americans subscribe to health plans available per the ACA (Luhby, 2023). Efforts to address health disparities and promote health equity have been central to the practice of progressive leaders and health care clinicians alike. However, these objectives gained a renewed sense of urgency in the public and professional eye following a national reckoning with racism and equity in the wake of the murder of George Floyd (Ayanian & Buntin, 2020). Amid these major events, the concerning crisis in mental health care has persisted. An ongoing national epidemic of substance use disorders (National Institute of Mental Health, 2023), a shortage of mental health care clinicians (Counts, 2023), stigma about mental health (American Psychiatric Association, 2020), and the evolving influence of social media on well-being have exacerbated this crisis (Mass General Brigham McLean, 2023). Through public health events like the HIV and AIDS epidemic and the COVID-19 pandemic, history offers nurses valuable lessons to apply

to contemporary health problems. Despite progress in many areas of public/community health, research, innovation, expanded access to care, and a national commitment to health promotion and disease prevention are essential to meeting population health goals. Leading the Way to Improving Population Health provides more information on these and other contemporary health challenges.

PUBLIC HEALTH NURSES: THE FIRST LINE OF PREVENTION

Access multimedia content (http://openstax.org/books/population-health/pages/3-1-defining-public-community-health-nursing)
This video profiles public health nurses who discuss some of the challenges present before COVID-19 and some that were precipitated by the pandemic.

Watch the video, and then respond to the following questions.

1. Which activities discussed in the video were most easily adapted to remote implementation? Which activities were likely challenging to implement in a remote setting?
2. How did you interact with public/community health nurses during the pandemic?
3. How should public/community health nurses, other health care providers, and the public leverage the increased visibility of public/community health nursing in the wake of the pandemic to secure support for this specialty?

Public Health Nurse Leaders

From advocating for policy reform and addressing health equity, to developing innovative approaches to bringing health to all, public/community health nurses throughout decades of practice have built a foundation for modern public health practices. Harriet Tubman, Sojourner Truth, and Lillian Wald are select examples of historical nursing leaders who have advanced public/community health nursing, while Cori Bush and Bonnie Castillo are contemporary nursing trailblazers. While this section includes information about these five exemplary nurses, they represent a fraction of the larger collective of nurses who have advanced client care and population health through numerous professional activities.

THE ROOTS OF HEALTH INEQUITIES

Florence Nightingale

Although nurses around the globe recognize Florence Nightingale as a pivotal figure in shaping modern nursing, her views perpetuated prejudiced, colonial, and classist ideals. In her publications, she demonstrated a belief in the superiority of British people over Indigenous populations. She used these notions to justify the disproportionate rates of death for Indigenous individuals in schools and health-care settings as necessary for societal progress. An alternate version of her *Notes on Nursing* text titled *Notes on Nursing for the Labouring Classes* reinforced exclusionary practices that marginalized individuals based on socioeconomic status.

The legacy of Florence Nightingale is marked by exclusionary and biased ideals, which perpetuate systemic disparities that contribute to contemporary health inequities. Given this context, this chapter will abstain from discussing her professional contributions to public/community health.

(See Bell, 2021; National Commission to Address Racism in Nursing, 2022; Robinson-Lane & Patel, 2022, and Sake-Doucet, 2020.)

Harriet Tubman and Sojourner Truth are often associated with their accomplishments as abolitionists, but they were also enslaved nurses. Although they, along with other Black nurses during the Civil War era, made great contributions to nursing and public health, those contributions are largely disregarded. Sojourner Truth practiced nursing as the private, enslaved nurse for a family in New York (Figure 3.2) (Painter, 2007). Freed following the state's Emancipation Act of 1827 (Baptiste et al., 2021), she spent the rest of her life advocating for the abolition of slavery, women's rights, humanitarian causes, and funding for nurse training. The U.S. War Department appointed Truth to work as a nurse at Freedman's Hospital in Washington, DC (Davis, 1999). The philosophy underpinning

Truth's practice was the belief that hospitalized clients would not be able to get well in unclean environments (Baptiste et al., 2021). That belief aligns with current public health efforts to promote infection control, clean air, and the importance of environmental factors in maintaining health across the population.



FIGURE 3.2 In addition to advocating for the end of slavery, Sojourner Truth worked as nurse with the National Freedman's Relief Association. (credit: modification of work "Sojourner Truth" by National Portrait Gallery, Smithsonian Institution, Public Domain)

Harriet Tubman was an enslaved nurse who ultimately escaped slavery (Figure 3.3). Her direct nursing care involved treating injured Black soldiers during the Civil War (Baptiste et al., 2021) and opening a care home for older Black adults in Auburn, New York (Donnelly, 2016; Matthias, 2023). Tubman notably and heroically worked to lead other enslaved people to freedom. Her efforts to fight oppression and promote human rights align with contemporary social justice and equity in access public health priorities (Donnelly, 2016).



FIGURE 3.3 Harriet Tubman provided nursing care to soldiers during the Civil War. (credit: modification of work "Harriet Tubman" by Horatio Seymour Squyer/Wikimedia Commons, Public Domain)

Some consider nurse Lillian Wald (Figure 3.4) to be the founder of modern public health (Buhler-Wilkerson, 1993). In 1893, she founded the Henry Street Settlement in New York City, which helped members of the public obtain resources such as nursing care in their homes, medicine, food, cab fares, loans, childcare, cleaning, and job training (Pittman, 2019). Wald was also a pioneer in upstream interventions, as she recognized that social reform, more than medical treatments, could bring about great change in health. She was a nurse dedicated to policy reforms to improve workplace conditions, housing, education, and recreation for the public. Lillian Wald believed that people in need must be met where they were, that partnerships between public and private organizations must be forged to support health, and that community resilience must be supported as a means of promoting health (Waters, 2022). These principles may look familiar, as they align with the 10 Essential Public Health Services discussed in Foundations of Public/Community Health that guide modern public health. The Henry Street Settlement remains in operation in New York City today, addressing the effects of urban poverty and promoting health for many families (Harris, 2019). Wald's groundbreaking and enduring work addressing social determinants of health lives on through the Henry Street Settlement and contemporary public/community health nursing. Caring Across Practice Settings discusses Wald's work as a public health nurse in more detail.



FIGURE 3.4 Lillian Wald was a public health nurse, social activist, and humanitarian who believed in bringing care and resources to the community. (credit: "Wald, Lillian, Miss" by Harris & Ewing/Library of Congress, No Known Restrictions)

Cori Bush is a member of the U.S. House of Representatives and registered nurse, representing Missouri's first congressional district (*About Cori*, 2022). Following the murder of Michael Brown in Missouri in 2014 (Associated Press, 2019), she became an influential figure in the local and national movements against police brutality and racial injustices, which inspired her entry into the political arena. Her lived experiences as a Black woman, a mother, being unhoused, surviving assault, working in low-wage jobs that did not support the cost of living, and background as a nurse influence her work and policy positions (Rothberg, 2022). In alignment with the central tenets of public/community health nursing and justice in health care, she supports legislation for a national $15 minimum wage, tuition-free college, criminal justice reform, and Medicare for All (Adams, 2021; Chávez, 2022, Rothberg, 2022). In 2023, Representative Bush was joined by Lauren Underwood of Illinois as a nurse serving in the U.S. Congress (ANA, 2023). As legislators, nurses are expertly positioned to support legislation that supports the health of the public and advances health equity for the nation.

Bonnie Castillo is a registered nurse and executive director of the largest nurse's union and professional association for registered nurses in the United States, National Nurses United (2023). She has been a leader in promoting health care for all and safety for nurses. In public/community health and beyond, if nurses cannot safely care for clients and communities, population health will not advance. For example, in January 2020, two months before the WHO declared COVID-19 a pandemic, she was already working to determine how prepared the U.S. health system was to

protect nurses and other professionals from the virus (Sharma Rani, 2020). As it turned out, the nation's health system was ill-prepared to protect nurses, as there was a shortage of adequate personal protective equipment (Schlanger, 2020). In response to this shortage, Castillo was one of the first nurse leaders to draw public attention to the personal protective equipment emergency (Huerta, 2020). Beyond her work to support nurses, she was also the director of the Registered Nurse Response Network (https://openstax.org/r/nationalnursesunited), a professional group that sends registered nurse volunteers to places affected by disasters.

THE ROOTS OF HEALTH INEQUITIES

Misrepresentation in Congress

Given their significant power and influence in the realm of laws and regulations, elected officials play a crucial role in shaping public health policies. Elected officials should represent their constituents—the people who live and vote in their districts. Representation occurs when elected congresspeople support their constituents' interests and needs and ensure that policies align with the health and preferences of those who elected them. One of the ways this representation can be compromised is when a mismatch occurs between the characteristics of constituents and the characteristics of a congressperson or congress at large.

Although diversity within the U.S. Congress has gradually increased over time, it falls short of adequately representing the U.S. population. In 2023, 13 percent of House members were Black, which approximates the percentage of the population that is also Black. However, the number of non-Hispanic White individuals in Congress is disproportionately high. Though non-Hispanic White people make up only 59 percent of the general population, 75 percent of congresspeople are non-Hispanic White (Schaeffer, 2023). Underrepresentation of groups and communities in Congress has implications for health policy decision-making.

At the local level, researchers recently studied the impact of Native American political representation during the COVID-19 pandemic. In places where Native American political representation and political power were more substantial, the number of COVID-19 cases on tribal lands was lower (Evans et al., 2022). Increased political representation can lead to effective and supportive public health policymaking.

Regardless of the national, state, local, or even institutional level, addressing misrepresentation and promoting diversity is a critical element of creating inclusive and equitable public health policies.

(See Evans et al., 2022; Schaeffer, 2023.)

3.2 Public/Community Health Nursing Scope of Practice, Core Competencies, and Function

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 3.2.1 Describe the scope and standards of practice of public/community health nursing.
- 3.2.2 Describe community/public health nursing core competencies.
- 3.2.3 Discuss the knowledge, skills, and attitudes associated with community/public health nursing practice.
- 3.2.4 Identify behaviors reflective of the Quad Council Coalition's community/public health competencies in caring for communities and populations.

Public/community health nursing is a specialty that focuses on improving the health of communities and populations through health promotion, disease prevention, risk reduction, community education, outbreak and epidemic management, and other initiatives. Nurses work in interprofessional teams with clinicians, community members, community partners, and policymakers to support ameliorating health disparities and injustices and ensure equitable access to a healthy life (Figure 3.5).



FIGURE 3.5 Public/community health nurses can impact health in many ways. Here, U.S. Representative Lauren Underwood speaks at an event celebrating the anniversary of the Family and Medical Leave Act. Underwood is a registered nurse elected to represent Illinois' 14th District in 2019. As such, she has been uniquely positioned to promote public health through national policy and legislation. She has created or supported bills on many health topics, such as mandating the removal of shackles to pregnant incarcerated individuals, ending preventable maternal mortality, climate change, and support for working families. (credit: Alyson Fligg/Department of Labor/Flickr, CC BY 2.0)

Scope of Practice and Practice Standards

The American Nurses Association (ANA) provides a scope of practice and practice standards that guide the current, evidence-based, ethical work of public/community health nurses. Across nursing specialties, such documents or guides are called "scope and standards." **Scope of practice** refers to the professional activities involved in a particular role. Defining a scope of practice helps nurses work within and to their level of qualification, expertise, and competence. **Standards of practice** are the principles and guidelines to which professionals must adhere. Standards of practice support nurses' decision-making and delivery of care. Standards can change with the dynamics of the nursing profession and depend on specific contextual factors like clinical situations and circumstances. Nurses across specialties and care settings are expected to be familiar with and adhere to the scope and standards relevant to their professional role.

The ANA identified the following nine core concepts of practice based on the dynamic and complex work of public health nursing:

1. Social determinants of health
2. Community collaboration
3. Population health
4. Ecological model of health: Micro- to macro-levels
5. Culturally congruent practice: Respectful, equitable, and inclusionary
6. Levels of prevention
7. Ethics
8. Social justice
9. Health equity (ANA, 2022)

These principles provide a framework to guide public/community health nurses in practice and support their work in addressing the population's needs and collaborating with varied parties.

Additionally, the ANA (2022) developed 18 standards of practice and professional performance for public health nursing. The standards for public/community health nursing follow standards set for nurses of any discipline or specialty by the ANA, which describe the who, what, where, when, why, and how of professional nursing practice

(ANA, 2023). The standards of professional public health nursing practice are:

- Assessment: Collects comprehensive data pertinent to the health status of populations.
- Diagnosis: Analyzes the assessment data to determine actual or potential diagnoses, problems, and issues related to health and well-being.
- Outcomes identification: Identifies expected outcomes for a plan specific to the health status of the population or situation.
- Planning: Develops a plan that prescribes strategies to attain optimal health and well-being.
- Implementation: Implements identified plans.
  - Coordination of care: Coordinates care delivery.
  - Health teaching and health promotion: Employs multiple strategies to promote health and safety.
  - Consultation: Provides consultation to enhance the abilities of diverse people to create and effect change.
  - Policy and regulatory activities: Participates in policy and regulatory activities related to health.
- Evaluation: Evaluates progress toward the attainment of goals and outcomes.
- Ethics: Practices ethically.
- Respectful and equitable practice: Practices with cultural sensitivity, humility, and safety in a manner that is congruent with principles of cultural diversity, inclusion, and equity.
- Communication: Communicates effectively in a variety of formats in all areas of practice.
- Collaboration: Collaborates with the population and others in the conduct of nursing practice.
- Leadership: Leads within the professional practice setting and the profession.
- Education: Seeks knowledge and competence that reflect current nursing practice and promote futuristic thinking.
- Evidence-based practice and research: Integrates evidence and research findings into practice.
- Quality of practice: Contributes to quality nursing practice.
- Professional practice appraisal: Evaluates personal nursing practice in relation to professional practice standards, guidelines, and relevant law.
- Resource utilization: Uses appropriate resources to plan and provide nursing and public health services that are safe, effective, and financially responsible.
- Environmental health, planetary health, and environmental justice: Practices in an environmentally safe, fair, and just manner (ANA, 2022).

Using this scope and these standards, public health nurses can help create healthier environments, foster partnerships that promote and protect health, and advocate for justice and health equity in practice.

Core Competencies

Public/community health nurses must possess certain knowledge, skills, and attitudes to effectively fulfill their professional role and successfully meet the community's health needs. In general, nurses need knowledge of epidemiology, environmental health, social determinants of health, statistics, evidence-based practice, health promotion, and factors that impact health. Public/community health nurses need strong communication and relationship-building skills to effectively engage with the community. Attitudes in alignment with social justice, health equity, and advancing health, as well as cultural humility and respect for all community members, are needed to fulfil the roles and responsibilities. Concepts and content related to these professional attitudes are threaded throughout chapters in this text. However, please see Structural Racism and Systemic Inequities, Designing Culturally and Linguistically Appropriate Programs, Managing the Dynamics of Difference, and Advocating for Population Health for in-depth information. The term **competencies** refers to the foundational knowledge, skills, and attitudes that nurses need to meet their clients' needs. Competencies represent technical skills, personal qualities, and professional behaviors that support successful work in a certain area. In public/community health nursing, four leading nursing organizations formed the Quad Council Coalition in 1988 and collaboratively developed the Community/Public Health Nursing Competencies (https://openstax.org/r/cphnoorgwp) in 2018. The Quad Council member organizations include the Alliance of Nurses for Healthy Environments, the Association of Community Health Nurses, the Association of Public Health Nurses, and the American Public Health Association-Public Health Nursing Section (Quad Council Coalition Competency Review Task Force, 2018).

The competencies include major domains and leveled competencies for public/community health nurses to follow based on their role. Tier 1 competencies apply to nurse generalists who are not in management positions, while tier

2 and 3 competencies are for public/community health nurses who are managers and supervisors or executives, respectively. Applying the domains and competencies of public/community health nursing in professional practice is critical. Public/community health nurses might be the only clinician or care provider some community members have reliable access to, see regularly, or are comfortable talking with. Nurses in community health have a duty to stay abreast of evidence and clinical guidelines that could impact the health and care of the community. Table 3.1 displays the domains, select generalist competencies, and sample public/community health nursing applications to practice associated with each. Please note the table is not exhaustive; see the full Quad Council Coalition document linked above for a comprehensive listing.

Domain	Generalist Competencies	Examples of Nursing Actions
Assessment and Analytic Skills *Focus on identifying and understanding data, turning data into information for action, assessing needs and assets to address community health needs, developing community health assessments, and using evidence for decision-making*	• Use a data collection plan that incorporates valid and reliable methods and instruments for the collection of qualitative and quantitative data to inform the service for individuals, families, and a community. • Use information technology effectively to collect, analyze, store, and retrieve data related to public health nursing services for individuals, families, and groups.	Assess for postpartum depression during home visits for new parents using the validated Edinburgh Postnatal Depression Scale. Enter collected data into a secure computer file for analysis.
Policy Development/ Program Planning Skills *Focus on determining needed policies and programs; advocating for policies and programs; planning, implementing, and evaluating policies and programs; developing and implementing strategies for continuous quality improvement; and developing and implementing community health improvement plans and strategic plans*	• Demonstrate knowledge of laws and regulations relevant to public health nursing services. • Comply with organizational procedures and policies.	Review the local nurse practice act, public health nursing scope and standards of practice, job description, and relevant employer policies regularly.

TABLE 3.1 Community Health Nursing Competencies

Domain	Generalist Competencies	Examples of Nursing Actions
Communication Skills *Focus on assessing and addressing population literacy; soliciting and using community input; communicating data and information; facilitating communications; and communicating the roles of government, health care, and others*	• Apply critical thinking and cultural awareness to all communication modes (i.e., verbal, nonverbal, written, and electronic) with individuals, the community, and other parties. • Use various methods to disseminate public health information to individuals, families, and groups within a population.	• Listen attentively to community member reports of health and demonstrate empathy and compassion in conversation. • Prepare health information for distribution via printed flyers, website posting, and email blasts.
Cultural Competency Skills *Focus on understanding and responding to diverse needs, assessing organizational cultural diversity and competence, assessing effects of policies and programs on different populations, and taking action to support a diverse public health workforce*	• Deliver culturally responsive public health nursing services for individuals, families, and groups. • Explain the benefits of a diverse public health workforce that supports a just and civil culture.	• Ensure health recommendations and suggestions for community participation align with cultural needs; for example, avoid suggesting attending community events that occur during religious holidays. • Support the hiring of colleagues that ensures the characteristics and demographics of the workforce approximate the community.

TABLE 3.1 Community Health Nursing Competencies

Domain	Generalist Competencies	Examples of Nursing Actions
Community Dimensions of Practice Skills *Focus on evaluating and developing linkages and relationships within the community, maintaining and advancing partnerships and community involvement, negotiating for the use of community assets, defending public health policies and programs, and evaluating & improving the effectiveness of community engagement*	• Assist individuals, families, and groups in identifying and accessing necessary community resources or services through the referral and follow-up process. • Build preferences into public health services.	• Remain aware of all community agencies, events, programs, and opportunities for social prescribing. • Evaluate client, family, and community comfort level and agreement with participating in selected activities.
Public Health Sciences Skills *Focus on understanding the foundation and prominent events of public health, applying public sciences to practice, critiquing and developing research, using evidence when developing policies and programs, and establishing academic partnerships*	• Assess hazards and threats to individuals, families, and populations and reduce their risk of exposure and injury in natural and built environments (i.e., chemicals and products). • Model public health science skills when working with individuals, families, and groups.	• Observe for methods of cleaning products and other household chemical storage during a pediatric home visit. • Guide practices with evidence-based resources obtained from the scholarly literature and guidelines of reputable organizations.

TABLE 3.1 Community Health Nursing Competencies

Domain	Generalist Competencies	Examples of Nursing Actions
Financial Planning, Evaluation, and Management Skills *Focus on engaging other government agencies that can address community health needs, leveraging public health and health care funding mechanisms, developing and defending budgets, motivating personnel, evaluating and improving program and organization performance, and establishing and using performance management systems to improve organization performance*	• Interpret the impact of budget constraints on the delivery of public health nursing services to individuals, families, and groups. • Organize public health nursing services and programs for individuals, families, and groups within budgetary guidelines.	• Periodically review the out-of-pocket cost and health plan coverage of interventions suggested to clients and families. • Prioritize free or low-cost recommendations for health promotion and risk reduction activities.

TABLE 3.1 Community Health Nursing Competencies

Domain	Generalist Competencies	Examples of Nursing Actions
Leadership and Systems Thinking Skills *Focus on incorporating ethical standards into the organization; creating opportunities for collaboration among public health, health care, and other organizations; mentoring personnel; adjusting practice to address changing needs and environment; ensuring continuous quality improvement; managing organizational change; and advocating for the role of governmental public health*	• Apply systems thinking to public health nursing practice with individuals, families, and groups. • Model personal commitment to lifelong learning, professional development, and advocacy.	• Recognize the role and utility of health services across the care continuum. • Engage in continuing education opportunities relevant to the needs of the community served.

TABLE 3.1 Community Health Nursing Competencies

Public/community health nurses have a vital role in meeting the health needs of a community. Their expertise in epidemiology, environmental health, social determinants, statistics, evidence-based practices, and health promotion impacts the communities they serve and the greater population. These nurses build relationships with community members and local agencies to make appropriate connections and referrals in support of health. Nurses in this area must guide their professional practices with a social justice lens, recognizing that health disparities and inequities in communities exist and influence health. The Community/Public Health Nursing Competencies provide a framework for nurses in community health to follow to meet the needs of the community holistically.

3.3 Public/Community Health Nursing Practice

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 3.3.1 Identify how the public health system interfaces with nursing care.
- 3.3.2 Explain the nurse's role in public/community health.
- 3.3.3 Describe how public/community health nurses facilitate the core functions of public health.
- 3.3.4 Explain why public/community health nursing is essential to promoting and protecting the health of communities.

Using the Community/Public Health Nursing Competencies as a guide, nurses in this specialty significantly impact the health of populations. Public/community health nurses collaborate with clinicians across the care continuum to bridge the gap between care that is offered or available and care that is needed or accessed. Health promotion and

education, social prescribing, community assessments, advocacy, and disease and disaster response are several examples of essential public/community health nursing interventions that promote and protect the health of community members.

Interface of Public Health with Nursing Care

Public health and clinical care can interact on a daily basis to support health across populations of clients. Some interactions are more visible than others, such as during times of a global pandemic. Despite increases in the visibility of and focus on public health during the COVID-19 pandemic, collaborations between public health and clinical care have been longstanding and ongoing. Such collaborations support both communicable and noncommunicable health concerns.

During the COVID-19 pandemic, public health efforts such as global, national, county, or city-specific disease surveillance and reporting played a crucial role in guiding clinical care decisions. Such efforts helped hospitals and other care facilities predict the need for services, directed policies on physical distancing and whether businesses and other community centers were open to the public, and helped clients and families evaluate the risk of socializing with those from other households. Public health efforts such as requiring masks when in public helped individuals, families, and essential workers avoid spreading or contracting COVID-19 (Cowger et al., 2022; Kociolek et al., 2022). Places that implemented public health policies to facilitate distancing, such as mandating quarantine and isolation when ill, school closures, household confinement, and limiting social gatherings, coincided with fewer COVID-19 cases and lower disease transmission rates than in places that did not implement such procedures early or stringently (Zweig et al., 2021). As public health efforts in prevention, screening, and later vaccination aimed to reduce the clinical care needed across the globe, clinical care efforts were supported by public health initiatives (Figure 3.6). Clinical care included treatment of active infection, but also testing and diagnosis in established care centers and drive-through operations. Public health efforts also supported the availability of needed medications, supplies, and equipment to treat active infections in hospitals and homes. Once a vaccine was developed, clinical care included vaccine administration. At the same time, public health initiatives determined priority groups for vaccination, established vaccine clinics across communities, and promoted vaccines as a method of health promotion and disease control.



FIGURE 3.6 A public health worker in Hawaii distributes at-home COVID-19 testing kits at a drive-through distribution event in March of 2022. Throughout the COVID-19 pandemic, public health organizations across the globe orchestrated accessible, convenient, and safe drive-through events for obtaining point-of-care COVID-19 testing, vaccines, and home test kits. (credit: Navy Medicine/Flickr, Public Domain)

Infectious disease response and control presents an opportunity for public/community health frameworks to guide clinical care and for nursing care to support public/community health goals. However, public/community health and

nursing care also work in concert to address noncommunicable diseases and health concerns. Addressing the population's mental health is a key example. Mental health impacts people of all genders, races, ages, occupations, parenting status, and education levels. In fact, 25 percent of youth experience depressive symptoms, 35 percent of adults aged 45 years and older feel lonely, and the suicide rate among all nurses is 18 percent higher than the U.S. general population, with female nurses having twice the risk of dying by suicide than the general population (Blazer, 2020; Lee and Friese, 2021; Office of the Surgeon General [OSG], 2021). Public health agencies may develop promotional campaigns to reduce the stigma surrounding mental health disorders and educate the public on signs that indicate help is needed for a mental health concern. Clinicians provide comprehensive mental health care that can include similar education personalized for the client. Public health agencies may work with clinicians to implement standard mental health screening tools into every preventative health encounter and then provide referral sites where other clinicians can offer expert mental health care and counseling. Clinicians may also engage in public health data sharing, making relevant public health agencies and organizations aware of the rates of mental health concerns in a community or nationally. Such sharing supports proper funding of programs to support mental health for all and treat mental illness among affected clients.

WHY ARE EVERYDAY INJURIES A PUBLIC HEALTH ISSUE?

Access multimedia content (http://openstax.org/books/population-health/pages/3-3-public-community-health-nursing-practice)

In this video, Dr. Deboki Chakravarti of the American Public Health Association (APHA) shares information about unintentional injuries as a public health issue. Unintentional injuries are another example of a non-communicable category that presents an opportunity for public health and clinical care to interact.

Watch the video, and then respond to the following questions.

1. Dr. Chakravarti shares information about public health initiatives aimed at addressing injuries across age groups. She discusses unsafe sleeping conditions for infants, drowning for young children, car accidents for teens, and workplace injuries for adults. What are some components of clinical care that work in concert with public health interventions to address these accidents?
2. Since the video has been published, new evidence has emerged that names gun violence as the leading cause of death in children (Goldstick et al., 2022). Can you think of the public health and clinical care interventions that can address this public health crisis?

Remember that efforts across clinical and health areas might address upstream or downstream factors. As discussed in What Is Population Health? upstream factors involve actions and initiatives that address the root causes of health issues, whereas downstream factors include responses to health issues without focusing on solving or preventing the health problem. Thinking about how to create meaningful change in upstream factors can be overwhelming and is much more labor-intensive than, say, teaching a client about the safe administration of medications. Importantly, it is not the responsibility of *one* nurse to change upstream factors or to move an entire health system to a focus on prevention over treatment. Working with individual clients who have diagnosed conditions is, of course, important to their health and quality of life and is a duty of nurses. However, nurses also have a duty to support meaningful upstream change for their clients and the community at large. Nurses can contribute to advancing this area through advocacy and activism, which are detailed in Advocating for Population Health. Nurses are well positioned, and have a professional duty, to leverage their personal, social, and political capital (Florell, 2021) as members of a highly trusted profession to engage in nursing activism and advance health equity through upstream change.

The Role and Significance of the Community Health Nurse

As frontline clinicians on whom community members rely for health care and guidance, public/community health nurses play a crucial role in sharing health information, promoting health through education and counseling, and implementing preventative care activities. Public/community health nurses meet the needs of community members seeking health guidance and health care through several key roles and responsibilities.

Health Promotion and Education

Public/community health nurses educate clients, families, and communities on health topics and conditions,

preventative measures, and approaches to wellness. For example, nurses in this specialty may teach caregivers of toddlers about nutrient-dense foods that picky eaters may enjoy or hold a weekly session to help seniors on a fixed income create recipes based on the local grocery store's weekly sale flyer. Nurses may employ many teaching methods, including conducting live and in-person class sessions, holding Zoom meetings, or distributing printed material. Nurses can create their own teaching material informed by current research, best practices, or clinical guidelines or may access freely available toolkits. Toolkits are often developed by health departments, colleges and universities, or national health organizations. For example, teaching toolkits are available for HPV vaccination (https://openstax.org/r/jhforgadmin), substance-use prevention (https://openstax.org/r/preventionab), healthy sleep (https://openstax.org/r/sleepeducation), hypertension (https://openstax.org/r/heartorgenh), interpreting nutrition labels (https://openstax.org/r/fdanutritioneducati), and many other health topics.

Health promotion efforts also involve screening for conditions and diseases so that the public/community health nurse can make appropriate and early referrals for care. A nurse may offer monthly vision and hearing screenings to alert community members to the need for sensory aids. Preventing diseases before they occur through education and other health promotion activities helps communities reduce disease prevalence, incidence, and impact. This is important for the health of the population but also decreases the burden and spending on the health care system and resources of the community. In fact, one study of a nurse-led community-based clinic in which clients could receive nonurgent health care and guidance demonstrated a $34 savings to society for every $1 invested (Bicki et al., 2013). While there is some rhetoric regarding the utility and cost of nurse-led clinics, a comprehensive review determined that these clinics do not increase health care costs and have improved client satisfaction with and access to health services (Connolly & Cotter, 2023). Ongoing rigorous research regarding the role of nurse-led initiatives is needed to reach additional conclusions regarding their impact on population health.

Social Prescribing

Social prescribing involves referrals to community resources other than those traditionally considered directly related to the health care setting. Social prescribing is a cost-effective way to support clients and families with chronic conditions with symptom management and health promotion (Husk et al., 2020). Public/community health nurses may facilitate connections to community agencies that support health and social needs, such as financial planning, a walking group, or a community garden (Figure 3.7). Activities like ballroom dancing, volunteering, seeing plays, or visiting museums can benefit clients' emotional health, social connectedness, and feelings of empowerment (Chen, 2022). Social prescribing interventions can engage the diverse population in social and health-promoting experiences that also decrease utilization of formal health care services and prevent development of chronic conditions (Howarth et al., 2020). To learn more about this topic, watch the video What is social prescribing? (https://openstax.org/r/socialpresc).



FIGURE 3.7 Clarence Webb proudly displays a bunch of kale grown at the community garden *Grow Dat Youth Farm* in New Orleans. Community members who learn to grow food here have opportunities to explore and practice sustainable agriculture, engage in community leadership, and support food security and food justice. Referrals to community agencies like community gardens go beyond the conventional boundaries of nursing care and exemplify the concept of social prescribing. (credit: Kirsten Strough/USDA/Flickr, Public Domain)

HEALTHY PEOPLE 2030

Food Insecurity

Food insecurity (https://openstax.org/r/healthypeoplep) refers to limited or uncertain access to food. Income, employment, race/ethnicity, and disability may all be contributing factors. Neighborhood access to grocery stores impacts food security, given the limited options and higher prices at smaller convenience stores. Additionally, lack of personal transportation or access to public transportation to travel to a faraway grocery stores can precipitate food insecurity. The Healthy People 2030 program aims to reduce household food insecurity and hunger, eliminate very low food security in children, and increase the consumption of fruits and vegetables among people ages 2 and older.

Community Assessments

Nurses in community health can assess communities or groups within communities to determine health problems, health risks, and the need for teaching or other interventions. Creating a Healthy Community describes community assessments in depth. Community assessments can also reveal problems or areas of opportunity related to health equity. Nurses in community health address health disparities, promote equity, and facilitate justice.

Health Advocacy

Using results of community assessments and professional experiences with addressing the health needs of the community, the public/community health nurse can advocate for services and programming that the community needs to achieve health. Additionally, public/community health nurses can engage in proactive advocacy. Public/community health nurses participate in safeguarding (e.g., tracking medical errors), empower clients and families with information about their health condition and possible alternatives to care plans, liaise between families and providers, and champion social justice (Abbasinia et al., 2020). Advocating for Population Health discusses the nurse's role as advocate in depth.

CASE REFLECTION

Health Education, Social Prescribing, and Health Advocacy

Read the scenario, and then respond to the questions that follow.

As you have gotten to know the Lee family, you have also improved your public/community health nursing skills. You are interested in employing health education, social prescribing, and health advocacy in your professional role to address some of the health concerns of the Lee Family.

1. What health advocacy could you conduct to address the Lee family's lack of access to clean water?
2. What health education could you provide, and to whom, to support Sunshine's safety given her life-threatening allergy?
3. What social prescriptions might you make to the entire family?

Disease and Disaster Response

Public/community health nurses prevent the spread of diseases across communities through the following by:

- Administering immunizations
- Screening for infectious and communicable diseases
- Providing education on infection control
- Educating community members on disease mitigation and self-assessments

Public/community health nurses are at the forefront of response efforts during natural disasters, mass casualty incidents, and other crises. These nurses provide immediate, on-site care to those affected physically and emotionally by disasters. They also coordinate resources, connect community members to needed resources, and support those affected in efforts to rebuild or return to predisaster levels of functioning. Importantly, public/community health nurses collaborate with public services (e.g., police and fire) to develop plans for responding to disasters in the community. Addressing disasters and engaging in disaster planning helps the public/community health nurse build community resilience. Through building confidence in the community's ability to respond to a disaster, creating networks of support, and expertly managing health needs in an evolving situation, these nurses minimize the negative health impact of actual or potential disasters.

The professional services public/community health nurses offer and roles they fill are essential to promote and protect the health of communities. Such nursing efforts largely focus on prevention and early intervention to address health issues before they develop or contribute to disability and decreases in quality of life. With a focus on prevention and health promotion rather than reacting to diagnoses, public/community health nurses can empower individuals, families, and communities to make informed decisions about health and be involved in their own care and needs. Through assessments and related advocacy, nurses facilitate additional community empowerment, as community members may be involved in local health decision-making processes and be invested in participating in health programming. Finally, emergencies, disasters, and disease outbreaks significantly compromise a community's health. Public/community health nurses establish response plans, coordinate and mobilize resources during a disaster, and ensure that resources needed to stay safe and healthy are available in times of crisis (Figure 3.8). Principles of Disaster Management discusses this topic in more detail.



FIGURE 3.8 A community health worker distributes water, diapers, personal care products, and other essential supplies to community members of St. John, USVI, following a natural disaster. Resource management and supply distribution following natural disasters such as floods, fires, and hurricanes pose significant challenges due to co-occurring infrastructure collapse and logistical constraints. Public/community health nurses can manage and organize the distribution of medical and essential supplies and ensure equitable distribution of resources following a disaster. (credit: Jocelyn Augustino/FEMA/Flickr, Public Domain)

Public/Community Health Foundations and Nursing Practice

Nurses provide services to clients, families, groups of people, and the larger community in a specific place. The place may be a school or school district, health center, prison, or memory care facility, as only a few examples. Public/community health nurses may set goals related to each of the essential services and core functions, implement interventions, and lead aspects of care in the community to meet the public's health needs and broad population health goals. They provide direct care, education, and assessments and fill other duties to promote health, prevent disease, reduce risk, and support the health of the determined community. Regardless of the activity or step of the nursing process addressed, providing care to communities, and not just in the community, is an important consideration when thinking about what role a nurse may be filling. To provide care to the community, public/community health nurses guide their practice with the core functions of public health, the 10 Essential Public Health Services, and the levels of prevention.

Foundations of Public/Community Health discussed the 10 Essential Public Health Services (https://openstax.org/r/publichealthgatewaya) that all communities should use to protect and promote health in communities. The core functions of public health are carried out via these activities. Table 3.2 connects the 10 Essential Public Health Services with an exemplar regarding public/community health nursing care supporting children's dental health.

Essential Public Health Service	Example Supporting Dental Health in Children
1. Assess and monitor population health status, factors that influence health, and community needs and assets	A public/community health nurse receives a report from a school nurse that many elementary-school children have obvious and painful dental caries. They collect data on the number of dental offices in the county, the cost of attending a dental appointment, and methods of accessing the dental offices. They also collaborate with the school nurse to identify any dental education efforts in the school setting.
2. Investigate, diagnose, and address health problems and hazards affecting the population	The public/community health nurse determines that there are only two dental offices in the county that provide care to children, a visit costs 30 percent of the average weekly salary for families, and public transportation options to access the dental offices are limited. The school has limited education on healthy teeth, brushing, and flossing for first-grade students. The nurse has identified issues in access to dental care for children and preventive teaching and will work to address these gaps in health care.
3. Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it	The public/community health nurse discusses methods of increasing dental health education in the school with the school nurse, teachers, and principals. They use funds available to purchase a toothbrush, toothpaste, and flossers for every child in the county elementary schools. They collaborate with the school team to develop a short video and flyer for parents about dental health in children.
4. Strengthen, support, and mobilize communities and partnerships to improve health	The public/community health nurse builds a relationship with the dental offices in the county to determine the feasibility of offering dental services to the children while at school.
5. Create, champion, and implement policies, plans, and laws that impact health	The public/community health nurse communicates findings about unaddressed dental caries in children to the county and state lawmakers. They propose a funding initiative to subsidize the cost of dental visits for children to the two offices offering pediatric services and funding for a mobile dental unit that could visit each school once per month to carry out dental exams and fillings.
6. Utilize legal and regulatory actions designed to improve and protect the public's health	The public/community health nurse contacts the county water department to ensure that water is being adequately fluoridated per state law.
7. Assure an effective system that enables equitable access to the individual services and care needed to be healthy	The public/community health nurse files a formal request with the public transportation bus unit to develop additional routes that include stops proximal to the dental offices so families without reliable transportation may access the dental office.

TABLE 3.2 Ten Essential Public Health Services Related to Public/Community Health Nursing Care

Essential Public Health Service	Example Supporting Dental Health in Children
8. Build and support a diverse and skilled public health workforce	The public/community health nurse involves community members with diversity in experiences, gender, race, and dental health history by recruiting older students from the high school to serve as interns three hours per week to mentor the elementary-school students on dental care.
9. Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement	The public/community health nurse collects data on the number of children evaluated and treated in the mobile dental van and increases in dental office visits with the newly added bus routes. They determine that the new bus routes are underutilized for dental office visits, so they request public funds be re-allocated from the new bus routes to funding additional dental van days at each elementary school.
10. Build and maintain a strong organizational infrastructure for public health	The public/community health nurse will maintain and develop new partnerships with dental and health-focused organizations in the county and beyond and will continue to collect data to support the ongoing need for supplies and funding to ensure dental caries are prevented, identified, and addressed in elementary-school children.

TABLE 3.2 Ten Essential Public Health Services Related to Public/Community Health Nursing Care

HEALTHY PEOPLE 2030

Increase the proportion of children and adolescents who have dental sealants on 1 or more molars

Healthy People 2030 has set a goal to increase the proportion of children and adolescents (https://openstax.org/r/healthypeopleoba) who have received dental sealants on one or more primary or permanent molar teeth. Dental sealants are coatings that are painted on teeth and can prevent tooth decay. This preventive intervention can help children avoid cavities for years. School-based dental programs are one way to ensure all children have access to dental sealant regardless of race/ethnicity or income, two determinants with noted disparities in access to this component of care.

Thinking back to Foundations of Public/Community Health, recall that the essential services align with the three core functions of public health (https://openstax.org/r/malphorgsitea): assessment, policy development, and assurance. Please see Table 3.3 for examples of how community/public health nurses implement the core functions of public health across a variety concerns and conditions affecting the health of the public.

Topic	Assessment Collecting and analyzing data to:	Policy Development Collaborating with local legislators, businesses, schools, and other organizations on policies supporting:	Assurance Providing:
Asthma	Identify the prevalence of asthma, common triggers, and temporal patterns in exacerbations	Asthma-friendly environments and improved air quality	Hands-on teaching regarding the use of asthma medications and devices

TABLE 3.3 Public/Community Health Nursing Implementation by Core Function

Sexually transmitted infections (STIs)	Determine STI rates, high-risk populations, and trends in transmission	Access to confidential and affordable testing and treatment	Education and counseling on prevention and treatment, confidential partner notification and contact tracing
Headache disorders	Describe the prevalence and impact of headache disorders	Headache-friendly workplaces and school/work attendance flexibility	Support groups for community members with chronic headache disorders
Diabetes	Identify community members at risk for diabetes	Affordable access to diabetes supplies, exercise, and nutrient-dense foods	Self-management education programs
Food safety	Evaluate food-handling practices of local restaurants and eateries	Food safety training and outbreak prevention	Guidance and case triage of community members impacted by an outbreak
Violence	Explore the availability and content of violence prevention programs and resources	Gun-safety legislation and trauma-informed care practices	Support and counseling for those affected by community violence
Immunization	Monitor immunization rates among community members	Vaccine requirements for school attendance	Immunization clinics and health promotion education regarding vaccine uptake

TABLE 3.3 Public/Community Health Nursing Implementation by Core Function

Public/community health nursing activities can be categorized by the five levels of prevention below. Foundations of Public/Community Health provides more details on each level.

- Primordial prevention
- Primary prevention
- Secondary prevention
- Tertiary prevention
- Quaternary prevention

Table 3.4 provides examples of nursing activities across the levels of prevention and related activities that support the core functions of public health. Because quaternary prevention concerns what public/community health nurses and other professionals should avoid (Martins et al., 2018), this level is not included in the table.

Topic	Primordial	Primary	Secondary	Tertiary
Cardiac health in older adults	Implements community programming that promotes good general health, such as physical activity and stress reduction	Leads a fitness walking group for attendees of the senior center without cardiac health conditions	Conducts weekly blood pressure screenings for seniors	Leads a fitness walking group for attendees of the senior center with cardiac health conditions
Teen pregnancy	Provides mandated comprehensive sex education programs to all students in grades 9 to 12	Facilitates access to barrier methods of contraception in schools and additional contraceptive services at the local health clinic	Offers pregnancy testing and prenatal counseling to teens	Delivers quarterly parenting and child development seminars for pregnant teens and partners
Seasonal influenza	Implements public awareness campaigns regarding handwashing and respiratory hygiene	Administers influenza vaccines each fall to students enrolled in city schools	Provides accessible testing to facilitate early diagnosis	Counsels ill individuals on supportive care measures and facilitates access to antiviral medications as appropriate
Smoking cessation	Enforces comprehensive tobacco control policies	Educates community members on the health risks and implications of smoking	Provides individual and group counseling to smokers	Offers relapse prevention services for community members who have successfully quit
Road accidents	Supports legislation for clearly designated bike lanes and crosswalks	Teaches young children about walking and pedestrian safety	Coordinates efficient systems for rapid emergency services responses to scenes of accidents	Ensures community access to rehabilitative services following a road accident
Suicidality	Promotes mental health awareness and antistigma education	Trains caregivers, teachers, and other community members on suicide prevention and intervention techniques	Establishes community crisis hotlines	Coordinates support groups for individuals and families affected by suicide
Substance use disorder	Develops mandate for prescribers in community to engage in safe prescribing practices education	Educating community members on healthy coping skills	Provides screening and referral for middle and high school students	Facilitates access to prescribers of medication-assisted treatment as a recovery support

TABLE 3.4 Public/Community Health Activities

Health Across the Community Helps Clients and Families

Public/community health nurses may work in specialty roles as school nurses, street nurses, occupational health nurses, home care nurses, correctional nurses, or clinic nurses. Caring Across Practice Settings describes several of these nursing roles. Nurses in public/community health provide direct-care services, promote health, reduce risk, and prevent disease within communities. They apply the nursing process to identify the community's health needs,

create and disseminate interventions, engage in advocacy efforts, and collaborate with community members to support the overall health of the community. These nurses provide the care and services that support population health goals in the community.

Note that the term "community nurse" may have a different meaning globally. For example, outside of the United States "community nurse" or "district nurse" may refer to nurses who provide direct care in client homes.

Public/community health nurses apply a community-focused lens to their professional practice. This lens provides a broader view of health and captures more of the community members in their professional efforts. Their work will involve promoting public health practices and preventing disease among large groups, such as those in schools, prisons, or community care centers. Table 3.5 provides examples of public/community health nurse care settings and nursing actions performed. Additionally, the Johnson & Johnson Nursing website (https://openstax.org/r/nursingjnj) details 96 different nursing specialties, many of which are community-based.

Setting/Specialty	Example of Actions Performed
School	• Assess student episodic health concerns • Manage student chronic conditions • Conduct vaccine surveillance
Corrections	• Evaluate client response to treatment • Educate clients on chronic disease self-management • Promote infection control practices among clients and staff
Camp	• Provide camper and staff first aid • Educate campers and staff about sun safety • Securely store emergency medications and develop administration procedures
Occupational health	• Evaluate work environments for health risk • Develop accident or disaster response plans • Assess and treat employee injuries
Home health—continuous services	• Provide round-the-clock care to a client so they may live in their home instead of an inpatient setting • Facilitate client access to their community • Periodically evaluate the need for continued continuous services
Home health—skilled visits	• Administer injections or infusions in the home setting • Educate clients and families about home management of health conditions • Manage complex client wounds
Hospice	• Manage client pain and symptoms at end of life • Provide psychosocial support and coping counseling to the client and family • Educate client and family members of expected course of care
Parish/faith	• Initiate health and wellness programs for a faith community • Connect clients and families to local health resources • Visit faith community members' homes or hospital rooms when ill
Ambulatory care	• Assess client and family general health • Collaborate with clients to determine plans for supporting wellness • Create client and family care plans

TABLE 3.5 Community Health Nursing Specialties and Actions

While the community is the client, individuals and families can be recipients of care. Public/community health nurses also provide direct care to individuals and families outside of acute-care centers, such as in personal homes and clinics. Individuals and families may need direct nursing care and support to address their conditions and personalized health concerns. Public/community health nurses help individuals and families learn to manage conditions and can administer ordered care and treatments.

When a public/community health nurse cares for a client, family, or group, the benefits of such care extend to the community at large. The individual or family benefit from direct nursing care; and the community at large may experience reductions in communicable diseases, amelioration of health care disparities, lowered health care costs, and other benefits. To address health needs in the community, public/community health nurses may mobilize existing resources or develop new programs that will benefit clients and families across the community. They work with community members to determine their health priorities and align programs and initiatives with the community's needs. This requires analysis of community member input and community-level health data.



WHAT IS A COMMUNITY/PUBLIC HEALTH NURSE?

Access multimedia content (http://openstax.org/books/population-health/pages/3-3-public-community-health-nursing-practice)

This video follows a nurse as she contemplates different ways to contribute to health and well-being via roles in community health. Community-based and hospital-based nurses can collaborate and serve equally important roles in bridging client transitions across the care continuum to ensure safe and supportive care.

Watch the video and visit the Johnson & Johnson (https://openstax.org/r/nursingjnja) nursing specialty website, and then respond to the following questions.

1. Thinking about the Lee family, which community health nursing roles or specialties could help promote health and reduce risk for the family?
2. What kinds of community health nursing jobs or roles are of interest to you in the future?

Chapter Summary

3.1 Defining Public/Community Health Nursing

Community health focuses on the physical, mental, and social well-being of a community. Nurses promote health, prevent diseases, and address the needs of populations with shared characteristics, health conditions, and health risks. Public/community health nurses have a rich history of service. Events such as World War II, the HIV and AIDS epidemic, and the COVID-19 pandemic were greatly impacted by nursing and have shaped modern public/community health nursing practice. Nursing leaders have contributed to this field by addressing social determinants and inequities and by caring for vulnerable populations.

3.2 Public/Community Health Nursing Scope of Practice, Core Competencies, and Function

Nurses in public/community health work in interprofessional teams and collaborate with community partners and policymakers to address health disparities and promote equity. The ANA provides a set of professional scopes and standards that guide public/community health nursing practice.

3.3 Public/Community Health Nursing Practice

Public health and clinical care collaborate to address communicable and noncommunicable conditions that are actual or potential risks to the public's health. Public/community health nurses promote health, provide education, create social prescriptions, perform community assessments, engage in health advocacy, and respond to diseases and disasters. Their work addresses health disparities, promotes equity, and facilitates justice in health care.

Key Terms

community a group of people with at least one characteristic in common

community health the physical, mental, and social well-being of a community; involves health promotion, risk reduction, and disease prevention

community/public health nursing specialty focused on improving the health of communities and populations through health promotion, disease prevention, risk reduction, community education, management of outbreaks and epidemics, and other initiatives

competencies foundational knowledge, skills, and attitudes that enable nurses to meet client needs

contact tracing identification of people who may have been exposed to a specific disease and are at risk for disease acquisition or spread

disease surveillance data-collection activities that aim to inform a disease response plan

scope of practice professional activities involved in a particular role; supports nurses working to their level of qualification, expertise, and competence

social prescribing referrals to community resources outside of traditional health care settings

standards of practice rules of conduct to which professionals are expected to adhere; support nurses' decision making and delivery of care

vaccine uptake the proportion of the population receiving a vaccination

Review Questions

1. Which action by the nurse demonstrates the application of community health principles to a program aimed at preventing cardiovascular disease through risk-factor modification?
   a. Providing individual counseling sessions for adults at risk for heart disease
   b. Promoting a weekly farmer's market for locally grown fruits and vegetables
   c. Assisting an adult with heart disease to develop a medication schedule that fits their lifestyle
   d. Developing a cardiac rehabilitation program for community members with heart failure

2. Which nursing action following World War II represents an autonomous public-health nursing function?
   a. Providing direct care to wounded soldiers in military hospitals
   b. Conducting vaccination campaigns to promote immunizations
   c. Collaborating with physicians to perform medical procedures
   d. Assisting in surgical operations in field hospitals

3. Which statement describes the purpose of defining a scope of practice for nurses?

a. Establishing principles and guidelines for professional behaviors and ethics
b. Outlining specific clinical skills and procedures nurses may perform
c. Ensuring nurses work within their level of qualification, expertise, and competence
d. Promoting collaboration in teamwork within a health care setting

4. Which of the following accurately describes public health nursing practice?
a. The scope of practice for public health nurses is broader than that of a registered nurse.
b. The ANA has identified nine core concepts for public health nursing.
c. Public health nurses practice using standards developed for medicine.
d. The ANA has not identified a scope of practice for public health nursing.

5. Which action by the public health nurse is an example of the "public health sciences" domain of the Quad Council Coalition's Community/Public Health Nursing Competencies?
a. Recommending a walking trail to encourage wellness
b. Providing educational materials that meet the community's cultural needs
c. Applying research findings to the development of new community programs
d. Assisting families in finding affordable health insurance

6. Which Quad Council Coalition's Community/Public Health Nursing Competency domain is the nurse engaged in when hiring a workforce representative of the community?
a. Communication
b. Cultural competency
c. Community dimensions of practice
d. Leadership and systems thinking

7. Which action by the community health nurse is an example of a downstream intervention?
a. Focusing on health promotion and disease-prevention activities
b. Managing the care of clients diagnosed with health conditions
c. Engaging in advocacy and activism to advance health equity
d. Addressing the root causes of health problems in a population

8. Which action will the community health nurse take when engaged in the activity of social prescribing?
a. Referring a client with heart failure to a cardiac rehabilitation program
b. Teaching a client with a new diagnosis of diabetes how to inject insulin
c. Suggesting volunteer work to a client who is feeling depressed after retiring
d. Assessing the social resources of a community

9. The community health nurse is interviewed for a podcast to discuss bike safety tips for children. Which level of prevention is the community health nurse providing during the interview?
a. Primordial
b. Primary
c. Secondary
d. Tertiary

10. Which activity will the community health nurse perform when engaged in secondary prevention activities at a community senior center?
a. Educating about signs and symptoms of influenza
b. Administering pneumococcal pneumonia vaccines
c. Providing information about supportive care for COVID-19
d. Teaching how to properly wash hands

CHAPTER 4

The Health of the Population



FIGURE 4.1 The concept of what it means to be healthy is different for everyone. The role of the population health nurse is to support clients as they strive to attain positive health outcomes. (credit: modification of work "Start of Tullamore Half Marathon 2014" by Peter Mooney/Flickr, CC BY 2.0)

CHAPTER OUTLINE

4.1 Defining Health
4.2 Performance Metrics
4.3 Health in America
4.4 World Health Statistics
4.5 Global Public Health Security

INTRODUCTION Sara, an 18-year-old mother, brings her infant, Jasper, to the rural health clinic for his 2-month checkup. Nurse Mateo notes that Jasper is due to receive several vaccinations. He begins explaining their purpose to Sara and gives her an immunization schedule for a child's first year. Sara frowns and seems reluctant to take the schedule; she says, "Jasper has already had lots of shots," and she wonders about how well vaccinations even work since her father "still got COVID-19 even though he was boosted." Mateo, understanding this is an opportunity to educate the new parent on illness prevention, begins describing the different childhood diseases that are now preventable by immunizations. Using parent-friendly handouts from the Centers for Disease Control and Prevention (CDC), he discusses issues that may occur when an unimmunized child attends day care or school or socializes with other children, along with the possible consequences of not receiving the recommended vaccinations. No longer frowning, Sara nods and follows along as Mateo points out the different vaccinations on the handout.

Clinic visits like this one are opportunities for clients to obtain information on keeping themselves and their families healthy and free from illness. Providing education on preventive care is one example of how nurses work in the community. Nurses like Mateo must understand the health needs of their communities to enhance health. This

chapter explores the health needs of a population by defining health, describing the current health status of the U.S. population, and discussing methods used to measure it. The chapter also explores the nurse's role in creating a culture of health by promoting actions through which good health and well-being can be achieved across geographic, demographic, and social sectors.

4.1 Defining Health

LEARNING OUTCOMES

By the end of this section, you should will be able to:

- 4.1.1 Discuss the different meanings of health.
- 4.1.2 Formulate a definition of health.
- 4.1.3 Explain the purpose of measuring health outcomes in a population.

What first comes to mind when you think about *health*? Many people would describe a healthy person as someone who eats nutritious food, exercises regularly, manages stress, spends time outdoors, and receives adequate rest. The World Health Organization (WHO) defines **health** as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (n.d.-a). This holistic perspective considers how many factors are key components of an individual's well-being. These factors, or *determinants of health*, include genetics, behavior, environment, physical influences, medical care, and social factors. Modifying one of these factors can have a positive or negative effect on a person's health. For example, reducing sodium intake may have a positive effect, such as lowering high blood pressure. Conversely, smoking cigarettes may result in a negative consequence, such as increasing the risk of emphysema or lung cancer.

As Social Determinants Affecting Health Outcomes discusses in more depth, additional factors called **social determinants of health** (SDOH) affect an individual's health and well-being. SDOH are "the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks" (ODPHP, n.d.-j). They include economic stability, education access and quality, health care access and quality, neighborhood and built environment, and social and community context. For example, someone without a social support network or close family connections may feel disconnected from their community, leading to poor mental health.

SOCIAL DETERMINANTS OF HEALTH

Access multimedia content (http://openstax.org/books/population-health/pages/4-1-defining-health)
This brief video explores some of the practical effects of the social determinants of health. The scenario in the video depicts the ramifications of social differences from a child's perspective.

Watch the video, and then respond to the following questions.

1. What characteristics of his community did A. J. identify that could affect his family's health?
2. Consider your own community. What social factors are present that you think support the health of your community?
3. Again, considering your own community, what social determinants exist that negatively affect the community's health?
4. What is something you can do to positively influence social conditions in your community?

What Does It Mean to Be Healthy?

How individuals view what it means to be healthy varies depending on how they define health. For example, those who perceive health as complete physical well-being may consider themselves unhealthy if they are diagnosed with a chronic illness like asthma. In contrast, someone with a holistic view of health may consider themselves healthy despite having a chronic condition if the illness does not significantly affect other aspects of their life. **Well-being**, or the subjective perception that life is going well, is important from a public health perspective, as it is an outcome that can be measured to determine the benefits of disease prevention and health promotion initiatives within a population. Well-being relates to overall life satisfaction and encompasses a range of factors, including physical, social, economic, emotional, and psychological, to name a few (CDC, 2018).

The term **health-related quality of life** (HRQL), sometimes abbreviated HRQOL, refers to the perceived physical and mental well-being of an individual or population. HRQL, although subjective, can be measured using a variety of surveys and scales (CDC, 2018). A healthy population can satisfy its needs and cope with a range of environments. The health of a population also often depends on the extent to which there is inequality in health outcomes within that population. Populations with the greatest lifespan variation also have the highest mean mortality rates (CDC, 2018; McCartney et al., 2019).

The attainment of health requires access to various resources and is also affected by the SDOH. The WHO and organizations such as the American Heart Association (AHA) and American Diabetes Association (ADA) provide health education designed to address the critical components of health, including access to health care, safe environment and transportation, healthy food and healthy habits, and mental health and social supports (ADA, n.d.; AHA, n.d.; WHO, 2019).

Factors necessary to attain health include the following:

- Access to health care: Factors such as health insurance and the availability and geographical location of health care facilities affect the health of individuals and communities (Office of Disease Prevention and Health Promotion [ODPHP], n.d.-a). Other factors include health literacy, or the ability to comprehend health information, and trust in the health care system, particularly if there are barriers such as socioeconomic or cultural disparities (CDC, 2023f; WHO, n.d.-c).
- Safe environment and transportation: The environment has a significant role in the health of individuals and communities. Physical safety; environmental safety, such as safe water; and the accessibility of employment, schools, and recreation all affect the health of community members (WHO, n.d.-c).
- Healthy food and healthy habits: The availability of healthy food, the ability to properly store food, and the development of healthy food habits all promote health. Other healthy habits, such as refraining from smoking or the harmful use of alcohol and engaging in physical activity, provide additional health benefits. Failure to engage in these healthy habits is a risk factor for many chronic diseases, such as cardiovascular disease and diabetes (ADA, n.d.; AHA, n.d.; WHO, 2019).
- Mental health and social supports: Mental health issues, such as depression, anxiety, and stress, have a negative effect on health. Individuals with chronic illnesses, such as diabetes, face additional stressors. The presence of social supports, such as family and friends, has positive health benefits. Individuals with chronic diseases, such as diabetes or cardiovascular disease, often benefit from support groups, which promote mental health (ADA, n.d.; AHA, n.d.; WHO, 2019).

WHAT DOES HEALTH MEAN TO YOU?

Access multimedia content (http://openstax.org/books/population-health/pages/4-1-defining-health)
In this video from the World Health Organization (WHO), individuals from diverse cultures describe their personal definitions of health.

Watch the video, and then respond to the following questions.

1. What is your definition of health?
2. Which characteristics of health do the individuals interviewed mention consistently, if any?
3. How do their definitions compare to yours?

Health Outcomes

As discussed in What Is Population Health?, population health looks beyond the individual client to consider the health of a group or larger community, as well as environmental, economic, social, behavioral, and other factors that influence health. One way to assess the health of a population is by measuring health outcomes. A **health outcome** is "a change in the health status of an individual, group or population that is attributable to a planned intervention or series of interventions, regardless of whether such an intervention was intended to change health status" (WHO, 2021a, p. 20). A health outcome related to an individual client would focus on the effectiveness of an intervention for that client. **Population health outcomes** consider broad topics related to a larger group or target population, such as **mortality rates**, life expectancy rates, quality of life, the prevalence of chronic conditions, or measures of

the frequency of death in a defined population during a specific time interval. Positive health outcomes include being alive with a sense of well-being and an ability to function well mentally, physically, and socially. Negative health outcomes include death, an inability to function, and a lack of well-being. Recall that numerous factors can affect both an individual's and a population's health.

THEORY IN ACTION

A Grassroots Population Health Initiative

Access multimedia content (http://openstax.org/books/population-health/pages/4-1-defining-health)
Efforts to improve a community's health can take all forms and can be driven by everyday citizens, not just by the community's leaders. Watch the video "Palm Beach County: Co-powering Solutions" to learn more about how a county in Florida "co-powered" its citizens to improve the county's "culture of health."

Watch the video, and then respond to the following questions.

1. How is the West Palm Beach community health initiative addressing mental health issues from a holistic perspective?
2. What factors did the initiative identify that negatively impact the community's health?
3. How did community members participate in identifying desired outcomes?

4.2 Performance Metrics

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 4.2.1 Explain the purpose of health indicators.
- 4.2.2 Identify approaches to measuring population health outcomes.
- 4.2.3 Differentiate between various types of health status indicators.
- 4.2.4 Discuss the nurse's role in managing population health.

Health indicators are health-related measures of data that are used to quantify and track an individual's health status. Measuring health indicators allows health care providers to assess improvement or decline in an individual's health over time. Just as health care providers follow individual health indicators, it is possible to measure health-related indicators for a population. Population health metrics are quantifiable group-level measures associated with health (Mathers et al., 2003; Pan American Health Organization, 2018; Roser et al., 2021). Health care professionals, researchers, and policymakers use these metrics to make decisions and plan population health initiatives. Positive indicators, such as life expectancy, correlate with better health. Negative indicators, such as infant mortality rate, are inversely correlated with health. See Table 4.1 for examples of population health metrics.

Years of life lost (YLL)	A measure of premature mortality that considers both the frequency of death and the age at which it occurs, calculated by multiplying number of deaths by a standard life expectancy at the age at which death occurs; used to determine public health priorities (WHO, n.d.-f)
Years of healthy life lost due to disability (YLD)	The number of healthy years one might lose from their life due to disability or sickness (WHO, n.d.-e)
Disability-adjusted life years (DALYs)	The sum of the YLLs and YLDs attributable to a disease or health condition, with each DALY representing the loss of one year of full health (WHO, n.d.-b)
Quality-adjusted life years (QALYs)	The months or years of reasonable quality that an individual may gain following treatment; measures both length and quality of life of an individual (Health Analytics, 2022)

TABLE 4.1 Population Health Metrics

Measures of Population Health Outcomes

A population health measure is an indicator that reflects the quality of a group's overall health and well-being.

Examples of measured topics include access to care, clinical outcomes, health behaviors, preventive care and screening, and utilization of health services. Life expectancy at birth, morbidity, mortality, and premature death are examples of population health outcome measures (Hernandez & Kim, 2022).

Life Expectancy at Birth

Life expectancy at birth refers to a population's overall mortality level, or the average age of death. It is an important measure for assessing population health, as it reflects mortality patterns across all age groups. Life expectancy at birth is calculated by identifying the number of deaths that occur in a population during an identified time frame and dividing it by the size of the population. This calculation is referred to as the population's mortality number. Disease- or cause-specific mortality rates are used to describe the contributions of specific diseases to a population's mortality, such as deaths related to heart disease or cancer (WHO, n.d.-d).

Morbidity and Mortality

Morbidity and mortality are two measures commonly used for epidemiological surveillance that describe the progression and severity of a given health event. They are useful tools for learning about risk factors for diseases and comparing health events between different populations. **Morbidity** is the state of being symptomatic or unhealthy due to a disease or condition and is usually represented or estimated using prevalence or **incidence**. **Prevalence** refers to the proportion of a population that has a disease or condition over a given time frame, whereas *incidence* refers to the number of new cases over a given time frame. *Mortality*, in contrast, refers to the number of deaths in each time frame. Years of life lost (YLL) measures premature deaths and has implications for public health, as risk factors can be addressed through health promotion initiatives (Hernandez & Kim, 2022; National Institute of Mental Health, n.d.; National Research Council & Institute of Medicine, 2015). See Epidemiology for Informing Population/Community Health Decisions for more information.

Combining mortality and morbidity rates gives a more comprehensive view of a population's health. While mortality rates are an accurate, straightforward indicator, they do not consider the effects of diseases people are living with. The measure of both indicators together is referred to as the **burden of disease** (Roser et al., 2021). The burden of disease is measured by disability-adjusted life years (DALYs). For example, cardiovascular disease is the disease with the greatest burden on the population. People with cardiovascular disease die prematurely from myocardial infarctions, congestive heart failure, and other cardiovascular conditions. Additionally, many people live for years with cardiovascular disease before they die, which is reflected in morbidity rates and the burden of disease. Figure 4.2 shows the global burden of the most prevalent diseases in 2019, categorized by disease or injury.

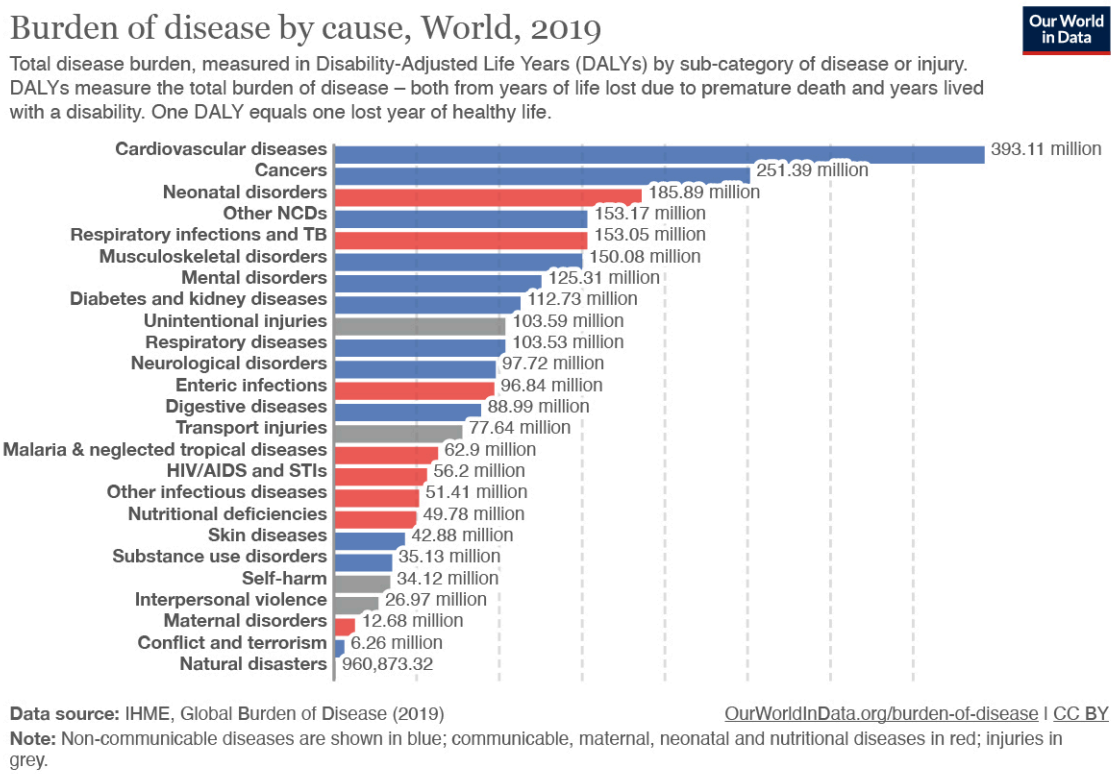


FIGURE 4.2 Before the COVID-19 pandemic in 2019, cardiovascular diseases were the number-one health burden in the world in terms of lost years of healthy life. (data source: Institute for Health Metrics and Evaluation, "Global Burden of Disease, 2019"; credit: "Burden of disease by cause, World, 2019" by Our World in Data, CC BY 4.0 International)

Summary Measures of Population Health

Summary measures of population health combine data from the basic metrics, such as mortality and nonfatal disease outcomes, to represent health in a single number (New Mexico Department of Health, 2021). Quality-adjusted life years (QALYs) is an example of a summary measure. An advantage of summary measures is that a single statistic is easier to communicate to the public and track over time than data from multiple basic metrics. Summary measures also provide information on the distribution and inequalities of health, which have implications for health programming.

Key Health Indicators Based on Subjective Data

In addition to the health indicators previously mentioned that rely on objective data, a population's health is also measured with key health indicators based on subjective data. Objective data, such as the ability to perform a physical task, are measurable. Subjective data require a person to self-rate their perception of their health. Population health surveys, such as the Behavioral Risk Factor Surveillance System, the National Health and Nutrition Examination Survey, and the National Health Interview Survey, are examples of tools used to obtain key health indicators based on the population's perception.

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is a health-related telephone survey used throughout the United States to collect data on health risk behaviors, chronic health conditions, the use of preventive services, and other factors, such as health care access and use of health care services. The data are then used to identify groups at risk for developing chronic diseases, monitor changes in health risk factors and chronic disease rates, and develop local, state, and national health promotion strategies. This system has served as a valuable resource for health promotion at the state and local levels. Some of the topics covered in the 2022 telephone survey include exercise, adequacy of sleep, colorectal cancer screening, and alcohol consumption (National Center for Chronic Disease Prevention and Health Promotion [NCCDPHP], 2022b). A state-by-state listing of how the data were used to improve health outcomes is available on the website: State-By-State Listing of How Data Are Used (https://openstax.org/r/cdcbrfss).

The National Health and Nutrition Examination Survey

Ideally, an indicator would reflect both subjective and objective data. The National Health and Nutrition Examination Survey (NHANES) combines interviews and physical examinations to assess the nutritional health of U.S. adults and children. All participants are evaluated by a physician, are interviewed about their diet, and have body measurements taken. Most participants have lab work done and a dental screening performed. As participants age, more tests are incorporated. The survey identifies the prevalence of major diseases and the presence of risk factors for diseases. The data are then used in epidemiological studies and research that assist in developing public health policies, programs, and services. Past outcomes of this survey have included the pediatric growth charts that are used nationwide at well-child visits and the policy to eliminate lead from gasoline, food, and soft drink cans (National Center for Health Statistics, 2023c).

National Health Interview Survey

The National Health Interview Survey (NHIS) is the oldest ongoing health survey in the United States. Census workers conduct personal interviews in participants' homes to collect health data on a broad range of topics from a sample of noninstitutionalized, civilian Americans. They survey categorizes data by demographic and socioeconomic features. The data are used to track disease and disability status of Americans and to track progress toward the achievement of national health objectives (National Center for Health Statistics, 2023d).

Health-Related Quality of Life

As mentioned earlier in this chapter, HRQL refers to an individual's perceived physical and mental well-being. To track HRQL, the CDC uses a subset of questions called "Healthy Days measures" in both the BFSS and NHANES surveys. These questions ask the respondent to rate their overall health from excellent to poor, report how frequently in the past 30 days their physical or mental health was not good, and report how frequently during that same time frame poor physical or mental health kept them from doing their usual activities. The data are utilized for research, program planning, and tracking progress toward achieving Healthy People 2030 goals (CDC, 2021a).

The Nurse's Role in Managing Population Health

Nurses have traditionally practiced in a variety of community settings and are well positioned to identify patterns across populations, connect clients to community resources, and develop community interventions (Robert Wood Johnson Foundation, 2017). The role of the population health nurse is to support clients as they strive to attain positive health outcomes. The nurse must understand that although lifestyle choices play an essential role in health outcomes, those outcomes are also influenced, and often limited, by environmental and social factors. Nurses in all health care settings play an important role in helping clients understand what influences and drives health.

The passage of the Patient Protection and Affordable Care Act of 2010, or the Affordable Care Act (ACA) for short, shifted the emphasis of health care from episodic care of individuals to primary and preventive care of groups or populations. Population health management requires nurses to develop skills in understanding basic health metrics, measures of population health outcomes, and key health indicators. Understanding these concepts allows the nurse to comprehend the health status and risk levels of populations and the influence of the SDOH. Nurses must also evaluate the outcome of community-based interventions, which are based on data, and revise the interventions as indicated. The use of health metrics by nurses plays a key role in identifying health risk and developing interventions to improve the health of a population (Ariosto et al. 2018).

The Robert Wood Johnson Foundation released the *Catalyst for Change report* in 2017, urging nurses to expand their practice in communities, schools, businesses, homes, and hospitals to promote population health. Population health nurses take a holistic approach to managing a group's health, recognizing that health is influenced by many factors in a variety of settings. Nurses providing client care should monitor relevant metrics to identify needs and evaluate outcomes of interventions. Additionally, informatics nurse specialists can serve as resources to manage data to track health indicators and evaluate population outcomes.

Many nurses work with individual clients. However, community health nurses who work in public health or other community settings work to improve health outcomes of the population at large rather than those of individual clients. For example, when working with an individual client to manage their hypertension, the nurse will use that client's blood pressure measurements as data to monitor and evaluate the care provided to them. In contrast, population health measures the health of the entire group, not its individual members, using performance

measurements, or metrics. Examples of basic metrics used in population health include mortality and life expectancy rates. Population health nurses then use the data to provide evidence-based care to populations in need (NCCDPHP, 2023). Population health nurses working with the community will analyze data to identify modifiable risk factors—for hypertension, for example—and develop broad strategies to prevent or manage the disease. Examples of these interventions include educational offerings and blood pressure screenings.

Nurses can use health-related outcome measures to assess and monitor the health of the population. They can track metrics to identify and prioritize population health issues. For example, a public health nurse may utilize data from the BRFSS to track chronic diseases in an urban community. Based on this information, nurses can develop appropriate health promotion and disease prevention activities for the population that target desired health outcomes. The nurse may note an increase in diabetes prevalence in the community and use these data to formulate a plan to address this increase. Interventions could include assessing the availability of affordable and nutritious foods, access to primary care clinics, and availability of parks and green spaces conducive to exercise. Finally, nurses can monitor metrics to evaluate the effectiveness of policies and interventions.

4.3 Health in America

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 4.3.1 Identify public health priorities in the United States.
- 4.3.2 Discuss the leading causes of death in the United States.
- 4.3.3 Describe trends in mortality due to the most common infectious and chronic diseases across populations.
- 4.3.4 Discuss health trends in the United States.
- 4.3.5 Compare health outcomes in the United States with those of high-income or "peer" countries.
- 4.3.6 Describe the nurse's role in addressing health inequities.

The United States has the highest health care spending compared to peer countries, such as Germany and France, but with worse health outcomes (Gunja et al., 2023; Hoyert, 2023). Infant and maternal mortality rates are higher than those of peer countries, and the life expectancy of Americans is lower. As first introduced in What Is Population Health?, Healthy People is an initiative of the U.S. Department of Health and Human Services (HHS) to improve the health and well-being of all people in the United States. The Healthy People initiative began in 1980 with the launch of Healthy People 1990 (ODPHP, 2021b). Every 10 years, HHS releases updated national health objectives to shape health promotion and disease prevention efforts in the United States for the next decade. Healthy People 2030 is the most current version.

Healthy People 2030

The vision of **Healthy People 2030** is a society in which everyone can reach their full potential for health and well-being across their lifespan. Healthy People 2030's mission is to support the nation's efforts to improve the population's health and well-being. Several foundational principles support Healthy People's mission (ODPHP, 2021a). These principles use a holistic perspective of health and recognize the importance of equitable access to health care and health promotion. Working to achieve this vision is a shared responsibility among all individuals, groups, and organizations and is essential to creating a thriving, equitable society. Creating healthy physical, social, and economic environments and effective policy is essential for achieving the vision of Healthy People 2030. Health Disparities discusses the impact of health disparities and SDOH on care outcomes in more detail.

FIVE THINGS TO KNOW ABOUT HEALTHY PEOPLE 2030'S FRAMEWORK

Access multimedia content (http://openstax.org/books/population-health/pages/4-3-health-in-america)
This video describes the Healthy People 2030 framework.

Watch the video, and then respond to the following questions.

1. Which of the focus areas is new to the Healthy People initiatives?
2. How did the definition of health literacy change?
3. Do you think this video is effective in explaining the fundamental concepts of Healthy People 2030 to the

lay public? Why or why not?

While the vision, mission, and foundational principles provide a framework essential for the utility of Healthy People 2030, the goals and objectives shape how the country's health experts work to identify priorities and implement targeted interventions. The overall goals of Healthy People include promoting health and well-being throughout the lifespan by creating supportive environments and public policy.

To measure the nation's progress toward the Healthy People 2030 vision, HHS has identified Overall Health and Well-Being Measures (OHMs). The OHMs are used to assess the Healthy People 2030 vision over its 10-year span to determine the overall health and well-being of the U.S. population and see where improvements have occurred. Because they are broad goals, OHMs do not have targets and are not classified as objectives (ODPHP, n.d.-e). The OHMs are subdivided into three tiers, as shown in Table 4.2.

Tiers	OHMs
Well-being	OHM-01: Overall well-being (expressed as overall life satisfaction, reflecting the cumulative contributions of health and non-health factors)
Healthy life expectancy	OHM-02: Life expectancy at birth—free of activity limitation OHM-03: Life expectancy at birth—free of disability OHM-04: Life expectancy at birth— in good or better health
Summary mortality and health	OHM-05: Life expectancy at birth OHM-06: Free of activity limitation OHM-07: Free of disability OHM-08: Respondent-assessed health status—in good or better health

TABLE 4.2 Healthy People 2030 Overall Health and Well-Being Measures (See ODPHP, n.d.-e.)

The next layer of the Healthy People framework includes the core, developmental, and research objectives. Within the core objectives, Healthy People 2030 identifies high-priority health issues and challenges, which are referred to as **leading health indicators** (LHIs). LHIs are objectives that cover the lifespan and allow for the assessment and promotion of health at the community, state, and national levels (ODPHP, n.d.-d). LHIs address high-priority issues that have a significant effect on health outcomes. The indicators must address the SDOH; **health disparities**, which are preventable differences of health among populations; and **health equity**, or the expectation that everyone has a fair opportunity to attain their highest level of health. LHIs are modifiable, meaning they can be improved by implementing evidence-based interventions and strategies. The LHIs were developed to focus resources on the major causes of death and disease, aiming to improve health (ODPHP, n.d.-c).

An example of an intervention for the LHI of children and adolescents with obesity was a study conducted by a school nurse to promote healthy choices. The relevant Healthy People 2030 objective is to "reduce the proportion of children and adolescents with obesity" (ODPHP, n.d.-h), and students in this study earned points toward a special healthy class snack for each healthy choice they made. The study resulted in a 25 percent decrease in the consumption of chocolate milk, demonstrating the positive effect that a health promotion intervention can have on an LHI (Lovell, 2018). Each LHI represents an opportunity to develop health promotion activities that address the modifiable risk factors leading to death and disease. Figure 4.3 illustrates the relationship between the OHMs, objectives, and LHIs.



FIGURE 4.3 Healthy People 2030 includes overall outcome measures as well as more specific objectives to direct health promotion efforts. (credit: "Healthy People 2030 Objectives and Measures" by the Office of Disease Prevention and Health Promotion/U.S. Department of Health and Human Services, Public Domain)

Leading Causes of Death in the United States

According to the National Center for Health Statistics (2023b), the following were the 10 leading causes of death in the United States in 2021:

1. Heart disease
2. Cancer
3. COVID-19
4. Accidents (unintentional injuries)
5. Stroke (cerebrovascular diseases)
6. Chronic lower respiratory diseases
7. Alzheimer's disease
8. Diabetes
9. Chronic liver disease and cirrhosis
10. Nephritis, nephrotic syndrome, and nephrosis

Tracking shifts in mortality trends serves as a guide for developing public health policies and interventions. In 2020, for example, the prevalence of COVID-19 and COVID-19-related deaths led the United States to declare a national state of emergency. State governments implemented policies such as travel restrictions, school closures, physical distancing, and mask wearing based on COVID-19 case rates. Although initially delayed, testing for COVID-19 infection was implemented to obtain surveillance data that was then used to prevent transmission, ultimately leading to decreased mortality rates (Unruh et al., 2022; CDC, 2023a).

Population health nurses must be familiar with disease trends. The following section briefly reviews the leading causes of death in the United States.

Heart Disease

Heart disease has been the leading cause of death globally for more than 20 years and is the most common cause of death in the United States for both men and women overall, as well as for most racial and ethnic groups (CDC,

2023d; World Heart Federation, 2023). The key risk factors for developing this condition include high blood pressure and high blood cholesterol. Several modifiable risk factors, such as smoking, obesity, and physical inactivity, contribute to the development of heart disease, and public health efforts are in place to create awareness (CDC, 2023d). For example, the American Heart Association (AHA) sponsors the Go Red for Women Health Movement (https://openstax.org/r/goredforwomen) to create awareness about heart disease in women.

Cancer

Although deaths from cancer have decreased over the past 30 years, it remains the second leading cause of death in the United States. Lung cancer is the most prevalent cause of cancer death, followed by colorectal, pancreatic, breast, and prostate cancer. Public health campaigns to increase awareness of cancer risk factors, such as smoking, as well as advances in screening and treatment, have contributed to the decrease in cancer deaths (American Cancer Society, 2022; CDC, 2022b). The CDC supports initiatives such as the National Breast and Cervical Cancer Early Detection Program (NBCCEDP (https://openstax.org/r/cdccancern)) to reduce cancer deaths (CDC, 2022b).

Accidents

Accidents or unintentional injuries were the third leading cause of death in the United States in 2022 (Ahmad et al., 2023). The CDC (2022a) identifies unintentional injuries such as unintentional poisoning (including opioid and other drug overdoses), drowning, motor vehicle accidents, and falls as the leading cause of death for Americans aged 1 to 44 years old. Interventions to prevent death from these types of injuries are included in the Healthy People 2030 objectives. For example, as drug overdoses are the leading cause of unintentional deaths, Healthy People 2030 supports interventions such as the distribution of naloxone and providing medication for addiction treatment, and HHS has a prevention strategy for preventing overdoses (ODPHP, n.d.-c;).

COVID-19

As indicated previously, after the start of the pandemic, COVID-19 quickly became a leading cause of death, with the weekly death toll peaking in the week of January 9, 2021, at more than 25,000 deaths per week (CDC, 2023a). However, COVID-19-related deaths have since dropped, and according to the CDC's provisional mortality data for 2022, it was the fourth leading cause of death that year (Ahmad et al., 2023). It is unclear at this time if COVID-19 will remain a leading cause of death.

The COVID-19 pandemic has strained global health systems and the health care workforce. Even before the pandemic, there was a long-standing health care worker shortage, and the WHO currently predicts a global shortfall of 18 million health care workers by the year 2030, although more recent data indicate these numbers may be improving (WHO, 2022d). The WHO groups its member states into six regions for purposes of data analysis and reporting (GreenFacts, 2023). The health care workforce shortage is of high concern in the African region, which consists of 46 countries, because it bears almost one-quarter (24 percent) of the world's disease burden but has only 3 percent of the world's health care workers (WHO, 2022d).

Stroke

Stroke is the fifth leading cause of death in the United States. Deaths from stroke have increased from 2018 and are more likely to occur among low-income populations, certain racial and ethnic groups, and populations in certain parts of the country. The risk of stroke can be decreased by controlling high blood pressure and treating high cholesterol levels. Teaching people to recognize symptoms is key to helping more people get the treatment they need in a stroke emergency (ODPHP, n.d.-g).

Chronic Lower Respiratory Disease

Emphysema, chronic bronchitis, and nonreversible asthma belong to a group of illnesses known as chronic obstructive pulmonary disease, or COPD. The symptoms of COPD make it hard to breathe and can cause death. COPD is a major cause of disability and one of the leading causes of death in the United States. Unfortunately, many people who have COPD may not know it. Healthy People 2030 has a goal to reduce emergency department visits for COPD by reducing smoking and exposure to air pollution, teaching people with COPD how to manage it, and promoting early detection (ODPHP, n.d.-f).

Alzheimer's Disease

Alzheimer's disease is a type of dementia characterized by cognitive decline. Growing research suggests ways to help prevent or delay dementia instead of merely treating it and reducing its impact. Although no cure is presently

available to eliminate Alzheimer's disease, early recognition and early intervention may slow its deteriorating progress (ODPHP, n.d.-d).

Diabetes

Adults who are diagnosed with diabetes are at an increased risk of early death. Complications such as heart disease and kidney disease are among the leading causes of death in people with diabetes. Improving diabetes treatments may reduce the risk for these complications and lower the death rate for people with diabetes (ODPHP, n.d.-b).

Chronic Liver Disease, Cirrhosis, and Nonalcoholic Fatty Liver Disease

In the United States, chronic liver disease and cirrhosis are among the leading causes of death. Notably, death rates have been consistently higher for Black Americans. Most cirrhosis deaths are due to alcohol use. Other risk factors include type 2 diabetes, injecting drugs using shared needles, and exposure to others' blood and body fluids (American Liver Foundation, 2022). Effective policies to reduce cirrhosis deaths include taxing and regulating alcohol sales and restricting alcohol advertising. According to the WHO (2023g), alcohol taxation and price regulation are among the most effective strategies to decrease alcohol-related harm.

Nonalcoholic fatty liver disease (NAFLD) develops when excess fat builds up in the liver for reasons unrelated to alcohol use. This is one of the most common causes of liver disease and is associated with obesity and type 2 diabetes. NAFLD increases a person's risk of cardiovascular disease, type 2 diabetes, and metabolic syndrome (National Institute of Diabetes and Digestive and Kidney Diseases [NIDDK], n.d.).

Nephritis, Nephrotic Syndrome, and Nephrosis

Nephritis and nephrotic syndrome/nephrosis are forms of kidney disease and a leading cause of death in the United States. Nephritis is an inflammatory condition, frequently resulting from infection, that can lead to renal failure if untreated. Nephrosis or nephrotic syndrome is a group of symptoms that reflect poor renal function caused by renal diseases or other causes, such as diabetes or hepatitis. The symptoms include proteinuria, hypoalbuminemia, peripheral edema, and hyperlipidemia (NIDDK, n.d.). Chronic kidney disease affects more than one in seven adults, and many do not realize they have it (NIDDK, 2023). Additionally, these conditions disproportionately affect low-income and racial and ethnic minority groups (ODPHP, n.d.-a; Norris, 2021).

Trends in Mortality

Over the past 100 years in the United States, life expectancy has increased and rates of death have decreased. Figure 4.4 depicts the death and life expectancy rates for the United States from 1900 to 2018 (National Center for Health Statistics, 2022).

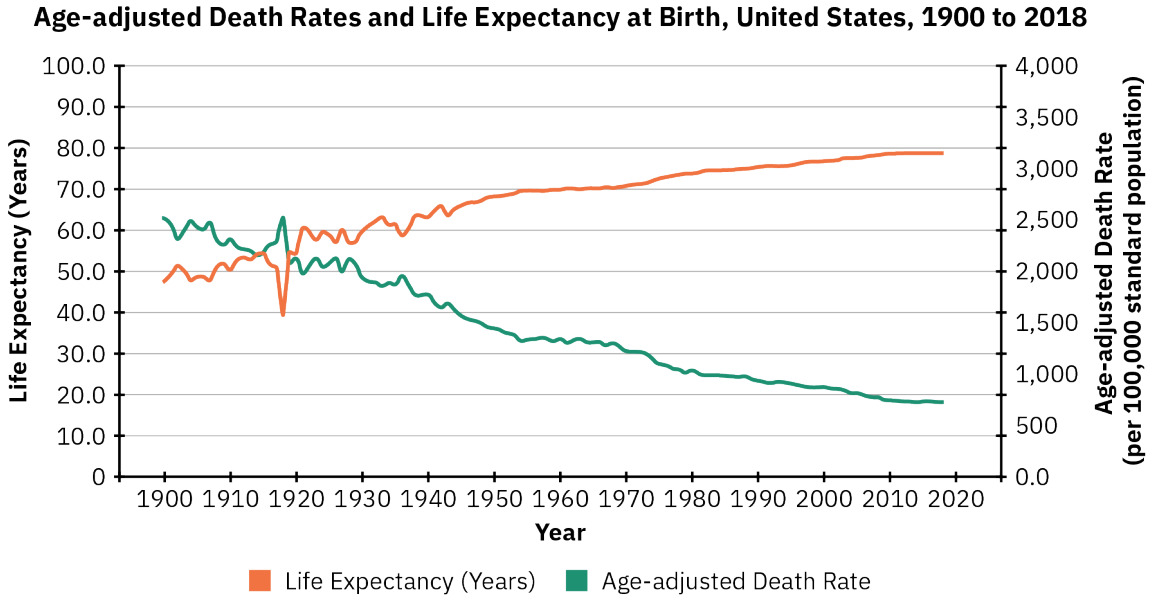


FIGURE 4.4 After decades of increases, life expectancy in the United States has slowly begun to decline. (data source: "Age-adjusted Death Rates and Life Expectancy at Birth (Both Sexes, All Races): United States, 1900 to 2018" by Centers for Disease Control and Prevention, Public Domain; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

An unprecedented decline in mortality occurred during the 20th century in the United States, and life expectancy rose by more than 30 years during this time frame. Infectious diseases were the leading cause of mortality in the early 1900s. Urbanization and the resulting increased population density provided a prime opportunity for diseases such as tuberculosis and influenza to spread. Improvements in sanitation and nutrition, coupled with the development of antibiotics, led to a sharp decline in deaths from infectious diseases. As the death rate from infectious diseases decreased, chronic illnesses emerged as the primary cause of mortality. Smoking, for example, was identified as a leading cause of cardiovascular disease and cancer. Public health campaigns successfully developed awareness of smoking risks, resulting in decreased chronic diseases attributed to tobacco use (The Wharton School, 2016).

Following decades of increases, life expectancy in the United States is now falling (National Center for Health Statistics, 2022). One factor alone is not responsible for this drop, and there are also disparities in mortality rates among population groups within the United States. The next section will explore trends in mortality as a starting point to develop an understanding of this concerning change (Shmerling, 2022).

Mortality Trends in Infectious Disease

Infectious disease remains a public health threat in the United States despite its decline as a leading cause of mortality. COVID-19, as previously discussed, is still a leading cause of death in the United States. Americans of all ages are at risk for mortality from other infectious diseases, such as bacterial sepsis in newborns or influenza and pneumonia for people from 1 year of age through late adulthood. Vaccines, such as those for COVID-19 and influenza, significantly reduce the risk of these infectious diseases and their complications (CDC, 2021b).

Mortality Trends in Chronic Disease

Chronic disease is a condition that is present for more than 1 year and requires ongoing medical intervention and/or limits activities of daily living. According to the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP, 2022c), 6 out of 10 Americans have one chronic disease, and 4 in 10 have two or more. The major chronic diseases in the United States include heart disease and stroke, diabetes, and cancer. These diseases are the leading causes of death and disability in the United States and share the same risk factors, which include:

- tobacco use,
- exposure to secondhand smoke,
- poor nutrition,
- physical inactivity, and
- excessive alcohol use.

Chronic diseases account for most health care costs in the United States, and interventions to prevent them have significant economic and health benefits for Americans (NCCDPHP, 2022a). Because it is estimated that by 2050, most Americans aged 50 years and above across all races will have one or more chronic conditions, it is imperative that health promotion efforts address this concerning trend (Ansah & Chiu, 2022).

Mortality Trends in Suicide and Drug Overdose

Suicide is a major public health concern in the United States. As defined by the National Institutes of Health, suicide is death caused by self-directed injurious behavior with intent to die as a result of the behavior. Suicide rates increased by 37 percent between the years 2000 and 2018 and then decreased by 5 percent between 2018 and 2020. Unfortunately, rates nearly returned to their peak in 2021 (National Institute of Mental Health, 2023). Suicide is a leading cause of death for Americans aged 10 to 34. High suicide rates correlate to certain demographic factors, such as Native American ethnicity, and certain occupations, such as military service. Research suggests that increased suicide rates correlate to increases in mood and affective disorders and are associated with alcohol and drug use (Martinez-Ales at al., 2020).

Drug overdoses can be intentional or unintentional. The United States is currently experiencing an opioid overdose epidemic. There were more than six times the number of fatal drug overdoses in 2021 compared to 1999. The epidemic involves three waves or types of deaths. The initial wave started with prescription opioids in the 1990s, followed by increases in heroin-related deaths in 2010, and the third wave began in 2013 with synthetic opioids such as illegally manufactured fentanyl (CDC, 2023g). For more information on drug overdoses, refer to Caring for Populations and Communities in Crisis.

Trends in Maternal-Newborn Mortality

In the United States, maternal mortality is measured in three different ways. *Pregnancy-associated* deaths are those that occur during pregnancy or within a year after the end of pregnancy, regardless of the cause of death. *Pregnancy-related* deaths occur either during pregnancy or within one year after the end of pregnancy from a pregnancy-related complication; days 43 to 365 postpartum are considered "late" maternal deaths. Finally, *maternal mortality* refers to deaths that occur while pregnant or within 42 days after the end of pregnancy from any cause related to or aggravated by the pregnancy or its management, not including accidental or incidental causes. Nurses should understand these distinctions because many pregnancy-related deaths in the United States occur during the postpartum period (Tikkanen et al., 2020).

The maternal mortality rate in the United States exceeds that of other high-income countries and is increasing (Douthard et al., 2021). This trend is concerning, as the mortality rate of peer countries is decreasing, and more than 8 out of 10 maternal deaths are preventable. The maternal mortality rate is exceptionally high for Black Americans (Trost et al., 2022). Adverse maternal outcomes are often related to a combination of factors, such as an increased prevalence of chronic conditions, barriers to health care, or pregnant clients' distrust of the health care system. Pregnant clients also experience variations in the quality of care they receive throughout the pregnancy, which is related to geographical location and socioeconomic status (Collier & Molina, 2019).

Infant mortality refers to an infant's death before their first birthday, and the rate in the United States also exceeds that of peer countries (Petrullo, 2023). Infants born to Black people in the United States are at higher risk for mortality than those born to White people (Office of Minority Health, 2022). A primary cause of infant mortality is maternal pregnancy complications. Social and economic inequities drive maternal and infant mortality disparities in the United States. Initiatives at the federal, state, and community levels are striving to address the maternal and infant health crisis in America. Preventing pregnancy complications and maternal death is also a Healthy People 2030 goal (Hill et al., 2022).

Health Care Disparities

Various factors are responsible for the health disparities, or preventable differences in attaining health, among population groups in the United States. Disparities exist along many dimensions, including race or ethnicity, sexual orientation, age, socioeconomic status, and geographic location. Health care disparities can originate from health inequities, which are avoidable differences in the health of groups and communities (National Academies of Sciences, Engineering, and Medicine, 2017; Ndugga & Artiga, 2023). Barriers such as a lack of insurance or transportation and cultural differences between clients and providers affect health care quality. All Americans deserve an opportunity to attain their highest health level, which will only occur if disparities are addressed and health equity is achieved (CDC, 2022e). Health Disparities covers this topic in greater detail.

THE ROOTS OF HEALTH INEQUITIES

Disparities in Cause-Specific Mortality

In a recent review of U.S. deaths from 2000 to 2019, National Center for Health Statistics researchers determined that non-Hispanic American Indians or Alaska Natives (AIAN) and non-Hispanic Black Americans experienced higher mortality rates than White, Asian, and Latina/Latino Americans. These findings highlight the pervasive nature of health disparities that urgently need to be addressed.

(See GBD U.S. Health Disparities Collaborators, 2023.)

Health Trends in the United States

There are several notable positive health trends in the United States. Deaths attributed to heart disease, despite it being the leading cause of death, are on the decline. The age-adjusted heart disease death rate decreased from 182.8 per 100,000 in 2009 to 161.5 per 100,000 in 2019 (CDC, 2023d). Other trends include the following (National Center for Health Statistics, 2023a):

- The percentage of children with asthma declined from 9.6 percent in 2009 to 7.0 percent in 2019.
- Cigarette smoking among adults declined from 20.6 percent in 2009 to 14.2 percent in 2019.

- In 2019, 12.0 percent of Americans under age 65 were uninsured, which is down from 17.5 percent in 2009.
- In 2019, 8.5 percent of people delayed or did not receive medical care due to cost in the past 12 months, compared with 11.4 percent in 2009.

Healthy People 2030 data suggest that several goals and objectives for specific leading health indicators have improved or are improving. For example, more adults use information technology to track health care data or communicate with providers. The number of toxic pollutants released into the environment has improved, and the overall cancer death rate is improving (ODPHP, n.d.-d).

Not all trends are positive. For example, rural Americans are at greater risk for poor health outcomes and face more disparities than their urban counterparts. In 2019, the death rate for people living in rural areas was 20 percent higher than for those living in urban areas (Curtin & Spencer, 2021). A higher incidence of poverty, less access to health care, and longer distances to health care services negatively affect this demographic's health status. Modifiable risk factors, such as smoking, limited leisure-time physical activity, and lack of seat belt use, also contribute to poor health outcomes for rural Americans. The rates of the 10 leading causes of death in the United States were also higher in 2019 in rural areas than in urban areas (Curtin & Spencer, 2021). Rural health promotion initiatives are indicated to improve the health of those living in rural areas (CDC, 2023c; Curtin & Spencer, 2021). In addition, suicide rates have increased in almost every state over the last two decades (ODPHP, n.d.-i).

U.S. HEALTH MAP

Visit the Institute for Health Metrics and Evaluation's U.S. Health Map (https://openstax.org/r/healthdataorg), an interactive map showing life expectancy and cause-specific mortality by race and ethnicity. Select a community of interest to view life expectancy or mortality rates at the county level, and then respond to the following questions.

1. How does the county you selected compare to surrounding counties?
2. Are the statistics consistent with what you expected? Why or why not?
3. How might a public health or community health nurse use this tool?

Comparison Between United States and Other High-Income Countries

The United States spends more on health care and medical technologies than other high-income countries and outperforms them on preventive measures, such as flu vaccines and cancer screenings. However, the United States has poor health outcomes and the lowest life expectancy compared to peer countries. Contributing factors include a low supply of physicians, a high incidence of chronic diseases, and obesity rates that are twice the average of peer countries (Tikkanen & Abrams, 2020). The data obtained from comparing the performance of the U.S. health care system against peer countries can be used to address areas in need of improvement. Improving access to health care, including availability and affordability, is a key factor in improving health outcomes (Tikkanen & Abrams, 2020). To find out more about how the United States compares to other countries, visit this Health System Tracker (https://openstax.org/r/healthsystemtracker) from the Peterson Center on Healthcare and KFF.

THE REAL REASON AMERICAN HEALTH CARE IS SO EXPENSIVE

Access multimedia content (http://openstax.org/books/population-health/pages/4-3-health-in-america)
This video examines why the United States spends so much money on health care but ranks lower in overall efficiency than other, similar countries.

Watch the video, and then respond to the following questions.

1. Name three factors that drive health care costs in the United States.
2. Why is health care less expensive in other countries?
3. Why does the patient-as-a-consumer model not work in health care, according to the video? Do you agree or disagree?

The Nurse's Role in Addressing Health Inequities

Nurses have a professional and moral responsibility to address the inequities that are embedded in the U.S. health care system. Access to health care is a key component of equitable care, and nurses are uniquely qualified to assist Americans in navigating the health care system. Nurses in all health care settings play an essential role in identifying and addressing barriers to care by providing person-centered care. This model addresses the physical, mental, and social needs of clients, families, and caregivers. Nurses in population health can work as case managers and connect their clients with appropriate resources to meet their health-related needs. Nurses can match community resources with learning opportunities, reduce health disparities, and assist in processing the outcomes of community-based interventions (Arisoto et al., 2018).

In addition to working directly with groups of clients, nurses must advocate for policies that improve access to care for all Americans (Oruche & Zapolski, 2020). There are several ways nurses can become more involved in the policymaking process, including:

- joining a professional nurses association or other politically active health care organization which can provide an opportunity to learn more about and participate in the policymaking process;
- building relationships with elected officials to raise their awareness of health-related issues; and
- educating clients on how they can become politically active and affect positive health-related policy changes.

The nurse's role in population health extends to many areas of health. The leading health indicators identified by Healthy People 2030 serve as a good starting point for addressing priority issues. For example, a nurse can work with Head Start programs, school systems, and day care centers to bring mobile dental hygiene care to students. A school nurse can advocate for and implement changes regarding the content of school vending machines and healthier menus for school breakfast and lunch options. The nurse may address drug overdose deaths by educating the community on the use of Narcan or expanding access to methadone clinics. The nurse can work with state and local governments on plans to address pollution issues by planting more trees or address traffic issues to minimize exhaust fumes associated with car idling. See Advocating for Population Health for more information on how nurses may participate in advocacy efforts.

4.4 World Health Statistics

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 4.4.1 Discuss the role of sustainable development goals (SDGs) in ensuring health equity.
- 4.4.2 Recognize the Global Burden of Disease (GBD) study as a tool to quantify global health priorities.
- 4.4.3 Examine global disease estimates to develop an understanding of global health challenges.
- 4.4.4 Recognize how health in the United States intersects with global health.
- 4.4.5 Describe the nurse's role in global health.

World health statistics are important to health care on a global basis. People continue to live longer and live more years in good health. The global life expectancy at birth increased from 66.8 years in 2000 to 73.3 years in 2019, and healthy life expectancy (HALE) increased from 58.3 years to 63.7 years (WHO, 2022b).

Despite these increases in life expectancy, health inequalities continue to take a toll on the lives and health of populations in areas that lack adequate resources. Both life expectancy and HALE were at least 10 years lower in lower-income countries than in higher-income countries. However, the total gains in life expectancy and HALE greatly impact mortality and morbidity. In the past 30 years, improvements have been made in global maternal and child health, with the global maternal mortality ratio and the under-5 mortality rate falling by nearly 40 percent and 60 percent, respectively, since 2000 (WHO, 2022b). From 2000 to 2020, the global maternal mortality ratio (MMR), or the number of maternal deaths per 100,000 live births, fell by about 34 percent worldwide. Almost 95 percent of all maternal deaths occurred in low- and lower-middle-income countries in 2020 (WHO, 2023a).

Sustainable Development Goals

United Nations (UN) member countries developed **sustainable development goals** (SDGs) in 2015 to create a world that is more fair, just, and equitable. SDGs are a 15-year plan with 17 interlinking goals that are a call to action to address global challenges such as poverty, inequality, climate change, peace, and justice (Table 4.3). The goals are

aimed at all countries, including those that are developed and those that are developing. SDGs are organized into five categories: people, planet, prosperity, peace, and partnerships. SDGs related to people include ending poverty and hunger and ensuring everyone can fulfill their potential in a healthy environment. Goals related to the planet address climate change and managing natural resources. Prosperity goals, such as those related to education, economic growth, and gender equality, are to ensure that all human beings can enjoy fulfilling lives. Peace SDGs foster both peace and inclusive societies. Successful implementation of the 17 SDGs requires partnerships and global solidarity. The goals are transformational and, if implemented, will lead to an equitable world that supports the human rights of all people (United Nations, n.d.).

Sustainable Development Goals		Examples of Targets
1	End poverty in all its forms everywhere.	• By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day. • By 2030, reduce at least by half the proportion of people of all ages living in poverty in all its dimensions according to national definitions.
2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.	• By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious, and sufficient food all year round. • By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, Indigenous peoples, family farmers, pastoralists, and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets, and opportunities for value addition and non-farm employment.
3	Ensure healthy lives and promote well-being for all at all ages.	• By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births. • By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births.

TABLE 4.3 The 17 UN Sustainable Development Goals (See United Nations, n.d.)

Sustainable Development Goals		Examples of Targets
4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	• By 2030, ensure that all youth complete free, equitable, and quality primary and secondary education, leading to relevant and effective learning outcomes. • By 2030, ensure that all youth and a substantial proportion of adults of all genders achieve literacy and numeracy.
5	Achieve gender equality and empower all women and girls.	• End all forms of discrimination against all women and girls everywhere. • Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.
6	Ensure availability and sustainable management of water and sanitation for all.	• By 2030, achieve universal and equitable access to safe and affordable drinking water for all. • By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
7	Ensure access to affordable, reliable, sustainable, and modern energy for all.	• By 2030, ensure universal access to affordable, reliable, and modern energy services. • By 2030, double the global rate of improvement in energy efficiency.
8	Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.	• Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7% gross domestic product growth per annum in the least developed countries. • Achieve higher levels of economic productivity through diversification, technological upgrading, and innovation, including through a focus on high-value-added and labor-intensive sectors.

TABLE 4.3 The 17 UN Sustainable Development Goals (See United Nations, n.d.)

Sustainable Development Goals		Examples of Targets
9	Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.	• Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all. • Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.
10	Reduce inequality within and among countries.	• By 2030, progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average. • By 2030, empower and promote the social, economic, and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion, or economic or other status.
11	Make cities and human settlements inclusive, safe, resilient, and sustainable.	• By 2030, ensure access for all to adequate, safe, and affordable housing and basic services and upgrade slums. • By 2030, provide access to safe, affordable, accessible, and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities, and older persons.
12	Ensure sustainable consumption and production patterns.	• Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries. • By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse.

TABLE 4.3 The 17 UN Sustainable Development Goals (See United Nations, n.d.)

Sustainable Development Goals		Examples of Targets
13	Take urgent action to combat climate change and its impacts.	• Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. • Integrate climate change measures into national policies, strategies, and planning.
14	Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.	• By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution. • Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.
15	Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	• By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought, and floods, and strive to achieve a land-degradation-neutral world. • Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity, and, by 2020, protect and prevent the extinction of threatened species.
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.	• Significantly reduce all forms of violence and related death rates everywhere. • End abuse, exploitation, trafficking, and all forms of violence against and torture of children. • By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets, and combat all forms of organized crime.
17	Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.	• Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection. • Mobilize additional financial resources for developing countries from multiple sources.

TABLE 4.3 The 17 UN Sustainable Development Goals (See United Nations, n.d.)

The UN reports on progress toward realizing the SDGs annually. The 2022 report reveals that the goals are in

jeopardy due to factors such as the COVID-19 pandemic, the war in Ukraine, and the climate crisis. The pandemic disrupted essential health services and pushed more people into extreme poverty, largely eradicating progress that had been made in this area. The war in Ukraine has heightened the risk of a global food crisis. Supply chains and global trade have been disrupted, and food, fuel, and fertilizer prices have increased dramatically. Effects of climate change, including floods, fires, and droughts, are affecting ecosystems worldwide. Based on the 2022 report, the UN has identified addressing inflation, ending armed conflict, addressing the root causes of increasing inequality, and mitigating climate change as priorities if the SDGs are to be realized (United Nations, n.d.).

Global Health Priorities

In today's interconnected society, a threat in one area of the globe is a threat everywhere. The **Global Burden of Disease** (GBD) study is a resource that studies the changing health care needs and challenges worldwide in the 21st century. This study is conducted by the Institute for Health Metrics and Evaluation (IHME) and is used worldwide to help improve the lives of people. Among the key findings of the 2019 report are that the health of the world's population is steadily improving, and global life expectancy has increased. Urgent action is needed, however, to address concerns such as the global crisis related to chronic diseases and risk factors, trends in maternal and child health, assessing the impact of the COVID-19 pandemic, and the relationship between climate change and health (IHME, 2020). This section reviews the top global health priorities.

GLOBAL BURDEN OF DISEASE

Visit the Institute for Health Metrics and Evaluation Global Burden of Disease (https://openstax.org/r/healthdataresearch) (GBD) website to view global health indicator data. Select a health condition/risk factor or location of interest, find relevant data to learn more about the health status of a particular population, and then respond to the following questions.

1. Are the data consistent with what you expected to find on your topic?
2. How can the data be used to measure a population's health decline?

Cardiovascular Diseases

Cardiovascular diseases (CVDs) are a leading cause of death globally, representing 32 percent of all deaths (Coronado et al., 2022). Most CVDs are associated with risk factors such as tobacco use, unhealthy diet and obesity, physical inactivity, and harmful alcohol use. The burden of CVDs can be reduced by addressing these modifiable risk factors and through CVD management interventions, such as controlling hypertension and managing acute events such as heart attacks promptly (WHO, 2021b). Three-quarters of deaths from CVDs occur in low- and middle-income countries in which access to primary care is limited, resulting in late diagnosis of CVD. Improvements in CVD statistics will only occur when health care systems are strengthened globally (WHO, 2021b).

Diabetes

Diabetes is among the top 10 causes of death worldwide, and its prevalence is increasing more rapidly in low-income countries (LICs) and middle-income countries (MICs) than in high-income countries (HICs). Diabetes mortality rates also rose by 3 percent globally between 2000 and 2019 (WHO, 2023c). The WHO launched the Global Diabetes Compact (https://openstax.org/r/whointa) in 2021, an initiative to reduce diabetes rates and improve diabetes prevention and care. The focus of the compact is on LICs and MICs. Additionally, the World Health Assembly endorsed global health diabetes targets that are to be achieved by 2030. The targets are intended to reduce the risk of diabetes and provide people worldwide with equitable care (WHO, 2022c).

Cancer

Cancer is the leading cause of death globally. Its most prevalent forms are breast, lung, colon and rectal, and prostate cancer. As noted, approximately one-third of deaths from cancer are related to modifiable risk factors, such as tobacco use, obesity, harmful alcohol consumption, physical inactivity, and a diet low in fruit and vegetable intake. Approximately 30 percent of cancers in LICs and MICs are caused by infections such as the human papillomavirus (HPV) and hepatitis. The WHO urges governments to develop standards and tools to guide the planning and implementation of interventions for prevention, early diagnosis, screening, preventive vaccines, and treatment for adult and child cancers. Improved access to care is a critical component of this initiative.

Comprehensive cancer treatment is available in 90 percent of HICs but only 15 percent of LICs (WHO, 2022a).

Malaria

Malaria is a life-threatening illness mostly found in tropical countries and spread by certain types of mosquitoes (Figure 4.5). Although it is preventable and curable, the incidence of malaria and its associated deaths are increasing. From 2020 to 2021, at the height of the COVID-19 pandemic, the incidence of malaria increased by 13 million cases, and there were 63,000 more deaths. Nigeria, the Democratic Republic of the Congo, the United Republic of Tanzania, and Niger account for over half of malaria deaths worldwide. Vector control is an essential aspect of preventing malaria; however, it is being threatened by resistance to insecticides. The WHO recommends the RTS,S/AS01 malaria vaccine for children, which significantly reduces malaria and its deadly sequelae. The WHO's *Global Technical Strategy for Malaria, 2016–2030* is a guide for malaria control and elimination that can countries can use as they strive to reduce or eliminate this public health threat (WHO, 2023b).



FIGURE 4.5 Research to discover new interventions to prevent or limit the spread of malaria is ongoing. (credit: "U.S. Army medical researchers take part in World Malaria Day 2010, Kisumu, Kenya April 25, 2010" by Rick Scavetta/U.S. Army Africa Public Affairs/Flickr, CC BY 2.0)

How Global Disease Estimates Support Challenges

The GBD is an important component in identifying health priorities worldwide, as well as trending the data to determine if health-related issues improve over time. The data provide a comprehensive overview of mortality and disability throughout the world and quantify losses related to hundreds of diseases, injuries, and risk factors. The GBD looks at both prevalence, or the number of people with a condition, and the relative harm that the condition causes. The data can then be used at global, national, and local levels to improve health care systems and address health care disparities (IHME, 2020).

Intersection of Health in America with Global Health

The United States has engaged with global health activities for over a century and contributes more funds to international health programs than any other country. The investment of the United States in global health is important not only from a humanitarian standpoint for other countries but also because it protects the health and well-being of Americans. The health and safety of countries worldwide are more closely linked than ever before. Travel provides opportunities for people around the globe; however, it also increases exposure to health risks. Global health issues like climate change and communicable diseases know no boundaries. The COVID-19 pandemic demonstrated the impact of an infectious disease on not only the health but also the economy of the world. Improvements in global health mandate a shift from independence to interdependence. Countries that identify and exchange best practices and strategies strengthen global health and human services systems (HHS, 2019).

The Nurse's Role in Global Health

All nurses, not only those who work as part of an international health care team, have a professional obligation to understand global health issues and health care priorities. It is important for nurses to develop an understanding of SDGs and global health priorities, as they are connected to local and national concerns. Infectious diseases, for example, do not recognize borders, as was evident during the rapid global spread of COVID-19 during the pandemic. Chronic diseases such as cancer have common risk factors regardless of geographic location, and all nurses must support health promotion initiatives to improve health outcomes. Nurses are also well positioned to lead efforts in global health due to their knowledge of population-based care (Salvage & White, 2020).

4.5 Global Public Health Security

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 4.5.1 Define global health security.
- 4.5.2 Describe interventions used to promote public health security.
- 4.5.3 Discuss the interconnectedness of population health across borders.
- 4.5.4 Describe the nurse's role in public health security.

Infectious diseases are a threat everywhere in the world. Global health security refers to public health systems that work to prevent, detect, and respond to these threats. In the United States, the CDC works to protect the American people's health, safety, and security and fight global health threats worldwide. The prevalent global health security risks include the following (CDC, 2022c):

- Emergence and spread of new infectious diseases
- Ability of diseases to spread related to the increased globalization of travel and trade
- Increasing drug-resistant, disease-causing pathogens
- Risk of accidental release, theft, or unlawful use of dangerous pathogens

The Global Health Security Agenda (GHSA) is an effort of more than 70 countries to protect the world from infectious disease threats (CDC, 2022f). The CDC works to strengthen the public health programs of other countries to reduce the risk of infectious disease outbreaks. It has invested in 19 partner countries to strengthen their public health readiness to contain infectious disease outbreaks at their source. The CDC is invested in the GHSA to promote the safety of the United States and the world, as there are more opportunities for disease to spread due to global travel. Closing gaps in preparedness is a role of the CDC that protects the world's health and economic and political stability (CDC, 2021d, 2022d).

Global Public Health Security Interventions

The CDC's efforts to promote public health security are focused on four interventions: surveillance systems, laboratory systems, emergency management, and workforce development. The CDC also works with other government agencies within the United States, such as the Office of Global Affairs (OGA), as well as ministries of health and international organizations to meet global health security goals (CDC, 2021d).

Surveillance Systems

Surveillance systems allow countries to identify risks and quickly detect and stop outbreaks of infectious diseases. In the United States, the National Notifiable Diseases Surveillance System (NNDSS) enables all levels of public health to report notifiable infectious, and some noninfectious, diseases. The data obtained by the NNDSS are used within the United States and can also be shared internationally. Limitations of surveillance systems include variations in reporting practices, both nationally and globally, and missing data from individuals who do not seek medical care. Resources, such as the availability of diagnostic testing facilities or the ability to test for new disease entities, also affect the validity and usefulness of case reports (CDC, 2022g). Pandemics and Infectious Disease Outbreaks discusses disease surveillance in more detail.

Laboratory Systems

Laboratory systems are an important component of public health security, as they allow for the detection of pathogens that cause disease, outbreaks, and death. Reducing the spread of disease and death is possible when a pathogen is identified quickly, as confirmation allows health care workers to respond with the appropriate treatment

and prevention methods efficiently. As with surveillance systems, limitations of laboratory systems include factors such as the availability of diagnostic testing facilities and the ability to test for new disease entities. At the beginning of the COVID-19 pandemic in 2020, for example, the capacity for SARS-CoV-2 testing was limited, and the CDC advised a priority-based approach based on factors such as age, occupation, and morbidity. Another concern with COVID-19 testing was that limited data were available on the accuracy of the rapidly developed tests. These limitations, in turn, affected the validity of data obtained through surveillance systems (Goldstein & Burstyn, 2020). The WHO is reviewing the health emergency preparedness, response, and resilience (HEPR) process in light of the knowledge gained during the COVID-19 pandemic (WHO, 2022f).

Emergency Management and Response

Emergency management and efficient response to infectious disease threats are important public health security interventions. Countries must have knowledge and resources, such as emergency operations centers, to mount rapid, coordinated responses to infectious disease outbreaks. The United States and 19 partner countries have a Public Health Emergency Operations Center (PHEOC) that coordinates the response to an emergency or public health threat. Additionally, most of those 19 countries have personnel trained by the CDC's Public Health Emergency Management (PHEM) Fellowship course. Coordinated efforts within and between countries are important in reducing the potential for a local outbreak to become a pandemic (CDC, 2021c, 2021d; WHO, 2022e). Principles of Disaster Management discusses the nurse's role in emergency response in more detail.

Workforce Development

Global health security requires each country to have well-trained, highly skilled teams to investigate potential outbreaks and intervene quickly. The CDC has established the Field Epidemiology Training Program (FETP) to train what it refers to as "disease detectives" in more than 80 countries around the globe (CDC, 2023b). Many of these countries have expanded their programs since partnering with the CDC. The CDC also has between 350 and 400 experts who can be deployed in response to a public health emergency within 72 hours of the crisis, anywhere in the world (Knight, 2020).

THE DISEASE DETECTIVES STOP OUTBREAKS AT THEIR SOURCE

Access multimedia content (http://openstax.org/books/population-health/pages/4-5-global-public-health-security)

This video features the CDC's disease detectives as they investigate an outbreak of leptospirosis.

Watch the video, and then respond to the following questions.

1. How do the disease detectives conduct an investigation?
2. How does the CDC work with HHS during an investigation?

Interconnectedness of Population Health across Boundaries

Everyone is vulnerable to threats from infectious disease, which can spread nearly everywhere on Earth in as few as 36 hours (CDC, 2022d).The most significant risk from infectious disease occurs when novel diseases appear or when familiar diseases appear in novel geographic locations. COVID-19, for example, is a novel coronavirus. Illnesses that were eventually determined to be COVID-19 were first identified in Wuhan, China, in December 2019. COVID-19 spread rapidly, and the WHO declared it a global pandemic on March 11, 2020 (WHO, 2022f). From a public health standpoint, it is essential to understand the impact of emerging disease threats and outbreaks of familiar diseases on world health (CDC, 2022d).

Ebola

Ebola virus disease (EVD), or Ebola, is a rare form of hemorrhagic fever with a fatality rate that varies from 25 to 90 percent (Patel & Su, 2023). Ebola is transmitted by infected animals, the body fluids of infected persons, or items from infected persons that are contaminated with body fluids, such as clothing. It enters the body through human-to-human transmission via contact through the eyes, nose, or mouth or an opening in the skin. There are five identified strains of the Ebola virus species; four of them may cause the virus in humans (Patel & Su, 2023). Health care workers can become infected with Ebola if infection control precautions are not strictly followed. An effective vaccine is available only for the Zaire type of Ebola, and the treatment is supportive care and the use of antibodies

(CDC, 2022c, 2023e; WHO, 2023e).

The first outbreak of Ebola occurred in 1976 in the Democratic Republic of the Congo (DRC, formerly Zaire) in a village near the Ebola River. There have now been more than 20 outbreaks of Ebola in 18 different countries, including the United States. In 2019–2020, the DRC experienced the second-largest recorded outbreak of Ebola (Patel & Su, 2023). Global health security interventions are imperative with a disease such as Ebola to contain the virus since transmission can occur even after the death of an individual, during burial practices (WHO, 2023e).

Tuberculosis

Tuberculosis (TB) is an infectious disease caused by the *Mycobacterium tuberculosis* bacteria. TB affects all age groups and occurs in every country in the world. In 2021, 10.6 million new cases of TB were diagnosed, resulting in more than 1.6 million deaths. TB is the second leading infectious cause of death worldwide, and although more than two-thirds of the new cases of TB in 2022 were in Bangladesh, China, the DRC, India, Indonesia, Nigeria, Pakistan, and the Philippines, it affects every country throughout the world. Multidrug-resistant TB (MDR-TB) is a public health threat because it is resistant to many drugs and is easily transmitted from person to person. Ending the TB epidemic by 2030 is among the health targets of the UN SDGs. The WHO is providing global leadership to end TB and setting strategic priorities, including monitoring and reporting on the current global, regional, and country-level epidemic progress (WHO, 2023f).

Human Immunodeficiency Virus

Human immunodeficiency virus (HIV) is an infection that affects the body's immune response. Acquired immunodeficiency syndrome (AIDS) is an advanced form of the disease. The first published report of what would be identified as HIV and AIDS was in 1981 (CDC, 2001), and more than 40 years later it remains a major global public health issue. There is ongoing transmission of HIV globally, compounded by the concerning trend of increasing transmission reported by some countries. In 2021, 1.5 million people were diagnosed with HIV, and 650,000 people died from HIV-related causes. Approximately 40 million people were living with HIV at the end of 2022, with two-thirds residing in the WHO African region. In 2022, 630,000 peopled died from HIV-related causes, and 1.3 million people acquired HIV. WHO global HIV strategies align with the SDG target of ending the HIV epidemic by 2030. Contracting both HIV and TB is significant, as nearly all HIV-positive people with TB will die (WHO, 2023d).

The Nurse's Role in Public Health Security

The role of the nurse in public health security is significant, and active participation is critical. Writing, updating, reviewing, and exercising emergency response plans are key, along with collaborating with other community entities in the event of an actual emergency.

The nurse must be knowledgeable about their agency's security plan and chain of command. For example, when a biological agent has manifested, the nurse can provide the public with fact sheets to disseminate valid health information. This also includes responding to health consequences of biological agents.

A suspected bioterrorist event may require the nurse to dispense vaccines, antimicrobials, and antitoxins or obtain other resources from HHS's Strategic National Stockpile (Administration for Strategic Preparedness and Response, n.d.). Nurses may also assist in shelters, schools, or places with vulnerable populations. Additionally, psychological support by the nurse may be required to care for the victims, the public, and the workers who are responding to and working with the bioterrorism event (Rowney & Barton, 2005). Both Pandemics and Infectious Disease Outbreaks and Principles of Disaster Management discuss bioterrorism in more detail.

Chapter Summary

4.1 Defining Health

Health is a state of complete physical, mental, and social well-being and wholeness. Social determinants that affect health outcomes include access to health care, a safe environment, healthy food and habits, and having social support for one's mental health. Public health nursing aims to improve health outcomes of the population by focusing on health promotion and disease prevention.

4.2 Performance Metrics

A population health measure or metric is an indicator that reflects the quality of a group's overall health and well-being. Life expectancy at birth, morbidity, mortality, and premature death are examples of population health outcome measures. Summary measures of population health combine data from the basic metrics, such as mortality and nonfatal disease outcomes, to obtain a single numerical statistic.

4.3 Health in America

The United States has the highest health care spending compared to peer countries but has worse health outcomes. Healthy People 2030 identifies high-priority health issues and challenges, which are referred to as leading health indicators (LHIs). LHIs are objectives that cover the lifespan and allow for the assessment and promotion of health at the community, state, and national levels. Mortality trends guide the development of public health policies.

4.4 World Health Statistics

World health statistics are important to health care on a global basis. The results of statistical measurements indicate that people continue to live longer and live more years in good health. Health inequalities that take a toll on life and health are present in areas that do not have adequate resources. United Nations (UN) member countries developed sustainable development goals (SDGs) to create a more fair, just, and equitable world. SDGs are a call to action to address global challenges such as poverty, inequality, and climate change and promote peace and justice.

4.5 Global Public Health Security

Global public health security functions to prevent, detect, and respond to security threats. In the United States, the CDC works to protect the American people's health, safety, and security and fight global health threats worldwide.

The CDC's efforts to promote public health security focus on four interventions: surveillance systems, laboratory systems, emergency management, and workforce development. The CDC also works with other U.S. government agencies, such as the Office of Global Affairs (OGA), and with ministries of health and international organizations to meet global health security goals.

Key Terms

burden of disease the impact of a health problem based on population health metrics, or indicators, that refer to valid, reliable, and comparable measures of health status

disability-adjusted life years (DALYs) the sum of years lost to a disease or health condition (the YLLs and YLDs), with each DALY representing the loss of one year of full health

Global Burden of Disease a study conducted by the Institute for Health Metrics and Evaluation (IHME) that reflects the current health care needs and challenges worldwide

health a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity

health disparities preventable differences in experiencing diseases, injuries, or opportunities

health equity the expectation that everyone has a fair opportunity to attain their highest level of health

health indicators health-related measures of data that are used to quantify and track an individual's health status

health outcome a change in the health status of an individual, group, or population that is attributable to a planned intervention or series of interventions, regardless of whether such an intervention was intended to change health status

health-related quality of life (HRQL) the perceived physical and mental well-being of an individual or group

Healthy People 2030 an initiative of the U.S. Department of Health and Human Services to improve the health and well-being of all people in the United States that has produced a list of high-priority health issues and challenges focused on the year 2030

incidence the number of new cases of a disease over a given time frame

leading health indicators (LHIs) high-priority, modifiable issues addressing social determinants of

health, health disparities, and health equity that have a significant effect on health outcomes

morbidity the state of being symptomatic or unhealthy due to a disease or condition; usually represented or estimated using prevalence or incidence

mortality rate the number of deaths in a specified time frame

population health outcomes broad topics related to a larger group or target population, such as mortality rates, life expectancy rates, prevalence of chronic conditions, or quality of life

prevalence the proportion of a population with a disease or condition over a given timeframe

quality-adjusted life years (QALYs) the months or years of reasonable quality that an individual may gain following medical treatment for a condition

social determinants of health (SDOH) non-health factors such as socioeconomic status, education, or environment that affect health

sustainable development goals (SDGs) a call to action to address global challenges such as poverty, inequality, climate change, peace, and justice; aimed at all countries, including those that are developed and those that are developing

well-being the subjective perception that life is going well; is important from a public health perspective, as it is an outcome

years of healthy life lost due to disability (YLD) the number of healthy years one might lose from their life due to disability or sickness

years of life lost (YLL) a measure of premature mortality that considers both the frequency of death and the age at which it occurs, calculated by multiplying number of deaths by a standard life expectancy

Review Questions

1. The public health nurse is examining the number of maternal deaths in a certain year. Which rate is the nurse studying?
   a. Crude deaths
   b. Morbidity
   c. Mortality
   d. Proportional population

2. Which factor should the community health nurse take into account when assessing an individual's social determinants of health?
   a. Genetic influences
   b. Exercise habits
   c. Nutritional intake
   d. Level of education

3. Which source of data would a community health nurse utilize during a community assessment to determine the births, deaths, marriages, health, and diseases in a certain county?
   a. Morbidity report
   b. Service utilization
   c. Population survey
   d. Vital statistics

4. Which outcome would the community health nurse measure to evaluate the health of a population?
   a. Blood pressure readings of individuals in the community
   b. Home blood glucose levels monitored by clients with diabetes
   c. Mortality rates in the community
   d. Percent of high school students who attend college

5. Which definition of health would the nurse attribute to a client who perceives themselves as healthy despite taking medication for hypertension?
   a. Health is the absence of disease.
   b. Health is the full return to wellness.
   c. Health is a state of improving well-being.
   d. Health is an internal state of balance and well-being.

6. The nurse is explaining to a client that smoking cessation will add years of quality to their life. Which population health metric is the nurse describing?
    a. Years of healthy life lost due to disability
    b. Disability-adjusted life years
    c. Quality-adjusted life years
    d. Years of life lost

7. Which indicator is the nurse utilizing when considering the effects of diseases that people in a population are living with?
    a. Morbidity
    b. Mortality
    c. Burden of disease
    d. Prevalence

8. Which current health trend data will the population health nurse utilize to develop health education programming?
    a. Heart disease is the leading cause of death in most ethnic and racial groups.
    b. Deaths from cancer have increased in the last two decades.
    c. Deaths from stroke are decreasing in all ethnic and racial groups.
    d. Unintentional accidents are the fourth leading cause of death in individuals aged 1 to 44 years.

9. A nurse is volunteering for a global nongovernmental organization whose work addresses the United Nation's sustainable development goals (SDGs). Which statement about the SDGs is accurate?
    a. SDGs have been impacted by the climate crisis.
    b. The focus of SDGs is on developing nations.
    c. Progress on SDGs is reported every 5 years.
    d. Each country has its own individualized SDGs.

10. Which trend in mortality in the United States over the past century would the nurse utilize to develop public health campaigns?
    a. Life expectancy has increased, and rate of death has decreased.
    b. Life expectancy and rate of death have remained unchanged.
    c. Life expectancy has increased, and rate of death has also increased
    d. Life expectancy has decreased, and rate of death has also decreased.

CHAPTER 5

Demographic Trends and Societal Changes



FIGURE 5.1 Immigration and naturalization partly drive changing demographics. Other factors include the aging population, regional and national employment trends, and changes in healthcare. (credit: modification of work "Naturalization Ceremony" by Utah Reps/Flickr, CC BY 2.0)

CHAPTER OUTLINE

5.1 Demographic Factors
5.2 Health Care Consumer Behavior
5.3 Virtual Care and Technology
5.4 Health Care Workforce

INTRODUCTION Michael is a public health nurse who works at a free clinic in the community where he grew up and still lives. The community Michael's clinic serves includes a large immigrant population as well as a high percentage of older adults. A consortium of local clinics in Michael's area recently received a grant from the Health Services and Resources Administration (HRSA)—which operates under the U.S. Department of Health and Human Services (HHS)—to work toward increasing the number of minorities who receive care at these local clinics. As a participant in the consortium, Michael prepared a flyer about the free clinic. The clinic has been recruiting nurses that represent minority ethnic groups in the community, so Michael included photos of the diverse staff to help increase trust in the clinic's health care. As a public health nurse, Michael has the opportunity to improve access to health care and nutrition resources for his community.

This chapter will discuss demographic shifts in the United States and the unique opportunities they present to advance technology and to improve policy, consumer behavior, and the health care workforce.

5.1 Demographic Factors

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 5.1.1 Define demographics.
- 5.1.2 Describe the fastest-growing demographics in the United States.
- 5.1.3 Discuss characteristics of underrepresented populations.
- 5.1.4 Examine how projected population changes challenge public health policies and the implications for health care services.

Demographics are statistical data regarding the characteristics of the people living in a particular place, describing them based on categories such as age, race, ethnicity, sexual orientation, gender identity, ability, education level, income level, and marital status. Individuals belong to many demographic groups. For example, a person may belong to one group based on age, another based on race, and a third based on geographic location. This section examines demographics, focusing on rapidly growing underrepresented populations and on how the growth of these populations affects both public health policies and the provision of health care services.

Fastest-Growing Demographics

U.S. Census Bureau forecasts indicate that the United States will continue to experience significant demographic shifts in the next 40 years. By 2060, the U.S. population is expected to increase by 79 million people (U.S. Census Bureau, 2020), and changing demographics will have major implications for the national health care system. Community health and public health nurses must prepare to serve these changed populations. A more diverse nursing workforce will lead to better health outcomes for populations (American Association of Colleges of Nursing, 2023). This section reviews the most rapidly expanding population groups within the United States.

Baby Boomers

One way to categorize populations is by generation, a period spanning about 20 to 30 years that includes everyone who is born and lives their lives at approximately the same time, experiencing similar social and cultural events. Until recently, baby boomers, or the generation born from 1946 to 1964, made up the largest generation in the United States—76 million births—and 71.6 million living adults in 2019 (Fry, 2020). As this large demographic group ages, the number of individuals over the age of 65 continues to increase. For example, although older adults represented 8 percent of the total population in 1950, they made up 16 percent of the population in 2020 and are projected to represent nearly 25 percent of the total population in 2060 (see Figure 5.2) (Centers for Disease Control and Prevention [CDC], 2022d).

The U.S. Census Bureau estimates that by 2030 all individuals in the United States categorized as baby boomers will be over 65 years old, marking a significant shift toward an older average age in the U.S. population (America Counts Staff, 2019). The growth of the baby boomer population is significant for nurses and other health care professionals because older adults tend to have a higher prevalence of health issues and chronic diseases, such as Alzheimer's disease, diabetes, hypertension, and arthritis, that are related to aging (CDC, 2022d). As the proportion of older adults in the population increases, the incidence of age-related health conditions and deaths will also increase. Consequently, the need for health care services in nursing homes, long-term care, and home health care facilities in the United States will grow.

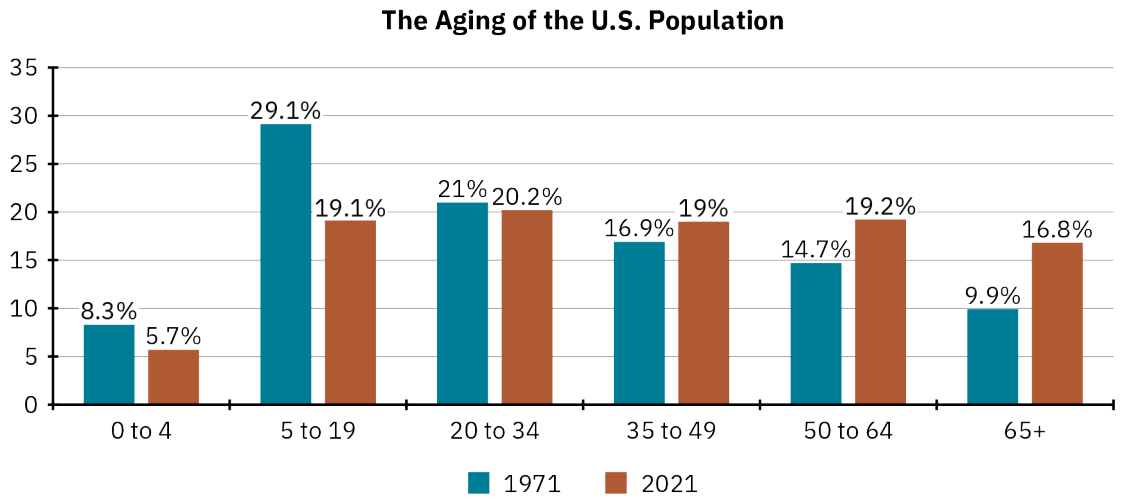


FIGURE 5.2 The number of individuals over the age of 65 in the U.S. population is growing. (data source: U.S. Census Bureau; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Racial and Ethnic Minorities

Another projected demographic change in the U.S. population is a shift in the numbers of racial and ethnic minorities in relation to the population as a whole. **Ethnic minorities** are population groups with a shared culture, tradition, religion, language, history, or other factors living in communities or areas where most people are from a different

ethnic group. Between 2020 and 2060, the U.S. Census Bureau predicts major changes in the racial and ethnic diversity of the U.S. population. For example, the number of non-Hispanic White individuals is expected to decrease dramatically. In 2020, there were approximately 199 million non-Hispanic White individuals in the United States; that number is expected to fall to approximately 179 million by 2060, a 10 percent decrease. The decline in the non-Hispanic White demographic is related to a decrease in overall births and an increase in deaths over time.

During the same 40-year period, individuals who identify as two or more races are projected to be the fastest-growing racial or ethnic group in the United States. The U.S. Census Bureau estimates that Asian people will make up the second fastest-growing ethnic group, and Hispanic people will be the third fastest. The projected increase in the number of individuals who identify as Hispanic is attributed to an increase in the number of children born to parents who identify as Hispanic in the past decade, while the projected increase in net international migration is the primary driver for an increase in the number of individuals who identify as Asian. The U.S. Census Bureau also estimates that the population of individuals who are considered foreign-born will increase from 44 million in 2016 to approximately 69 million in 2060, making up 17 percent of the U.S. population (2020).

For nurses and other health care professionals, these rapidly changing demographics are significant because they have implications for the prevalence of disease and **health disparities**. The CDC defines health disparities as "preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations" (CDC, 2020a, para. 1).

Heart disease, cancer, diabetes, and stroke are the most common causes of illness, disability, and death in the United States (CDC, 2022a). **Underrepresented populations**, such as ethnic minorities, tend to be impacted the most by **chronic diseases**—conditions like hypertension, diabetes, kidney disease, heart disease, and cancer—that individuals live with for a year or more that require ongoing medical attention, limit the activities of daily living, or both. Underrepresented populations are defined as subgroups within a population, often identified by race, ethnicity, age, sex, gender, sexual orientation, or socioeconomic status, whose representation in society is disproportionately low relative to their numbers (National Institutes of Health [NIH], 2023b). Chronic diseases affect certain racial and ethnic groups more than others:

- Between 2017 and 2018, diagnosed diabetes prevalence was higher among American Indians/Alaska Natives, people of Hispanic origin, and non-Hispanic Black people than among White people (CDC, 2020c).
- In 2018, Asian people comprised 6 percent of the U.S. population but accounted for approximately 2 percent of new HIV cases (CDC, 2020b).
- Asian/Pacific Islanders have tended to experience the highest rate of hepatitis B when compared with other ethnic groups. As such, rates of hepatitis B-related mortality remain higher among Asian/Pacific Islanders than among than their ethnic counterparts (CDC, 2020b).
- In 2018, the rate of tuberculosis among Asian people was 31 times higher than all people reported as having been diagnosed with tuberculosis nationwide (CDC, 2020b).

Black and Hispanic people and Alaska Natives experience worse health outcomes on several measures when compared with their White counterparts (NIH, 2023b):

- Alaska Natives, Hispanic people, and American Indians are at higher risk of being uninsured (Tolbert et al., 2022).
- Black, Hispanic, and Asian adults were less likely to receive care for mental health conditions as of 2021 (Hill et al., 2023).
- Approximately six in 10 Hispanic, Black, and Alaska Native adults did not receive a flu vaccine in the 2021–2022 flu season compared with less than one-half of White adults (Hill et al., 2023).
- Life expectancy at birth was shorter for Alaska Native people and Black people between 2019 and 2021 (Hill et al., 2023).
- In 2021, infant mortality rates were twice as high among Black people and Alaska Native people (Hill et al., 2023).
- In 2021, Black and Alaska Native women experienced the highest rates of death related to pregnancy (Hill et al., 2023).
- In 2021, Black and Hispanic children were more than twice as likely to experience food insecurity (Hill et al., 2023).

HEALTHY PEOPLE 2030

Reduce the Proportion of Adults Who Don't Know They Have Prediabetes

According to Healthy People 2030, approximately 38 percent of individuals living in the United States, age 18 and older, have undiagnosed prediabetes. The goal of this Healthy People 2030 objective is to decrease the proportion (https://openstax.org/r/healthreduce) of American adults who have prediabetes from the baseline of 38 percent in 2013 to 33.2 percent by 2030. Healthy People 2030 discusses resources for individuals such as weight loss, healthy eating, and increased physical activity to reduce the risk of prediabetes.

According to the CDC (2022b; 2020c), African Americans, Hispanic/Latino Americans, and American Indians, Pacific Islanders, and some Asian Americans are at elevated risk of developing prediabetes.

(See Office of Disease Prevention and Health Promotion [ODPHP], 2023c.)

UNFOLDING CASE STUDY

Part A: Demographic Factors

Read the scenario, and then answer the questions that follow.

Jose is a 53-year-old Hispanic male who has presented to the clinic with anxiety and with chest pain radiating to the right arm. Jose was recently let go from his job and has not been able to find employment. He is accompanied to the clinic by his wife and his mother. Jose indicates that he does not like coming to the doctor's office, and he becomes more anxious as the nurse completes his health assessment. His vital signs are as follows:

- Blood Pressure: 126/82 mm Hg
- Respirations: 18 breaths/minute
- Heart Rate: 130 beats/minute
- Oxygen Saturation: 98 percent on room air

Other findings from the nurse's health assessment of the client are as follows:

- Neurological: Within normal limits.
- Respiratory: Lungs clear to auscultation.
- Cardiovascular: Increased heart rate, but normal heart sounds. No peripheral edema noted.
- GI: Within normal limits.
- GU: Within normal limits.
- Pain: Radiating to the right arm 5 on a scale of 1–10.

1. When assessing Jose, what factors about his ethnic background should the nurse consider?
    a. The client is at a higher risk for certain health conditions because of his ethnic background.
    b. The client has the same risk for certain health conditions as anyone else his age.
    c. The client is a member of a minority group that is decreasing in numbers over time.
    d. The client is a member of a minority group that is eligible for additional health-related resources.

2. How can Jose's employment status potentially affect his health?
    a. He will be covered by Medicaid, so there should be no long-term effects.
    b. He can continue to receive health care in the local emergency department.
    c. He is more likely to be affected by a health disparity.
    d. His temporary unemployment status should not permanently affect his health.

Vulnerable Populations

According to the National Collaborating Centre for Determinants of Health (NCCDH), "vulnerability occurs when people are exposed to multiple layers of marginalization, including barriers to social, economic, political, and environmental resources that overlap to increase the risk of poor health. Individuals and communities are

vulnerable to, live in vulnerable conditions or are forced into vulnerability rather than being labeled as vulnerable people/populations/groups" (NCCDH, 2023, para. 1). Ethnic and racial minorities are examples of **vulnerable populations** as many individuals within these groups are at risk of experiencing health disparities. Individuals experiencing poverty—many of whom identify as members of ethnic or racial minorities—are another demographic at risk of poor health outcomes related to lack of access to health care. For example, a 2020 report on income and poverty in the United States revealed the following (Shrider et al., 2021):

- Between 2019 and 2020, real median household income decreased 2.9 percent to $67,521.
- The total number of people with earnings decreased by 3.0 million, and the number of individuals who worked full-time year-round decreased by 13.7 million between 2019 and 2020.
- There was a 1.2 percent decrease in real median earnings for all workers.
- The official poverty rate increased from 10.5 percent in 2019 to 11.4 percent in 2020.
- In 2020, 37.2 million people were living in poverty, up from 33.9 million in 2019.

Sexual and gender underrepresented populations, which "include, but are not limited to, individuals who identify as lesbian, gay, bisexual, asexual, transgender, Two-Spirit, queer, and/or intersex" (NIH, 2023a, para. 2), are another vulnerable population that is growing. The number of individuals identifying as lesbian, gay, bisexual, or transgender rose significantly between 2010 and 2020. As of 2017, there were approximately 11.4 to 12.2 million adults living in the United States who identified as lesbian, gay, bisexual, or transgender (National Library of Medicine, 2020).

The population of individuals with disabilities is another growing vulnerable population. Between 2008 and 2019, rates of disability among children under age 18 increased by 0.4 percent (Young & Crankshaw, 2021). Children who identified as American Indian and Alaskan Natives and those living in poverty had the highest rates of disability (Young & Crankshaw, 2021). In its Annual Report on People with Disabilities in America (https://openstax.org/r/disabilitycompendium), the University of New Hampshire Institute on Disability (2023) states that the percentage of Americans with disabilities increased from 13.2 percent in 2019 to 13.5 percent in 2021.

For nurses and other health care professionals, these changing demographics are significant because they present challenges in areas across society, including in the workforce, education systems, and health care systems. Vulnerable populations tend to have more health issues such as preventable diseases (e.g., diabetes, hypertension, and obesity) and poor access to care, which leads to increased mortality (deaths) and morbidity rates (diseases). An increase in mortality and morbidity reflects increased health disparities (American Association of Colleges of Nursing, 2023). Members of the lesbian, gay, bisexual, transgender, queer/questioning, intersex, and asexual/aromantic/agender plus other unknowns (LGBTQIA+) community—particularly youth—are at increased risk for negative health and life outcomes related to discrimination and stigma. The risk of suicide and substance misuse is high within this age group (CDC, 2023b). Individuals with disabilities are more likely to smoke and have obesity, heart disease, and diabetes. One in four adults in this population is also less likely to have a dedicated health care provider or receive an annual check-up (CDC, 2019a).

THE ROOTS OF HEALTH INEQUITIES

What Causes Health Inequities?

Access multimedia content (http://openstax.org/books/population-health/pages/5-1-demographic-factors)
The World Health Organization (WHO) defines health inequities as "systematic differences in the health status of different population groups" (2023, para. 2). Health inequities are the result of human-made systems that favor one group over another. As a result, an unequal distribution of power occurs. The following have been identified as the structural root causes of health inequities: racism, sexism, classism, xenophobia, heterosexism, and ableism. These inequities can occur at the institutional level (how organizations treat others), interpersonal level (individuals' behaviors toward each other), and the internal level (how individuals view themselves). Watch the video for more information about the causes of health inequities.

In addition to experiencing more health issues, members of underrepresented communities tend to distrust the health care system because of racism, bias, and perceived mistreatment. For example, in a Kaiser Family Foundation survey, 78 percent of individuals who identified as White said they trusted their doctors, although only 59 percent of those who identified as Black said they trusted theirs (Hamel et al., 2020).

As discussed in Structural Racism and Systemic Inequities, much of this distrust is due to systemic racism—the institutional unfair treatment of individuals based on race—and discrimination against racial minority populations in the United States. The perception by members of underrepresented communities that racism will be present often leads this population to choose not to seek health care. The resulting poor health outcomes further exacerbate health disparities between groups within a population. Such disparities are especially present in cancer screening, neonatal care, pain management, end-of-life care, and the treatment of cardiovascular disease (Huzar, 2021).

Individuals tend to have better health outcomes when they receive care from providers who are familiar with their culture (Nair & Adetayo, 2019). Health care providers should work toward developing greater cultural competence—the ability to understand and work with people of cultures other than one's own—which in turn increases trust within communities. The box below provides some suggestions for strategies nurses can use to increase client trust. Also see Culturally and Linguistic Responsive Nursing Care and Managing the Dynamics of Difference for more information on this topic.

GUIDELINES FOR INCREASING TRUST WITH CLIENTS

- Learn about the client's culture and ensure it is central in every aspect of the client's care.
- Include the client and their family in the care process.
- Work to build trust with your client before and during the client care process.
- Be open and transparent with the client when communicating.
- Assess whether the client understands what you have taught them (health literacy).
- Be mindful of the degree to which the client has access to health care resources, and ensure you have mechanisms in place to address barriers, such as transportation, housing, and health insurance.
- Involve the interdisciplinary team in the client's care to ensure all aspects of the client's life and health issues are addressed. This would include professionals such as the physician, social workers, nutritionist, and health educators.

(See The Institute for Functional Medicine, 2023.)

Needed Policy Changes

To provide appropriate care to a changing population, policies and programs devoted to achieving health equity must be developed**. Health equity** refers to "the state in which everyone has a fair and just opportunity to attain their highest level of health" (CDC, 2022g, para. 1).

The CDC's Office of Health Equity (https://openstax.org/r/cdchequity) is on the front lines of achieving health equity through its CORE Strategy, which is an integration of health equity into every element of the work of the organization. CORE is an acronym for the following goals (CDC, 2023a):

- **C**ultivate Comprehensive Health Equity Science—The CDC Office of Health Equity will facilitate and accelerate the principles of health equity across all CDC programs, policies, and funding structures.
- **O**ptimize Interventions—The CDC Office of Health Equity will engage partners to address gender discrimination and gendered racism in the workplace.
- **R**einforce and Expand Robust Partnerships—The CDC Office of Health Equity will engage partners to mobilize around developing and implementing strategies to address health disparities and long-term health inequities, which includes the social determinants of health.
- **E**nhance Capacity and Workforce Engagement—The CDC Office of Health Equity will work to diversify the public health workforce.

One health policy with which most people are at least somewhat familiar is the Patient Protection and Affordable Care Act of 2010, also known as the Affordable Care Act (ACA). The primary goals of the ACA are to (U.S. Department of Health and Human Services [HHS], 2023a):

- Improve the affordability of health insurance to more individuals (Figure 5.3).
- Expand the Medicaid program, a state-operated health insurance program for those who are living in poverty or are disabled.

- Provide support for medical care delivery methods that are designed to yield lower health care costs.

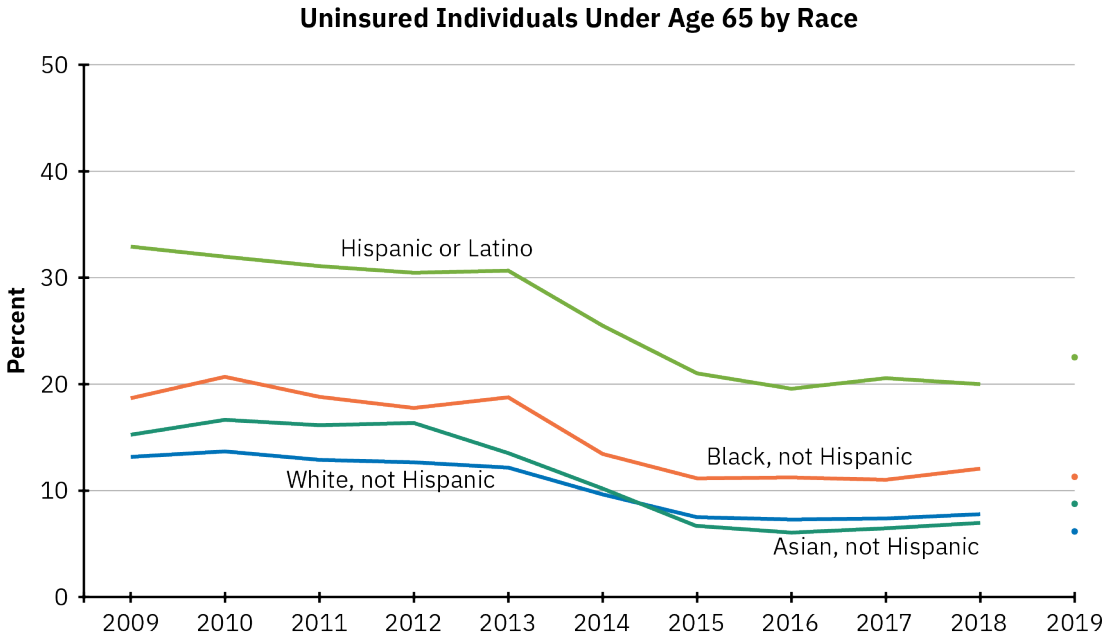


FIGURE 5.3 This graph shows the lack of health insurance among people in the United States under age 65 by race and Hispanic origin. (Those over age 65 are covered by Medicare and Medicaid.) (data source: National Center for Health Statistics, National Health Interview Survey [NHIS] and *Health, United States,* 2020–2021, https://www.cdc.gov/nchs/hus/topics/health-insurance-coverage.htm; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

5 THINGS ABOUT THE AFFORDABLE CARE ACT

Access multimedia content (http://openstax.org/books/population-health/pages/5-1-demographic-factors)
This video provides a brief overview of the ACA, the 2010 law that increases health insurance options and provides additional health care rights and protections to all citizens, improving access and reducing disparities.

Watch the video, and then respond to the following questions.

1. How does the ACA protect clients with preexisting medical conditions?
2. What are some preventive services covered by the ACA? How do such services improve clients' health?

Medicaid is a national program, jointly funded by each state and the Centers for Medicare and Medicaid Services (CMS, 2022), a federal agency. The program provides health coverage to the following populations: eligible low-income adults, children, pregnant clients, older adults, and people with disabilities. Medicaid is administered by individual states according to federal requirements. Each state independently determines its population's Medicaid coverage and eligibility; to be eligible, an individual must fall within a certain financial category. One outcome of the ACA was to lower Medicaid eligibility requirements, thus increasing opportunities for those needing it; each state determined whether to expand Medicaid.

As of 2023, 38 out of 50 states and the District of Columbia had adopted and implemented expanded Medicaid; Wyoming, Kansas, Wisconsin, Texas, Mississippi, Tennessee, Alabama, Georgia, South Carolina, and Florida chose not to adopt Medicaid expansion, and South Dakota and North Carolina had adopted expansion but had not implemented it (Rudowitz et al., 2023). States that chose to expand Medicaid experienced an average reduction in poverty of 0.917 percent, or approximately 690,000 individuals lifted above the federal poverty line (Chee, 2019; Zewde & Wimer, 2019). These expansion states experienced increased state revenue as well as cost savings in other government programs that provide services that overlap with Medicaid (Guth & Ammula, 2021). Hospitals and other health care providers in expansion states have seen their profits and revenues increase (Guth & Ammula, 2021). In the states that have not adopted the Medicaid expansion, individuals fall into the coverage gap where their income is too high to qualify for Medicaid but too low to quality for subsidies offered by health insurance plans through the ACA Health Insurance Marketplace (Kagan, 2022). The uninsured rate in these states is almost double

the rate of uninsured in states that have expanded Medicaid (15.4 percent compared with 8.1 percent) (Rudowitz et al., 2023). If all states adopted the Medicaid expansion, approximately 3.5 million uninsured adults would become eligible for coverage (Rudowitz et al., 2023).

Medicare, a federal health insurance program, provides health insurance coverage to individuals over age 65 and to those with specific disabilities who are younger than 65. Different parts of Medicare cover different services. Medicare Part A pays for inpatient hospital visits, skilled nursing facilities, hospice care, and some home health care; Part B pays for some outpatient care, doctor's visits, and preventive services, and Part D covers the cost of prescription drugs (Medicare.gov, n.d.; Medicare Resources, 2023). Sixty-five million Americans receive insurance coverage through Medicare. This includes 57 million older adults and almost 8 million younger adults who have disabilities (Kaiser Family Foundation, 2023). Unlike Medicaid, Medicare is both funded and controlled by the federal government. To address the increasingly aging population—as well as increases in the number of individuals with disabilities—additional Medicare funding is necessary. By 2030, the percentage of American citizens who do not work and rely on those who are employed will exceed 70 percent. Medicare is expected to deplete its reserve by 2035 if the trend of the aging of America continues its current trajectory. In order for Medicare to continue providing for the growing number of recipients, policy change will be needed to fund the program.

5.2 Health Care Consumer Behavior

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 5.2.1 Examine how the availability of health care services influences consumer behavior.
- 5.2.2 Discuss how consumer confidence influences consumer behavior.
- 5.2.3 Explain how the cost of health care services affects consumer behavior.

A **health care consumer** is someone who makes use of health care services regardless of whether they pay for those services directly or those services are provided to them at no cost. Internal and external factors affecting health care consumers' behavior include:

- Availability of health care services and providers
- Consumer confidence
- Consumer loyalty
- Cost of health care services

Availability of Health Care Services

The availability of health care services and health care providers may be limited or absent, depending on where an individual lives. This is especially true for people who live in rural areas where the distance to the nearest clinic, hospital, or provider may be great and transportation to reach health care services may be a barrier related to cost or availability. Many rural regions of the United States have been experiencing severe shortages of primary care providers for decades (Rural Health Information Hub [RHIH], 2023), exacerbating health disparities as individuals without reasonable access to health care providers and services cannot adequately address health conditions or receive preventive care, such as screenings (CDC, 2022g).

Mental health care is essential to a population's health, yet there are additional barriers to accessing these services—particularly for disadvantaged groups. "**Mental health** includes a person's emotional, psychological, and social well-being. It affects how we think, feel, act, handle stress, relate to others, and make choices" (CDC, 2022c). The cost of mental health services has continued to rise in the United States over the last decade. According to Harvard Pilgrim Health Care (2023), "even prior to the pandemic in 2019, the cost of mental health treatment and services reached $225 billion, up 52 percent from 10 years earlier."

Ethnic minorities experience greater mental health disparities than the rest of the population (CDC, 2023c). This is often related to limited access to health care services as well as stigma and discrimination, which may prevent individuals from seeking care. **Stigma** is shame or disgrace attached to an individual's circumstance, background, personal traits, or associations. Often the result of ignorance or fear, stigmatization involves negative attitudes and beliefs toward people, which can also lead to discrimination (American Psychiatric Association (APA), 2023; Mayo Clinic, 2017). This stigma is especially acute in minority communities. For some populations, such as ethnic minorities and those struggling with chronic diseases, accessing mental health services is especially difficult. For

example, ethnic minorities tend to live in areas that lack treatment facilities or health care providers qualified to offer mental health services (CDC, 2022g). In addition, stigma related to mental illness tends to prevent individuals from seeking care (Mayo Clinic, 2017). The combination of stigma and limited access to health care services means that individuals living with mental illness may not seek care until their disease has advanced to the point that more expensive treatments or even institutionalization are required, which drives up the cost of caring for an individual living with a mental illness. Caring for Populations and Communities in Crisis provides more information on mental health.

Consumer Confidence

Consumer confidence refers to how individuals feel about health care services and providers. Confidence in the health care system can be compromised. For example, a history of structural racism and discrimination in the United States may lead members of some communities, such as communities of color, to distrust the health care system. People who distrust the system tend to avoid seeking the care they need to address health conditions, such as chronic diseases (CDC, 2022f; 2022g). Individuals who are concerned that they will not be able to communicate effectively with health care providers or navigate the complexities of the health care system due to language barriers, low health literacy, or both may be reluctant to seek care (RHIH, 2022). Consumer loyalty refers to an ongoing emotional relationship between an organization and its customers. Customers loyal to an organization tend to support its mission and utilize its services (Oracle, 2023). Based on this definition of customer loyalty and consumer confidence, it is possible to conclude that mistrust in the health care system may prevent individuals from seeking care, potentially further exacerbating health disparities (CDC, 2022g).

The COVID-19 pandemic highlighted the longstanding issue of a lack of trust in the health care system among ethnic minorities and other underrepresented populations, resulting in vaccine hesitancy despite higher rates of COVID-19 infections, deaths, and hospitalizations among this demographic (Shearn & Krockow, 2023). The rapid development of the COVID-19 vaccine caused many communities—such as Black, Hispanic, and immigrant communities—to grow increasingly distrustful of the health care system because of a history of unethical research practices in which minorities were mistreated. This significantly increased the level of anxiety among these groups and made many less likely to get vaccinated (Baker, 2020). A systematic review of the literature by Shearn and Krockow (2023) attributed three main themes related to COVID-19 vaccine hesitancy among ethnic and racial minority populations: institutional mistrust, lack of confidence in the vaccine development process, and lack of reliable information or messengers. In addition to the general history of racism and discrimination encountered by this population, many are aware of a history of previous mistreatment and unethical research practices by medical researchers, such as bias in assigning minorities to study groups in clinical trials. For this reason, some equated the rapid development of the COVID-19 vaccine with fears about medical experimentation, sterilization, or eradication. Individuals who reside in the United States without legal documentation expressed concerns that data related to their vaccination would be shared with immigration enforcement (Shearn & Krockow, 2023; Rusoja & Thomas, 2021).

Health Care Costs and Consumer Behavior

Cost determines if an individual can afford to pay for health care services. Those with limited income often must choose between health care and basic needs such as food and shelter. In this situation, they may choose not to seek health care services altogether, which further exacerbates health disparities related to chronic diseases such as diabetes, heart disease, and obesity (CDC, 2022g).

Cost of Health Insurance

Health care costs impact the behavior of individuals who lack the means to pay for health care services. For example, ethnic minorities, such as Hispanic and Black clients, tend to have higher rates of uninsured than their White counterparts. This is especially true of individuals living in rural and urban areas and of the "working poor," individuals who do not make enough money to purchase health insurance but who make too much money to qualify for Medicaid (Commonwealth Fund, 2021). When individuals lack the means to pay for health care services, their use of health care services tends to decrease, which leads to more negative health outcomes for the client.

Cost of Prescription Drugs

The cost of prescription medications also affects consumer behavior. Prescription drug prices have risen steadily in the last two decades in the United States. According to a report by the American Association of Retired Persons

(AARP, 2021), every year since 2006, the cost of specialty prescription drugs has increased at a rate that far exceeds the general inflation rate. Such specialty medications are used to treat cancer, rheumatoid arthritis, multiple sclerosis, and other conditions and are used widely by older adults. Approximately three in 10 adults report not taking their medications as prescribed due to cost (Kirzinger et al., 2023). Among this group, 21 percent did not fill the prescription, 21 percent took an over-the-counter medication instead of getting the prescription filled, and 12 percent reported cutting the pills in half or skipping doses to save costs. Other common strategies clients use to decrease drug costs include using generic drugs, asking the health care provider to prescribe a different medication (a less expensive alternative, a higher dose that can be split in half, or a different form of the drug—a cream instead of a gel, for example), or trying alternative therapies (CDC, 2019b).

Cost of Delaying Care

According to the CDC (2022g), racial and ethnic minorities tend to be impacted by disease at greater levels than their White counterparts. The same can be said of older adults, who tend to have more health issues than their younger counterparts. In many cases—because of the cost of, mistrust in, or lack of easy access to health care services and providers in their communities—individuals may wait until their disease is more advanced before they seek health care. For example, a person who does not receive care during prediabetes may be impacted by kidney failure secondary to diabetes, which is far more expensive than preventing or even managing diabetes before it has damaged the kidneys.

The COVID-19 pandemic also ushered in a time of economic challenges. Job losses peaked during the pandemic, especially for minority populations who worked in low-paying industries impacted by pandemic-caused closures (Center on Budget and Policy Priorities, 2022). These job losses coincided with a rise in health care costs, which exacerbated the tendency of many ethnic minorities to not seek health care, contributing to negative health outcomes among groups who were already struggling before the arrival of the pandemic.

Cost of Disease Care

Ethnic minorities and older adults may also be more likely to be the recipients of public health insurance programs such as Medicaid and Medicare. The types and severity of health conditions experienced by these demographics make health care costs covered by government insurance programs even greater. For example, as the percentage of older adults in the United States grows, the dollars Medicare pays will continue to rise. This is especially true as the large numbers of aging baby boomers become eligible for Medicare at age 65.

When individuals lack adequate health insurance, they tend to use hospital emergency departments more frequently (Figure 5.4) (Udalova et al., 2022). Laws prevent health care organizations from turning clients away when they present to the emergency department. When individuals lack health insurance, health care organizations may have to provide uncompensated care, which leads to increased costs for the facility (American Hospital Association, 2023c). Individuals from underrepresented communities and those with lower incomes tend to use an emergency department for preventable care more than their counterparts in other communities (Udalova et al., 2022). Thus, the cost of paying for health insurance for underrepresented populations leads these populations to use the emergency department for services best addressed in another setting (Udalova et al., 2022).



FIGURE 5.4 Individuals who lack access to other health care providers or health insurance may seek treatment at a hospital emergency department. (credit: "Saratoga Hospital emergency entrance, Saratoga Springs NY" by Peter/Flickr, CC BY 2.0)

HEALTHY PEOPLE 2030

Reduce Emergency Department Visits for Nonfatal Injuries

According to Healthy People 2030, there were approximately 9,325 emergency department visits for nonfatal injuries per 100,000 people in 2017. To address this issue, Healthy People 2030 established a goal to reduce the number of visits for nonfatal injuries (https://openstax.org/r/healthinjuries) to approximately 7,711 per 100,000 people by 2030. The most recent data from 2020 show this goal has been exceeded.

(See ODPHP, 2023b.)

5.3 Virtual Care and Technology

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 5.3.1 Examine key technology trends impacting delivery of care.
- 5.3.2 Describe how technology can advance cost-effective health solutions.
- 5.3.3 Assess the implications of technology for quality and safety of care.

According to the Health Care Information and Management Systems Society (2023, para. 4), "the use of technology increases provider capabilities and patient access while improving the quality of life for some patients and saving the lives of others." The use of technology in health care in the United States has increased exponentially over the past 20 years. The most common and most impactful recent technological developments in health care are telehealth, home monitoring, and the electronic health record (EHR).

This section will discuss each of these technologies and how they impact health care costs, the **quality of health care**, and the safety of health care. The Institutes of Medicine define quality as "the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (Agency for Healthcare Research and Quality, 2020). Additionally, health care quality seeks to put into place standard procedures and systems with the intention of having the best possible health outcomes. For example, for a person with diabetes, quality activities would include checking the hemoglobin A1C on a regular basis as well as teaching the person with diabetes about disease self-management. The goal is to control the disease in clients living with diabetes, which also decreases the cost of care. A resulting reduction of the

health care cost is especially advantageous for individuals who are beneficiaries of public health insurance programs such as Medicare and Medicaid.

Telehealth

Telehealth is the use of digital information and communication, including mobile devices such as smartphones, laptop computers, and tablets, to enable remote access to health care services and to facilitate health care management (Mayo Clinic, 2023). With telehealth, a health care provider such as a physician, nurse, or nurse practitioner can provide care to a client in one area while the client is in another. Telehealth has been especially beneficial to individuals living in rural areas, including ethnic minorities who are more likely to live in rural areas and may have limited access to health care services. During the COVID-19 pandemic, when federal and state governments mandated social distancing, telehealth linked health care providers to clients (Figure 5.5). Some key benefits of telehealth are that it:

- Allows for the remote monitoring of chronic diseases such as diabetes, hypertension, and heart disease
- Allows for remote monitoring of mental health and behavioral health conditions
- Allows for the coordination of care services between two or more health care providers (i.e., primary care provider and specialty care provider)
- Allows for improved communication between the client and the health care provider
- Increases access to health care services for individuals living in rural areas
- Allows for social distancing during pandemics such as COVID-19
- Allows clients to receive care in their home by way of mobile devices such as smartphones and tablets



FIGURE 5.5 Telehealth enables nurses and other health care professionals to communicate with each other and to provide care to clients who may not be able to access a health care facility in person. (credit: Jacob Sippel/U.S. Navy/Flickr, Public Domain)

As of 2020, 76 percent of hospitals in the United States used telehealth to remotely connect with clients, up approximately 35 percent from 2010 (Watson, 2020). Telehealth has gained in popularity in the United States. The need for telehealth became more apparent during the COVID-19 pandemic. A research study found that approximately three-quarters of individuals living in the United States were more eager to participate in virtual health care experiences due to a fear of being infected with the disease secondary to face-to-face interactions between clients and health care providers (Watson, 2020). Although the use of telemedicine has its positive benefits, there are downsides: it cannot be used for every type of visit; its use involves the risk of personal health data being breached; and health insurance companies may not cover each virtual visit type (Watson, 2020). Certain regions of the country—like remote and/or rural areas—may also lack access to the broadband high-speed internet access necessary for telehealth services (RHIH, 2022). According to Call (2022), in 2020 organizations invested

over $14.1 billion in telehealth and other digital health technologies.

CASE REFLECTION

Addressing Barriers to Access

Read the scenario, and then respond to the questions that follow.

A 40-year-old client presents to the local community health center for treatment of his ongoing type 2 diabetes. Upon assessment, the nurse learns the client is having difficulty affording his medication and must pay his neighbor to drive him 30 miles to his doctor's appointments. The client reports that he was laid off from his job over a year ago and has had an extremely hard time adjusting. The client's blood glucose is 300 fasting. His hemoglobin A1C is 8, and he appears to be extremely anxious.

1. What might the nurse do to address the client's anxiety related to losing his job previously?
2. Given the client's difficulty in presenting to his doctor's appointments due to transportation, what might be an option for the client?

The use of telehealth has ushered in cost savings for clients and health insurance providers, both public and private. A 2017 study found that telehealth appointments cost clients $79 out of pocket, as opposed to $146 for an in-person office visit (Ashwood et al., 2017). Telehealth also provides an estimated savings of $89 billion each year in lost time associated with travel to and from doctor's visits. Additionally, telehealth has lowered costs associated with unnecessary emergency department visits. It is estimated that more than $1,500 per visit is saved by using telehealth instead of an emergency department (Call, 2022). This is especially significant for ethnic minorities, who are less likely than White individuals to have adequate insurance coverage and are therefore more likely to use the emergency department to receive care (CDC, 2020a). Research has indicated that as many as 90 percent of telehealth clients say they would not have sought care if telehealth was not available to them (Call, 2022); however, access to telehealth may be limited if the individual does not have adequate health insurance.

Although the use of telehealth has shown many benefits, it also presents challenges, including potential fraud and waste, which increase costs (Call, 2022). Examples of fraud and waste include providers coding check-in phone visits as full telehealth visits between the client and the health care provider and billing for services that were not provided. Additionally, the time and effort it takes for health care organizations to deploy the technology of telehealth in their facility increases costs. Organizations are exploring the use of artificial intelligence to combat the increase in costs related to telehealth set-up and deployment (Call, 2022). The use of artificial intelligence has the potential to, in some instances, remove the need to have a human on the opposite side of telehealth as is currently required for the system to work properly (Kuzimesky et al., 2019).

Electronic Health Records

The HHS (2020, para. 1) defines the **electronic health record** (EHR) as "an electronic version of a client's medical history, that is maintained by the provider over time and may include all the key administrative clinical data relevant to that person's care under a particular provider, including demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data and radiology reports" (HHS, 2020). Sometimes, an older term, **electronic medical record** (EMR), is used. An EMR is generally associated with software that contains very specific clinical functions—such as checking for drug interactions and allergies—as well as with the documentation of the interaction between the client and the health care provider.

The EHR enables the recording, tracking, and maintenance of the client's information:

- health care record
- problem list
- demographics
- medications
- medical history
- care plans

EHRs are essential to maintaining client safety and quality of care. They provide a means by which the provider can track certain clinical measures associated with the client's health care. EHRs also facilitate communication, providing a mechanism by which providers may convey instructions, guidelines, and protocols to clients after discharge and a means by which health care providers and organizations may communicate with each other (HHS, 2020). Improved communication improves client safety. For example, the EHR helps reduce medication errors, preventing the client from being prescribed the same medication twice or being prescribed a harmful combination of medications (HHS, 2020).

UNFOLDING CASE STUDY

Part B: Demographic Factors

Read the scenario, and then answer the questions that follow based on all the case information provided in the chapter thus far. This case study is a follow-up to Case Study Part A.

The client, Jose, presented with chest pain. Upon further assessment and evaluation, the physician has ruled out a heart attack. Instead, the physician believes Jose is experiencing anxiety. The nurse educates Jose on the diagnosis and works with him to develop a treatment plan. The client appears to be reluctant to share information with the nurse but does reveal that he has been treated for hypertension since the age of 23. Because he recently lost his job, he has been unable to afford health insurance. For this reason, he could not afford his blood pressure medications and has not taken them for the past 6 months. Jose appears tearful and anxious. He answers the nurse's questions with brief responses. Jose and his family have also started utilizing a local food bank and have applied to the Supplemental Nutrition Assistance Program (SNAP). The nurse suspects that Jose is experiencing more financial hardship than he is sharing. The physician has prescribed medication for Jose, but the nurse is concerned he cannot afford to get the prescription filled.

3. What is the best approach the nurse can adopt to increase Jose's trust and facilitate further discussion about his circumstances?
    a. The nurse should provide the client with a list of financial resources.
    b. The nurse should acknowledge Jose's concerns and explain what financial resources and other sources of support are available to him.
    c. The nurse should let the client's family know what he needs.
    d. The nurse should tell the client that if he can control his anxiety then everything will seem better.

4. Based on the nurse's experience working with vulnerable populations, which of the following is the best approach for ensuring that Jose takes the new medication as prescribed?
    a. Explain to Jose and his family the benefits of the new medication.
    b. Explain to Jose and his family the risks of not taking the new medication.
    c. Develop a plan for Jose to manage any adverse drug effects.
    d. Connect Jose with resources so that he can get the medication at minimal to no cost.

Home Monitoring

With **home monitoring**, clients use devices such as digitized scales, blood pressure monitoring devices, and glucometers (blood glucose monitor) that are linked to the EMR in the physician's office. Mobile applications through the client's smartphone, smartwatch, and other tracking devices, such as step trackers, are used to collect client data like heart rate and connect it directly to the client's health care provider. According to the Health Resources and Services Administration (HRSA, 2023), home monitoring is often paired with telehealth to allow for the long-term and continuous monitoring of chronic diseases such as high blood pressure, diabetes, obesity, heart disease, chronic obstructive pulmonary disease, sleep apnea, and asthma. The use of home monitoring has led to improved health outcomes associated with these chronic diseases as well as cost savings for the client and the health care facility (HRSA, 2023). Home monitoring impacts both client safety and quality. As it relates to quality, health care providers can monitor health indicators such as blood pressure and hemoglobin A1C while the client is home. When health care providers notice an abnormal lab value, as an example, they can more readily address the issue in many instances without the client having to come to the clinic or hospital. Health outcomes are further improved by

preventing hospital readmissions and emergency department visits, decreasing the cost of care. Client safety is also achieved in this example (HRSA, 2023).

HEALTHY PEOPLE 2030

Health IT

Healthy People 2030 includes the goal of helping health care providers and clients use health information technology (https://openstax.org/r/healthit) to access and exchange health information. Health information technology (health IT) is essential to the sharing of information between the client and their health care provider. The sharing of information allows the client to have access to their health information and enables them to use it more effectively, which can lead to better health outcomes.

(See ODPHP, 2023a.)

5.4 Health Care Workforce

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 5.4.1 Evaluate workforce shortage trends that could jeopardize access to health care.
- 5.4.2 Assess the impact of the COVID-19 pandemic on the health care workforce.
- 5.4.3 Discuss the lack of diversity among the health care workforce and its impact on client care.
- 5.4.4 Discuss the aging of the health care workforce and its impact on the nursing workforce shortage.

According to the American Nurses Association (2023), there are approximately 4.3 million registered nurses working in various settings across the United States. Nurses are key to ensuring positive health outcomes for clients and communities. A strong health care workforce is essential to address health disparities in the United States. However, the American Hospital Association (AHA) found that between 2019 and 2020, health care workforce vacancies increased by 30 percent (AHA, 2023a).

Effects of the COVID-19 Pandemic on the Nursing Workforce

The COVID-19 pandemic precipitated the "great resignation," during which more than 50 million Americans quit their jobs (Richter, 2023). The great resignation was especially impactful in health care, as many health care providers, including registered nurses, exited the health care system in mass numbers (Balasubramanian, 2022). A study by the Kaiser Family Foundation (2021) found that approximately three in 10 health care workers considered leaving the profession during the COVID-19 pandemic. Approximately six in 10 health care workers stated that stress related to the pandemic impacted their mental health. An additional survey by the American Organization for Nursing Leadership, which falls under the umbrella of the American Heart Association, found that nurses stated that "emotional health and well-being of staff" were the top challenges nurses faced during the COVID-19 pandemic.

Effects of the Registered Nurse Shortage

The American Nurses Association refers to registered nurses as the backbone of the health care system. Without adequate highly qualified registered nurses, client health outcomes will suffer.

The U.S. Bureau of Labor Statistics projects that there will be an average of approximately 194,500 annual openings for registered nurses between 2020 and 2030. By 2026, there will be an estimated shortage of approximately 3.2 million health care workers (AHA, 2023b). A shortage of qualified health care professionals such as registered nurses, physicians, and respiratory therapists, for example, limits access to quality health care services for individuals who already experience less-than-optimal health outcomes. Prevention is one of the top means by which chronic diseases such as diabetes, heart disease, and hypertension can be controlled, especially in underrepresented communities. Individuals from these communities, who disproportionately experience chronic diseases, would benefit from preventive health care services that public health nurses are well qualified to provide.

A U.S. Bureau of Labor Statistics study suggested that more than 275,000 additional nurses would be needed from 2020 to 2030 (Balasubramanian, 2022). Employment opportunities for nurses are projected to grow at a faster rate (9 percent) than all other occupations from 2016 through 2026 (Balasubramanian, 2022).

The nursing shortage is the most significant of any profession in the health care system. For this reason, extra attention and emphasis are being placed on the number of nurses needed for the health care system to function properly. The American Hospital Association framed the nursing shortage as a national emergency and predicted a deficit of 1.1 million nurses by the end of 2022 (AHA, 2023b; Chamlou, 2022). Hospitals in major cities, with their larger populations, have experienced the worst level of nursing staff shortages when compared with other areas and settings throughout the country. Rural areas are also impacted, especially in hospitals in less populous areas (Chamlou, 2022), where access to health care is already lacking. According to the Kaiser Family Foundation, rural hospitals have fewer intensive care unit (ICU) beds: approximately 1.7 per 10,000 people when compared with 2.8 per 10,000 in more populated urban areas. For this reason, rural hospitals tend to become overwhelmed faster than urban care centers. Additionally, nursing salaries tend to be lower in rural areas, which makes it more difficult to recruit nurses in these areas (Chamlou, 2022).

The lack of qualified health care workers has driven up wages, especially for nurses. This increase in wages has placed a financial strain on the health care system, which has led to an increase in health care costs across the board. When hospitals and other organizations within the health care system increase costs, access to care for vulnerable populations may be further hampered, which, as has been stressed throughout this chapter, leads to less-than-optimal health outcomes for these individuals.

One of the issues contributing to the shrinking number of health care providers is the aging of the nursing workforce. According to the American Nurses Association (2023), the median age of registered nurses in 2020 was 52. Approximately one-fifth of these nurses expressed their intent to retire within the next 5 years.

Achieving Diversity in the Nursing Workforce

In addition to the overall shortage of personnel in health care, the health care workforce lacks diversity. Nurses care for clients across the gender spectrum; however, in 2020, 90 percent of all nurses worldwide were female (Buchan & Catton, 2020). A study conducted by the National Council of State Boards of Nursing (NCSBN) asked members of the nursing workforce to self-identify by race/ethnicity. The study found a striking lack of diversity in the workforce, in stark contrast to the diversity of the client populations nurses serve (Figure 5.6).

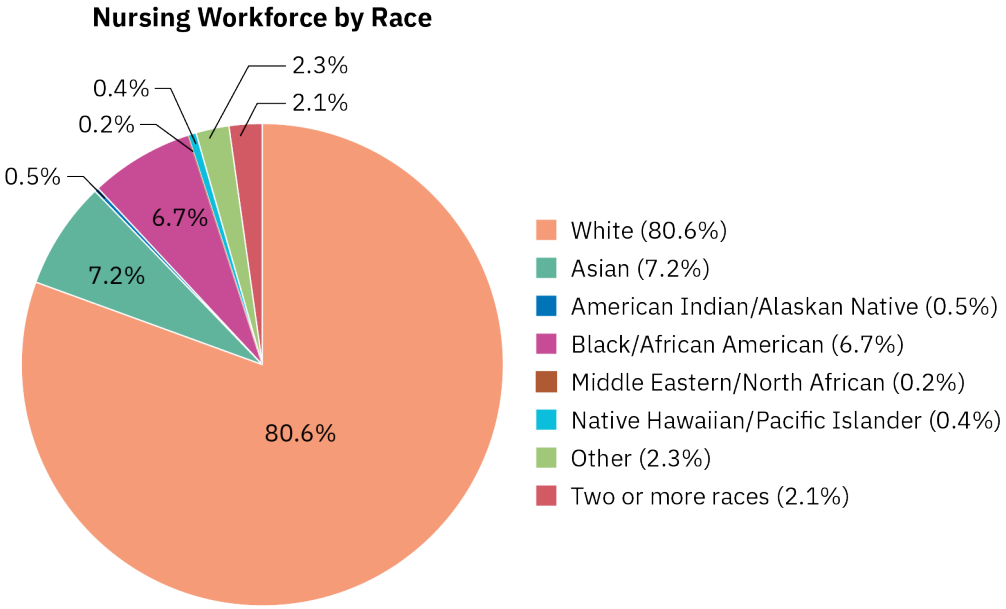


FIGURE 5.6 The nursing workforce in the United States is predominantly White according to the results of the 2020 National Nursing Workforce Survey. (data source: American Association of Colleges of Nursing, 2023; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Given these statistics, the AACN, along with other national organizations such as the National Black Nurses Association, National Coalition of Ethnic Minority Nurse Associations, and the National Association of Hispanic Nurses, asserts that, to address increasing racial and ethnic diversity in the U.S. population, it is necessary to further diversify the nursing workforce (AACN, 2023). Research has shown that racial and ethnic minority health care providers are more likely to return to their communities to provide care, and these providers are more likely to

advocate for those communities. They are able to bridge cultural and linguistic gaps related to client education and the provision of care, which leads to better health outcomes for individuals in those communities (AACN, 2023).

Nursing leaders recognize and understand the link between a nursing workforce that is culturally diverse and that workforce's ability to provide high-quality and culturally appropriate care (AACN, 2023). To provide quality care for other underrepresented populations, such as members of the LGBTQIA+ community and individuals with disabilities, increased representation of those individuals in the nursing workforce is needed.

The current shortage of nurses and the need for more diversity among nursing faculty both threaten already compromised health outcomes for underrepresented groups (AACN, 2023). Organizations such as the AACN have strategies in place to address this issue. For example, the Building a Culture of Belonging in Academic Nursing program, a program funded by Johnson and Johnson in January 2022, seeks to assist nursing schools in creating a more inclusive environment. A more diverse nursing faculty can help ensure a more diverse nursing workforce. According to the AACN (2023), nursing students tend to have better outcomes and are more successful when faculty can relate to them culturally. In addition to the need for minority professionals to practice in their home communities, there is a great need for policies that can ensure positive health outcomes within underrepresented groups (AACN, 2023).

Chapter Summary

5.1 Demographic Factors

The demographic makeup of the U.S. population continues to change, with communities that have concentrations of groups such as older people, minority racial and ethnic groups, and others often underrepresented in the social and political power structure. Such groups tend to experience higher rates and greater severity of chronic disease, lack of access to and a distrust of health care resources, and the inability to afford health insurance. The fastest-growing demographics are baby boomers, racial and ethnic minorities, and vulnerable groups like those living in poverty, sexual and gender minorities, and individuals with disabilities. As these demographic changes continue, the delivery of health care will have to change to ensure health equity and the elimination of health disparities, which currently impact underrepresented populations disproportionately throughout the United States.

5.2 Health Care Consumer Behavior

Factors that affect health care consumer behavior include cost, availability of services and providers, and degrees of consumer confidence in those services and providers. Consumer behavior affects health care costs. For example, populations that tend to neglect health care until chronic diseases and mental health disorders become severe are more costly to treat than preventive care would have been. This also pushes up the price of costly prescriptions needed to treat advanced health conditions. Conversely, the high cost of health care and health care insurance prevents consumers from using health care services. Many consumers turn to emergency department visits because hospitals by law cannot turn away clients. If the client is unable to pay, the hospital bears the cost of care given, thereby further increasing the cost of health care overall. As the face of America continues to change, how individuals as consumers interact with the health care system will increasingly be a factor that must be addressed.

5.3 Virtual Care and Technology

As U.S. demographics change, developing new ways to reach and care for clients is crucial to ensure positive health outcomes. Technologies such as telehealth vastly increase the accessibility of health care providers and services. Telehealth has proven especially effective in improving accessibility to rural areas that often have fewer health care facilities and providers. Additionally, as care of older adults shifts from hospitals and rehab centers to the home, home monitoring, EHRs, and telehealth can enable high-quality, safe, and comfortable homecare for clients. The same is true for the monitoring of chronic diseases such as diabetes, which especially affects minorities and older adults.

5.4 Health Care Workforce

Nurses are the backbone and necessary component of the health care system, which cannot function without them. The current severe shortage of nurses is caused partly by the aging of the nursing workforce (the number of nurses reaching age 65 and retiring) and partly by the COVID-19 pandemic. The significance of the nursing shortage is prompting a great deal of attention on estimating the number of nurses needed for the health care system to function properly and on how to train and recruit new nurses. At the same time, the need for greater diversity in the nursing workforce is gaining increased recognition and attention.

Key Terms

chronic disease conditions such as hypertension, diabetes, kidney disease, heart disease, and cancer that individuals live with for a year or more and that require ongoing medical attention, limit the activities of daily living, or both

demographics statistical data relating to particular groups within a population

electronic health record (EHR) electronic version of a client's medical history that is maintained by the provider over time and may include all key administrative clinical data relevant to that person's care under a particular provider (e.g., demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data, and radiology reports)

electronic medical record (EMR) software that performs specific clinical functions, such as checking for drug interactions and allergies, and handles documentation of client encounters (i.e., the interaction between the client and the health care provider)

ethnic minorities population groups with a shared culture, tradition, religion, language, history, or other factor who live in communities or areas where most people are from a different ethnic group

health care consumer recipient of health services,

whether those services are paid for or provided at no cost

health disparities preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations

health equity state in which everyone has a fair and just opportunity to attain their highest level of health

home monitoring use of devices such as digitized scales, blood pressure monitoring devices, and glucometers (blood glucose monitor) that are linked to the EHR or EMR in the physician's office

mental health emotional, psychological, and social well-being; affects how an individual thinks, feels, acts, handles stress, relates to others, and makes choices

quality of health care degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge

stigma shaming attached to an individual's circumstance, background, personal traits, or associations that can lead to discrimination; often the result of ignorance or fear

telehealth use of digital information and communication technologies to access health care services remotely and manage health care

underrepresented populations subgroups within a population—often identified by race, ethnicity, age, sex, gender, sexual orientation, or socioeconomic status—whose representation in society is disproportionately low relative to their numbers

vulnerable populations groups and communities at a higher risk for poor health as a result of the barriers they experience to social, economic, political, and environmental resources, as well as limitations due to illness or disability

Review Questions

1. Which concept should the nurse consider when developing community programs to meet the needs of the baby boomer generation?
   a. The baby boomer population is steadily declining.
   b. There is an increase in the need for long-term care.
   c. The average age of the U.S. population is decreasing.
   d. The prevalence of chronic disease is declining.

2. A nurse works in a community health center whose population consists of many working poor. Which characteristic would the nurse expect in this population?
   a. Most clients receiving care in the clinic hold jobs but are uninsured.
   b. Most clients are working and have health insurance.
   c. Most clients engage in health-promotion activities since they do not have health insurance.
   d. Most clients will qualify for Medicaid benefits.

3. Which statement should guide the care a nurse provides to clients in a community health clinic that serves an ethnic minority group?
   a. Health disparities are preventable differences in health.
   b. Hypertension affects all ethnic groups equally.
   c. Underrepresented populations engage in health-promotion activities.
   d. The population of ethnic minorities in the United States is declining.

4. A client at a rural community health center has been diagnosed with diabetes and has scheduled a telehealth appointment with a diabetes educator. Which client statement about seeing a provider via telehealth indicates to the community health nurse that more teaching is needed?
   a. "I will get the same level of care as an in-person visit."
   b. "This will save me a 2-hour drive to the city."
   c. "Telehealth reduces communication with the diabetes educator."
   d. "This will allow close monitoring of my diabetes."

5. Which statement best describes the impact of COVID-19 on the nursing profession?
   a. The pandemic highlighted nursing as a desirable profession.
   b. Nurses are now more vigilant about the care they provide for clients.

c. Many nurses left the health care system.
d. Nursing salaries have decreased due to the impact of COVID-19 on the finances of health systems.

6. A nurse is working in a community health clinic that serves a large Asian population. Which health factor should the nurse consider when providing care to this population?
a. There is a higher rate of hepatitis B than in other ethnic groups.
b. The rate of tuberculosis is lower than all people diagnosed with this infection.
c. They are more likely to receive care for mental health issues.
d. There is a lower genetic risk for developing prediabetes.

7. A 38-year-old client, who identifies as transgender, presents to a community health center with symptoms of an upper respiratory infection. During the intake assessment, the client tells the nurse that they do not receive regular health care and do not have a primary health care provider. As the nurse performs an assessment of this individual, which finding does the nurse anticipate?
a. An absence of preventable diseases
b. A distrust of the health care system
c. Positive past health care encounters
d. Up-to-date cancer screenings

8. Which intervention should the nurse use to instill trust in underrepresented clients in a community health center?
a. Asking family members to remain in the waiting area
b. Assessing the client's potential barriers to care
c. Providing education materials in English
d. Learning about the client's culture by reading about it

9. Which statement should guide the nurse in helping an underrepresented client obtain health insurance based on the ACA?
a. The age of qualification for Medicare was lowered.
b. Medicaid financial eligibility requirements were lowered.
c. Administration of Medicaid was transferred to the federal government.
d. Individuals with disabilities are no longer covered by Medicare.

10. The nurse is recommending that a client in a rural area monitor their blood pressure electronically at home to determine the effectiveness of antihypertensive medication and lifestyle changes and to follow up using telehealth. Which information will the nurse provide the client about telehealth visits?
a. There is no charge for telehealth visits.
b. It allows the nurse to see trends in the client's blood pressure.
c. It increases the number of emergency department visits.
d. It is not as effective in treating conditions as in-office visits.

CHAPTER 6

Structural Racism and Systemic Inequities



FIGURE 6.1 In 2020, throughout the United States, hundreds of Black Lives Matter protests signaled a renewed focus on racial justice and a recognition that structural racism exists in the United States. (credit: modification of work "Black Lives Matter" by John Lucia/Flickr, CC BY 2.0)

CHAPTER OUTLINE

6.1 Understanding Different Forms of Racism
6.2 The Historical Context of Structural Racism in the United States
6.3 Contemporary Structural Racism and Systemic Inequities in the United States
6.4 Structural Racism and Systemic Inequities in U.S. Health Care

INTRODUCTION For decades, U.S. agencies including the U.S. Census Bureau, the National Center for Health Statistics, the Agency for Healthcare Quality and Research, the National Center for Educational Statistics, and the Bureau of Labor Statistics have documented racial and ethnic inequalities in the United States in health, in the criminal justice system, in the education system, and in socioeconomic status (Bailey et al., 2017). The following are just a few examples of the many racial inequalities in the United States.

- Significant differences in mortality rates from heart disease, breast cancer, and stroke exist between Black and White Americans, with Black Americans dying at much higher rates (Hostetter & Klein, 2018).
- A Black woman is 22 percent more likely to die from heart disease than a White woman, 71 percent more likely to die from cervical cancer, and 243 percent more likely to die from pregnancy and childbirth-related causes (Hostetter & Klein, 2018).
- Though drug use is a major public health threat affecting all races, Black Americans are imprisoned for drug crimes at six times the rate of White Americans. Nearly 80 percent of individuals in federal prison for drug offenses are Black or Latino/Latina (Pearl, 2018).
- One in three Black men can expect to go to prison in their lifetime (American Civil Liberties Union [ACLU],

2023).
- In 2018, Black students were four times as likely as White students to be given an out-of-school suspension despite representing only 15 percent of the total enrollment in public schools (Churchwell et al., 2020).
- On average, Black families in the United States have one-twentieth the wealth of White families (Beech et al., 2021).

This chapter will explore the reasons behind these disparities. A history of patterns and practices have reinforced discriminatory beliefs and distribution of resources, resulting in structural racism and systemic inequities. Discrimination refers to unfair treatment of individuals and groups based on certain characteristics such as race, ethnicity, gender, age, religion, sexual orientation, and ability (Office of Disease Prevention and Health Promotion [ODPHP], 2020a). Distribution of resources relates to the social determinants of health (SDOH), or the social factors that significantly impact health outcomes. Access to safe housing, quality education, and income level are SDOH that are founded on inequitable distribution of resources due to historical and contemporary racism. To improve population health and achieve **health equity**, a condition in which everyone has a fair opportunity to attain their highest level of health, nurses and health care professionals must understand the impact of structural racism and work to dismantle these longstanding discriminatory behaviors.

6.1 Understanding Different Forms of Racism

LEARNING OUTCOMES

By the end of this section, you should be able to:
- 6.1.1 Define racism and its associated levels.
- 6.1.2 Discuss ways in which forms of racism affect health care.

Racism is a type of bias that assigns value and determines opportunity based on people's appearance or the color of their skin, resulting in conditions that unfairly advantage some individuals while disadvantaging others (Centers for Disease Control and Prevention [CDC], 2023). Race is a social construct, a way of categorizing or dividing individuals based on physical traits, social factors, and cultural backgrounds; it is not biologically based (Baker, 2021; Devakumar et al., 2022; National Institutes of Health [NIH], 2023). There is little genetic variation or difference between racial categorizations (American Medical Association [AMA], 2020; Braveman & Dominguez, 2021; Yudell et al., 2016). Racial categorizations change depending on time period, location, and context, but they are often used to establish a social hierarchy (NIH, 2023). With racism, opportunity is structured, and value is assigned based on the social interpretation of how an individual looks based on their physical traits (National Academies of Science, Engineering, and Medicine [NASEM], 2020). This inequitable process of racial categorization unjustly disadvantages some individuals and communities and is advantageous to others.

Within health care, race-associated differences in health outcomes are documented but not explored or explained, leading many to believe that race is biological even though it is not (Baker, 2021). An example is hypertension. Many students learn that hypertension is more common in Black clients, and these students internalize the belief that being Black is a risk factor for hypertension. However, this assumption does not account for the client's lived experience; the higher risk for hypertension is not due to the client's race but is due instead to *social factors* related to their race (Ackerman-Barger et al., 2020). Leading health agencies such as the Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics, the American Heart Association (AHA), the American Academy of Family Physicians (AAFP), the National Academy of Medicine (NAM), and the American Medical Association (AMA) now recognize differences in race-associated health outcomes as an outcome of racism (AAFP, 2020; CDC, 2023; Javed et al., 2022; NAM, n.d.; O'Reilly, 2020).

Racism is often described as operating on three levels: structural, personally mediated, and internalized (Jones, 2000).

WHAT IS RACE? WHAT IS ETHNICITY?

Access multimedia content (http://openstax.org/books/population-health/pages/6-1-understanding-different-forms-of-racism)

Though the terms *race* and *ethnicity* are often used interchangeably, they are not the same. Race is externally imposed, a social construct based on certain physical characteristics such as hair color, common ancestry, and

cultural attributes, whereas ethnicity is a self-defined group based on shared kinship, history, and culture.

Watch the video, and then respond to the following questions.

1. What race do you associate with, and why?
2. Why do you think the terms *race* and *ethnicity* are often used interchangeably?
3. Did anything in this video make you feel uncomfortable? If so, why?

Structural Racism

Structural racism, also called institutional racism, is a process resulting in a gap in access to societal opportunities based on race. It is embedded in long-standing policies and is structural in nature, as it is entrenched in every part of society (Bailey et al., 2021; Braveman et al., 2022; Jones, 2000). It is often difficult to recognize because it is so deeply embedded in society through historical practices. Structural racism results in institutional policies, systems, laws, and practices that limit opportunities, resources, and power (Braveman et al., 2022). These deeply rooted practices and beliefs propagate pervasive unjust treatment and oppression of Black people, Indigenous people, and people of color (BIPOC) (Braveman et al., 2022). This includes differential access to quality education, housing, employment, and medical care. It also includes limited power and voice, such as representation within government and the media (Jones, 2000). Due to persistent structural factors that perpetuate past inequalities and biases, an individual's race is frequently an indicator of their socioeconomic status (Jones, 2000). The AMA "recognizes that racism in its systemic, structural, institutional, and interpersonal forms is an urgent threat to public health, the advancement of health equity, and a barrier to excellence in the delivery of medical care" (AMA, 2021, para 4).

Health insurance inequities are a visible modern example of structural racism in health care. Inadequate health insurance is a barrier to accessing quality health care, and the unequal distribution of health insurance coverage contributes to health disparities. In 2019, almost 60 percent of Americans were covered by employer-sponsored health plans: 66 percent of White workers compared with 47 percent of Black workers. Individuals without employer-sponsored health insurance are often uninsured, disproportionately affecting BIPOC communities (Yearby et al., 2022). There are many reasons for this large gap in health insurance coverage, but three of the driving forces behind this disparity are government support for occupational segregation, the National Labor Relations Act of 1935, and the introduction of Medicare and Medicaid (Yearby et al., 2022; Zhavoronkova et al., 2022). Structural Racism and Systemic Inequities in U.S. Health Care will discuss these forces in greater depth.

Personally Mediated Racism

Personally mediated racism is more commonly known as prejudice and discrimination, in which individuals or communities make assumptions about other individuals or communities based solely on race (NASEM, 2020). Prejudiced individuals act based on their assumptions (NASEM, 2020). Examples of prejudice include police profiling, disrespectful encounters in health care, and teachers devaluing students based on race (NASEM, 2020). Whether personally mediated racism is intentional or unintentional, it maintains structural barriers to equitable treatment (Jones, 2000). Intentional racism is overt and explicit, whereas unintentional racism is more commonly referred to as a form of implicit bias. Implicit biases are unconscious attitudes, beliefs, and associations that result in a negative evaluation of a person based on race, ethnicity, age, gender, or other characteristics (Sabin, 2022). They are called implicit as they are unconscious, have been shaped by prior experiences, and are based on learned associations between certain qualities and social categories. These internal and individual biases exist within the larger social and cultural context of the community that perpetuates biased policies and practices to propagate and maintain systemic and structural racism (Sabin, 2022).

Internalized Racism

Internalized racism refers to members of a stigmatized race accepting negative messages about their abilities and overall worth with self-devaluation, resignation, and hopelessness (David et al., 2019; Jones, 2000; Roberson & Pieterse, 2021). It can be viewed as a result of structural racism as it is based in the setting of whiteness as the norm. It is a process that occurs internally in some individuals experiencing racism whereby they view their own culture with self-doubt and disrespect (David et al., 2019; Roberson & Pieterse, 2021). This results in members of a stigmatized race devaluing their race and sometimes even trying to alter their skin tone, further reinforcing stratification by skin color (Jones, 2000). Internalized racism mirrors the systems of privilege in place, reflecting

societal values and further perpetuating racism (David et al., 2019; Jones, 2000). Studies have indicated that individuals who are more frequently discriminated against based on race experience greater levels of internalized racism (David et al., 2019). In health care, internalized racism could manifest in a variety of ways from psychological distress in clients who are BIPOC to clients who exhibit self-loathing or denouncing one's culture (Rodriguez-Knutsen, 2023; Willis et al., 2021). Clients who experience internalized racism may also demonstrate subservient behaviors to the health care team to fit in and behave in a more mainstream manner (Hagan, 2021).

Scientific Racism: Structural Racism and Unequal Medical Care

Elements of modern American medicine are rooted in scientific racism and eugenics. **Eugenics** is the erroneous theory, linked to historical and contemporary forms of discrimination, racism, ableism, and colonialism, that humans can be improved through the selective breeding of populations (NIH, 2022). Nazi Germany applied eugenics theory leading up to and during World War II and the Holocaust, but eugenics theory has been applied in the United States, too. The U.S. Indian Health Service forced the sterilization of Native American women in the 1960s–1970s (Churchwell et al., 2020), and in the 20th century, the United States used eugenics-based laws in 30 states to involuntarily sterilize at least 60,000 individuals thought to be unfit, feebleminded, or anti-social (NIH, 2022). These forced sterilizations disproportionately targeted BIPOC individuals, poor White individuals, and individuals with disabilities (NIH, 2022).

Scientific racism, a belief that White Europeans are superior to non-White people, has its origins in the 18th century and was used as a justification for slavery (NIH, 2022). Medical doctors have historically considered Black individuals as inherently diseased and "less than" their White counterparts. Throughout history, Black Americans have been subjected to medical experimentation and forced medical procedures (Bailey et al., 2021). In the 18th century, White physicians inoculated enslaved Black individuals with smallpox to see its effects. In the 19th century, White physicians used enslaved Black individuals as subjects of experimentation for various surgeries, from eye surgeries to gynecologic procedures, without anesthesia. For example, J. Marion Sims, often called the father of modern gynecology, practiced his technique for repairing vesicovaginal fistulas on enslaved Black women without using anesthesia (Bailey et al., 2021). In the infamous Tuskegee Syphilis Study, beginning in 1932, the U.S. Public Health Service experimented on impoverished Black American sharecroppers in Alabama, misleading them about the true nature of the study, not informing them of their syphilis diagnosis, and denying them treatment for the disease (Baker, 2021). The Tuskegee study did not officially end until 1972 despite the existence of a widely available cure for syphilis by 1943 (CDC, 2022c). Scientific racism, contemporary racism, and the historical injustices Black clients experienced within the health care system are factors in this populations' distrust of the medical system (Bajaj & Stanford, 2021). Americans' trust in health care has declined in general, but it is the lowest among Black Americans, with a 2020 poll finding that 55 percent of Black Americans distrust the health care system (Hostetter & Klein, 2021).

INSURANCE GAPS AND MEDICAL DESERTS

Access multimedia content (http://openstax.org/books/population-health/pages/6-1-understanding-different-forms-of-racism)

This Wall Street Journal video highlights the struggles that low-income individuals in rural areas face when trying to access health insurance or health care. Many of these individuals are underinsured or uninsured and struggle with medical costs, ultimately causing them to forgo necessary medical treatment. This burdens the health care system and local hospitals, which end up closing or scaling back the care offered, often putting clients at risk. For example, clients who do not seek treatment for chronic medical conditions such as diabetes or hypertension will experience adverse effects and may end up in the emergency department for acute medical conditions such as kidney failure, blindness, or extremity amputation in the case of untreated diabetes or stroke in the case of untreated hypertension. These acute medical conditions ultimately cost the health care system more as they are largely preventable with appropriate chronic disease management. Insurance gaps and medical deserts negatively impact both clients and those caregivers who treat conditions that likely could have been prevented with appropriate primary care access.

Watch the video, and then respond to the following questions.

1. How does health insurance coverage connect with access to care?
2. Do you feel the government has a responsibility to ensure access to health care for its citizens? Why or why not?
3. How would you explain the intersection between poverty and health outcomes?

In 2003, the Institute of Medicine report *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* (https://openstax.org/r/nap) reviewed over 100 studies and concluded that bias, prejudice, and stereotyping contribute to disparities in health care by race and ethnicity. Fifteen years later, the *2018 National Healthcare Quality and Disparities Report* (https://openstax.org/r/nhqdr18) documented that Black, American Indian and Alaska Native, and Native Hawaiian and Pacific Islander clients continued to receive poorer care than White clients on 40 percent of quality measures, indicating little or no improvement from prior decades (Bailey et al., 2021). Persistent racist beliefs are partly responsible for these health care disparities. Many studies have demonstrated that health professional students have implicit biases against BIPOC clients, while other studies have found that some medical students still believe there are intrinsic biologic differences between Black and White individuals (Bailey et al., 2021; FitzGerald & Hurst, 2017; Greenwald et al., 2022; Hall et al., 2015; Hoffman et al., 2016). Overt and implicit biases are not the only causes of unequal medical care between Black and White clients. Structural factors have led to health facilities that lack adequate resources and clinicians. This, in turn, affects client access and utilization (Bailey et al., 2021).

HEALTHY PEOPLE 2030

Health Care Access and Quality

A leading health indicator for Healthy People 2030 is to increase the proportion of people with health insurance. As discussed previously, inadequate health insurance is a barrier to accessing quality health care (https://openstax.org/r/access), and the unequal distribution of health insurance coverage contributes to health disparities. A lack of health insurance coverage disproportionately affects BIPOC communities and is a focus of the Healthy People 2030 goal of promoting health equity and reducing health disparities.

6.2 The Historical Context of Structural Racism in the United States

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 6.2.1 Discuss patterns of structural racism in the history of the United States.
- 6.2.2 Explain how policies of racial apartheid in the United States have reinforced structural racism and systemic inequities.

It is difficult to discuss structural racism without first discussing the long history of racism in the United States. Racism in the United States dates back to British Colonial America, prior to the country's founding, with the ill treatment and forced removal of Native Americans from their lands and the terrible history of slavery. This longstanding history of racism is the foundation of contemporary structural racism.

The Killing and Forced Removal of Native Americans

Native American people have been targets of violence since the first European explorers arrived in North America in the 15th century. The expansion of European settlers and later U.S. government policies resulted in the killing and mistreatment of Native American people (Braveman et al., 2022; Fixico, 2021; Library of Congress [LOC], n.d-b). From the time of its establishment up to the late 19th century, the U.S. government authorized over 1,500 wars and attacks on Native Americans (Fixico, 2021). For decades, U.S. policies threatened Native American land and autonomy. In 1786, the United States established the first Native American reservation and designated each tribe as an independent nation. In the 1830s, under President Andrew Jackson, Congress passed The Indian Removal Act (https://openstax.org/r/guides), requiring Native Americans to leave the East and settle in the Indian Territory west of the Mississippi River (Fixico, 2021). Imposing this act, federal soldiers and volunteers forcibly relocated the Cherokee tribe, requiring them to walk 1,000 miles to the Indian Territory with few provisions to sustain them. An estimated 4,000 Cherokee people died on this infamous "Trail of Tears" (Pauls, 2023). Though an estimated 5 to 15

million Native Americans were living in North America when Columbus first arrived in 1492, by the late 1890s, fewer than 238,000 Indigenous people remained in the country (Fixico, 2021). Legally, Native Americans were not citizens of the United States until President Calvin Coolidge signed The Indian Citizenship Act of 1924 (https://openstax.org/r/loc) (National Constitution Center, 2023b). This status as non-citizens meant the Indigenous population did not have the same legal rights as many other Americans, including the right to vote (LOC, n.d.c).

Slavery and Post–Civil War Reconstruction

In 1619, 20 enslaved Africans were brought to the British colonies in Virginia against their will, likely the first slaves to arrive in what would later become the United States (Shah & Adolphe, 2019). In 1776, when the Declaration of Independence was signed, the lines about all men being created equal did not apply to enslaved people as many of the nation's founders were slaveholders. Slavery flourished on tobacco, cotton, indigo, and rice farms. According to the first U.S. census, 697,624 enslaved people were living in the United States by 1790 (Hacker, 2020, p. 840). By 1808, Congress had banned the slave trade, but slavery was still legal, and by 1860, four million enslaved Black people resided in the United States, representing 13 percent of the population (Shah & Adolphe, 2019). This tremendous growth in the number of enslaved people between 1790 and 1860 was the result of increasing numbers of new slaves being imported from Africa and the Caribbean and due to population growth among the American-born slaves (Hacker, 2020). In 1864, during the Civil War, President Lincoln issued the Emancipation Proclamation, declaring freedom for and protection of enslaved people who lived within the Confederate states that were rebelling against the Union, yet this presidential order did not officially end slavery.

It was not until the ratification of the 13th Amendment on December 6, 1865, 8 months after the end of the Civil War, that slavery was officially abolished in the United States. At this time, Congress implemented Reconstruction efforts to restructure the southern states and to outline the process for White and Black individuals to live together in a post-slavery society (LOC, n.d-a). Opposition to Reconstruction laid the foundation for segregated institutions separated by race (Shah & Adolphe, 2019). The 14th Amendment, passed in 1868, afforded equal protection of the law to all citizens, and the 15th Amendment, passed in 1870, guaranteed that the right of citizens to vote could not be denied on account of race. This trio of Civil War amendments greatly expanded the civil rights of most Americans, but by the late 1870s, Reconstruction efforts came to an end. With the end of Reconstruction, local governments in many of the former Confederate states began building legal systems that undermined the three amendments to codify White supremacy after Reconstruction.

The Jim Crow Era and Systemic Racial Discrimination

The **Jim Crow era** refers to the period from the 1870s through most of the 1960s during which primarily southern U.S. states enacted many discriminatory laws in response to the civil rights and social gains of newly freed Black Americans during the Reconstruction period (Bailey et al., 2017; Shah & Adolphe, 2019). Although they are often thought of as the beginning of the Jim Crow era, the passage of the Black Codes in Mississippi and South Carolina in 1865 and the formation of the White supremacist group the Ku Klux Klan in Tennessee in 1866 were the era's immediate precursors (National Constitution Center, 2023a; PBS, 2023). The Black Codes, often referred to as "slavery by another name," were laws targeted at Black Americans that denied them rights to testify against White individuals, to serve on juries, and to vote and that limited their employment opportunities and the ability to leave a job once hired, often forcing them to work in the fields or as servants, stripping away their autonomy and ability to earn decent wages (History.com editors, 2023; National Geographic, n.d.; PBS, 2021). Founded by six former Confederate officers, the Ku Klux Klan terrorized Black families and pro-reform individuals, especially in rural areas. The Black Codes and Ku Klux Klan are emblematic of the efforts of former Confederate southern states in the post-Reconstruction era to keep Black Americans from gaining money, power, education, or land, all in service of maintaining White dominance (PBS, 2023).

THE BLACK CODES: RECONSTRUCTION

Visit the PBS LearningMedia website (https://openstax.org/r/wisconsin) to view the video "Black Codes: Reconstruction," which describes the origins and effects of the Black Codes, a set of laws intended to restrict the freedom of Black individuals and compel them to work for White employers in a situation not unlike slavery.

Watch the video, and then respond to the following questions.

1. What legacy do you feel the Black Codes have left behind?
2. What parallels do you see between the institution of the Black Codes and the current treatment of individuals who are experiencing homelessness?

The Jim Crow laws of the 1870s–1880s were a formal system of laws codifying racial segregation and discrimination that dominated the American South, affecting every aspect of daily life. These laws mandated segregated, or separate parks, libraries, restrooms, buses, and trains (PBS, n.d.). This system of segregation prohibited Black Americans from eating at the same restaurants, drinking from the same water fountains, or attending the same schools as White Americans (Figure 6.2).



FIGURE 6.2 The roots of structural discrimination are evident in this historical photo highlighting Jim Crow Laws. (credit: "At the bus station in Durham, North Carolina" by Jack Delano/Library of Congress, Prints & Photographs Division, FSA/OWI Collection, No known restrictions)

"Separate but Equal" and Civil Rights Laws in the United States

In 1896, the Supreme Court ruled in *Plessy v. Ferguson* that racially separate facilities did not violate the Constitution if they were equal, establishing the "separate but equal" rule (NMAH, n.d.). Though the Supreme Court insisted in *Plessy v. Ferguson* that separate facilities could be equal, the Black American experience of the era suggested otherwise. By the 1900s, Jim Crow laws had created a segregated society condemning Black Americans to unequal treatment and second-class citizenship (National Museum of American History [NMAH], n.d.; Shah & Adolphe, 2019). During the Jim Crow era, many places in the United States prevented Black Americans from exercising the right to vote using a variety of legal maneuvers including literacy tests, poll taxes, complex registration systems, and primaries in which only White people were allowed to vote. It was not until the Supreme Court's ruling in *Brown v. Board of Education* in 1954 that racial segregation in public schools became illegal. This ruling overturned the "separate but equal" principle and made it unconstitutional for children to be separated in public schools on the basis of race (National Archives, 2021). Despite the *Brown* ruling, Jim Crow laws separating Black Americans from White Americans in housing, jobs, schools, and public gathering places persisted well into the 1960s in many areas of the United States (Shah & Adolphe, 2019).

The Civil Rights Act of 1964 prohibited discrimination based on race and outlawed segregation in businesses, public places, and public schools (National Archives, 2022). The Act made it illegal to discriminate on the basis of race. However, the enforcement of such laws was not and has not been adequate, allowing for the perpetuation of racial inequities and, by extension, socioeconomic inequities. These racial inequities persist due to the unjust systems that have sustained discriminatory practice in policies and laws (Bailey et al., 2017). BIPOC individuals are still significantly disadvantaged in contemporary society due to prior discriminatory laws mandating segregation by race (Braveman et al., 2022). These structures maintaining racial oppression are hidden, ensconced in the normal everyday operations of institutions, and invisible to most except those affected by them (Braveman et al., 2022).

Japanese Internment Camps

The attitudes of racial discrimination common in the Jim Crow era extended to Japanese American individuals living in the United States, who, whether they were citizens and whether they were born in Japan or in the United States, were presumed to be loyal to Japan during World War II. Their loyalties to the United States were questioned solely on the basis of their ancestry. During the war, the United States forcibly detained Japanese Americans in concentration camps, also known as internment camps (Figure 6.3) (National Archives, n.d.). Around 120,000 Japanese-Americans were detained in these camps, imprisoned based on their race, with many losing their homes and businesses (National Archives, n.d.). Most of those interned were U.S. citizens, and half were children, incarcerated for up to 4 years without any recourse. At the time, the U.S. Supreme Court accepted the implementation of President Roosevelt's Executive Order 9066, determining that civil rights could be denied to U.S. citizens based on the executive branch's definition of membership in a specified ethnic group.



FIGURE 6.3 Japanese Americans arrive at Santa Anita Assembly Center in California in 1942 during the first phase of relocation and internment. (credit: Clem Albers/National Archives, Public Domain)

Boarding School Policy for Native American and Alaska Native Children

From 1869 through the 1970s, the U.S. government forcibly removed Native American and Alaska Native children as young as age 4 from their families, homes, and cultural traditions, placing them into boarding schools with the goal of replacing their tribal values, languages, and culture with dominant White Christian values, religion, culture, and language (Braveman et al., 2022; National Native American Boarding School Healing Coalition [NNABSHC], 2020). This practice began with the Civilization Fund Act of 1819, which financed Christian churches to provide education that fostered "civilization" for Native Americans (LoneTree, 2021; Wong, 2019). In 1824, the Bureau of Indian Affairs assumed oversight of the program, which ultimately became a program of cultural genocide (NNABSHC, 2020). Children in the program faced harsh punishment if they spoke their native language or engaged in Native American cultural practices. Survivors of the schools recount sexual, physical, and spiritual abuse; neglect; and witnessing murders of other children. By 1925, the Bureau of Indian Affairs had placed into boarding schools over 60,000 children—approaching an estimated 83 percent of all Native American children in 1926. Overall, the United States funded 367 Native American boarding schools operating in 29 states.

Over time, the poor conditions in these schools did not go unnoticed. For example, the 1928 *Meriam Report: The Problem of Indian Administration* (https://openstax.org/r/narf) documents starvation, poor and unsanitary living conditions, and the harmful effects of corporal punishment on children's mental health at these boarding schools (NNABSHC, 2020). However, it was not until passage of the 1975 Indian Self-Determination and Education Assistance Act that Native Americans gained legal control of their own educational systems (Avalos, 2021), and the passage of the 1978 Indian Child Welfare Act protected Native children from forced adoption or placement in foster

care with non-Native individuals (Braveman et al., 2022; NNABSHC, 2020). The effects of these forced removals have resulted in significant cultural losses for tribal nations.

Redlining and Residential Segregation by Race

During the 1930s, the U.S. government sanctioned **residential racial segregation** via the Home Owners' Loan Corporation (HOLC) and the Federal Housing Administration (FHA). Residential racial segregation is the practice of keeping racial communities separate based on where people live. The HOLC was established in 1933 as part of the New Deal programs to relieve the effects of the Great Depression, to assist homeowners who defaulted on their mortgages and were in foreclosure, and to expand homeownership for the average middle-class American family.

HOUSING SEGREGATION AND REDLINING IN AMERICA: A SHORT HISTORY

Access multimedia content (http://openstax.org/books/population-health/pages/6-2-the-historical-context-of-structural-racism-in-the-united-states)
This NPR podcast video explores the history of redlining with an emphasis on its legality. Despite the passage of the Fair Housing Act, maps and census data show that housing segregation persists.

Watch the video, and then respond to the following questions.

1. Are you surprised by the history of legalized discrimination in housing and banking practices? Why or why not?
2. How do residential segregation and racial profiling intersect?

As a part of its City Survey Program, the HOLC employed examiners who consulted with local bank officers, city officials, appraisers, and realtors across the country to appraise neighborhoods according to perceived lending risk. Using this information, the HOLC created Residential Security maps of cities that graded neighborhoods based on condition and age of housing, transportation, proximity to parks and polluting industries, and the economic class and ethnic and racial composition of the residents (Mitchell & Franco, 2018). Examiners assigned each neighborhood a letter grade and then outlined them on the map in different colors. Green neighborhoods received the letter A, indicating the best neighborhoods; blue neighborhoods received the letter B, indicating desirable neighborhoods; yellow neighborhoods received the letter C, indicating neighborhoods in decline; and red neighborhoods received the letter D, indicating "hazardous" or high-risk (Mitchell & Franco, 2018). Loan officers, appraisers, and real estate professionals used these maps to calculate or estimate mortgage lending risk in the 1940s and 1950s (Mitchell & Franco, 2018).

Red lines were often drawn around communities that had predominantly Black populations, effectively labeling them as risky investment areas (Figure 6.4) (Bailey et al., 2021). **Redlining** these communities of color made mortgages on homes in these areas less available, placing Black homebuyers at risk for predatory lending terms and reducing their access to home ownership. The term *redlining* came to mean a system of denying borrowers access to mortgage loans based on the location of properties in disadvantaged neighborhoods that were often made up of minority populations (Mitchell & Franco, 2018). Borrowers who obtained loans in HOLC red zones paid higher interest rates. Some White homeowners signed **restrictive racial covenants** that prevented them from selling their homes to non-White individuals. These covenants were justified as protecting the value of the home and other neighborhood properties, and they allowed brokers to follow segregation standards in the resale of properties acquired by foreclosure (Mitchell & Franco, 2018). Restrictive racial covenants became popular in the immediate post–World War II era and were often required by the FHA for builders or homeowners to receive homeowners' insurance. This further undervalued real estate in BIPOC neighborhoods and incited violence against BIPOC individuals who moved into White neighborhoods (Bailey et al., 2021).

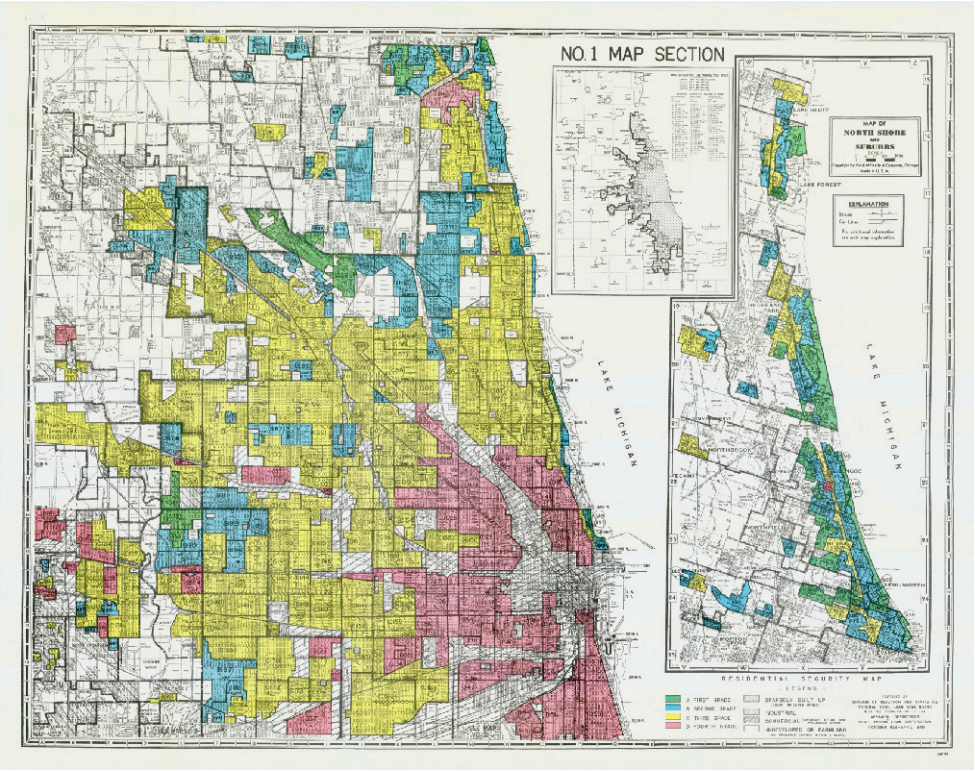


FIGURE 6.4 In this HOLC-era redlined map of Chicago, red areas outline so-called "hazardous" urban, industrial neighborhoods that house a majority-BIPOC population, whereas the green areas outline neighborhoods in suburbia, away from the inner city and associated industrial pollution. (credit: "holc-chicago" by Kara Zelasko/Flickr, Public Domain)

Multiple sectors, including banking, real estate, private developers, and homeowners, were involved in redlining and restrictive racial covenants, all with the cooperation and backing of the U.S. government. Lending was discouraged in red zones, while green neighborhoods were preferred (Mitchell & Franco, 2017). The FHA refused to insure mortgages in or near redlined communities while subsidizing builders who produced subdivisions in suburbia for White Americans (Gross, 2017). As a condition for these subsidies, the FHA required restrictive racial covenants to prevent BIPOC individuals from purchasing homes in these subdivisions, justifying their policy to ensure their loans would not be at risk (Gross, 2017). That the FHA included these covenants in its Underwriting Manual amounts to a U.S. government agency essentially stating in an official document that different racial groups should not live in the same communities (Gross, 2017). These practices perpetuated stereotypes that Black individuals would be poor neighbors, would drive down home values, and would increase crime (Bailey et al., 2021).

As a result of these policies, White Americans in the 1950s began leaving urban areas for the suburbs, a phenomenon often referred to as **white flight**, largely blocking BIPOC individuals from new suburban housing communities and isolating them in urban housing projects (Filippino, 2017; Gross, 2017).

Another government action that segregated BIPOC communities during the late 1950s through the early 1970s was the 1956 Federal-Aid Highway Act. This law authorized the largest public works program in history at that time, promising to construct 41,000 miles of an interstate highway system crossing the nation and connecting 42 state capitals. A consequence of this highway expansion was the displacement of more than one million people, largely in urban BIPOC communities (Evans, 2021). Highways cut through neighborhoods, disrupted green spaces, worsened air quality, and sank property values (Figure 6.5). Communities already struggling due to disinvestment and white flight ended up losing churches, community spaces, homes, and small businesses (Evans, 2021). Policymakers viewed highway construction as an easy way to destroy undesirable neighborhoods and used concrete walls, ramps, and overpasses as further physical tools of segregation to isolate BIPOC communities (Evans, 2021). These highways were built during the civil rights movement, and as the prospect of integrated neighborhoods became more real, highway construction offered a means to reinforce racially segregated neighborhood boundaries (Evans, 2021).

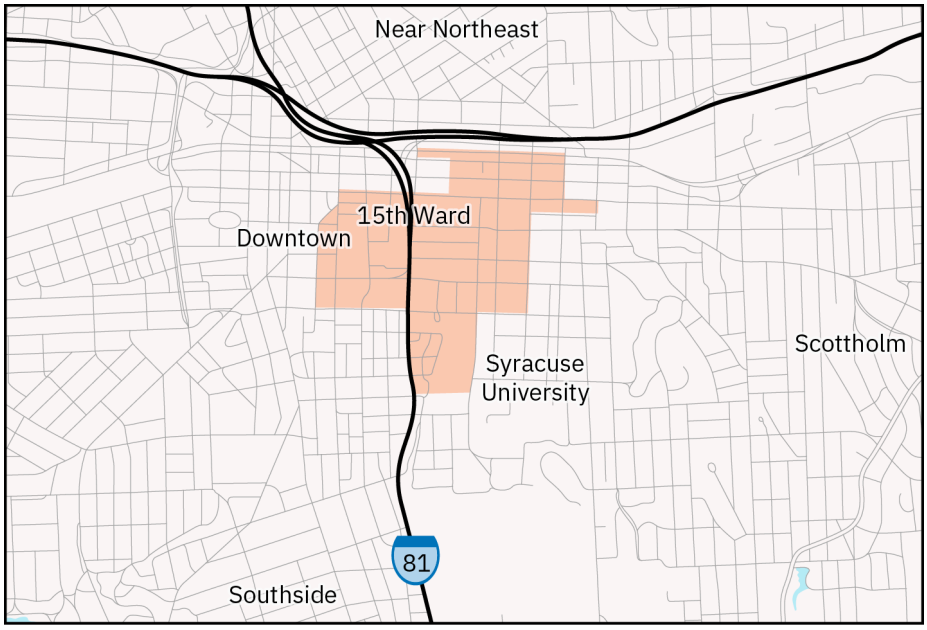


FIGURE 6.5 This map is an example of how the 1956 Federal-Aid Highway Act created highway systems that cut through Black communities. Interstate 81 was designed to break up the 15th Ward, where 90 percent of Syracuse's Black population lived. Homes, businesses, and churches were destroyed, severely disrupting the community and increasing poverty among its residents. (See Sullivan, 2021; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Redlining and residential segregation practices have broad implications today. Residential segregation resulted in a range of social disinvestment, or lack of investment of money in businesses, schools, homes, and infrastructure, in BIPOC communities. Social disinvestment largely dictated the built environment, resulting in poor neighborhood infrastructure, services such as schools and transportation, and employment opportunities (Bailey et al., 2021). Residential segregation is an influential predictor of Black disadvantage (Bailey et al., 2021). Redlining is associated with poor health outcomes, including higher rates of preterm birth, cancer, tuberculosis, maternal depression, and other mental health issues in residents who live in neighborhoods that were once redlined (Bailey et al., 2021). Many factors are related to these differences in health outcomes, such as environmental toxins and the physical impact of persistent psychosocial stressors (Bailey et al., 2021). In contrast, neighborhoods that received high HOLC grades have more tree coverage and lower levels of airborne carcinogens and air pollution; such areas tend to be predominantly White neighborhoods (Bailey et al., 2021).

WHY ARE U.S. CITIES STILL SO SEGREGATED?

Access multimedia content (http://openstax.org/books/population-health/pages/6-2-the-historical-context-of-structural-racism-in-the-united-states)

This TED-Ed video recounts the history of the American suburbs, discussing racial covenants, white flight, and the massive freeway projects in redlined areas that further devalued properties and created environmental health injustices.

Watch the video, and then respond to the following questions.

1. What factors do you think drove white flight?
2. How are racial covenants and redlining similar to other racially discriminatory practices in the United States in the past and today?
3. How does residential segregation intersect with poverty and environmental injustice?

Mass Incarceration and Police Violence

Mass incarceration is another manifestation of structural racism in the United States. The United States has one of the highest incarceration rates globally (ACLU, 2023; Bailey et al., 2021; Nellis, 2021; Sawyer & Wagner, 2023). Though the United States makes up less than 5 percent of the world's population, incarcerated individuals in the U.S. make up 25 percent of the world's inmate population (ACLU Washington, 2022). These rates of incarceration,

and in particular the large numbers of young Black men who are incarcerated in the U.S. prison system, are often referred to as **mass incarceration** (Cullen, 2018; Hinton & Cook, 2021). Research has consistently demonstrated racial bias across the U.S. criminal legal system in policing, bail setting, sentence length, prison disciplinary measures, and capital punishment (Bailey et al., 2021; Hinton & Cook, 2021; Nellis, 2021).

After slavery was outlawed and following initial Reconstruction-era civil rights progress, police and prisons in some locations became institutions where White dominance was reasserted (Bailey et al., 2021; Hinton & Cook, 2021). For example, some individuals in law enforcement sanctioned the lynching of Black Americans or used it to police them (Bailey et al., 2021; Hinton & Cook, 2021). Law enforcement also enforced vagrancy laws, jailing individuals for vagrancy and then leasing them to perform agricultural work, essentially compelling formerly enslaved people back into slavery (Bailey et al., 2021; Hinton & Cook, 2021). With the passage of the Civil Rights Act of 1964, lynching and the convict-leasing system became less common.

In the decades following the passage of the Civil Rights Act of 1964, federal legislation has persisted in undercutting the gains it represented. In 1965, President Johnson declared a "War on Crime," giving the federal government new responsibility for fighting crime within communities. Not solely focused on criminal behavior, this "war" targeted the sociological and economic factors the government believed led to criminality, tasking police and law enforcement officials with monitoring poverty, family breakdown, and youth and young adult restlessness within their communities. Law enforcement presence increased in poor urban neighborhoods mostly comprised of Black Americans, leading to a racial criminalization of young Black individuals on the street. This resulted in **racial profiling**, suspecting an individual of criminal misdeeds based on racial stereotypes rather than on an individual's behavior (Lassiter, 2021a; Lassiter, 2021b; Laurencin & Walker, 2020).

In 1971, President Nixon's "War on Drugs" increased law enforcement and penalties for drug possession and imposed mandatory incarceration for drug offenders. Critics have argued that Nixon's War on Drugs was both racially motivated and an effort to criminalize those individuals who were protesting the Vietnam War, often described as hippies. Through a media campaign, the government sought to suggest to the American public that they should associate anti-war hippies with marijuana and Black individuals with heroin and that they should consider both populations as prone to criminal behavior (Taifa, 2021). Both the War on Crime and the War on Drugs arguably spread fears about supposed Black criminality (Bailey et al., 2021; Hinton & Cook, 2021; Lassiter, 2021a; Taifa, 2021). Following these two presidential declarations, the incarcerated population increased sevenfold, with Black individuals incarcerated at five times the rate of White individuals. In 1981, President Reagan expanded the War on Drugs, allocating more funding to law enforcement, emphasizing incarceration over treatment, and instituting mandatory minimum sentences for drug possession (Hinton & Cook, 2021). The large gap between the amounts of crack and of cocaine powder that resulted in the same minimum sentence reinforces claims that the War on Drugs was racially motivated; 5 grams of crack and 500 grams of cocaine powder resulted in the same minimum five-year prison sentence. Because most crack users were Black, these mandatory minimums resulted in inequitable increases in incarceration rates for nonviolent Black drug offenders (Taifa, 2021).

It is unknown if poverty is a reason why an individual is more likely to perpetrate a crime, but records confirm that poverty renders an individual not only more vulnerable to being arrested but also more likely to be accused of a more severe crime and receive a longer punishment (Hayes & Barnhorst, 2020). Adults experiencing poverty are three times more likely to be arrested than those who are not living in poverty (Hayes & Barnhorst, 2020). The Brookings Institution found the probability that a boy from a family with an income in the bottom 10 percent of income distribution has a 20 times greater risk of being incarcerated in his thirties than a boy from a family with an income in the top 10 percent (Hayes & Barnhorst, 2020).

In 1972, 34 percent of the U.S. Black population lived below the poverty level, and 42 percent of incarcerated Americans were Black (Hinton & Cook, 2021). In contrast, only 10 percent of the White population in 1972 lived below the poverty level. This socioeconomic disparity worsened as the Nixon administration defunded many social welfare programs, resulting in a decrease in access to education and employment opportunities. The 1970s were characterized by increased police presence in low-income neighborhoods, police brutality, and increased incarceration. Discriminatory behaviors among national policymakers and law enforcement continued throughout the next three decades, resulting in a quadrupling in the size of the prison system between 1980 and 2000. This mass incarceration, which still exists in the United States today, disproportionately affects BIPOC populations (Bailey et al., 2021; Hinton & Cook, 2021).

The policies of the 1960s and 1970s that resulted in increased police surveillance in poor, often predominantly BIPOC, urban communities involved the policing of social issues such as alcohol use and an increase in police violence against and killing of Black individuals (Bailey et al., 2021; Green & Peneff, 2022; Lassiter, 2021a). Some of the outcomes of the War on Crime and the War on Drugs include:

- By the mid-1970s, Black and Latino/Latina people were overrepresented in state and federal prisons despite being minority populations within the United States (Hinton & Cook, 2021).
- In Philadelphia, from 1970 to 1974, Black people incarcerated in county jails increased from 50 percent to 95 percent, accounting for more than 62 percent of prisoners state-wide even though Black Americans made up less than 10 percent of the entire state's total population (Hinton & Cook, 2021).
- The 1984 Comprehensive Crime Control Act eliminated parole in the federal prison system (Taifa, 2021).
- The 1986 Anti-Drug Abuse Act established mandatory minimum sentences, including the 100:1 ratio between crack and cocaine powder sentences (Taifa, 2021).
- In 1991, the Supreme Court asserted that mandatory life imprisonment for a first-time drug offense was acceptable (Taifa, 2021).
- The 1994, the Violent Crime Control and Law Enforcement Act resulted in the largest expansion to date of the federal death penalty. The Act treated teenagers as adults, increased the police force, eliminated Pell educational grants for incarcerated people, implemented the "Three Strikes" law (https://openstax.org/r/justice), and resulted in the creation of many new prisons (Taifa, 2021).

Upon their release, formerly incarcerated individuals often experience the long-term effects of an infectious disease contracted in prison and have a higher risk of death (American Academy of Family Physicians, 2021; Binswanger et al., 2016). Mass incarceration means that these effects disproportionately impact BIPOC individuals.

JASON'S SENTENCE

Access multimedia content (http://openstax.org/books/population-health/pages/6-2-the-historical-context-of-structural-racism-in-the-united-states)

This video from the American Civil Liberties Union highlights the story of Jason Hernandez, a 21-year-old who was sentenced to life in prison without parole for a low-level drug crime. Although the judge wanted to give Jason a second chance, he was obligated to enforce mandatory minimum sentencing laws.

Watch the video, and then respond to the following questions.

1. Based on the video, how do socioeconomic factors play a role in mass incarceration?
2. How do mandatory minimum sentencing laws affect families and communities?
3. What role does structural discrimination play in these laws?

A surge in police killing of Black men in the late 1960s led to efforts to curtail police use of force, but it was not until 1985 that the Supreme Court decision in *Tennessee v. Garner* placed restrictions on police use of force. In that case, the Court found that deadly use of force on a fleeing suspect is unconstitutional unless there is cause to believe the suspect poses a significant threat to the officers or the public (Bailey et al., 2021; Green & Peneff, 2022). Even with these restrictions in place, fatal police violence is an ongoing public health threat, disproportionately impacting BIPOC communities and highlighting the persistence of systemic racism (GBD 2019 Police Violence U.S. Subnational Collaborators, 2021 [GBD]; Peeples, 2020). Police killings are a leading cause of death for young Black men in the United States. Recent studies suggest that 1 in every 1,000 Black men are killed by the police, 2.5 times more than White men (GBD, 2021). In 2021, an investigation found that at least 135 unarmed Black men and women had been killed by police in the United States since 2015, and for more than a dozen of the officers involved, the fatal shootings were not their first. In more than half of these cases, the officers were not charged (Thompson, 2021). Aggressive policing in BIPOC communities and the lack of accountability for police officers involved in the deaths of Black people perpetuate disparities and erode trust in law enforcement, discouraging individuals in these communities from reporting crime (Schindler & Kittredge, 2020). Police violence has many indirect effects; racial profiling and surveillance with threats of violence negatively impact the mental health of a community (Bailey et al., 2021).

CASE REFLECTION

Structural Racism

Read the scenario, and then respond to the questions that follow.

Thirty-three-year-old James Cole lives in Chicago and works full-time at a downtown marketing firm. He just graduated with a master's degree in business administration and feels lucky as he reflects on the struggles of his parents and childhood friends. His parents grew up in Chicago in the late 1930s and 1940s, living in apartment complexes within a densely populated area consisting mostly of BIPOC families. When his parents were starting a family, they were unable to secure a mortgage to purchase a house because they were Black. In 1970, the Coles moved into a public housing project on the North Side of Chicago, where James grew up. By the 1980s, the War on Drugs and mass incarceration created an atmosphere of police distrust due to racial profiling. Crime and concentrated poverty increased, and the media portrayed the area as full of drugs and gangs. Many of the Coles' neighbors were incarcerated for drug-related crimes. The community where the Coles resided became undesirable to new businesses and social programing, resulting in overall disinvestment. The school district for the Coles' neighborhood was poorly funded and was considered one of the worst in the state, and many of James's friends did not graduate from high school.

1. How do you think structural racism impacted James and his family?
2. How do you think the Coles' social situation impacted their health?

KNOW THEIR NAMES

This interactive slide show "Know Their Names (https://openstax.org/r/interactive)" offers a brief history of some of the Black people killed by the police in the United States between 2014 and 2021.

Read through the slide show, and then respond to the following questions.

1. What do the victims featured in this slide show have in common?
2. Why do you think these individuals were the victims of police violence?
3. How does racial profiling relate to structural racism?
4. Compare the actions taken in response to these killings. Do the responses seem appropriate? Why? What do you think accounts for the differences in the responses?

6.3 Contemporary Structural Racism and Systemic Inequities in the United States

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 6.3.1 Describe the relationship between structural racism and systemic inequities.
- 6.3.2 Discuss contemporary manifestations of structural racism.
- 6.3.3 Examine current persistent systemic inequities.
- 6.3.4 Explain how structural racism intersects with the social determinants of health.

To illustrate the concept of structural racism, Gee and colleagues (2009) utilize the analogy of an iceberg. The visible part of the iceberg above the water represents overt racism, which is easily recognizable. The larger, mostly hidden base of the iceberg represents structural racism, the often invisible social systems and structures that result in harm of and discrimination against BIPOC individuals (Gee et al., 2009). Structural racism may pose barriers to opportunities that would otherwise promote health and well-being, such as access to high-paying jobs with benefits, safe neighborhoods, quality schools, quality health care, and equitable treatment in the criminal justice system (Braveman et al., 2022). Just as the unseen base of an iceberg is more dangerous to a ship than its tip, structural racism can be more dangerous than overt racism, as it positions BIPOC individuals at a significant disadvantage across several domains of living, impacting health in ways that are not as easily discernable (Braveman et al., 2022). Political disempowerment, residential segregation, unequal financial practices, unfair

treatment in the criminal justice system, and environmental health injustice are all examples of current structural racism and persistent systemic inequities.

The Relationship Between Structural Racism and Systemic Inequities

As discussed, structural racism results in institutional policies, systems, laws, and practices that limit the opportunities, resources, and power of individuals based on race (Braveman et al., 2022), resulting in systemic inequities. Inequities create inequalities in health care, education, housing, and employment opportunities. Structural racism and systemic inequities are partners, existing together and creating unequal systems across all of society. Put simply, structural racism creates unequal opportunities to achieve positive outcomes.

Structural racism results in systemic inequities even when controlling for income level. College-educated Black individuals are more likely to experience unemployment and have lower levels of income and accumulated wealth than their White counterparts (Churchwell et al., 2020).

THE RACE GAP: BLACK WHITE

The Reuters Graphics slideshow "The Race Gap: Black White (https://openstax.org/r/reuters)" explores the gap between Black and White Americans from birth to death, highlighting the systemic disadvantages still present in American life more than 150 years after the abolishment of slavery.

View the slideshow, and then respond to the following questions.

1. The slideshow mentions that disparities persist despite policies and laws intended to address them. Why do you think these policies and laws have failed to eliminate these disparities?
2. In what ways did structural racism create these disparities?
3. How do redlining policies have lasting effects on many of the disparities mentioned in this slideshow, including food insecurity, quality of education, and access to health care?

Political Disempowerment

Since the passage of the 15th Amendment in 1870 secured the right to vote for all men—including non-White men—groups of White Americans have engaged in voter suppression efforts to politically disenfranchise people of color. During the Jim Crow era, voter suppression was prevalent in many states, with White supremacist groups engaging in violent intimidation and governments selectively applying restrictions and laws such as a poll tax and literacy tests. As recently as 2023, many states were considering restrictive voting legislation, such as requiring voter identification, eliminating Sunday voting, limiting mail-in voting, and consolidating polling places. A voting bill or law is considered restrictive when it includes one or more stipulations that make it more difficult for eligible citizens to register to vote, stay on the voter rolls, or cast a vote as compared to existing state law (Brennan Center for Justice [BCJ], 2022). Requiring photo identification, decreasing available times to vote, and creating longer wait times to vote due to consolidated locations disproportionately affect low-income and BIPOC voters due to inflexibility of work schedules, transportation difficulties, and difficulty in obtaining photo identification (Braveman et al., 2022; BCJ, 2022).

Residential Segregation

Residential racial segregation in the United States remains high despite the Fair Housing Act of 1968, which outlawed racial discrimination in housing. Almost three-quarters of the neighborhoods that HOLC graded as hazardous in the 1930s are now considered neighborhoods of color with low-to-moderate income (Mitchell & Franco, 2018). These federal policies kept BIPOC communities living in low-income areas, ensuring systemic inequities in health care access, educational opportunities, employment opportunities, transportation, and health outcomes. For example, the Boston neighborhoods redlined in 1938 still rely on limited bus service, while better-funded commuter rail and subway systems serve other portions of the city (Hostetter & Klein, 2018).

Racial segregation is directly associated with an economic disadvantage, as many individuals gain wealth through equity in their homes. The new homes built in suburban areas during the time of the white flight sold for twice the national median income in the 1940s and 1950s; those same homes sell for almost eight times the national median income today, illustrating how home ownership can create wealth (Gross, 2017). Denying Black Americans the

opportunity to own a home denied them this wealth-creation opportunity, contributing to economic and social inequities. Racial segregation is also associated with limited opportunities for upward mobility due to lack of employment options and poor-quality schools. BIPOC individuals are more likely than their White counterparts with similar incomes to live in areas with concentrated disadvantage (Braveman et al., 2022). Today, once-redlined neighborhoods are more likely to have a majority BIPOC population with lower incomes and overall lower home values (Perry & Harshbarger, 2019).

THE RACIAL DISPARITIES OF MORTGAGE LENDING

Access multimedia content (http://openstax.org/books/population-health/pages/6-3-contemporary-structural-racism-and-systemic-inequities-in-the-united-states)
In this *Good Morning America* video, reporter David Scott shares his investigation highlighting racial disparities in mortgage lending in the United States.

Watch the video, and then respond to the following questions.

1. Why do you think there are still widespread racial disparities in mortgage lending?
2. Why do you feel the Fair Housing Act hasn't been more effective in reducing disparities in home ownership?
3. Do you see a path forward to changing these behaviors? If so, describe what you see; if not, explain why.

Financial Practices

Current financial practices continue to perpetuate structural racism, with echoes of the HOLC redlining scheme. Federal loan programs from the mid-1900s through today have greatly increased homeownership among White Americans, while BIPOC neighborhoods have largely experienced disinvestment. While redlined maps are no longer in use, their legacy continues as home values in racially segregated neighborhoods do not appreciate at the same rate as homes in mostly White neighborhoods (Braveman et al., 2022; Lynch et al., 2021; Yearby et al., 2022). Differences in homeownership, home values, and credit scores by race persist in areas that were formerly redlined. Current examples of discriminatory public and private financial practices include check cashing services and payday lenders. Businesses that offer check cashing services afford their clients the ability to get cash immediately from their checks for a fee. While individuals with bank accounts are able to deposit checks into their account and withdraw the money without any fees after the check clears, often in 2–3 days, individuals who use check cashing services must pay a fee–perhaps 2 percent of a check's face value, or $2 for every $100 cashed (Davies, 2017). Payday lenders offer short-term payday loans with high interest rates that are due the next pay day. These types of loans are often considered predatory as they are expensive, can damage credit scores if they are not paid back in full, and can lead to debt collection issues (National Association of Consumer Advocates, n.d.). Such services have a history of disproportionately targeting BIPOC communities, further contributing to the inability of the people in these communities to accumulate wealth (Braveman et al., 2022; Lynch et al., 2021).

THE SURPRISING LOGIC BEHIND THE USE OF CHECK CASHERS AND PAYDAY LOANS

Access multimedia content (http://openstax.org/books/population-health/pages/6-3-contemporary-structural-racism-and-systemic-inequities-in-the-united-states)
This *PBS News Hour* video investigates the business of check cashers and payday lenders. Check cashers are often considered predatory, as they charge a fee to cash paychecks, but for many Americans who are living in poverty without any savings, check cashers are often the only way to get cash the same day. This video discusses arguments for and against these services.

Watch the video, and then respond to the following questions.

1. Do you think check cashing and payday lending practices are predatory? Why or why not?
2. Are check cashing services helpful or harmful? What about payday loans?
3. Is expensive credit better than no credit? Why or why not?
4. What solutions to larger issues could help alleviate the need for check cashing and payday lending services? How would this relate to the social determinants of health?

The Social Security Act (SSA) of 1935 created a system of employment-based insurance and income compensation to care for adults in retirement age (Bailey et al., 2017). To secure congressional votes in the South, the SSA deliberately excluded agricultural workers and domestic servants as these occupations were largely filled with Black men and women (Bailey et al., 2017). Because it excluded Black individuals, the SSA afforded the primarily White recipients more opportunity to acquire wealth and transfer it to future generations, whereas those without the benefit of the SSA often become dependent on adult children after retirement, further relegating BIPOC communities and families to lower wealth accumulation (Bailey et al., 2017).

Public schools in the United States depend on local property taxes as a large part of their budgets. In racially segregated areas, the lower-income neighborhoods, largely composed of BIPOC individuals and low-income White individuals, have lower property tax revenues that result in resource-poor public schools. Property taxes are lower in these neighborhoods due to redlining. While low-income White individuals are affected by this issue, it disproportionately affects BIPOC individuals because structural racism has resulted in higher levels of household and community poverty (Braveman et al., 2022).

Criminal Justice System

Structural racism in the U.S. criminal justice system manifests in racial patterns of incarceration. The disproportionate burden of incarceration on BIPOC individuals reflects pervasive prejudicial policing and biased sentencing practices (Braveman et al., 2022). Incarceration carries a negative stigma that perpetuates a cycle of disadvantage, with fewer employment and economic opportunities affecting incarcerated persons' families and communities. As discussed, police violence continues to be among the leading causes of death in Black men. Evidence comparing Black victims and White victims killed by police suggests inequitable treatment between the two races with a fatality rate three times higher among Black victims than White victims and Black victims more likely to be unarmed than their White counterparts (Braveman et al., 2022; DeGue et al., 2016; Laurencin & Walker, 2020). Systemic racism includes laws and policies but also the norms that guide routine practices. In the case of police, implicit biases play a role in the assumption that Black men are dangerous, creating distrust and disparities in police use of force between Black and White individuals (Braveman et al., 2022; Hinton et al., 2018; DeGue et al., 2016). At the intersection of the police and educational systems, the practice of schools involving law enforcement more often for misbehaving Black students than for misbehaving White students, increasing the risk that Black students will be incarcerated, reflects systemic racism. Additionally, school systems discipline Black students with more suspensions and expulsions than they do other students. These practices are based not on law but on prevalent, deeply rooted discriminatory attitudes (Braveman et al., 2022).

LAVETTE'S CHOICE

Access multimedia content (http://openstax.org/books/population-health/pages/6-3-contemporary-structural-racism-and-systemic-inequities-in-the-united-states)

This ACLU video highlights the story of Lavette Mayes, a single mother arrested after a fight, who serves 14 months in jail because she is unable to afford her pretrial bail of $25,000. The video explores how the cash bail system has transformed into a for-profit system where higher-income individuals can avoid serving pretrial jail time while lower-income individuals are unable to afford to stay out of pretrial jail.

Watch the video, and then respond to the following questions.

1. How do police profiling, poverty, and incarceration intersect with the social determinants of health?
2. Do you feel pretrial detention is an equitable practice? Why or why not?

Environmental Health Injustice

Like many other facets of systemic racism in the United States, environmental injustices and disparities affecting BIPOC communities often stem from federally sponsored, racially motivated residential segregation. When HOLC and FHA redlined and labeled neighborhoods as hazardous, business disinvestment occurred, followed by a lack of insurable mortgages in these neighborhoods. Such changes made the way for industry to move in with coal-fired power plants, bus garages, and hazardous waste disposal plants, mostly in low-income BIPOC communities (Bailey et al., 2017; Braveman et al., 2022). In addition, most redlined neighborhoods were in urban areas where

widespread community disinvestment resulted in less green space and tree canopies and increased urban heat exposure. The Flint, Michigan, water crisis is an example of both systemic racism and environmental injustice affecting a town that is largely composed of BIPOC individuals, reflecting the history of segregation. In April 2014, the city of Flint switched to an untreated water source that ultimately corroded the water pipes, resulting in high levels of lead leaching into the city's drinking water. Despite months of complaints, it was well over a year before the city took any action. The city changed the Flint water supply, but this was ineffectual since the pipes were already corroded; they continue to leach contaminants into the residents' water (Ruckart et al., 2019). See Social Determinants Affecting Health Outcomes for more information. The Flint water crisis demonstrates the disinvestment in infrastructure and officials' lack of attention to the concerns of BIPOC individuals, resulting in negative long-term health impacts (Braveman et al., 2022).

Highways and associated traffic pollutants running through neighborhoods and the introduction of hazardous waste disposal plants and coal-fired power plants have resulted in significant environmental injustices in majority-BIPOC communities. These exposures are linked to adverse health outcomes such as asthma, adverse birth outcomes, and cancer (Swope et al., 2022). The legacy of redlining and the 1956 Federal-Aid Highway Act continue to shape the environmental exposures of BIPOC communities (Kowalski, 2019; Lane et al., 2022). The pollutant gradients within urban areas for nitrogen dioxide and particulate matter, both markers of air pollution, are significantly higher in former redlined neighborhoods than they are in other neighborhoods (Bose et al., 2022; Lane et al., 2022).

THE ROOTS OF HEALTH INEQUITIES

Asthma

The history of redlining and its resultant domino effect of social disinvestment resulted in higher levels of air pollution in BIPOC and low-income communities and higher rates of asthma in individuals living in those communities. The racial and ethnic disparities in asthma are a result of a complex interplay of factors including structural racism, residential segregation, discriminatory policies, and the SDOH, along with lifestyle and biological determinants. Black, Hispanic, and Indigenous people disproportionately bear the burden of asthma in the United States with the highest rates and numbers of deaths and hospitalizations. Black Americans are:

- one and one-half times more likely to have asthma,
- five times more likely to visit an emergency department due to asthma, and
- three times more likely to die from asthma.

(See Asthma and Allergy Foundation of America, 2020; Bose et al., 2022; Lane et al., 2022; Perez & Coutinho, 2021.)

The Congress for the New Urbanism (CNU) is a strong advocate for replacing aging highways that run through neighborhoods with city boulevards, housing, and green spaces, transforming the urban highway corridors of the past (CNU, n.d.-b). Examples of the kinds of completed projects for which Highways to Boulevards advocates include the Big Dig in Boston, Massachusetts; the Mandela Parkway in Oakland, California; and the Riverfront Parkway in Chattanooga, Tennessee (CNU, n.d.-b). For a complete listing of completed Highway to Boulevard projects, visit this website (https://openstax.org/r/cnu).

HOW RACISM SHAPED THE INTERSTATE

Access multimedia content (http://openstax.org/books/population-health/pages/6-3-contemporary-structural-racism-and-systemic-inequities-in-the-united-states)
In this *NPR Morning Edition* news episode, "A Brief History of How Racism Shaped Interstate Highways," reporter Noel King speaks with Professor Deborah Archer about the history of racism and redlining in creating the interstate highways.

Listen to the episode, and then respond to the following questions.

1. Do you think these highway projects were purposefully designed to keep residential populations segregated? Why or why not?

2. How would you describe the relationship between these highway projects, racism, and environmental health?

Intersection of Structural Racism and the Social Determinants of Health

The social determinants of health (SDOH) are the nonmedical factors that impact health outcomes (CDC, 2022b). Social Determinants Affecting Health Outcomes discusses the SDOH in detail. Examples of SDOH include access to safe housing, exposure to discrimination or violence, income level, and language and literacy skills (ODPHP, 2020d). Healthy People 2030 names structural racism as one of the SDOH given its pervasive and often invisible reach into all social practices (Bailey et al., 2017; ODPHP, 2020b). The historical roots of structural racism tie directly into the SDOH, as this racism has consigned BIPOC communities to an inferior or second-class status (Braveman et al., 2022). Put more succinctly, structural racism is further upstream than the SDOH (Churchwell et al., 2020; Lynch et al., 2021). The following are key examples of the ways in which structural racism intersects with the SDOH.

- Safe housing: Structural racism negatively affects income level due to the far-reaching and lasting implications of historical residential segregation. HOLC and FHA redlining are examples of structural racism that limited opportunities for BIPOC families to purchase homes and to benefit from intergenerational wealth transfer, contributing to the lower-than-average income and wealth of BIPOC families. Black Americans have approximately one-tenth of the wealth of White Americans, have fewer assets, and are less likely to own their homes, own a business, or have a retirement account (Hanks et al., 2018). Because of structural racism, residential segregation in America continues, with more BIPOC families living in lower-income neighborhoods (Lynch et al., 2021; Ray et al., 2021; Zonta, 2019). For all of these reasons, structural racism presents a barrier to safe housing for BIPOC families.
- Exposure to discrimination or violence: Structural racism exposes people to discrimination or violence in the form of biased policing practices, biased sentencing policies, and the mass incarceration of BIPOC individuals. This exposure results in a myriad of adverse outcomes for those affected (Bailey et al., 2021; Braveman et al., 2022), touching upon the SDOH in discrimination, violence, lower income, and barriers to safe housing.
- Language and literacy: Structural racism negatively affects language and literacy skills due to the lack of access to quality schools in predominantly BIPOC neighborhoods and due to the biased treatment of BIPOC students within the educational system (Quick & Kahlenberg, 2019; Williams et al., 2019).

6.4 Structural Racism and Systemic Inequities in U.S. Health Care

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 6.4.1 Explain how structural racism and systemic inequities manifest in the U.S. health care system.
- 6.4.2 Discuss how structural racism and systemic inequities affect population health outcomes.
- 6.4.3 Assess current programs addressing structural racism and systemic inequities in health care.
- 6.4.4 Describe the role of the nurse in addressing structural racism and systemic inequities.

The direct effects of racism and implicit bias, discriminatory policies in health insurance access and coverage, the effects of discriminatory mass incarceration, and the lasting impact of discriminatory policies in residential segregation led to negative health outcomes for BIPOC communities. Residential segregation, one of the principal drivers of systemic inequities resulting from structural racism, results in lower wealth accumulation in BIPOC families, educational inequities driving employment disparities in BIPOC communities, and the disproportionate burdens of environmental hazards, decreased access to quality foods, and lack of adequate transportation that results from disinvestment in communities (Lynch et al., 2021).

Racism and Implicit Bias in Health Care

In health care, personally mediated discrimination often manifests as an implicit bias against certain clients. Several studies have confirmed that health care professionals' implicit biases negatively affect the quality of client care they provide and correlate with discriminatory behavior (Greenwald et al., 2022; Sabin, 2022). Nurses are not immune to implicit biases or their effects (Hostetter & Klein, 2018; Ochs, 2023). Culturally and Linguistically Responsive Nursing Care has more information on implicit bias. The following are examples of how implicit racial bias manifests in the health care setting:

- BIPOC clients receive fewer cardiovascular interventions than their White counterparts, resulting in higher cardiovascular mortality rates (Bridges, 2018; Eberly et al., 2021; Emory University, 2023; Quach, 2020).
- BIPOC clients are less likely to be prescribed pain medications than their White counterparts (The Joint Commission, 2023).
- BIPOC clients receive fewer renal transplants than their White counterparts (The Joint Commission, 2023).
- Black women are more likely than White women to die after being diagnosed with breast cancer (The Joint Commission, 2023).
- Black men are less likely to receive chemotherapy and radiation therapy for prostate cancer and more likely to have their testicles removed than White men (The Joint Commission, 2023).
- BIPOC clients are more likely than White clients to be blamed for being "too passive" about their health care (The Joint Commission, 2023).

Discriminatory Policies in Health Insurance Access and Coverage

Occupational segregation refers to separating workers by race into certain industries, resulting in a disproportionate representation of one race in a sector of the workforce. This practice has its roots in slavery, where two-thirds of enslaved individuals were forced to work on farms while the remaining third worked in domestic settings. After slavery was abolished, many former confederate southern states created the Black Codes, essentially forcing the former slave population to continue to work in low-wage agricultural or domestic roles and ensuring ongoing disparities in wages and working conditions between BIPOC and White workers (Zhavoronkova et al., 2022). The National Labor Relations Act of 1935 further exacerbated occupational segregation. While it expanded union rights for workers, resulting in higher wages and benefits, these rights did not apply to service, domestic, or agricultural industries, thereby cutting out BIPOC workers from these protections (Yearby et al., 2022). Today, BIPOC workers are overrepresented in domestic and care occupations, such as home health aides, personal care aides, and childcare workers, and in service roles such as janitorial staff, drivers, and laborers (Zhavoronkova et al., 2022). These are often low-wage jobs that do not offer or provide health insurance.

During the Civil Rights era of the 1960s, the federal government created Medicare and Medicaid, public safety-net programs that aimed to cover health care costs for qualified individuals who lacked health insurance. Medicare is a federal health care program that covers the older adult population and individuals with disabilities, whereas Medicaid is a joint federal and state health care program for select categories of individuals such as individuals with lower incomes, pregnant people, children, older adults, and individuals with disabilities (Yearby et al., 2022). By not enforcing fair practices, the federal government allowed Medicare and Medicaid to be administered in ways that perpetuated racial discrimination and health care inequities and disproportionately negatively affected BIPOC individuals. For example, even if nursing homes denied admission to BIPOC clients, as long as the homes made it look like they were open to everyone by, for example, making an effort to use nondiscriminatory language in their marketing materials, they could participate (Yearby et al., 2022).

The Affordable Care Act (ACA) expanded Medicaid, but a Supreme Court decision in *National Federation of Independent Business v. Sebelius* made the expansion optional for states, creating a coverage gap in states that chose not to expand for those individuals who are unable to afford private insurance but do not meet the tight eligibility criteria of traditional Medicaid. This gap largely affects minority populations, 60 percent of whom are BIPOC, and twice as many Black individuals as White and Latino individuals (Yearby et al., 2022). Some states have attempted to impose eligibility restrictions on Medicaid expansion, including work-reporting requirements rooted in racist assumptions about the work ethic of Black individuals (Yearby et al., 2022).

Financing is another area of concern. Federal law requires that Medicaid reimbursement be sufficient to ensure equitable access to high-quality health care for its beneficiaries. However, Medicaid payments to health care providers are low compared to commercial health insurance plans, leading many providers to drop clients who have Medicaid insurance. These providers often cite low Medicaid reimbursement levels (i.e., payments for services rendered) as the reason they will not accept clients on Medicaid insurance (Yearby et al., 2022). This creates a barrier to health care access for clients who do not have commercial or employer-sponsored health insurance.

The federal government has attempted to institute health care payment reform to improve quality of care and reduce costs of care by placing more accountability for health outcomes on the health care provider. One popular model for payment reform, value-based programs, as discussed in Demographic Trends and Societal Changes,

rewards health care providers for positive health outcomes by reimbursing health providers and systems a flat fee for a health condition. If the client has a positive outcome from treatment and only requires one or two visits, the health care provider or system gets to keep most of the flat fee reimbursement from the insurance plan. For clients who develop complications or require multiple subsequent visits arising from the health condition, the health care provider or system is responsible for the costs if they exceed the flat fee reimbursement that was already paid. This payment system incentivizes health care providers and systems to provide excellent quality care. One downside of this payment system is that it is "color-blind"; safety-net providers that care for low-income BIPOC clients may be penalized for health outcomes that result from poorer overall health due to the SDOH and structural racism rather than from the quality of clinical care provided (Yearby et al., 2022). Pay-for-performance programs are very common in the United States and financially reward providers who care for mostly affluent and predominantly White populations with better general health (Yearby et al., 2022).

Despite increases in health insurance coverage since the passage of the ACA, BIPOC individuals are still more likely to be uninsured than White individuals (Yearby et al., 2022). Medicaid expansion, as supported by the ACA, is associated with lower rates of uninsured individuals. However, 12 states with higher percentages of historically marginalized groups currently do not provide this additional coverage (Rudowitz et al., 2023). This contemporary lack of equitable access to high-quality health care is a result of structural racism in U.S. health care policy, as is the requirement for employer-based health insurance excluding agricultural and domestic industries (Yearby et al., 2022). Outside of the discriminatory policies in health insurance access, structural racism in the form of residential segregation has negatively impacted health care access and quality at all levels. Systematic disinvestment in communities from both the public and private sectors has left many BIPOC communities at a socioeconomic disadvantage, making it difficult for these communities to attract experienced and high-quality primary care providers and specialists (Bailey et al., 2017). Studies have demonstrated a lack of investment in health promotion resources in these communities and that overall health care infrastructure and services are inequitably distributed, exposing BIPOC clients to substandard and racially biased care (Bailey et al., 2017).

Discriminatory Mass Incarceration

Racial profiling and biased policing, along with mass incarceration, particularly of BIPOC men, result in harmful exposures from the stress of police profiling, being incarcerated, and lifelong stigmatization. Within the general population that has experienced incarceration, there are higher rates of mental health disorders, hypertension, asthma, cancer, arthritis, tuberculosis, hepatitis C, and HIV (ODPHP, 2020c). The mass incarceration of a disproportionate number of Black individuals in the U.S. prison system means that a disproportionate number of Black Americans experience these negative health outcomes. The heavy disease burden these individuals experience in prison has implications for their return to the community. Post-incarceration, formerly incarcerated individuals experience a lifelong lack of access to resources and opportunities needed for good health, such as access to employment, housing, and health care (Braveman et al., 2022). Individuals who were formerly incarcerated on a felony drug charge are often denied access to food assistance programs, public housing, and other services (Wildeman & Wang, 2017). Additionally, stress from discrimination and police profiling is associated with higher risks of chronic diseases such as heart disease, hypertension, and obesity (Braveman & Dominguez, 2021; Braveman et al., 2022).

Pervasive Lingering Effects of Racial Residential Segregation

The policies and practices of racial residential segregation have resulted in the populations living in low-income and mostly BIPOC neighborhoods experiencing more physical and chemical hazards, increased psychosocial stressors, increased policing, lack of access to quality food, lower-quality school districts, transportation difficulties, and reduced availability of quality health care and pharmacy services (Williams et al., 2019). Economic disadvantage and racial segregation result in poorer health due to environmental factors such as less tree canopy, increased airborne hazards, higher inner-city temperatures, increased exposure to air pollution, toxic waste, mold in substandard housing, and other environmental hazards. Lower levels of income, poorer-quality education, and discrimination in housing mean that BIPOC families may not be able to access healthier residential living and often suffer racial disparities in health (Braveman et al., 2022; Lynch et al., 2021).

Numerous epidemiologic studies have linked segregation to increased risk of low birth weight and preterm birth for Black babies (Williams et al., 2019). Segregation is also associated with later-stage diagnoses for breast and lung

cancers with lower survival rates in Black clients (Williams et al., 2019). Increased rates of asthma and utilization of the emergency department for asthma care are associated with historically redlined neighborhoods, likely related to environment injustice; there is also increased availability of alcohol, use of alcohol, and urban violence in these communities (Haley et al., 2023; Lynch et al., 2021). Self-reported racial discrimination is associated with adverse cardiovascular outcomes, including obesity, hypertension, engagement in high-risk behaviors such as alcohol use, and poor sleep. Self-reported racial discrimination also revealed that those who perceived discrimination were less likely to seek medical care and adhere to medical plans (Williams et al., 2019).

How Structural Racism and Systemic Inequities Affect Population Health

There is a direct connection between structural racism and the resulting systemic inequities in health outcomes for certain populations. Structural and interpersonal racism is at the foundation of health disparities and inequities, with an unacceptable and widespread impact on BIPOC communities (CDC, 2021). These adverse health disparities exist in maternal–child health outcomes, cardiovascular care and outcomes, asthma care, cancer care and outcomes, diabetes care, and mental health care, with a life expectancy 4 years lower among Black Americans than among White Americans (CDC, 2021). Infant mortality rates among Black childbearing families are 11.11 infant deaths out of every 1,000 births, compared with the overall rate in the United States of 5.96 infant deaths out of every 1,000 births (ODPHP, 2020a).

The COVID-19 Pandemic

The COVID-19 pandemic illustrates how structural racism and systemic inequities affect population health. The pandemic exposed and intensified longstanding racial health disparities. The morbidity and mortality rate for COVID-19 is disproportionately higher for BIPOC clients in comparison with White clients, with data between March 2020 and June 2021 demonstrating that BIPOC clients endured hospitalization rates almost three times the rate of White individuals (U.S. Government Accountability Office, 2021; Yearby et al., 2022). The COVID-19 pandemic highlighted the cumulative impact of discrimination on health outcomes, reflecting differences in susceptibility to disease, occupational exposure, access to care, clinical prognosis, and outcomes (Selvarajah et al., 2022).

As discussed, race is associated with socioeconomic status, with structural racism designating many BIPOC populations to lower socioeconomic status (Lopez et al., 2021). Members of BIPOC communities are more likely to live in overcrowded, multigenerational households. They are also more likely to have jobs that require on-site presence such as transportation workers, grocery store employees, nursing aides, construction workers, and household workers (Andraska et al., 2021; Lopez et al., 2021). These social factors place BIPOC communities at higher risk for COVID-19 infection. Additionally, due to the chronic stressors of structural racism, discrimination, and overall marginalization, this population often has chronic medical conditions, such as hypertension, diabetes, liver disease, and obesity, that are associated with more severe COVID-19 infection (Andraska et al., 2021; Lopez et al., 2021). Overall decreased access to health care accounts for the significant disparities in COVID-19 health outcomes by race (Figure 6.6). This is a preventable, socially mediated disparity.

The incarcerated population also experienced a disproportionate burden of COVID-19 disease, with a case rate that was almost six times higher and a death rate that was three times higher than that of the non-incarcerated population (Andraska et al., 2021). These statistics are unsurprising given that incarcerated populations have similar comorbidities to BIPOC communities in general, coupled with living in a communal setting without autonomy, fostering the rapid transmission of the disease (Andraska et al., 2021).



FIGURE 6.6 During the COVID-19 pandemic, individuals often waited in long lines for hours to obtain testing. Some BIPOC communities lacked access to COVID-19 screening, testing, and vaccination sites. (credit: "COVID-19 Testing Site in Times Square, New York City" by Anthony Quintano/Flickr, CC BY 2.0)

Looking at the COVID-19 pandemic through a population health lens of structural racism, the reasons for the disproportionate BIPOC morbidity and mortality are multifaceted across public health practice levels. This list provides a few examples of the broad-reaching effects, on health in particular, of structural racism and is adapted from the work of Selvarajah et al. (2022).

- Individual level
  - Increased occupational exposures to COVID-19
  - Prevalence of comorbidities associated with COVID-19 severity and mortality
- Community level
  - Neighborhood and housing
    - Difficult for multigenerational households to self-isolate or physically distance
    - Unequal exposures to environmental toxins and air pollution that can exacerbate COVID-19 symptoms and outcomes
- Systems or population level
  - Health systems
    - Minority health care workers were more likely to be in higher-risk areas and were less likely to receive adequate personal protective equipment.
    - There were vaccine and testing site inequities as BIPOC communities experienced barriers in accessing the vaccine and testing sites (Sina-Odunsi, 2021). Access barriers are related to inflexible hours of health care or testing sites, transportation difficulties, and lack of available sites to administer vaccines (Johnson, 2021; Selvarajah et al., 2022).
    - BIPOC communities experience structural barriers to accessing health care.
    - BIPOC communities often have a distrust in the health system.
  - Government
    - Ineffective public health messaging with mixed messaging resulted in unclear public health messages regarding masking, testing, vaccines, medications to treat COVID-19, and isolation periods (Ngo, 2022). In a systematic scoping review, Kalocsanyiova et al. (2022) found health inequities and communication inequities were closely associated, meaning BIPOC clients, who were disproportionately impacted by COVID-19, also were negatively impacted by a lack of health communication either from a lack of access to information, a lack of trust, language barriers, and/or

barriers to health literacy.
- Discrimination was rooted in the pandemic response with Sinophobia, anti-Chinese sentiment, and an overall increase in attacks on Asian Americans.

The intersections of structural racism with health disparities affecting BIPOC communities, the socioeconomic status of BIPOC populations, and community disinvestment are a complex web of interrelated cycles of social exclusion resulting in stark health inequities. The COVID-19 pandemic highlighted these inequities but did not create them.

CASE REFLECTION

Structural Racism and Health Disparities

Read the scenario, and then respond to the questions that follow.

Earlier, the chapter introduced James and his family, who grew up and live in Chicago. James and his wife Tina are expecting their first child. Tina, a generally healthy 30-year-old, is 7 months pregnant and feeling tired but well overall. She has had an uneventful pregnancy thus far. One morning Tina wakes up with a bad headache that does not go away with acetaminophen. She calls her health care provider, who tells her to rest and drink fluids as no other medication can be given for her headache. Tina follows this advice, but the headache worsens, and she thinks her face looks swollen. She calls her provider and requests a same-day appointment.

At the appointment, Tina relays her concerns of the worsening headache and swollen face to the nurse and then to her health care provider. The provider finds a reassuring fetal heart rate and tells Tina that the baby is fine. The provider tells Tina to go home and reinforces using acetaminophen, rest, and fluids. Tina asks if it is normal to have a headache and swollen face, and the provider says, "Headaches are common, and I don't think your face is swollen—it looks proportionate to your body. It's normal for expectant mothers to be vigilant, but I'm sure it's nothing." Tina goes home but feels as if the provider dismissed her complaints. She calls her mother-in-law and expresses her frustrations. Tina's mother-in-law asks about her blood pressure reading, and Tina says, "I don't think they took it. They rushed me in and out. They only checked the baby's heart rate." Tina's mother-in-law tells her she should go back to the clinic the next day.

Tina goes to bed that night with a severe headache. James is concerned, but he doesn't want to worry her, so he doesn't say anything. He plans to go to the provider visit tomorrow. In the morning, when Tina wakes up, her face and hands are very swollen, and she is crying in pain. They go straight to the emergency department, where Tina is diagnosed with eclampsia and undergoes an emergency Caesarean section to deliver the baby.

1. What factors contributed to the delayed diagnosis of eclampsia for Tina?
2. What screenings should the nurse or provider have conducted with Tina?
3. Why do you think there are health disparities in maternal morbidity and mortality by race and ethnicity?
4. How can a community health nurse address these disparities from a population-health standpoint?

Physiological Response to Racism

Discrimination affects health via the over-activation of stress pathways. When the body perceives a threat or danger, the neurological, endocrine, and immune biological systems activate to prepare for it with the fight-or-flight response. Each activates the sympathetic nervous system, the hypothalamic-pituitary-adrenal (HPA) axis, and increasing amounts of inflammation (Selvarajah et al., 2022). This results in a state of general alertness with an increased heart rate, blood pressure, and circulating energy through elevated blood glucose levels and fat breakdown from the effects of cortisol and norepinephrine. This is a useful system when confronted with an acute, potentially dangerous situation, but when this response occurs for an extended period of time, termed **allostatic load** (AL) or allostasis, it gives rise to adverse physiological effects (Baker, 2021; Obeng-Gyasi et al., 2022; Selvarajah et al., 2022). Structural racism is a form of discrimination that is often perceived as a threat that activates these stress response pathways. Facing structural racism over a lifetime leads to chronic activation of this response that ultimately favors short-term survival over long-term health, resulting in physiological wear and tear and dysregulation at the cellular level (Baker, 2021; Obeng-Gyasi et al., 2022; Selvarajah et al., 2022).

AL is a measure of physiological dysregulation due to cumulative chronic stress (Rodriguez et al., 2019; Selvarajah et al., 2022). Researchers have studied AL extensively in the setting of structural discrimination and racism; it can be measured from biomarkers such as blood pressure, albumin, hormone levels, cholesterol levels, and C-reactive protein levels among others (Churchwell et al., 2020; Obeng-Gyasi et al., 2022; Rodriguez et al., 2019). High AL is associated with increased overall mortality of 22 percent and increased cardiovascular-related mortality of 31 percent across 17 studies (Churchwell et al., 2020; Parker et al., 2022; Robertson et al., 2017). Other studies specifically looking at Black–White mortality disparities independent of socioeconomic status or behavioral risk factors also found the burden of AL correlates with higher mortality among Black clients (Duru et al., 2012; Obeng-Gyasi et al., 2022). Exposure to discrimination can even perpetuate adverse health effects in subsequent generations via epigenetic changes, that is, changes in the way genes in the body work precipitated by the environment and lifestyle behaviors (CDC, 2022d; Selvarajah et al., 2022). These individuals face epigenetic aging, where biological age exceeds chronological age, which is a predictor of coronary heart disease, diabetes, and premature mortality (Baker, 2021; Obeng-Gyasi et al., 2022; Selvarajah et al., 2022). "Maternal exposure to discrimination is associated with fetal exposure to excess cortisol, fetal HPA axis activation, and higher rates of low birthweight" (Selvarajah et al., 2022, p. 2112).

THE ROOTS OF HEALTH INEQUITIES

Maternal Mortality—A Public Health Crisis

A maternal death is the death of an individual while pregnant or within 42 days of the termination of pregnancy from any cause related to the pregnancy or its management (Hoyert, 2023). The U.S. maternal mortality rate has increased significantly across all races and ethnicities. In 2019, the maternal mortality rate was 20.1 maternal deaths per 100,000 live births, and in 2021, the maternal mortality rate was 32.9 maternal deaths per 100,000 live births (Hoyert, 2023). BIPOC individuals disproportionately bear the burden of the maternal and infant mortality rates within the United States. The CDC has determined that over 80 percent of pregnancy-related deaths are considered preventable; consider these statistics (Trost et al., 2022):

- Non-Hispanic Black women are 3.5 times more likely to die in pregnancy or during the postpartum period than non-Hispanic White women.
- Infants born to Black women are more than twice as likely to die in comparison to infants born to White women.

Structural racism and discrimination along with differences in health insurance coverage and access to care are some of the major factors driving these disparities in maternal and infant morbidity. However, even after controlling for income and health insurance status, studies have demonstrated BIPOC women are less likely to receive routine medical care and overall experience a lower quality of care, highlighting the prominent role of provider discrimination. Additionally, the AL of the chronic stress of racism and discrimination place BIPOC individuals at higher risk for pregnancy-related complications that threaten their lives and the lives of their infants (Taylor et al., 2019).

(See: Gingrey, 2020; Hill et al., 2022; Hoyert, 2023; Population Reference Bureau, 2023; Taylor et al., 2019; Trost et al., 2022.)

Current Programs Addressing Structural Racism and Systemic Inequities in Health Care

Many health organizations are committed to addressing structural racism and systemic inequities in health care. While it is too early to know if these programs and organizations are making a difference, their efforts demonstrate movement and action in the right direction.

ADDRESSING SYSTEMIC RACISM

Access multimedia content (http://openstax.org/books/population-health/pages/6-4-structural-racism-and-systemic-inequities-in-u-s-health-care)
This video from the Robert Wood Johnson Foundation highlights three communities for their work to dismantle structural racism to create fair opportunities for all.

Watch the video, and then respond to the following questions.

1. How does the sovereignty and advocacy mentioned in the Chickaloon Native Village segment in the video relate to the goals of population health?
2. In the Rocky Mount segment of the video, how do you think the community's efforts to remedy the effects of structural racism can benefit health outcomes in the community moving forward?
3. In the Worcester segment of the video, how do you think communication among representatives of different racial, ethnic, and socioeconomic groups can help the community address the social determinants of health?

Centers for Disease Control and Prevention

In its efforts to decrease and eventually eliminate racial health inequities, the CDC is working to address structural racism and the SDOH. Agencies across the CDC utilize scientific research, community programs, policy efforts, and workforce development (CDC, 2022a). Examples of the agencies' work include (CDC, 2022a):

- The CDC Health Equity Glossary (https://openstax.org/r/chronicdisease) seeks to facilitate understanding and consensus around terminology utilized in health equity literature.
- The comprehensive Health Equity Science and Intervention Strategy (https://openstax.org/r/core) strives to ensure health equity is a fundamental part of the CDC's scientific portfolio with a health equity lens applied to program, intervention design, implementation, and evaluation.
- Project REFOCUS (https://openstax.org/r/projectrefocus) (Racial Ethnic Framing of Community Informed and Unifying Surveillance) explores how to develop and expand public health surveillance to track how social stigma affects individuals.
- The SDOH Portfolio includes surveillance, research, policy, programs, partnerships, and communications to address health inequities and their intersection with the SDOH.
- The CDC's Occupational Health Equity Program (https://openstax.org/r/niosh) focuses on eliminating work-related inequities linked with social, economic, and environmental disadvantages.
- The REACH (https://openstax.org/r/nccdphp) (Racial and Ethnic Approaches to Community Health) Initiative focuses on reducing disparities for BIPOC communities with high rates of chronic diseases.
- The CDC's workforce efforts include implicit bias training, tracking and reporting workforce diversity data, and a diversity and inclusion steering committee.

American Medical Association

The AMA established the Center for Health Equity in 2019 to advance equity across all aspects of care. This effort includes a health equity guide (https://openstax.org/r/ama) for physicians, nurses, and other health care professionals to provide guidance and promote a deeper understanding of equity-focused, person-first language (AMA, n.d.-a). The AMA also published its five-part strategic approach to advance health equity, a three-year roadmap that includes five strategic approaches. This roadmap aims to encourage action and accountability to embed racial justice in health care to advance health equity for all (AMA, n.d.-b). The five parts of the approach include (AMA, n.d.-b):

- embed equity in practice, process, action, innovation, and organizational performance and outcomes;
- build alliances and share power with meaningful engagement;
- ensure equity in innovation for marginalized and minoritized people and communities;
- push upstream to address all determinants of health; and
- foster truth, reconciliation, racial healing, and transformation.

National Institutes of Health

The NIH has acknowledged how historical racism has resulted in the marginalization and oppression of BIPOC communities, creating persistent health disparities, poor health status, and premature mortality among BIPOC communities (NIH, n.d.). The NIH recognizes that it is in a position of power to address structural racism by establishing policies, social norms, and practices that eliminate stereotypes and alleviate the ubiquitous effects of racism (NIH, n.d.). The NIH established the UNITE initiative (https://openstax.org/r/nih) to promote racial equity and inclusion at the NIH and to address structural racism. The specific aims of the initiative are as follows (NIH, n.d.):

- U—understand people's experiences through listening and learning

- N—(engage in) new research on health disparities, minority health, and health equity
- I—improve the NIH culture and structure for equity, inclusion, and excellence
- T—(seek) transparency, communication, and accountability with all interested parties
- E—(engage in) extramural research to change policy, culture, and structure to promote workforce diversity

National Academy of Medicine

The NAM's Culture of Health Program (https://openstax.org/r/culture) (CoHP), funded by the Robert Wood Johnson Foundation (RWJF), is a collaborative effort to identify strategies to create and maintain conditions that sustain equitable quality health for everyone (NAM, 2022). The program focuses on four approaches that scaffold and reinforce one another (NAM, 2022):

- Understand—building, informing, and elevating the evidence base to better understand and eliminate heath inequities
- Translate—communicating the evidence in a timely and culturally congruent manner to bring understanding of the science to those working to advance health equity
- Engage—ensuring partners and interested parties working at every level to eliminate heath inequities are given the tools they need to ensure effectiveness
- Learn—learning in real time from current activities to ensure effective evaluation and impactful metrics

The video Building Equitable Communities (https://openstax.org/r/building) from the RWJF highlights four communities for their work keeping community at the heart of community development, embracing what a culture of health means.

American Heart Association

The AHA's call to action (https://openstax.org/r/ahajournals) to address structural racism as a fundamental driver of health disparities outlines a plan for dismantling and addressing structural racism within the AHA (Churchwell et al., 2020). The AHA's strategies for addressing structural racism include five broad areas (Churchwell et al., 2020):

- Advocacy—advocacy and other externally facing efforts will adhere to antiracist principles such as advocating for affordable health insurance, including expansion of Medicaid in all states
- Quality improvement program—identify racist policies and practices within the AHA and provide consistent education and training of all staff on different manifestations of racism, ensuring accountability, diversity policies, and ensuring diversity of the AHA workforce
- Leadership—examine how to leverage its membership to ensure diversity, inclusion, health equity, and antiracism as essential elements coordinated with other AHA efforts
- Human resources/business operations—recruiting and supporting more early and midcareer investigators from historically marginalized groups
- Science—build an antiracist research agenda with input from key people focused on research that is directed at racism as a cause of poor cardiovascular and cerebrovascular health

Role of Nursing in Addressing Structural Racism and Systemic Inequities

Nursing is one of the largest, most trusted health care professions in the United States with nearly 5.2 million registered nurses (American Association of Colleges of Nursing [AACN], 2022; Gaines, 2023). Thus, nursing is well positioned to help address structural racism and systemic inequities. This role begins with conducting a critical evaluation of nursing education curricula, displaying a commitment to developing workforce diversity, speaking out against structural racism by naming it and discussing it, including the SDOH in all nursing assessments and plans, and engaging in advocacy for a more equitable health system.

Nursing Education

To address structural racism at the systems level requires a critical appraisal of the prelicensure nursing education curriculum. Nurse educators need to be aware of their hidden curriculum; knowingly or unknowingly, educators give certain content more weight and thereby reinforce the content as important. Academic nurse leaders, administrators, and nurse educators need to assess the curriculum to identify content that reinforces racism or discounts structural racism as an important factor in how nurses care for and treat their clients. Despite egalitarian faculty views, many faculty unknowingly commit curricular microaggressions, furthering a racist pedagogy (Ackerman-Barger et al, 2020; Emami & de Castro, 2021; Ochs, 2023). Microaggressions are common, everyday

slights, snubs, or insults directed toward minorities that may be intentional or not, but they communicate derogatory or negative messages to individuals based upon their minority group status (American Psychological Association [APA], 2019; NIH, 2016). An example is a person complimenting an Asian college student as surprisingly well-spoken ("You speak good English for an Asian") or mistaking a Black nurse for a service worker (APA, 2019; NIH, 2016). Educators must commit to an anti-racist pedagogy and educate students about their responsibility as nurses to engage in dismantling structural racism (Villarruel & Broome, 2020). This work includes updating the curriculum to include content on nursing care through the lens of structural racism, implicit bias, the SDOH, and health disparities.

Workforce Diversity

The nursing profession has given increased attention to diversity and inclusion to recruit and retain underrepresented students and faculty (Villarruel & Broome, 2020). A diverse nursing workforce is needed to better serve a diverse client population and make progress toward achieving health equity for several reasons. Nurses who are members of underrepresented minority groups are more likely to work in their communities and advocate for services and programs that are needed (AACN, 2023). They also improve communication and trust and bridge cultural and linguistic gaps among these underrepresented minority groups (AACN, 2023). By serving underrepresented communities, they may even improve access to health care among communities that have faced difficulties in accessing quality care (AACN, 2023). The National Center for Health Statistics names a lack of diversity in the health care workforce as a factor contributing to higher mortality rates among underrepresented minority groups (AACN, 2023). To increase diversity in the nursing workforce, it is important to remove historical obstacles to accessing health professions education among BIPOC communities and to advocate for and support the inclusion of more diverse health professions students (Dent et al., 2021). Recruiting more underrepresented nurses will not immediately address structural racism, but it will assist in efforts to reduce disparities and to achieve health equity (Villarruel & Broome, 2020). Demographic Trends and Societal Changes discusses this in more detail.

Naming Structural Racism

Naming structural racism as a social determinant of health highlights its significant impact on the overall health and well-being of BIPOC communities with broad implications for population health outcomes. Healthy People 2030 emphasizes health equity, recognizes SDOH as the key to achieving it, and calls out discrimination as a SDOH within the social and community context (ODPHP, 2020b). While this is an important step, nurses must use their collective voice and large numbers to lead the charge in educating others by naming structural racism as the fundamental driver of health disparities (CDC, 2021; Nardi et al., 2020; Williams et al., 2019). Nurses need to be able to talk about structural racism and link it to the persistence of White privilege, unconscious bias, and the power of the dominant culture. White privilege is not name calling or dismissing the lived experience of White individuals; rather, it is a recognition that structural racism has camouflaged societal advantages of being White due to the persistence of an inherently racially unequal society (Moorley et al., 2020).

HEALTHY PEOPLE 2030

Discrimination

Healthy People 2030 features many objectives related to the SDOH. These objectives (https://openstax.org/r/determinants) highlight the importance of "upstream" factors, conditions related to the economic, social, and physical environments, in promoting health equity, a state where everyone has a fair opportunity to attain their highest level of health. Discrimination is listed as a SDOH under the umbrella of the social and community context. The three objectives that could be related to structural racism, a form of discrimination, are as follows:

1. Increase the proportion of people whose water supply meets Safe Drinking Water Act regulations (EH-03)
2. Increase employment in working-age people (SDOH-02)
3. Reduce the proportion of children with a parent or guardian who has served time in jail (SDOH-05)

Include the Social Determinants of Health in All Nursing Assessments

Nurses are at the front line of client care. When completing admission assessments at the bedside, triaging a client in the emergency department or urgent care center, reviewing medical history in the outpatient clinic, providing health promotion education at the community center, visiting clients in their homes, screening children at the

schools, and advocating for public health services, nurses need to include a thorough assessment of the social determinants of health as these are directly related to structural racism. See Social Determinants Affecting Health Outcomes. With client care, focusing solely on individual behaviors such as diet, exercise, smoking, alcohol, and drug use without including the context of the SDOH can further exacerbate structural racism (Scott et al., 2019). Substantial evidence exists that physical inactivity and poor nutrition are associated with experiences of discrimination (Selvarajah et al., 2022). Similarly, blaming clients for not seeking preventive care can be harmful as health insurance is not universally available to everyone due to many socioeconomic factors and past governmental health insurance injustices. With maternal–child health outcomes, "mother blame" is often included in the narrative of why Black women have worse outcomes than White women, sometimes related to individual behaviors or lack of preconception care, but this dismisses structural racism and the fact that Black women are most likely to be uninsured and less likely to have access to preconception care (Scott et al., 2019).

Advocacy

Nursing has been at the forefront of advocacy efforts since the beginning of the profession, but while there are examples of how nurses are addressing inequities in teaching, research, and practice, structural racism remains. Therefore, nursing needs to re-examine its advocacy efforts (Villarruel & Broome, 2020). Because race is an ascribed social category that results in inequality (ANA, 2022), nurses must extend advocacy beyond the individual client to address policy level issues. Nurse leaders have an ethical responsibility to address structural racism within the nursing profession and to be a part of the rebuilding of structures and systems that are anti-racist, address historical structural racism, and promote health equity (ANA, 2021).

Advocacy can take many forms, such as advocating for:

- professional development across health professions education on the role of structural racism and implicit bias in health care disparities;
- elimination of predatory advertising of alcohol, cigarettes, and vaping products among lower-income communities;
- accessible and high-quality care equally dispersed among zip codes;
- affordable health insurance for everyone, including Medicaid expansion in all states;
- equitable allocation of resources among zip codes;
- equitable models of care, prioritizing health over profits; and
- equal funding across all public-school districts to eliminate the disparities in resources that lower-income communities face.

Including a lens for structural racism when caring for clients and communities across the health care spectrum is an essential part of nursing. The nursing profession was founded on principles of social justice and health equity. Staying true to the professional and ethical mandate of nursing requires an understanding of structural racism and how the racist origins of our country are still impacting BIPOC communities today. Risk factors for ill health, such as sexual health behaviors, physical activity levels, nutrition, smoking cigarettes, and alcohol use, need to be viewed not only as causative agents contributing to poor health but also as a potential response to the chronic structural racism that has resulted in different opportunities in residence, education, employment, and health insurance (Selvarajah et al., 2022). Relative to privileged groups, groups exposed to racism and discrimination are more likely to struggle with poverty, neighborhood disinvestment, low educational attainment, lack of good employment prospects, and unhealthy environments. Racism drives these groups into these disadvantaged circumstances (Selvarajah et al., 2022). Advocating for Population Health discusses the nurse's role as an advocate in more detail.

Chapter Summary

6.1 Understanding Different Forms of Racism

Structural racism is a deeply rooted, persistent, normative process of institutional policies, systems, laws, and practices that limit opportunities, resources, and the power of individuals based on race. It ensures differential access to quality education, housing, employment, and medical care. Forms of racism include personally mediated racism, internalized racism, eugenics, and scientific racism.

6.2 The Historical Context of Structural Racism in the United States

Structural racism in the United States can be traced back to British Colonial America, prior to the country's founding, with the ill treatment and forced removal of Native Americans from their lands and the terrible history of slavery. Though it has changed and evolved from the era of slavery and the Civil War, through Reconstruction and the Jim Crow era, in the internment of Japanese Americans and the boarding school policy for Native American and Alaskan children, in the redlining and racially restrictive covenants of the 1950s, the War on Crime and War on Drugs, and the current epidemic of police violence and unequal access to health care, structural racism has persisted.

6.3 Contemporary Structural Racism and Systemic Inequities in the United States

Despite some policies aimed at addressing structural racism and systemic inequities, their existence and effects remain. Differences in homeownership, home values, and credit scores by race persist in those areas that were formerly redlined. Many of these formerly redlined, majority-BIPOC neighborhoods also suffer environmental injustices as most of these redlined neighborhoods were in urban areas where there was widespread community disinvestment resulting in less green space, less tree canopies, and increased urban heat exposure. In addition, the Federal-Aid Highway Act built highways that cut through neighborhoods, disrupted green spaces, worsened air quality, increased pollutants, and sank property values. These environmental injustices are linked to adverse health outcomes such as asthma, adverse birth outcomes, and cancer.

6.4 Structural Racism and Systemic Inequities in U.S. Health Care

Structural racism and systemic inequities have many manifestations in health care. Racism and implicit bias, discriminatory policies in health insurance access and coverage, the effects of discriminatory mass incarceration, and the lasting impact from discriminatory policies in residential segregation all negatively impact health incomes for BIPOC populations. Residential segregation has lasting harmful effects on BIPOC communities, resulting in lower wealth accumulation, educational inequities driving employment disparities, the disproportionate burden of environmental hazards, and decreased access to quality foods and transportation. Structural racism intersects with health disparities and the social determinants of health, resulting in stark health inequities. The COVID-19 pandemic highlighted these existing inequities. The role of the nurse in addressing structural racism begins with conducting a critical evaluation of nursing education curricula, displaying a commitment to developing workforce diversity, speaking out against structural racism by naming it and discussing it, including the SDOH in all nursing assessments and plans, and advocating for a more equitable health system.

Key Terms

allostatic load (AL) the body's physiologic "wear and tear" due to an individual's exposure to stressors that accumulate throughout the lifespan

eugenics the erroneous theory that humans can be improved through selective breeding of populations

health equity a condition in which everyone has a fair opportunity to attain their highest level of health

internalized racism when members of a stigmatized race accept negative messages about their abilities and overall worth with self-devaluation, resignation, and hopelessness

Jim Crow era a period during which laws perpetuating institutional racism and the denial of Black Americans' constitutional rights were enforced across the southern United States, lasted from 1877 to about 1965

mass incarceration extreme rates of incarceration, particularly affecting large numbers of young Black men, in the U.S. prison system

occupational segregation the practice of separating workers by race into certain industries, resulting in a disproportionate representation of one race in a sector of the workforce

personally mediated racism prejudice and

discrimination where individuals or communities make assumptions about other individuals or communities based solely on race

racial profiling assuming or suspecting a person of criminal behavior based on race alone

racism the unfair treatment of individuals based on race

redlining the system of denying borrowers access to mortgage loans based on the location of properties in disadvantaged neighborhoods that were often comprised of minority populations

residential racial segregation the practice of keeping racial communities separate based on where people live

restrictive racial covenants racist restrictions that prevented Black individuals from homeownership through a legal agreement initiated by prior homeowners

scientific racism belief that White Europeans are superior to non-White people

structural racism a process resulting in a gap in access to societal opportunities based on race that results in institutional policies, systems, laws, and practices that limit opportunities, resources, and power

white flight the White American exodus from the cities to the suburbs, leaving BIPOC individuals behind, that occurred during the 1950s

Review Questions

1. After performing a community assessment, a nurse determines that a neighborhood with a higher concentration of BIPOC clients lacks access to medical care. Which term describes a major factor contributing to this finding?
   a. Structural racism
   b. Personally mediated racism
   c. Internalized racism
   d. Scientific racism

2. Which of these nurse actions would be considered an example of microaggression?
   a. Asking a transgender client their pronouns
   b. Telling an Asian client that they speak perfect English
   c. Determining the dietary preferences of a Jewish client
   d. Obtaining a medical interpreter for a client who does not speak English

3. Which of the following is an example of racial profiling?
   a. Suspecting a person of criminal behavior based on race
   b. Segregating communities based on race
   c. Assuming all men of a certain racial group are dangerous
   d. Community-wide disinvestment based on race

4. Which statement best highlights the continuing prevalence of racism in the U.S. health care system?
   a. A university researcher has built a relationship with the local community.
   b. Some states have attempted to impose work-reporting requirements as a means of restricting Medicaid expansion.
   c. The city council is considering a summer jobs program for local teenagers.
   d. The police department has established a community advisory board in each precinct.

5. Which client being seen in the community health clinic does the nurse anticipate is most affected by allostatic load?
   a. A 52-year-old Native American construction worker with osteoarthritis of the knees
   b. A 24-year-old Black man with persistent hypertension
   c. A 62-year-old White woman with newly diagnosed hypothyroidism
   d. A 38-year-old Hispanic woman concerned about a change in the color of a mole

6. Which environmental condition is a consequence of the redlining of neighborhoods that has negatively affected health outcomes of BIPOC individuals?
   a. Decreased urban heat

b. Less green space
c. Improved air quality
d. Increased access to clean water

7. A public health nurse running a cost-free vaccination clinic for COVID-19 in an underserved community notes that the turnout is lower than expected. Which factor is the most likely explanation for the low turnout?
a. Medicaid expansion
b. Low perceived personal risk for COVID
c. Lack of health insurance
d. Distrust of the health system

8. A nurse is caring for four clients in the medical-surgical inpatient unit. One is a Black woman who has been admitted with pancreatitis, another is a White man who has been admitted with acute low back pain, the third is a Black man with pneumonia, and the fourth is a White woman who has been admitted with cholecystitis. The nurse medicates the Black woman with one oral Percocet tab for 8/10 pain, medicates the White man with two oxycodone tabs for 7/10 pain, does not medicate the Black man as he does not have current pain, and medicates the White woman with 2 mg of IV morphine for 8/10 pain. What is this an example of?
a. Explicit racism
b. Implicit bias
c. Professional standard of care
d. Structural racism

9. The community health nurse is working on creating nutrition initiatives for a community with a high incidence of heart disease and diabetes. Which of the following is a driving factor in the persistence of food deserts in areas of the United States?
a. Structural racism
b. Implicit bias
c. Explicit racism
d. Mass incarceration

10. Which of the following issues are implicated in the current maternal mortality public health crisis?
a. Differences in health insurance coverage and access
b. Income level
c. Provider discrimination
d. Distrust in the medical system

CHAPTER 7

Policies and Regulatory Conditions Impacting Health Outcomes



FIGURE 7.1 Family Nurse Practitioner and Certified Diabetes Educator Carmen Morales-Board speaks about the impact of the Affordable Care Act. (credit: modification of work "Carmen Morales: Thank You Affordable Care Act" by Nancy Pelosi/Flickr, CC BY 2.0)

CHAPTER OUTLINE

7.1 Factors Affecting Public Health Policy
7.2 Balancing Individual Rights and Public Health Interests
7.3 Public Health Initiatives, Delivery Mechanisms, and Implications
7.4 Policies Affecting Drug Approval, Supply, and Cost

INTRODUCTION As a pediatric nurse, Maria Sanchez spends a lot of her time making babies cry, but she knows she is doing so for a good cause. As a public health nurse, she provides routine vaccinations to children from birth through their teens, ensuring they are protected from preventable diseases like measles and polio. Sanchez has first-hand experience working within the context of **public health policy**—the laws, regulations, programs, behaviors, and decisions implemented within a society to promote public health.

Public health policy takes many forms, ranging from legislative policies to community outreach interventions, and it affects many fields, including health care, insurance, education, agriculture, and business, among others. Public health policy development and intervention occur at the local, state, national, and global levels:

- On a local level, a city council may develop policies to limit smoking on city properties.
- On a state level, a state legislature may pass emergency preparedness laws or regulations for its citizens.
- On a national level, the Centers for Disease Control and Prevention (CDC) provide policies to govern the administration of vaccinations in the United States; the U.S. Food and Drug Administration (FDA) develops policies related to the development and sale of food and drug items.

- On a global level, the World Health Organization (WHO) provides leadership on public health matters and establishes policies such as those related to controlling pandemics like COVID-19.

The most important focus of any public health policy is ensuring positive **health outcomes** for communities. Public health policy is essential to physical health outcomes and mental, social, and economic well-being.

This chapter provides an in-depth analysis of public health policies and regulations and their influence on the role of the community health/population health nurse and health outcomes for communities.

7.1 Factors Affecting Public Health Policy

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 7.1.1 Discuss factors affecting public health policy, including access, cost, and quality.
- 7.1.2 Describe the influence of payment models on health care access and quality of care.
- 7.1.3 Differentiate between the various health care delivery models.
- 7.1.4 Define care deserts and assess their implications on health outcomes.

This section discusses factors affecting public health policy, including access, cost, and quality; payment models; care delivery models; and the impact of health care deserts on health outcomes.

Access, Cost, and Quality

In the United States, *access* to health care factors into many public policy discussions and decisions. Most Americans access their health care through an employer's health insurance plan. In fact, employer-sponsored insurance in the United States covers 70 percent of workers, 36 percent of children, and 53 percent of nonworking adults (Commonwealth Fund, 2023). Although the country does not have a publicly funded **universal health care system**—a system that provides all people access to the full range of quality health services they need, when and where they need them, without financial hardship—the passage of the Patient Protection and Affordable Care Act (ACA) in 2010 led to millions of previously uninsured Americans receiving health care coverage (Congressional Budget Office, 2016). In addition, access to health insurance may be provided through Medicare—a government health insurance program established in 1965 that covers millions of Americans aged 65 and older and some others with disabilities, end-stage renal disease, and amyotrophic lateral sclerosis (ALS) (Medicare.gov, n.d.). Another health care access vehicle for some Americans is Medicaid, a national health insurance plan that covers some low-income families and children and individuals with disabilities. Established in 1965, Medicaid was expanded with the passage of the ACA, but because it is state-managed, its eligibility requirements and benefits differ from state to state (Centers for Medicare and Medicaid Services [CMS], 2023).

Access to health care is also impacted by technology. During the COVID-19 pandemic, **telehealth**, or telemedicine—delivering health care services through technology—increased dramatically (Figure 7.2). Although the use of technology to provide health care services was an essential step in providing health care at the time, its continued use poses questions about its quality and whether telehealth appointments are accessible to everyone (U.S. Government Accountability Office, 2022).

Health care cost is another factor that plays a role in public health policy discussions and decisions. The United States has one of the world's highest costs of health care. In fact, in 2021, U.S. health care spending totaled $4.3 trillion (roughly equivalent to $12,914 *per person*) (CMS, 2022). This is about twice as much as the average cost of health care per person in other developed countries.



FIGURE 7.2 A nurse specialist with the Naval Medical Center San Diego's Joint Tele-Critical Care Network provides support to a remote intensive care unit via teleconference. (credit: Luke Cunningham/U.S. Navy/Flickr, Public Domain)

The high spending rate per person has not led to higher health care quality in the United States. A 2021 Commonwealth Fund report ranked the United States last among 11 high-income countries on:

- access to care, with the United States ranking last on factors such health care affordability and timeliness
- health care efficiency, with the United States trailing other countries in terms of simplifying insurance, billing, and payment
- equity, with the United States ranking lowest in terms of disparities in health care experiences between lower- and higher-income groups
- health care outcomes, with the United States performing worst on outcomes such as infant mortality rate and life expectancy

How can the United States lower its health care expenditures while also increasing access to health care, health care efficiency, and equity? Policy changes are one way the United States can effect more positive outcomes. This section discusses some factors that affect health care policy, including containing costs through evolving payment models, improving client care using various client care models, and avoiding barriers to health care such as those found in health care deserts.

Payment Models

The quality of health care provided to clients in the United States depends in part on how health care professionals are allowed to administer and bill for their services. As noted earlier, despite having the highest per capita expenditure on health care across high-income countries, the United States has no universal health care system and a low quality of care. Public health policies that relate to **payment models**—the mechanisms by which health care services are established and paid for—may help to address this issue.

Currently, the health care system is transitioning from the traditional fee-for-service model—providers and organizations are reimbursed based upon the volume of services they provide—to payment based upon the value of those services, which includes value-based care and alternative payment models (American Hospital Association, 2023). The American Medical Association (2022) describes the most common payment models for physicians. It divides them into three categories: core payment models, supplementary payment models, and organizational models. Table 7.1 summarizes each type.

Core Payment Models (can exist alone without other payment types)	
Bundled payments (**episode-based payments**)	Physician practices receive payment based on episodes of client care according to a defined set of diagnoses and services provided to the client over a specific period. This model allows practices and health systems to achieve higher revenue by avoiding client complications, discount negotiation, and choosing a client care setting, which leads to lower costs.
Capitation	Physician practices receive payment to manage the client's health condition per client per period, which is usually 1 month. The health plan applies rules that govern which clients are included within the physician practice.
Fee-for-service	Physician practices are paid a flat rate for each client visit, test, or procedure performed. Through this payment model, practices can achieve higher revenue with more clients and procedures each day. However, physicians may not cover their costs using this model.
Supplementary Payment Models (cannot exist on their own; must coexist with one or more of the core payment models)	
Pay for performance	The payer pays physicians according to prescribed practice performance on defined metrics (e.g., blood pressure levels, blood glucose, hospital admissions, emergency room visits, etc.), based on the quality of care and/or utilization of care services. Providers may receive an incentive for meeting prescribed performance metric goals through pay for performance.
Retainer-based payment	Physician practices or other organizations receive capitation payments from the client. These payments, also known as "concierge" payments, are usually paid per client per year or month as a membership fee that covers an array of services.
Shared savings programs	Physicians or health care practices receive payment throughout the contract year instead of a capitation of payments during or before the year. Total costs for a specific client population are compared with a cost target which can lead to a lump-sum payment incentive or penalty for not meeting prescribed goals.
Organizational Models (combined payment models that create additional payment models)	
Accountable care organizations (ACOs)	Large health systems where an individual physician practice or a collection of physicians enter into a contract with a payer, typically under a fee-for-service payment model, to provide care to a population of clients. This network is responsible for improving health outcomes and reducing spending for a particular client population. Organizations may include physician groups, health systems, hospitals, and behavioral health organizations.
Medical homes	An integrated team of health care providers such as nurses, physicians, and care managers provides care that addresses the "whole person." Organizations can become recognized as accredited "Patient-Centered Medical Homes" through the National Committee for Quality Assurance (NCQA). The main source of revenue for most practices is fee-for-service payments; they may also receive additional payments in enhanced fee-for-service payment rates, per-month patient care management fees, and pay-for-performance payments for high performance on measures of quality, client experience, or cost.

TABLE 7.1 Physician Payment Models

Like physicians, health care organizations are reimbursed in different ways, including prospective payment systems, bundled payments, and Accountable Care Organizations (American Hospital Association [AHA], 2023). Recently, value-based purchasing programs have significantly changed hospitals' approach to providing care. For example, the Hospital Value-Based Purchasing Program bases Medicare payments on the quality of care rather than the services performed. Hospitals with higher rates of post-operative infections, ventilator-associated pneumonia, and

other negative outcomes associated with hospital care receive decreased reimbursement. Accordingly, hospitals are incentivized to focus on health care quality. Another example of a reimbursement structure designed to increase the providers' quality of care is the Hospital Readmissions Reduction Program. This program, administered through the CMS, penalizes hospitals with higher-than-expected levels of readmissions.

This complex framework of health care reimbursement influences how and where care is provided to clients and by whom (National Academies of Sciences, Engineering, and Medicine [NASEM] et al., 2021a). Accordingly, payment systems can affect nurses' ability to address a community's health needs. For example, the traditional fee-for-service payment system that focuses on physician reimbursement does not recognize the value of care provided by other health care team members, including nurses (NASEM et al., 2021a). This limits the ability of the health care system to address the social determinants of health (SDOH). It is currently unclear which newer payment model(s) will prevail and become dominant. However, nurses have the opportunity to make a more measurable impact in the newer reimbursement models. For example, nurses working as case managers and care coordinators can help manage a population's health and reduce costs associated with chronic illness (NASEM et al., 2021a). Overall, community nurses will be better able to promote continuity of care between the health systems and clients at home.

Care Delivery Models

The payment models previously described are the foundation for delivering care. **Care delivery models** refer to how health care providers work together to provide health care to clients. One example of a care delivery model is the collaborative care model, which "seeks to impact the clinical outcomes of patients who present with depression in primary care" (Collaborative Family Healthcare Association, 2023). Through this model, a psychiatrist and care manager are members of an interdisciplinary care team that manages a group of clients who have been screened for depression and need a higher level of intervention to achieve positive health outcomes. In addition to addressing the clients' behavioral and psychological needs, the team addresses physical needs, such as the maintenance of chronic diseases (e.g., diabetes, hypertension, cancer, and heart disease). Through this model, health care team members collaborate to achieve the common goal of ensuring the best possible health outcomes for clients.

According to the AHA (2019a), to achieve better outcomes for clients, hospitals and health systems across the United States have had to redesign how they provide client care. The AHA identifies four care models as the most common in the United States: accountable care organizations and medical homes, previously defined in Table 7.2, integrated service lines, and provider-sponsored health plans.

With **integrated service lines**, hospitals and health care systems organize around specific disease states such as cancer, heart disease, and diabetes throughout the continuum of client care. This model contrasts the traditional care provision, where service lines based on disease state are siloed. In **provider-sponsored health plans**, plans are either sponsored or acquired by hospitals, physician groups, or health systems, which take over responsibility for the total cost of care for the clients enrolled in the health plan. These organizations may often take on financial risks of providing care for the clients enrolled in the health plan.

Table 7.2 provides examples of these four care delivery models. The type of care model health care professionals choose to provide care is in part determined by health care policy and, in part, determines health care policies based on the revenues and outcomes it achieves.

Care Delivery Model	Example and Key Results
Accountable care organizations	Caravan Health partners with rural and independent health systems to ensure positive client outcomes. This has led to 60 percent or higher cost savings and improved quality scores.
Integrated service lines	New York's Mount Sinai Health System utilizes a care guide that visits clients in the hospital and coordinates client care transition to home, post-hospital follow-up, and transportation as needed for appointments. This has resulted in emergency room utilization dropping from 26 percent to 3 percent.

TABLE 7.2 Care Delivery Models and Examples (See AHA, 2019a.)

Care Delivery Model	Example and Key Results
Medical homes	Ohio's Summa Health provides care to clients through an integrated, team-based approach where primary care is the focus. Every aspect of the client's health, including physical and social issues, is addressed. This has led to lower hospital readmission rates. Today, 77 percent of Summa Health's primary care practices are accredited as Patient-Centered Medical Homes.
Provider-sponsored health plans	Sharp HealthCare in San Diego County, California, offers a care management program across the entire client care continuum. The Sharp health plan is the highest-rated organization of its kind in the state of California.

TABLE 7.2 Care Delivery Models and Examples (See AHA, 2019a.)

Care Deserts

Care deserts (or **medical deserts**) are areas where individuals have limited access to health care services such as hospitals or health clinics (Nguyen & Kim, 2021). Care deserts are most often found in rural areas and in tribal communities and can take many forms, including limited to no access to maternal health services—**maternal care deserts**—or limited to no access to pharmacy services—**pharmacy deserts**. More than 80 percent of counties in the United States lack proper access to needed medical services (Nguyen & Kim, 2021). Almost 50 million Americans are more than 60 minutes from a level I and II trauma center (Soto et al., 2018). It is estimated that over one-third of the U.S. population lives in counties that lack sufficient health care infrastructure to ensure good health outcomes. This may include a lack of access to services, medications, primary care providers, hospitals, and community health centers (Nguyen & Kim, 2021). For example, 136 rural hospitals closed between 2010 and 2021; 19 went out of business in 2020, the highest number since 2005 (AHA, 2022). Although this number dropped dramatically in 2021—when only two rural hospitals closed—the improvement may be attributed to federal relief funds associated with the COVID-19 pandemic that have now ended (Levinson et al., 2023). While fewer urban hospitals have closed over the past decade, those that do close tend to be in lower-income communities and treat clients who are uninsured or covered by Medicaid (KFF, 2020b). Closures of hospitals have compound effects because they are sometimes the only form of care to which local residents have access (Figure 7.3) (AHA, 2019b).



FIGURE 7.3 U.S. Department of Agriculture (USDA) Deputy Secretary Jewel Bronaugh speaks during the groundbreaking for the construction of a new rural hospital funded through the USDA. (credit: Lance Cheung/USDA/Flickr, Public Domain)

A care desert may be created for various reasons. One contributing factor is demographic shifts. Over the past decades, many rural areas in the United States have experienced a sharp decrease in their overall population. Such shifts lead to declines in revenue for health care providers like hospitals and health clinics. Because of this,

organizations may choose to leave less populated areas for more populated ones. Health care providers also have little motivation to offer care in neighborhoods where many people are uninsured or underinsured or covered through Medicare and Medicaid. Medicaid reimburses health care providers at a lower rate than private insurance companies such as Blue Cross Blue Shield (KFF, 2020a). As such, there is often a hesitancy to offer care in areas with a high rate of Medicaid-eligible individuals.

MEDICAID ISSUES FORCING ILLINOIS DOCTOR OFFICES TO CLOSE, CREATING 'MEDICAL DESERTS'

Access multimedia content (http://openstax.org/books/population-health/pages/7-1-factors-affecting-public-health-policy)
This news video from Illinois reports on how health care professionals and physicians working in underserved communities face an uncertain future related to challenges receiving Medicaid reimbursement.

Watch the video, and then respond to the following questions.

1. How many clients rely on Medicaid, according to the video?
2. How many Medicaid claims are denied as compared with claims from private insurance?
3. Why are doctors who accept clients who use Medicaid losing money?
4. How are difficulties with Medicaid contributing to medical deserts?

Communities that lack high-quality schools or work opportunities for spouses of medical professionals may find it difficult to recruit health care providers such as primary care and specialty care providers (Association of American Medical Colleges, 2023; Health Resources and Services Administration [HRSA], 2023). Research shows that although 20 percent of the U.S. population lives in rural areas, fewer than 10 percent of U.S. doctors practice in rural communities (Joynt et al., 2016). This exacerbates care deserts.

Lack of access to health care in such care deserts leads to many negative health outcomes, including untreated health problems and chronic diseases such as diabetes and hypertension. Communities with less access to primary care struggle with disease diagnosis and prevention, client education, and treating acute and chronic illnesses. Lack of health care access especially affects communities of color (Alfred, 2022).

Finally, clients who must travel long distances to secure care lose valuable work time and incur costs related to travel. In contrast to urban areas, rural regions frequently lack public transportation services. Older adult clients often have chronic conditions, the management of which may necessitate frequent medical appointments (Rural Health Information Hub [RHIhub], 2022). When rural hospitals close, employment opportunities in the community decrease, as the hospital may be one of the main employers in that community, and local economies suffer through revenue loss and tax base loss (AHA, 2019b; Harsha, 2022).

As discussed in Demographic Trends and Societal Changes, care deserts are often addressed using technology such as telemedicine. Because the health care provider (e.g., physician, nurse practitioner, or other specialist) can provide care to individuals remotely, clients in care deserts can receive routine health care (RHIhub, 2021). However, in many areas, clients are still left without access to emergency, inpatient, and surgical care. Many also lack access to simple urgent care for conditions like acute pharyngitis because group A *Streptococcus* (group A strep) tests must currently be done in person, not via telehealth. Finally, in-person primary care visits for screenings like skin cancer are still preferred to telehealth until the technology improves.

The government offers some care options to those living in care deserts through Federally Qualified Health Centers (FQHCs). These federally funded nonprofit health centers or clinics serve "medically underserved" areas and populations throughout the United States. FQHCs provide primary care services to all individuals, even those not able to pay, on a sliding scale basis (HealthCare.gov, n.d.).

WHAT IS AN FQHC?

Access multimedia content (http://openstax.org/books/population-health/pages/7-1-factors-affecting-public-health-policy)
This video provides an overview of FQHCs, also known as community health centers.

Watch the video, and then respond to the following questions.

1. What types of care do FQHCs provide to the communities they serve?
2. Who is eligible to seek care at an FQHC?

One organization seeking to address physician shortages in health care deserts is the National Health Services Corps, which is operated by the Health Resources and Services Administration (HRSA) arm of the U.S. Department of Health and Human Services (HHS). This organization connects underserved rural, urban, and tribal communities with health care providers. The organization's 20,000 members currently provide care to over 21 million people in the United States in over 9,000 community health care sites (HRSA, 2023). The organization offers loan repayment and scholarships to its member health care practitioners, making practicing in underserved areas more appealing.

In its report *Nowhere to Go: Maternity Care Deserts Across the U.S. 2022 Report* (https://openstax.org/r/marchofdimesa), the March of Dimes recommends several policy solutions to federal and state governments to reduce maternity care deserts (March of Dimes, 2022). Recommended solutions include passing a Medicaid postpartum extension from 60 days to 12 months, expanding telehealth services to bridge gaps in health care, and strengthening network requirements for health care plans made available through the ACA (March of Dimes, 2022).

According to the National Academies of Sciences, Engineering, and Medicine (NASEM, 2021b), nurses play a significant role in addressing health inequities such as the lack of qualified health care professionals and the lack of access to health services available to populations. The NASEM (2021b) points to the profession's deep roots in community health advocacy and social justice, which refers to seeking to ensure equal access to health care services for everyone within a society. The NASEM identifies five key roles to improve health equity for populations: awareness, adjustment, assistance, alignment, and advocacy (NASEM, 2021b). Let's briefly discuss each.

- With awareness, the nurse seeks to identify and understand social risks and opportunities for a select population. For example, the nurse would inquire about the availability of quality housing and health care services for the population.
- Adjustment has to do with incorporating activities that seek to accommodate populations to address identified barriers, such as providing care through telehealth for individuals lacking adequate transportation.
- Assistance refers to actions the nurse takes to connect populations with various resources such as providing transportation vouchers to ensure individuals have a means by which to get to and from appointments.
- Alignment refers to the actions of the nurse or a health care system to understand the needs of a community or population and implement mechanisms to address health inequities such as investing in ridesharing or time-bank programs, which are geared at increasing access to health care services.
- Advocacy has to do with partnerships between organizations to promote policies that create and deploy programming to address health inequities within communities, such as improving infrastructure that improves transportation for individuals with limited transportation to and from health care services.

Since its inception, the nursing profession has been heavily involved in ensuring everyone has equal access to resources. As such, the community health nurse and the advanced practice nurse are key partners in minimizing health inequities within communities (NASEM, 2021b).

7.2 Balancing Individual Rights and Public Health Interests

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 7.2.1 Discuss health as a human right.
- 7.2.2 Examine the implications of failing to protect the right to health.
- 7.2.3 Describe government obligations to protect the right to health.
- 7.2.4 Explain international and other mechanisms to protect the right to health.
- 7.2.5 Summarize the tensions between individual rights and public health.

Whether health care is a human right has long been debated. The WHO's constitution states, "health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition" (2023a, para 2). Accordingly, WHO (2022) has asserted that governments are responsible for ensuring access to quality, affordable health care for their citizens. Unlike many other countries, the United States does not

include a right to health or health care in its constitution (Jost, 2023). Nevertheless, the federal government has supported health care over the years by implementing Medicare, Medicaid, and federal tax subsidies for employer-sponsored health care (Jost, 2023). Despite these programs, health care costs have increased, leaving more Americans uninsured. For example, by 2010, more than 46.5 million nonelderly Americans were uninsured (Tolbert et al., 2022). In 2010, Congress passed, and President Obama signed into law, the ACA. Although this act did not recognize health care as a basic human right, it did bring the country closer to providing federal assistance for those who need health care (Jost, 2023).

HUMAN RIGHTS 101 | EPISODE 8: WHAT IS THE RIGHT TO HEALTH?

Access multimedia content (http://openstax.org/books/population-health/pages/7-2-balancing-individual-rights-and-public-health-interests)
This video discusses health as a human right.

Watch the video, and then respond to the following questions.

1. What does the right to health mean?
2. What are two ways to ensure our right to health?
3. What is your obligation as a nurse to ensure your clients' right to health?

Implications of Failing to Protect the Right to Health

Violations of health as a human right have serious consequences for individuals and populations. Discrimination, both overt and implicit, in delivering health care services creates barriers to positive health outcomes. Health as a human right is especially relevant as it relates to underrepresented populations (WHO, 2022). Underrepresented individuals tend to face higher rates of diseases such as cancer, cardiovascular disease, and chronic respiratory diseases and tend to have higher rates of mortality (deaths associated with a particular disease). Additionally, underrepresented populations may be impacted by laws and policies that further marginalize them, thus making it harder to access health care treatment, prevention, care services, and rehabilitation (WHO, 2022). **Marginalized communities** are those communities that are excluded from the dominant group's cultural, economic, educational, or social life (Weitzman Institute, 2023). A community or population can be marginalized based on race, age, gender identity, sexual orientation, religion, physical ability, language, immigration status, or another factor.

Ideally, health policies and programs address such health disparities. Healthy People 2030 defines **health disparities** as health differences linked to social, economic, and/or environmental disadvantages (Office of Disease Prevention and Health Promotion [ODPHP], n.d.-a). These health inequalities are systematic differences in health that exist between people of different socioeconomic levels, social classes, genders, ethnicities, sexual orientations, or other social groups (Eikemo & Oversveen, 2019). Racial and ethnic disparities in health outcomes persist in the United States. Some examples related to health care access include the following (Radley et al., 2021):

- Black, Latino/Hispanic, and American Indian and Alaska Native (AIAN) individuals are less likely to have health insurance and are more likely to encounter cost-related barriers to accessing health care.
- Medicare beneficiaries who are Black are more likely than beneficiaries who are White to seek care in an emergency department for conditions typically managed through primary care.
- Black, Latino/Hispanic, and AIAN adults are less likely than Asian American, Native Hawaiian, and Pacific Islander (AANHPI) and White adults to receive an annual flu shot.

One purpose of health policies is to mitigate health inequalities by improving systems through which health care services are provided. For example, to address hunger, the Supplemental Nutrition Assistance Program (SNAP), formerly known as the food stamp program, ensures certain low-income individuals have access to nutritious food, which improves an array of outcomes for adults and children (USDA, 2023).

Health policy should also make it feasible for individuals with long-term health conditions to access the necessary care. Inadequate health care both contributes to and exacerbates poor health outcomes. For example, ideally, community health nurses who work with clients with diabetes would assess their needs holistically and manage their care with a team of health professionals—including a primary care provider, a podiatrist, and an endocrinologist—and oversee the client's daily and long-term needs. In addition, nurses would coordinate other

services for clients who need them, such as consultations and treatment by ophthalmologists, certified diabetes care and education specialists, and mental health professionals (American Diabetes Association, n.d.). However, clients who lack access to this type of disease management because they are not insured or have other socioeconomic factors that limit their ability to participate are more likely to experience poor health outcomes, such as kidney failure, blindness, and amputation.

Government Obligations to Protect the Right to Health

The United States does not expressly acknowledge the rights of its citizens to receive health care—it is the only developed nation without access to universal health care (Harvard Public Health, 2023). Despite this, the United States has developed infrastructure and implemented policies and programs designed to support health care for all Americans. Federal agencies such as the CDC and the HHS work to improve the population's health. The CDC's mission is to protect Americans from health, safety, and security threats. The CDC protects the nation's health security through research, health information dissemination, and other programs that support communities to do the same (CDC, 2022a). The HHS works to enhance the population's health and well-being through effective services and the support of scientific advancements in medicine, public health, and social services (HHS, n.d.). Healthy People 2030, a data-driven initiative, includes health policy as a focus area and has set the goal of using health policy to prevent disease and improve health (ODPHP, n.d.-a, n.d.-b).

Mechanisms to Protect the Right to Health

According to the WHO (2022), to protect the right to health is to abide by the Core Components of the Right to Health, outlined in Article 12 of the Covenant on Economic, Social, and Cultural Rights. The Core Components of the Right to Health as defined by the WHO (2022) are shown in Table 7.3 and include availability, accessibility, acceptability, and quality.

Core Component	Description
Availability	Requires that sufficient functioning health care facilities and programs are available to all. Availability should be measurable by proven metrics across all segments of society to diagnose and remedy health coverage and health workforce gaps.
Accessibility	Requires that health care facilities and programs be accessible to all. Accessibility has four overlapping dimensions: non-discrimination, physical, economic, and information. An analysis of barriers—geographic, physical, legal, and economic, among others—is needed to account for gaps in coverage but also to understand how these barriers impact health outcomes, especially to the most vulnerable populations. Establishing laws and policies, as well as comprehensive monitoring systems, will help mitigate gaps and promote accessibility to all populations.
Acceptability	Requires policies and ethics sensitive to gender. Health facilities and programs should be people-centered and provide services tailored to the needs of diverse population groups in accordance with accepted international standards of confidentiality and informed consent.
Quality	Requires that all health care facilities and programs be scientifically and medically approved. Quality health services for all is the goal, which means they should be safe, effective, people-centered, timely, equitable, integrated, and efficient.

TABLE 7.3 Core Components of the Right to Health as Defined by the WHO (See WHO, 2022.)

The year 2018 marked the 70th anniversary of the birth of human rights law through the Universal Declaration of Human Rights as well as the birth of the governance of global health through the WHO (Meier et al., 2018). Since their adoption, these laws and policies have provided the foundation for public health (Meier et al., 2018). Scholars, health care advocates, providers, and others must join forces with human rights in public health policies, programs, and practices to ensure health is maintained as a human right.

To accomplish this, the American Public Health Association (APHA) established a new Human Rights Forum, which seeks to build the capacity of professionals operating in the public health space to more effectively bring human rights into public health practices (Meier et al., 2018). The APHA's mission is to improve public health and achieve equity in health status (APHA, 2023). APHA's Center for Public Health Policy works to promote inclusion of evidence-based practices into policies that address SDOH. They work with all levels of government to influence policy and strengthen local health departments. The APHA has achieved many notable contributions to public policy since its creation in 1872. Table 7.4 provides several examples of specific public health policies and organizations responsible for them.

Policy Type	Organization	Policy Example
Smoking restriction	Local city government	The Town of Arlington, Massachusetts (n.d.), has passed many bylaws related to smoking restrictions in its buildings.
Food safety	FDA	The FDA Food Safety Modernization Act (FSMA) provides a set of rules to prevent food safety problems, to detect and respond to food safety problems, and to improve the safety of imported food (FDA, 2020).
Sexually transmitted diseases (e.g., syphilis, AIDS, chlamydia)	CDC	The CDC's Community Approaches to Reducing Sexually Transmitted Diseases (CARS) initiative enables "community engagement methods and partnerships to build local STD prevention and control capacity" (CDC, 2020a).
COVID-19	WHO	In 2022/23, WHO updated its COVID-19 Global Preparedness, Readiness, and Response Plan to assist global efforts to reduce the disease's spread and prevent, diagnose, and treat it. To meet these goals, WHO produced eight policy briefs that guide policymakers (WHO, 2023b).

TABLE 7.4 Examples of Public Health Policies

Public health nurses are a key part of the APHA's efforts to influence public policy. The APHA partners with other community nursing organizations including the Alliance of Nurses for Healthy Environments, the Association of Community Health Nursing Educators, the Association of Public Health Nurses, the National Association of School Nurses, and the Rural Nurse Organization to form the Council of Public Health Nursing Organizations to advocate for health in all policies (2023).

State policies influence health as well. The Association of State and Territorial Health Officials (ASTHO), a nonprofit representing public health agencies in the United States, tracks policy trends that impact state and territorial health departments. They recently released their list of top state public health policy issues to watch in 2023 (ASTHO, 2022). The ASTHO list includes the following existing and emerging policy trends:

- immunization
- reproductive health
- overdose prevention
- public health agency workforce and authority
- mental health
- data privacy and modernization
- health equity
- HIV
- environmental health
- tobacco and nicotine products

Tensions Between Individual Rights and Public Health

Although the WHO and the UN have declared health to be a human right, tensions between individual rights and public health persist in the United States, with its individualistic cultural emphasis. Tobacco restrictions, seat belt use, helmet use, and mandated vaccinations have brought forth such tensions for decades. For example, in the United States, cigarette smoking remains the leading cause of preventable disease, disability, and death (CDC, 2023a). The percentage of adults who smoke has declined from 20.9 percent in 2005 to 11.5 percent in 2021 (CDC,

2023a). Public health interventions that have contributed to this decline include smoke-free policies, tobacco price increases, and health education campaigns (ODPHP, n.d.-d). Those who support reducing and eliminating cigarette smoking assert that it impedes the population's right to live a healthy life. Opponents of these efforts believe that it is the tobacco products—not the people—who are to blame, arguing that safer smoking products should be developed to allow people who smoke to continue to do so but with fewer negative health effects. Currently, 29 states and the District of Columbia still have laws that recognize smokers as a protected class of workers that cannot be discriminated against (American Lung Association, 2023).

The COVID-19 pandemic exacerbated tensions between individual rights and public health (The Network for Public Health Law [TNPHL], 2021). To protect the public from contracting COVID-19, federal, state, and local governments enacted policies such as mandatory business closures, mask mandates, social distancing, and vaccination mandates (Figure 7.4). These policies sparked public debate, with some viewing them as infringing upon individual freedoms. Although the policies may seem to be infringements on individual rights, they are considered constitutional because they were put in place to protect the public (TNPHL, 2021).



FIGURE 7.4 During the COVID-19 pandemic, the CDC recommended wearing masks in public to slow the spread of infection. However, the federal government did not issue a mandate requiring them, leaving the decision up to state and county governments. Requirements for masking, therefore, varied widely. (credit: modification of work "Trader Joe's: Please wear a mask Covid-19 sign" by G. Edward Johnson/ Wikimedia Commons, CC BY 4.0)

How are such decisions made? According to university professor Lawrence O. Gostin, Director of the O'Neill Institute for National & Global Health Law at Georgetown University, four standards must be in place if such restrictions are to be implemented (Gostin, 2005):

- There must be a necessity for government action.
- The action must employ reasonable means.
- The action must be proportional.
- The action should avoid harm to the health of the individual.

The following must also be considered when developing interventions to address a public health issue (Hadler et al., 2018):

- Once an acute public health problem is identified, intervention must occur as soon as possible to minimize preventable death and disease.
- Public interventions must be based on science and evidence-based practice. Public fear and politics must be carefully navigated to build trust within communities.
- Intervention must be specific to a particular community and will depend on the nature of the problem, its

cause, mode of spread, and other key factors.
- Open two-way communication between all parties involved must occur.

MANY AMERICANS HATE WEARING MASKS

Access multimedia content (http://openstax.org/books/population-health/pages/7-2-balancing-individual-rights-and-public-health-interests)
This video discusses the conflict between mask mandates and the rights of citizens within a society.

Watch the video, and then respond to the following questions.

1. Are mask mandates violating one's rights? Why or why not?
2. What can be done to mitigate the tension between opponents and proponents of mask mandates?
3. As a nurse, what is your role in upholding public health policy?

7.3 Public Health Initiatives, Delivery Mechanisms, and Implications

LEARNING OUTCOMES

By the end of this section, you should be able to:
- 7.3.1 Describe Healthy People 2030, a public health initiative that seeks to improve health outcomes.
- 7.3.2 Categorize public health policies by mechanisms of delivery (fiscal policy, regulation, education, preventative treatment, and screening).
- 7.3.3 Examine the implications of the Institute for Healthcare Improvement (IHI) Triple Aim to improve population health, reduce costs, and improve client satisfaction.

This chapter has discussed health policy and the balance between the right to human health and individual rights. This section will look at one U.S. public health initiative, the mechanisms of public health delivery, and a framework that has been developed to improve population health, reduce costs, and improve client satisfaction.

Healthy People 2030

The Health of the Population described **Healthy People**, a public health initiative that seeks to improve health outcomes in the United States. Put forth by the HHS, the 10-year plan establishes public health priorities and data-driven objectives to improve public health and well-being over a decade. The most recent iteration of the plan, Healthy People 2030, includes 23 high-priority **leading health indicators** (LHIs) to improve health and well-being over the lifespan. Most LHIs address factors that affect major causes of death and disease, such as the proportion of people with access to health insurance and the number of people exposed to unhealthy air (ODPHP, n.d.-c).

Public health policies and programs are what drive and establish the mechanisms by which such health outcomes are achieved. Table 7.5 provides examples of LHI objectives as established by Healthy People 2030 and examples of policies and programs necessary to achieve them.

Leading Health Indicator Objective	Public Health Policy or Program to Achieve the Objective
Increase the proportion of people with health insurance	The passage of the ACA improved access to health insurance through the expansion of Medicaid and the health care marketplace. The HHS (2022) reports that the total enrollment for Medicaid expansion, Marketplace coverage, and the Basic Health Program reached a high of over 35 million people as of early 2022.
Increase the proportion of persons who know their HIV status	According to the CDC, increasing the number of people who are aware of their HIV status is critical to preventing HIV infections. To increase Americans' awareness of their HIV status, the CDC has established the Expanded Testing Initiative, through which three programs have been launched (see Expanded Testing Initiative (https://openstax.org/r/cdcgovhiv)) (CDC, 2020b).

TABLE 7.5 Examples of LHIs and Associated Public Health Policies or Programs

Leading Health Indicator Objective	Public Health Policy or Program to Achieve the Objective
Reduce household food insecurity and, in doing so, reduce hunger	The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides federal grants to states for "supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age 5 who are found to be at nutritional risk" (USDA Food and Nutrition Service, n.d.) In a 2015 policy statement, the American Academy of Pediatrics (AAP) recommended that "pediatricians engage in efforts to mitigate food insecurity at the practice level and beyond," including connecting families to and advocating for federal nutrition programs (AAP, 2015).
Increase the proportion of persons who are vaccinated annually against seasonal influenza	State laws establish requirements regarding the vaccination of schoolchildren (CDC, 2016). In addition, the CDC works with public health agencies and private organizations to "improve and sustain immunization coverage and to monitor the safety of vaccines" (CDC, 2022c).
Reduce drug overdose deaths	The Overdose Response Strategy (ORS) is a collaboration between the CDC and the High Intensity Drug Trafficking Areas (HIDTA) program designed to help communities reduce drug overdoses through evidence-based intervention strategies at the local, regional, and state levels (CDC, 2023b). The Bureau of Justice Assistance's Comprehensive Opioid, Stimulant, and Substance Abuse Program (BJA COSSAP) supports state, local, and tribal responses to substance use to decrease overdose deaths, improve public safety, and improve access to treatment services in the criminal justice system (CDC, 2023b).
Reduce the number of days people are exposed to unhealthy air	The U.S. Environmental Protection Agency (EPA) Clean Air Act programs have lowered the levels of six common pollutants by 78 percent and have led to an improvement in air quality in the United States (EPA, 2023).

TABLE 7.5 Examples of LHIs and Associated Public Health Policies or Programs

Public Health Policy Delivery Mechanisms

Health policy interventions are how health policies are carried out (Hadler et al., 2018). Public health officials responsible for making decisions must consider certain factors, including selecting the appropriate intervention, facilitating the implementation of the intervention, and assessing the effectiveness of the intervention. Mechanisms for delivering public health policy interventions include fiscal policy, regulation, education, preventative treatment, and screening. Table 7.6 defines public health policy delivery mechanisms and provides examples of each.

Category	Explanation	Example(s)
Fiscal Policy	The U.S. government can use fiscal policy, including subsidies, free services, and taxes, to incentivize healthy behaviors and discourage unhealthy ones (Nugent & Knaul, 2006).	• Medicaid is an example of a subsidized program that provides health-promoting services for free or reduced rates. • During the COVID-19 pandemic, the government provided free COVID test kits to American households to help stop the spread of the disease. • Alcohol and cigarette taxes are examples of fiscal policy measures that disincentivize unhealthy activities.
Regulation	Any law, ordinance, rule, and so on issued by a government agency or organization.	The FDA is the U.S. agency responsible for regulating food- and health-related products. For example, under the Federal Food, Drug, and Cosmetic Act (FFDCA), the FDA regulates the safety and effectiveness of medical devices.
Education	The information, tools, and resources needed to obtain and sustain positive health outcomes (also referred to as **health literacy**).	The CDC's Diabetes Self-Management Education and Support (DSMES) Toolkit program provides individuals living with diabetes the necessary education and support to make the best health care decisions, leading to more positive health outcomes (CDC, 2022b).
Preventative Treatment	Routine care that people receive to maintain their health or prevent disease.	Well-child visits, vaccinations, and blood tests as required by the Children's Health Insurance Program (CHIP) are examples of preventative treatment.
Screening	Tests that screen people for diseases or other issues, often catching them before symptoms are noticed.	CDC guidelines on disease-specific screenings, such as mammograms, colonoscopies, and blood pressure screenings, are examples of screenings to improve public health by preventing disease progression.

TABLE 7.6 Public Health Policy Delivery Mechanisms



HEALTHY PEOPLE 2030

Education Access and Quality

Education is a crucial social determinant of health. Access to education (https://openstax.org/r/healthypeopleba) increases the probability that individuals will have the necessary skills to make the best decisions related to their health. Education also assists in increasing one's health literacy, which is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.

Institute for Healthcare Improvement Triple Aim

Despite its high costs, the U.S. health care system lags in factors relating to access, affordability, and quality. As discussed in What Is Population Health? the **Triple Aim** is a framework developed by the Institute for Healthcare Improvement (IHI) that aims to improve health care system performance on three levels (IHI, 2023):

- Improving the client experience of care (including quality and satisfaction)
- Improving the health of populations
- Reducing the per capita cost of health care

The IHI Triple Aim recommends a change process that includes identifying target populations; defining systems, aims, and measures to target the population; developing a portfolio of project work that is strong enough to drive system changes; and performing rapid testing that is specific to the needs of the local communities and the issues the community faces (IHI, 2023). The key to the success of the IHI Triple Aim is the utilization of and adherence to

five components, shown in Table 7.7.

Component	Explanation/Examples
Focus on Individuals and Families	• For medically and socially complex clients, establish partnerships among individuals, families, and caregivers, including identifying and supporting a family member or friend to coordinate services for the client among multiple care providers. • Jointly plan and customize care at the level of the individual. • Actively learn from the client and family to inform work for the greater population. • Enable individuals and families to better manage their own health.
Redesign of Primary Care Services and Structures	• Have a team for basic services that can deliver at least 70 percent of the necessary medical and health-related social services to the population. • Deliberately build an access platform for maximum flexibility to provide customized health care for the needs of clients, families, and providers. • Cooperate and coordinate with other specialties, hospitals, and community services related to health.
Population Health Management (Prevention and Health Promotion)	• Work with the community to advocate and provide incentives for smoking prevention, healthy eating, exercise, and reduction of substance misuse. • Develop multi-sector partnerships, utilize key partner resources, and align policies to provide community-based support for all who wish to make health-related behavioral changes. • Integrate health care and publicly available community-level data utilizing GIS mapping to understand local context to determine where and from whom health-related strategic community-level prevention, health promotion, and disease-management support interventions would be most useful.

TABLE 7.7 Five Components of the IHI Triple Aim (See IHI, 2009, 2023.)

Component	Explanation/Examples
Cost Control Platform	• Achieve less than 3 percent yearly for per capita cost by developing cooperative relationships with physician groups and other health care organizations committed to reducing the waste of health care resources. • Achieve lowest decile performance in the Dartmouth Atlas measures by breaking or countering incentives for supply-driven care. • Reward health care providers, hospitals, and health care systems for their contribution to producing better health for the population and not just producing more health care. • Orient care over time—the "patient journey"—targeted to the best feasible outcomes.
System Integration and Execution	• Match capacity and demand for health care and social services across suppliers. • Ensure that strategic planning and execution with all suppliers, including hospitals and physician practices, are informed by the population's needs. • Develop a system for continued learning and improvement. • Institute a sustainable governance and financial structure for the Triple Aim system. • Efficiently customize services based on appropriate segmentation of the population. • Use predictive models and health risk assessments that consider situational factors, medical history, and prior resource utilization to deploy resources to high-risk individuals. • Set and execute strategic initiatives to reduce inequitable variation in outcomes or undesirable variation in clinical practice.

TABLE 7.7 Five Components of the IHI Triple Aim (See IHI, 2009, 2023.)

The results and benefits of the IHI Triple Aim are as follows (IHI, 2023):

- Populations are healthier.
- Clients receive more coordinated care, which lessens the burden of disease and illness.
- The per capita cost of care for populations is stabilized.
- The burden on publicly funded health care budgets (such as Medicaid and Medicare) is lessened.
- The economic well-being of populations is improved.

Organizations and programs such as primary care coalitions, regional health care systems, and others have experienced success implementing the IHI Triple Aim (IHI, 2023).

Since the inception of the Triple Aim in 2008, two more aims have been proposed, including a **Quintuple Aim** (Mate, 2022). Those two aims are improving workforce well-being and safety and advancing health equity.

THEORY IN ACTION

The Story of New Ulm—A Population Health Transformation

Access multimedia content (http://openstax.org/books/population-health/pages/7-3-public-health-initiatives-delivery-mechanisms-and-implications)

This video describes a population health initiative in Minnesota that focuses on improving the health, well-being, and quality of life of the residents. Note this video is over 22 minutes.

Watch the video, and then respond to the following questions.

1. How does the Heart of New Ulm study use electronic health records and data warehousing to meet clients' needs?
2. What are examples of health interventions at a population level?
3. How does the Triple Aim relate to the Heart of New Ulm?
4. Do you agree that improving health outcomes requires making it easy for clients to do the right thing? Why or why not?

7.4 Policies Affecting Drug Approval, Supply, and Cost

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 7.4.1 Examine the role of the FDA in protecting public health.
- 7.4.2 Understand the global drug manufacturing supply chain.
- 7.4.3 Examine factors contributing to U.S. pharmaceutical costs being higher than those of other countries and their implications.

As discussed, the FDA is a regulatory body under the HHS umbrella. The FDA has broad regulatory authority and is responsible for protecting public health by ensuring the safety and efficacy of the food supply and all medical drugs, products, and devices (FDA, 2023). Table 7.8 lists examples of products over which the FDA has authority in eight regulatory areas.

Regulatory Areas	Products over Which the FDA Has Authority
Foods	• Bottled water • Dietary supplements • Food additives • Foods such as meats, poultry, and egg products, which are also regulated by the USDA • Infant formulas
Drugs	• Prescription and nonprescription drugs
Biologics	• Allergenics • Blood and blood products • Cellular and gene therapy products • Tissue and tissue products • Vaccines for humans
Medical devices	• Dental devices • Heart pacemakers • Surgical implants and prosthetics • Tongue depressors and bedpans
Electronic radiation products	• Laser products • Mercury vapor lamps • Microwave ovens • Sunlamps • Ultrasonic therapy equipment • X-ray equipment
Cosmetics	• Color additives found in makeup • Nail polish and perfume • Skin moisturizers and cleansers

TABLE 7.8 The FDA's Regulatory Areas and Products over Which It Has Authority

Regulatory Areas	Products over Which the FDA Has Authority
Veterinary products	• Livestock feeds • Pet foods • Veterinary drugs and devices
Tobacco products	• Cigarettes/cigarette tobacco • Cigars • Electronic cigarettes • Hookah • Smokeless tobacco

TABLE 7.8 The FDA's Regulatory Areas and Products over Which It Has Authority

As a regulatory body, the FDA has specific policies and regulations aimed at protecting the health and well-being of the American public. The agency develops rules and regulations based on evidence-based processes and through the input of other government agencies and subject matter experts. The FDA regulations are then published in the *Federal Register* (https://openstax.org/r/federalregister), the U.S. government's official publication for notifying the public of agency actions. FDA regulations are either required or authorized by statute.

The rules established by the FDA may come through the creation of laws by Congress, presidential executive orders, or regulations established within the FDA. Before a new drug is approved for public consumption, for example, the drug is subject to a stringent testing and research process to identify potential harm to the affected population. Once the food, drug, or other item is approved, it is then made available for public consumption.

One of the most recent FDA actions was the approval of the COVID-19 vaccine (FDA, n.d.). Although the process of approving a drug or other material for human and animal consumption generally takes years, the approval of the COVID-19 vaccine was expedited due to the nature of the COVID-19 pandemic and the need to limit new cases of the disease (FDA, n.d.). The FDA and drug makers worked at an accelerated pace to complete the required testing on the new vaccines before they were released to the public to ensure their safety and efficacy (Figure 7.5).



FIGURE 7.5 During the COVID-19 pandemic, a national initiative called Operation Warp Speed accelerated the development, production, and distribution of COVID-19 vaccines. In the photo, a phlebotomist assistant draws a client's blood for a preliminary, baseline antibody test for the Phase III trial of AstraZeneca's coronavirus (COVID-19) vaccine. (credit: "NMCSD NBHC Kearny Mesa COVID-19 Vaccine Trial" by Jake Greenberg/U.S. Navy/Flickr, Public Domain)

5 THINGS YOU NEED TO KNOW ABOUT THE DRUG APPROVAL PROCESS

Access multimedia content (http://openstax.org/books/population-health/pages/7-4-policies-affecting-drug-approval-supply-and-cost)
This video provides a brief overview of the process the FDA follows to approve new drugs.

Watch this video, and then respond to the following questions.

1. What considerations are involved in the decision to test a new drug on human subjects?
2. What are the three phases of clinical trials?

The Global Drug Manufacturing Supply Chain

One factor affecting the supply and cost of pharmaceutical drugs is the global drug manufacturing supply chain. A **supply chain** consists of the participants at each step in the process that takes a product from raw materials to finished goods sold to customers. As it relates to global drug manufacturing, the supply chain refers to the movement of the various components and materials essential to providing a drug for human consumption.

The pharmaceutical supply chain is a global, complex system. The key role players include raw material suppliers, drug manufacturers, regulatory agencies, wholesale distributors, pharmacies, pharmacy benefit managers (PBMs), health care providers, and clients (Kaylor, 2023). First, raw materials are sourced and transported for manufacturing. Pharmaceutical manufacturing in the United States has declined significantly, and up to 90 percent of needed raw materials are estimated to come from other countries (Constantino, 2021). Next, the drugs are transferred to wholesale distributors, who provide them to the pharmacies. Pharmacy benefit management companies are the intermediaries working with insurers, employers, and government programs to negotiate the prices the clients will pay for the prescriptions (Kaylor, 2023).

The supply chain's quality and safety are essential to the United States' national security and public health (Costantino, 2021). Standards related to the global drug manufacturing supply chain assist governments and drug manufacturers in increasing the availability of safe, quality medicines that are necessary to build client and health provider trust (U.S. Pharmacopeial Convention [USPC], 2023). Examples of standards include the processes employed by organizations, such as the FDA, before medications, foods, and other materials are deemed safe for human and animal consumption. These guidelines are necessary to promote a strong and resilient supply chain so that people have the drugs they need at the time they need them. It is imperative that such regulations are backed by science, producing high-quality development and manufacturing processes and high-quality drugs for human consumption (USPC, 2023).

The pharmaceutical supply chain faces several challenges, including supply chain visibility and rising prescription drug costs (Kaylor, 2023). These challenges became evident during the COVID-19 pandemic by negatively affecting the pharmaceutical supply chain in several ways (Choe et al., 2020):

- They prompted unexpected increases in demand for critical medications needed to treat clients with COVID-19.
- They disrupted critical medication production as supplies of these medications were rapidly depleted while manufacturers were unable to keep up with the demand.
- They delayed regulatory oversight of production as travel restrictions curtailed FDA officials' ability to inspect manufacturing facilities.
- They interrupted global trade of medications as many countries limited their pharmaceutical exports to meet the increased demand in their own countries.
- They revealed a limited understanding of local and demand-driven shortages that are not always reflected in the current FDA database of drug shortages.
- They highlighted inadequacies in supply chain planning and management. The United States has limited ability to coordinate and share medications and instead must rely upon pharmaceutical wholesalers.

The recently established Supply Chain Disruption Task Force is working to address the supply chain issues by developing a series of recommendations for supply chain diversification (Edwards, 2021). In the interim, the United States is working to overhaul its strategic national stockpile program. The stockpile program was established to

disperse medications around the country in the event of a short-term disaster or biological attack (Edwards, 2021). The United States is redesigning the program to incorporate a strategic stockpile of drug ingredients so that domestic manufacturers can quickly produce needed medications in the event of an emergency.

Pharmaceutical Costs

Americans spend more on prescription medications than citizens of other countries. A recent study determined that U.S. prescription drug prices were 2.56 times those in 32 comparable countries (Bosworth et al., 2022). Accordingly, pharmaceuticals are one of the fastest-growing components of health care spending in the United States (Ellis, 2019). In July 2022, the average price increase per drug was almost $250, an increase of 7.8 percent (Bosworth et al., 2022). That same year, the list prices of several drugs increased by more than $20,000 or 500 percent (Bosworth et al., 2022). Rising prescription drug costs are an issue for many Americans.

There are several reasons for the high drug costs (Rajkumar, 2020):

- Monopolies: Newer drugs do not yet have any alternatives or competition in the form of generic medications or comparable versions from other companies. Also, some established drugs are manufactured by a limited number of companies, decreasing competition.
- Disease severity: Clients with serious illnesses are usually willing to pay any price for a drug that can save or prolong their life.
- Research and development: Developing a new drug is a lengthy, costly process. It takes approximately 12 years and $3 billion dollars for a new drug to get approved; only 10 to 20 percent of drugs developed and tested make it to the market.
- Political power of the pharmaceutical industry: Although the federal government is aware of the need to address high drug prices, the pharmaceutical industry is an influential lobbyist that frequently limits the government's attempts to enact change.

The increase in drug costs disproportionately impacts underrepresented and marginalized populations. As drug costs continue to rise, access to drugs will become even more problematic for these populations. Drug adherence may decline as individuals and families make difficult choices related to priorities such as choosing to pay for housing and food or for pharmaceuticals to treat disease (Ellis, 2019). This leads to continued health disparities.

State and national policymakers are exploring options to better control and lower drug costs. In 2022, Congress passed the Inflation Reduction Act to address high and rising drug prices (Bosworth et al., 2022). The law requires drug manufacturers to pay rebates to Medicare if the drug prices for Medicare beneficiaries exceed inflation.

Community health nurses must recognize the impact of high drug prices on their clients. When assessing a client's medication history, nurses should determine if the client is adhering to the prescribed regime. If not, nurses should examine the client holistically to determine the cause. Clients may not take their medications as prescribed if they cannot afford them. Nurses should work with clients to identify programs that can help them pay for prescriptions. Alternatively, nurses could work with the prescribers to identify less costly alternatives for the client.

CASE REFLECTION

Working with Clients Who May Have Difficulty Affording Prescribed Medications

Read the scenario, and then respond to the questions that follow.

A client with a diagnosis of diabetes, hypertension, and congestive heart failure visits her local primary care physician for a six-week follow-up appointment after being discharged from the hospital with an exacerbation of her congestive heart failure. The client presents with shortness of breath, and her blood pressure is 190/100. The client did not bring her medications to her doctor's visit as her discharge nurse instructed. She reports that she has been taking her medications as scheduled. The client is currently unemployed and has applied for Medicaid benefits.

1. How should the nurse approach obtaining a more detailed medication history from the client?
2. If the client indicates she is not taking her medications because she cannot afford them, what next step(s) should the nurse take?

Chapter Summary

7.1 Factors Affecting Public Health Policy

Public health policy refers to the laws, regulations, programs, behaviors, and decisions implemented in a society to promote public health. There is a direct correlation from access to health care, the cost of health care, and the quality of health care to health outcomes. High health care costs impact an individual's ability to access health care services. Different payment models and care delivery models affect the quality of care. When individuals cannot access health care services, health outcomes, including maintenance of chronic disease processes, are compromised.

7.2 Balancing Individual Rights and Public Health Interests

Although the U.S. Constitution does not include a right to health or health care, the federal government supports health care through Medicare, Medicaid, federal tax subsidies for employer-sponsored health care, and agencies such as the CDC and the HHS that work to improve the population's health. Violations of health as a human right have serious consequences for individuals and populations. Discrimination in delivering health care services creates barriers to positive health outcomes, and underrepresented individuals tend to face higher rates of chronic diseases. Health policies can improve the systems through which health care services are provided and make it feasible for individuals with chronic health conditions to access necessary care. Public health nurses are integral to the APHA's efforts to influence public policy. The tension between individual rights and public health continues to be salient in the United States; this was especially apparent during the COVID-19 pandemic.

7.3 Public Health Initiatives, Delivery Mechanisms, and Implications

Healthy People is a public health initiative that seeks to improve health outcomes in the United States. This 10-year HHS plan establishes public health priorities and data-driven objectives to improve public health and well-being over a decade. Healthy People 2030 includes 23 high-priority LHIs to improve health and well-being over the lifespan. Mechanisms for the delivery of public health policy interventions include fiscal policy, regulation, education, preventative treatment, and screening. The IHI Triple Aim is a framework to improve health care system performance on three levels (improving the client experience, improving population health, and reducing costs).

7.4 Policies Affecting Drug Approval, Supply, and Cost

The FDA has broad regulatory authority and is responsible for protecting public health by ensuring the safety and efficacy of the food supply and all medical drugs, products, and devices. The global drug manufacturing supply chain affects the supply and cost of pharmaceutical drugs. Pharmaceuticals are one of the fastest-growing components of health care spending in the United States. The increase in drug costs impacts underrepresented and marginalized populations the most.

Key Terms

accountable care organizations (ACOs) payment model in large health systems where individual physician practices or a collection of physician practices contract with a payer, typically under a fee-for-service payment model, to provide care to a population

bundled payments payment model in which physician practices receive payment based on episodes of client care according to a defined set of diagnoses and services provided to the client over a specific period; also known as episode-based payments

capitation payment model in which physician practices receive payment per client per period, which is usually 1 month; health plan rules govern which clients are included in the physician practice

care delivery models delivery strategies that prescribe the specific ways in which professionals work together to provide health care services

care deserts areas in the United States where individuals have limited access to health care services such as hospitals or health clinics; also called medical deserts

episode-based payments payment model in which physician practices receive payment based on episodes of client care according to a defined set of diagnoses and services provided to the client over a specific period; also known as bundled payments

fee-for-service payment model in which physician practices are paid a flat rate for each client visit, test, or procedure performed; through this model, practices can achieve higher revenue with more

clients and procedures each day

health disparities systematic differences in health that exist between socioeconomic positions, social classes, genders, ethnicities, sexual orientations, or other social groups with differentiated access to material and non-material resources

health literacy the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions

health outcomes the results of a health intervention

Healthy People a 10-year HHS plan that establishes public health priorities and data-driven objectives to improve public health and well-being over a decade

integrated service lines hospitals and health systems organize around specific disease states such as cancer, heart disease, and diabetes throughout the continuum of client care

leading health indicators (LHIs) small subset of high-priority Healthy People 2030 objectives selected to drive action toward improving health and well-being

marginalized communities communities excluded from the dominant group's cultural, economic, educational, or social life

maternal care deserts areas within the United States where individuals have limited to no access to maternal care services

medical deserts areas within the United States where individuals have limited access to health care services such as hospitals or health clinics; also called care deserts

medical homes care delivery model in which an integrated team of health care providers such as nurses, physicians, and care managers provides care that addresses the "whole person"

pay for performance payment model in which physicians are paid according to prescribed practice performance on defined metrics, which are based upon the quality of care and/or utilization of care services

payment models mechanism by which health care services are established and paid for

pharmacy deserts areas in the United States where individuals have limited to no access to pharmacy services

provider-sponsored health plans health plans that are either sponsored or acquired by hospitals, physician groups, or health systems that assume responsibility for the total cost of care for clients enrolled in the health plan

public health policy laws, regulations, programs, behaviors, and decisions implemented in a society to promote public health

Quintuple Aim a proposed update to the Institute for Healthcare Improvement's Triple Aim

retainer-based payment payment model in which physician practices or other organizations receive capitation payments from the client; also known as "concierge" payments

shared savings programs payment model in which physicians or health care practices receive payment throughout the contract year; total costs of care for a specific client population are compared with a cost target at the end of year, which can lead to a lump-sum payment incentive or penalty for not meeting prescribed goals

supply chain participants at each step in the process that takes a product from raw materials to a finished good that is sold to customers

telehealth the provision of health care using technology, including the internet, computers, tablets, and smartphones

Triple Aim a framework developed by the Institute for Healthcare Improvement that describes an approach to optimizing health system performance

universal health care system a system in which all people have access to the full range of quality health services they need, when and where they need them, without financial hardship

Review Questions

1. A community health nurse is working at a community event to help individuals obtain health insurance. For which individual would the nurse most likely recommend Medicare?

a. A 62-year-old client with heart failure
b. A 54-year-old client who is employed
c. A 28-year-old client with two children and no income
d. A healthy retired 67-year-old client

2. An older adult client has developed a pressure injury while in the hospital for the treatment of pneumonia. The nurse understands that the development of the pressure ulcer will affect Medicare reimbursement for this client in what way?

a. There will be no reimbursement for this client's hospital stay.

b. Reimbursement will be increased due to the development of complications.
c. Reimbursement will be reduced as a result of the development of a pressure injury.
d. There will be no change in reimbursement.

3. The nurse is discussing homecare instructions with a client who was treated on a medical unit for an exacerbation of heart failure. The client tells the nurse that follow-up care will be difficult since they live 30 miles away and do not drive. Which intervention by the nurse can best meet the immediate needs of this client for follow-up care?
a. Meeting with community leaders about the need for medical facilities in the rural community
b. Providing the client with agencies that may be able to assist with transportation
c. Arranging for home monitoring and telehealth follow-up
d. Reinforce that follow-up is important and that the client needs to find rides to appointments

4. A nurse works at a clinic that provides care to clients through all stages of heart failure and coordinates transitions of care. Which care delivery model is the clinic using to provide care to clients?
a. Collaborative care
b. Integrated service line
c. Provider-sponsored health plan
d. Medical home

5. A community health nurse provides health care to a marginalized community. Which factor will guide the nurse's health programming?
a. Most members of this community are eligible for Medicaid.
b. Community members are likely to seek preventative health care.
c. Barriers to accessing health care may be present.
d. Laws and policies protect the health of this community.

6. Which concept concerning LHIs will the nurse use to develop programs to improve health outcomes in the community?
a. LHIs are primarily aimed at reducing childhood illnesses.
b. LHIs should be included in the plan of care for every individual.
c. LHIs improve health and well-being across the lifespan.
d. LHIs provide standardized guidelines for caring for certain diseases.

7. Which action can the community health nurse take to help an unemployed client without health insurance mitigate the high cost of prescription drugs?
a. Assist the client to reduce the amount spent on food and other items.
b. Ask the client which medications they feel are not necessary.
c. Speak with the provider about lower-cost alternatives.
d. Explain that all medications must be taken to improve health outcomes.

8. Which category of public health policy is the nurse engaged in while performing lipid profile testing at a community health fair?
a. Regulation
b. Screening
c. Education
d. Preventative treatment

9. A client in a community health center is receiving team-based care for primary care needs and management of heart failure. When the nurse assesses that the client is missing appointments due to difficulties with transportation, the nurse refers the client to the team social worker. Which care delivery model is this client experiencing?
a. Accountable care organization

b. Integrated service line
c. Medical home
d. Provider-sponsored health plan

10. Which component of the IHI Triple Aim is the nurse performing when working with the community to develop programs to reduce teenage smoking?
a. System Integration and Execution
b. Population Health Management
c. Redesign of Primary Care Services and Structures
d. Cost Control and Platform

CHAPTER 8

Social Determinants Affecting Health Outcomes



FIGURE 8.1 In some impoverished neighborhoods, the only operating businesses sell mainly soda, candy, and cigarettes. (credit: modification of work "No Loitering" by Paul Sableman/Flickr, CC BY 2.0)

CHAPTER OUTLINE

8.1 Economic Stability
8.2 Neighborhood and Built Environment
8.3 Educational Environment, Access, and Quality
8.4 Social and Community Context
8.5 The Cumulative Effect of Inequalities on Health

INTRODUCTION In the United States, clinical care accounts for only 20 percent of a person's health outcomes (Whitman et al., 2022). The remaining 80 percent are attributed to social and economic factors, health behaviors, and the physical environment. This means that 80 percent of health outcomes relate to one's income, education level, employment, neighborhood environment, and health behaviors. Putting it plainly, a person's zip code is a better predictor of their overall health than their genetic code.

Healthy People 2030 defines the **social determinants of health** (SDOH) as "the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks" (Office of Disease Prevention and Health Promotion [ODPHP], 2020v, para. 1). They are the nonmedical factors that impact health outcomes (CDC, 2022b). Healthy People 2030 groups the SDOH into five domains: economic stability, education access and quality, health care access and quality, neighborhood and built environment, and social and community context (Figure 8.2). They are called *social determinants* of health because they operate outside of nonmodifiable (unchangeable) biological and genetic factors; instead, they are

determined by social status. The SDOH have a major effect on an individual's health and well-being. Examples include access to safe housing, exposure to discrimination or violence, income level, and language and literacy skills (ODPHP, 2020v).

The good news is that factors affecting these SDOH *are* modifiable (changeable), and health care professionals, including nurses, are at the forefront of driving positive changes in health outcomes for populations. The Future of Nursing 2020-2030 report (https://openstax.org/r/namedupublications) highlights **health equity** as a major focus for nursing and states that achieving health equity begins with assessing the SDOH in every client encounter (Wakefield et al., 2021). The Centers for Disease Control and Prevention defines health equity as a "state in which everyone has a fair and just opportunity to attain their highest level of health" (CDC, 2022g, para. 1; MISPH, 2020). Addressing the SDOH is a key task of the professional nurse, as nursing practice is founded on the principle of **social justice**, the view that each individual deserves equal rights and opportunities (American Public Health Association, 2022). By incorporating assessments of the SDOH and their intersection with health outcomes, the nurse can drive positive change and support upstream interventions at the community, local, and state levels.

This chapter will follow the Healthy People 2030 outline on each of the SDOH and define what each determinant means. It will explore how each determinant correlates with health outcomes and why it is imperative for community and public health nurses to address the SDOH in practice and to advocate for social justice and change.



FIGURE 8.2 Social determinants of health (SDOH) are the conditions in which people are born, grow, work, live, and age and the wider set of forces and systems shaping the conditions of daily life that influence health outcomes. (credit: "Healthy People 2030 SDOH Graphic Domain Labels" by U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, Public Domain)

HEALTHY PEOPLE 2030

Social Determinants of Health

Healthy People 2030 features many objectives related to the SDOH. These objectives (https://openstax.org/r/healthypeoplepriority) highlight the importance of "upstream" factors, conditions related to the economic, social, and physical environments, in promoting health and reducing **health disparities**. Health disparities are the *preventable* differences in health between groups of individuals, usually as a result of social or economic factors, geographic location, or environment. See Health Disparities for more information on this topic.

8.1 Economic Stability

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 8.1.1 Discuss the relationship between poverty and economic insecurity.
- 8.1.2 Describe the impact of employment on economic stability.
- 8.1.3 Explain how housing instability contributes to economic insecurity.
- 8.1.4 Describe the link between a person's socioeconomic position and their health.

Economic stability in the context of the SDOH refers to the ability to access necessary resources and care to promote healthy living. It requires having a steady source of income with stable employment that is safe from occupational-related health risks. The necessary resources include the ability to afford quality housing in a safe neighborhood with access to clean air and water, transportation, and healthy food options.

In the context of an individual or a family, **economic stability** refers to a situation where the individual has a steady source of income and regular access to resources that are essential for a healthy life, such as food, clothing, housing, transportation, child care, and health insurance. A consistent income is one key to economic stability at the individual and family levels. Individuals with steady employment are less likely to experience economic insecurity (ODPHP, 2020a).

Consistently earning a **living wage** is another critical component of economic stability that directly correlates with what an individual can afford to live a healthy life. A living wage is one that affords a modest standard of living for the individual and family (Global Living Wage Coalition, 2018). The federal minimum wage is far below what is generally considered necessary for a family to survive; that is, it is less than a living wage (Glasmeier, 2023). The federal minimum wage rate has not kept pace with inflation and other cost-of-living adjustments that disproportionately impact Black, Indigenous, and people of color (BIPOC) individuals (Khan & Khattar, 2022). The last update to the federal minimum wage occurred in 2009, when it was increased to $7.25 per hour. Twenty states currently use the federal minimum wage. The ability to afford housing, food, child care, transportation, and health insurance affects an individual's economic or financial stability (ODPHP, 2020a; Rural Health Information Hub [RHIhub], 2020a). A goal of Healthy People 2030 is to "help people earn steady incomes that allow them to meet their health needs" (ODPHP, 2020a, para. 1).

Poverty

Economic insecurity is when an individual or family cannot consistently afford housing, food, clothing, transportation, child care, or health care. Economic insecurity is directly linked to **poverty**, a state in which an individual lacks a socially acceptable amount of money or possessions (Merriam-Webster, 2023). In 2021, almost 38 million individuals, close to 12 percent of the population, lived in poverty in the United States (Creamer et al., 2022). Individuals and families living in poverty cannot afford the resources essential to living a healthy life (ODPHP, 2020a). Economic insecurity is also associated with unemployment, underemployment (willing but unable to find full-time work), and low-wage employment. Many individuals with stable work still do not earn enough income to afford the resources necessary for good health (ODPHP, 2020a). Almost one in every three individuals in the United States is considered economically insecure, with incomes below 200 percent of the federal poverty level (Langston, 2018). The groups most affected are BIPOC communities, which comprise slightly more than half of the individuals who are economically insecure (Langston, 2018).

The **socioeconomic gradient** is another term for the relationship between income and health, namely, the association between low **socioeconomic position** (SEP) and increased disease risk and premature death (Bonaccio, et al., 2020). SEP refers to one's position in society based on social and economic factors of income, education, and employment. Individuals living with economic insecurity often cannot access resources that support healthy and quality living. These resources, along with economic stability, are what comprise the SDOH: stable housing, safe neighborhoods, access to healthy and affordable foods, and access to quality education. Living with economic insecurity makes it difficult to attain and sustain the determinants of health, thereby perpetuating a cycle of poverty, economic and housing instability, food insecurity, and a lack of access to educational and employment opportunities. This contributes further to income inequality and insecurity and results in a multitude of negative health outcomes (ODPHP, 2020b).

The U.S. Census Bureau (USCB) determines poverty levels by using a set of income thresholds that vary by family composition. If a family's total income is less than the set family threshold, that family and each individual in it are considered to be living in poverty (USCB, 2023). The official poverty definition uses income before taxes and does not include noncash benefits such as public housing, food stamps, tax credits, and Medicaid benefits (USCB, 2023). In 2021, the federal designation of poverty for an individual was an income under $12,880 per year, and for a household (family of four) it was an income under $26,500 per year (ODPHP, 2020b). According to the U.S. Department of Housing and Urban Development (USDHUD), regardless of the location, a family of four with one adult employed full-time at the federal minimum wage rate is unable to afford fair-market rent for a two-bedroom apartment (Habitat for Humanity, 2023). Families who live in poverty cannot consistently afford quality housing, food, health care, and other necessities.

Poverty is cyclical and often persists for long periods of time. Research supports the concept of **generational poverty**, the phenomenon of persistent poverty and disadvantage where children who grow up poor, regardless of race, are more likely to be poor as adults (Wagmiller & Adelman, 2009). In many cases, the foundation of poverty can be traced to structural discrimination and racism that contribute to inequitable social and economic opportunities (ODPHP, 2020b). These deeply rooted practices and beliefs propagate the pervasive unjust treatment and oppression of BIPOC individuals (Braveman et al., 2022; see Structural Racism and Systemic Inequities). Individuals living in poverty or within impoverished communities lack equal access to the resources necessary for healthy living, such as safe, quality, stable housing and healthy food options. In the United States, BIPOC individuals living in rural areas and individuals living with disabilities are at higher risk for living in poverty.

Living in poverty has been directly linked with poor health outcomes. Those living in poverty or with limited finances may have difficulty accessing care due to the costs of health insurance, medications, and provider visits. Living in impoverished communities with limited access to healthy foods impacts health outcomes related to metabolic diseases, cardiovascular diseases, and diabetes. Living with the daily stressors of poverty and having to make difficult decisions such as *pay the rent* or *purchase food* increases stress levels and negatively affects mental and cardiovascular health while also negatively influencing health behaviors. Adults living in poverty are at higher risk for adverse health outcomes from smoking, substance use, and chronic stress. Poverty in childhood is associated with developmental delays, toxic stress, chronic illness, and nutritional issues. Mortality rates are higher and life expectancy is lower for impoverished individuals, families, and communities. In the United States, individuals who earn the top 1 percent of income (meaning they make more than almost everyone else) live 10 to 15 years longer than individuals who earn the bottom 1 percent of income (ODPHP, 2020b). For individuals living in poverty, economic insecurity is a constant health threat.

Employment

Employment is a main driver of individual economic stability. Stable employment is associated with lower levels of poverty and overall better health. A job's demands, the work environment, compensation, and the security of the work all affect an individual's health status (ODPHP, 2020u). Individuals may be out of the workforce (retired or unable to work), employed (working for pay), unemployed (not working but looking for work), or underemployed (involuntary part-time work, intermittent work, poverty-wage work). A lack of employment and underemployment are associated with poverty and economic insecurity. Studies have linked illness and premature death, and a delay or absence in receiving necessary medical care and prescriptions, with unemployment in adults (Kansas Department of Health and Environment, 2015). Individuals who are unemployed have higher rates of depression, anxiety, and low self-esteem along with a sense of demoralization. In addition to psychological harm, some of these individuals experience stress-related issues such as hypertension, heart disease, and arthritis and may also experience a stroke or myocardial infarction (ODPHP, 2020u).

An individual's physical work environment is an important factor in their general health. Repetitive lifting, pulling, or pushing heavy items, exposure to chemicals, or loud noises can all cause significant injury and illness to workers (ODPHP, 2020u). Time off from work often follows an injury or illness, which can further tip an individual into economic insecurity. Highly demanding jobs, high levels of conflict within the workplace, long workdays, having multiple jobs, and working evening shifts are also associated with psychological stress. These workplace stressors place individuals at risk for depression, strained caregiver-child relationships, and unhealthy coping mechanisms such as misusing alcohol or smoking cigarettes (ODPHP, 2020u). Migrant workers are at particular risk; see Caring for Vulnerable Populations and Communities for more details.

Disparities in employment have been correlated with race and ethnic background, gender, and level of educational attainment (ODPHP, 2020u). These disparities negatively impact economic stability and further perpetuate the cycle of poverty. For example, BIPOC individuals are more likely to work in lower-paying blue-collar service jobs and environments with greater exposure to the environmental risk factors described above while White individuals are more likely to work in office jobs and assume managerial positions (ODPHP, 2020u). These exposures place BIPOC individuals at higher risk for injury, illness, anxiety, and depression (ODPHP, 2020u). While the pay gap between women and men in the United States has narrowed somewhat in recent years, in 2020, women earned 83 cents for every dollar earned by men (Wisniewski, 2022). This gap in pay equity between genders negatively affects the economic stability of women and families.

Educational level affects the type of work individuals engage in, the working conditions they experience, and compensation levels. Individuals with lower levels of education generally have fewer job choices and may be forced to accept undesirable positions and low wages. These individuals are more likely to have more physically demanding jobs that may expose them to harmful toxins (ODPHP, 2020u). Many factors may contribute to lower educational attainment, including growing up in poverty with unequal access to educational opportunities.

THE OPPORTUNITY ATLAS

At this interactive website, The Opportunity Atlas (https://openstax.org/r/opportunityatlas), you can click on a map to find out which U.S. neighborhoods offer children the best chance to rise out of poverty. You can trace the roots of today's affluence and poverty back to the neighborhoods where people grew up. The atlas allows users to search by location, outcome, and demographic group.

Explore the atlas, and then respond to the following questions.

1. What question(s) did you use to explore the Atlas?
2. What do the areas where household income at age 35 is highest seem to have in common? What about those areas where household income is lowest? And what about those where income falls somewhere in the middle? Thinking about other aspects of these regions, consider what it is about the regions—based solely on geography—that might relate to these outcomes.
3. Pick one of the articles on the map (indicated by an open book icon) and explore what you find at that link. How does this add to your understanding of poverty and opportunity?

Housing Instability

Affordable housing is another driver of economic stability, whereas **housing instability** is correlated with economic insecurity. Individuals and families who encounter difficulty paying rent, live in overcrowded residences, move frequently, or spend a large part of their household income on housing are experiencing housing instability.

Households are **cost burdened** if they spend more than 30 percent of their income on housing, and they are severely cost burdened if they spend more than 50 percent on housing (ODPHP, 2020s). After paying rent, these households are left with little to spend on other necessities such as food, clothing, utilities, and health care. BIPOC households are almost twice as likely as White households to be cost burdened (ODPHP, 2020u). In 2019, there were over 37 million cost-burdened households in the United States, almost 18 million of which were severely cost burdened. Cost-burdened households are at risk for housing instability (ODPHP, 2020u). Substandard or inferior housing is associated with health risks such as asthma, allergies, mental health conditions, and respiratory illnesses related to vermin, mold, water leaks, and inadequate heating and cooling systems (CDC, 2009).

INTERACTIVITY: SPENT

In the interactivity Spent (https://openstax.org/r/playspent), you begin by losing your job, life savings, and house. Down to your last $1,000, you must make it through the month by making a series of difficult decisions as you watch your savings dwindle. While this activity is set up as a game, poverty is not something you can simply stop playing, and many Americans make decisions like those in this interactive simulation daily to survive.

Walk through the interactivity, and then respond to the following questions.

1. What factors did you weigh as you decided how to spend your money?
2. What, if anything, surprised you as you made your choices?

Being cost burdened puts individuals and families at risk for foreclosure or eviction. Renters who are evicted or forced to move often relocate to poorer and less safe neighborhoods (ODPHP, 2020u). Researchers have correlated children who experience multiple housing moves in a year with poor physical health and lack of consistent health insurance coverage. If families must move frequently, building community relationships and attachments is more difficult. Community attachments can be protective for individuals experiencing adversity. For example, research has indicated that individuals living in higher-income areas report better health than those living in lower-income areas (ODPHP, 2020u).

Severe housing instability may result in homelessness, a state where individuals lack a nighttime residence (Figure 8.3). The USDHUD Annual Homelessness Assessment Report to Congress (https://openstax.org/r/hudusergov) found that an estimated 582,500 individuals were experiencing homelessness on a single night in 2022 (USDHUD, 2022). This equates to 18 of every 10,000 individuals in the United States experiencing homelessness. Compared to the overall U.S. population, BIPOC communities continue to be overrepresented among the population experiencing homelessness (USDHUD, 2022). Individuals experiencing homelessness have an increased risk of premature death. In Massachusetts, the mortality rate of individuals ages 25 to 44 experiencing homelessness was approximately ten times higher than that of the general population. A study of individuals experiencing homelessness in the New York City shelter system found that over 50 percent had a substance use disorder, 17 percent had hypertension, 17 percent had asthma, and 35 percent were experiencing major depression, correlating the negative impact of housing instability with homelessness. Children who are homeless are at risk of cognitive and mental health problems, asthma, physical injury and assaults, and poor school performance. Housing instability has broad implications for the development and future of these children (USDHUD, 2022). See Caring for Vulnerable Populations and Communities for more information about homelessness.



FIGURE 8.3 An individual experiencing homelessness is at risk for health issues related to inadequate nutrition and exposure to violence, communicable disease, and weather. (credit: "homeless" by Golfeser/Flickr, Public Domain)

THEORY IN ACTION

Moving to Opportunity

Access multimedia content (http://openstax.org/books/population-health/pages/8-1-economic-stability)
Neighborhoods make a difference in the health and well-being of residents. In this video, Harvard professors Nathan Hendren and Edward L. Glaeser discuss the Moving to Opportunity (MTO) program, which assessed the outcomes of moving families with young children out of high-poverty housing projects into lower-poverty

neighborhoods (ODPHP, 2020u). The program found that the children of families who moved to low-poverty neighborhoods before the age of 12 were more likely than children who didn't move or children who moved after the age of 12 to go to college, have higher incomes, and live in better neighborhoods as adults. The women of these families also had improved health outcomes, with lower levels of obesity and diabetes (Abdul Latif Jameel Poverty Action Lab, n.d.).

Watch the video, and then respond to the following questions.

1. According to the research presented, where in the United States do children have the best chance of upward mobility? Where do they have the worst chance? Why do you think this is so?
2. Why do you think children who were under age 12 when their families moved to neighborhoods with lower poverty rates fared better economically as adults than children who were older when they moved to these same neighborhoods?

CASE REFLECTION

Housing Instability

Read the scenario, and then respond to the questions that follow.

Serena Jordan is a 42-year-old woman who is married with three children, ages three, five, and nine. She works full-time as an administrative assistant at an insurance company. Her husband is a truck driver and is often gone for weeks at a time on the road. They do not have any family nearby, but they rent a second-floor apartment in an old three-family home and have made friends with the neighbors who live on the third floor. The neighbors, an older couple, sometimes help watch the children when Serena is in a pinch. Serena's family lives paycheck to paycheck, and though she works 40 hours a week, Serena is always worried about being able to pay the bills. Currently, she earns $13/hour, and her husband brings home a salary of $50,000/year, but with the three children, day care expenses, rent, grocery bills, car payments, and medical bills, it never seems to be enough. The family spends almost $2,000 a month on rent, leaving them cost burdened.

1. Why do you think many people in the United States are experiencing similar situations to those Serena and her family are experiencing?
2. What are some interventions the community health nurse can do to assist Serena and her family?

The Role of the Nurse in Addressing Economic Instability

Nurses need to assess for poverty in all their clients, regardless of appearance or health insurance status. This assessment can be a written questionnaire or an in-person conversation. It might be as simple as asking, "Do you sometimes have to skimp on purchasing groceries to pay your rent? Do you feel you have all the resources necessary?" Often, nurses do not want to ask these questions in case a client answers "No," as they do not have a solution or they feel the problem is too big for one person to solve. However, the first step in the nursing process is always assessment. Nurses need to be able to ascertain this information as a part of the total health assessment to collect data and then formulate a plan. Nursing can significantly impact individuals, families, and communities living in poverty by raising awareness of the prevalence of poverty and its associated negative health outcomes. By raising awareness, nurses can advocate for allocating more resources, such as increased tax credits for families, free early education programs for young children, and better food assistance programs. Community health nurses who assess for housing instability and collect relevant data can intervene with referrals to housing support programs and subsidies that can provide low-income families with financial and housing assistance. Additionally, nurses can advocate for a living wage for everyone by promoting the health and societal benefits of improving conditions for impoverished communities.

Community health nurses can be essential in promoting safe physical work environments to address employment-related health disparities. Nurses should screen all their clients for physical and psychological work-related hazards to formulate an appropriate care plan. They can also work with local and state officials and business owners to advocate for employee benefits and resources such as health insurance, paid sick leave, and parental leave.

Community health nurses can also advocate at the local, state, and federal levels for employment programs, free educational training programs, or degree programs for lower-income individuals who wish to further their education, obtain career counseling, and seek access to affordable, quality child care. Nurses specializing in occupational health often work in tandem with corporations to promote healthy work environments. Their role is to protect workers from physical injury related to repetitive lifting or poor ergonomic design and exposure to harmful chemicals and loud noises.

8.2 Neighborhood and Built Environment

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 8.2.1 Explain the link between food insecurity and food deserts.
- 8.2.2 Describe the relationship between crime and violence and health outcomes.
- 8.2.3 Define the term *built environment*.
- 8.2.4 Examine how the built environment influences health.
- 8.2.5 Assess the effect of housing and environment on health.
- 8.2.6 Explain how environmental conditions impact population health.

Healthy People 2030 objectives focus on creating neighborhoods and environments that promote the health and safety of the places in which individuals live, work, learn, and play (ODPHP, 2020b). The neighborhoods where people reside have a major impact on their health and well-being.

Food Access

Nutritious foods are an essential component of a healthy diet. Vegetables, fruits, whole grains, low-fat dairy, protein, and oils are all nutritious foods when consumed in healthy portion sizes. Healthy eating habits, defined as eating a variety of nutrient-dense foods and beverages across all food groups within calorie limits, can lower the risk of chronic disease. Foods and beverages with added sugars, saturated fat, and sodium, along with alcoholic beverages, are associated with unhealthy diets. Research has consistently demonstrated that healthy eating habits are associated with decreased cardiovascular disease, obesity, type 2 diabetes, and breast and colorectal cancer and improved bone health (ODPHP, 2020q). Therefore, access to healthy and affordable food is vital for health.

Often a result of economic insecurity and poverty, **food insecurity** is a condition in which individuals or families have limited access to adequate amounts of high-quality food (ODPHP, 2020r). Factors influencing food security include income, employment status, race, ethnicity, and disability. Food insecurity increases when income is limited or unavailable due to unemployment. In 2020, BIPOC households were more than twice as likely as the national average to struggle with food insecurity. Individuals living with disabilities are also more likely to experience food insecurity due to limited employment opportunities and health care expenses (ODPHP, 2020r). In 2020, almost 14 million U.S. households were food insecure at some point in the year, and almost 30 percent of low-income households were food insecure compared to the national average of almost 11 percent (ODPHP, 2020r). Factors influencing this disparity are thought to be related to neighborhood conditions, transportation access, and physical access to food (ODPHP, 2020r).

Healthy food choices are inaccessible in many neighborhoods because full-service grocery stores are not readily available, particularly in certain rural areas and low-income neighborhoods (ODPHP, 2020r; U.S. Department of Agriculture [USDA], 2017). These areas where residents have limited or no options for affordable and healthy foods are often termed **food deserts** (ODPHP, 2020r; RHIhub, 2020b; USDA, 2017). Limited access to healthy and affordable food sources, income level, transportation access, and distance are barriers to healthy food access for many Americans. Almost 13 percent of the U.S. population lives in low-income food deserts (USDA, 2017). Food deserts are common in locations with small populations and high rates of vacant or abandoned homes; in areas where residents have lower incomes, lower levels of education, and higher rates of unemployment; and disproportionately within BIPOC communities (The Annie E. Casey Foundation, 2021). Lack of transportation also contributes to food insecurity. Lack of or limited public transportation is a barrier to accessing affordable healthy food. Further contributing to health disparities among vulnerable populations, individuals experiencing disabilities, those with chronic diseases, BIPOC communities, and those living in rural areas are more likely to lack transportation to full-service supermarkets (ODPHP, 2020r).

THE FOOD DESERTS OF MEMPHIS

Access multimedia content (http://openstax.org/books/population-health/pages/8-2-neighborhood-and-built-environment)

This video explores food deserts by profiling two families living in Memphis, Tennessee. Their stories emphasize the contrast between the food choices available to the higher-income and lower-income areas within the city, highlighting the income and zip code divide with a 13-year life expectancy difference between the two parts of Memphis.

Watch the video, and then respond to the following questions.

1. How did you feel as you watched the video and listened to the stories? What, if anything, surprised you as you watched the video?
2. What is the relationship between the former practice of redlining and the current existence of food deserts?
3. What are some actions the community health nurse can take to address these food deserts?

In addition to accessibility issues, food affordability is a major obstacle, as healthier diets are more expensive than diets rich in processed and refined foods (The Annie E. Casey Foundation, 2021). Because nutrient-poor foods tend to be cheaper and more convenient to access than nutrient-dense foods, low-income individuals and families tend to rely on them. Convenience stores often have higher food prices with lower quality and less variety of foods than full-service supermarkets (ODPHP, 2020q). Residents of neighborhoods with fewer full-service supermarkets with fresh produce are at higher risk of obesity and diabetes, whereas rates of these conditions are lower among those who live in areas with increased access to grocery stores (ODPHP, 2020q). Studies have demonstrated a link between individuals experiencing food insecurity and higher rates of obesity and chronic diseases such as hypertension and heart disease. In children experiencing food insecurity, studies have demonstrated increased risks of obesity and developmental issues and even a negative impact on mental health (ODPHP, 2020r).

The Role of the Nurse in Addressing Food Access Disparities

Community health nurses play a major role in advocating for individuals experiencing food insecurity. School nurses nationwide have paved the way for free breakfast and lunch for students from low-income families via the National School Lunch Program (NSLP) (ODPHP, 2020r). School nurses, in conjunction with school administrators, are also at the forefront of promoting healthier food options for school-provided breakfast and lunch. Nurses both promote access to food and ensure that the food provided is nutritionally appropriate. This is one example of how community health nurses impact the health of the communities in which they serve.

Community health nurses often work with local food pantries to help families in need access food. Nurses can also help individuals obtain food benefits through programs such as Women, Infants, and Children (WIC) and the Supplemental Nutrition Assistance Program (SNAP) (ODPHP, 2020r). These government-sponsored programs provide food assistance to lower-income individuals and families. SNAP gives a monthly dollar amount, determined by income level, which must be used to purchase food. WIC is meant for pregnant, breastfeeding, or postpartum parents and for children under age five and provides nutrition education, breastfeeding support, and nutrient-dense foods (Benefits.gov, 2021). Community health nurses can advocate for increasing access to nutrient-dense foods in low-income neighborhoods to address food disparities and their subsequent negative impacts on health. At the policy level, public health nurses can be involved in policies to limit the number of fast-food restaurants in a community or to incentivize full-service supermarkets to expand into underserved neighborhoods.

Crime and Violence

Violence is a public health issue that adversely affects the target, any witnesses, the communities in which they live, and the perpetrator. It may include child abuse, firearm violence, intimate partner violence, sexual violence, or elder abuse. Violence has cumulative biological effects on the brain, neuroendocrine system, and immune response, resulting in increased incidence of depression, anxiety, posttraumatic stress disorder (PTSD), and suicide and increased risk of cardiovascular disease and premature death (Rivara et al., 2019). Repeated exposure to crime and violence is linked to an increase in negative health outcomes such as asthma, hypertension, cancer, stroke, and mental disorders (ODPHP, 2020e).

Childhood exposure to violence at home, at school, online, or in the neighborhood is considered an **adverse childhood experience** (ACE). ACEs are traumatic events such as experiencing or witnessing violence or abuse at home or in the community, having a family member attempt suicide, or any event that undermines a child's sense of safety, security, and bonding (CDC, 2022c). ACEs are linked to lifelong negative health outcomes such as chronic disease, mental illness, and substance use problems. Additionally, research has found that ACEs can negatively impact education levels, future job opportunities, and overall earning power. Evidence also links exposure to violence in childhood to an increased risk of experiencing intimate partner violence or being violent in adulthood (USDHHS Office on Women's Health, 2021). Exposure to violence as an adult is also associated with poor health outcomes, such as mental health disorders, depression, anxiety, suicidal ideation, and physical injuries from violence (ODPHP, 2020e). See Caring for Vulnerable Populations and Communities for more information on ACEs.

Individuals who are economically insecure are more likely to live in impoverished neighborhoods that lack resources and have higher rates of crime and violence (ODPHP, 2020e). Additionally, the national homicide rate is higher for BIPOC adolescents and young adults than their White counterparts (ODPHP, 2020e). Individuals who feel unsafe in their neighborhoods are more likely to avoid community gatherings and outdoor spaces, placing them at higher risk of poor physical and mental health (ODPHP, 2020e). If a community experiences violent crime, families will likely avoid utilizing public parks and partaking in outdoor physical activity out of safety concerns. This negatively affects the family, causing increased isolation and mental health stress and decreased physical activity, socialization, and play for children.

The Role of the Nurse in Addressing Violence

Strategies for public health nurses to address crime and violence include educational programs on building resilience and developing healthy interpersonal relationships. The community health nurse can collaborate to offer school-based programs that build emotional self-awareness and regulation, problem-solving, and teamwork skills to prevent violent behavior. Such educational and training programs can occur in a community center or even an outpatient community health clinic. Building resilience and emotional self-awareness and regulation skills, even from a young age, creates a culture of accountability and can reduce violence. Community and public health nurses can also offer parenting classes to help educate families on how to model resilient behaviors and give strategies for dealing with difficult parental situations. Finally, community health nurses can work with community members to provide high-quality child care, mentoring programs for young individuals, and safe, affordable after-school programs to keep children engaged with playing and learning in a supervised environment.

THEORY IN ACTION

Family Violence Prevention: Kaiser Permanente's Innovative Model

Access multimedia content (http://openstax.org/books/population-health/pages/8-2-neighborhood-and-built-environment)

In this short video, Kaiser Permanente highlights its innovative and effective model for addressing family violence and transforming the health care response to domestic violence. Community and public health nurses are well positioned in the community to utilize this approach in assessing for intimate partner and domestic violence.

Watch the video, and then respond to the following questions.

1. How does family violence impact a community?
2. What are the components of the innovative model?
3. How might a community health or public health nurse use components of this model in their communities?

The Built Environment

A community's **built environment** includes transportation access and roadways, the availability of green space, locations for community gatherings, and the buildings or other physical structures within the neighborhood (ODPHP, 2020d). Almost 20 percent of economically insecure households in the United States lack access to private transportation (Langston, 2018). Low-income individuals without a vehicle are doubly burdened if they reside in neighborhoods without adequate and affordable public transportation, such as bus routes or subways. These individuals may struggle to access schools, work, health care, and other necessary resources. Economically insecure

individuals, particularly those who identify as Black, Native American, and mixed/other race, are more likely than those who identify as White, Latina/Latino, or Asian or Pacific Islander to report dropping out of the labor force due to transportation issues (Langston, 2018).

The availability of outdoor green space and access to sidewalks and bike lanes have major health impacts on a community. A lack of green space for outdoor activities and community gatherings negatively affects residents' physical and mental health and well-being. Children need green space to play outside. Play is a means for children to learn and grow as individuals. It is difficult to socialize with groups of other children if play is limited to indoors only. Walking is a free and easy exercise activity, but residents may be hesitant to participate in this beneficial physical activity without a sidewalk or wide road shoulder to permit safe walking. Bike paths are also a cost-effective way to increase walking, biking, roller-skating, and other leisure activities and can serve as a means of transportation, but if there is not a safe way to engage in these physical activities, they will not occur.

CASE REFLECTION

Addressing the Client's Neighborhood and Built Environment

Read the scenario, and then respond to the questions that follow.

As described previously, Serena and her husband are trying to meet the basic needs of their family of five while living paycheck to paycheck. Their middle child was recently diagnosed with asthma after having numerous respiratory illnesses. The health care provider has told Serena that she should remove all carpets from the house and ensure there are no pets, woodstove smoke, or second-hand tobacco smoke near her child, as these are all possible triggers for an asthma attack. Serena is very upset, as the apartment they rent has carpet in every room except the kitchen and bathroom and her first-floor neighbors are smokers. Though Serena and her husband do not smoke, they can always smell cigarette smoke in their apartment.

1. What assessments and screenings should the nurse conduct with Serena?
2. How could the nurse assist Serena in getting some much-needed resources for her child who has asthma?
3. How might a community health nurse work with Serena and her family to find strategies to improve their living environment?

The Role of the Nurse in Addressing the Built Environment

Public health nurses are well positioned to work within the local community and government to advocate for shared public green spaces. Building community partnerships is a core policy development role for a public health nurse. From a windshield assessment of the community to raising awareness at the local level and collaborating with policymakers and community leaders, public health nurses can effect positive change within the community. Working with urban design planners and city planners, nurses can advocate for the construction of playground structures, tennis or pickleball courts, and basketball courts to afford more physical activity and community-building opportunities. School nurses can also be involved in this process by advocating for more physical education and outdoor recess time at school and by advocating for more gathering places for children and families to congregate, socialize, and play after school.

GREEN SPACE CUTS URBAN CRIME AND DEPRESSION

Access multimedia content (http://openstax.org/books/population-health/pages/8-2-neighborhood-and-built-environment)

This short video highlights how a little green space can make a big difference in low-income city neighborhoods by featuring the relationship between the environment and the health of residents living in a Philadelphia neighborhood. Community and public health nurses can be advocates and change agents, creating more green spaces in urban areas.

Watch the video, and then respond to the following questions.

1. In what ways did the neighborhood environment affect the health of its residents both before and after the

Philadelphia LandCare program?
2. Where did the intervention described in the video have the biggest impact?
3. What steps can nurses take to improve the physical environment of the clients in the communities they serve?

To find out more about the LandCare program described in the video, which is now part of the Pennsylvania Horticultural Society, visit their website (https://openstax.org/r/phsonline).

Quality of Housing

Housing quality refers to a home's physical condition and the quality of the environment (neighborhood) in which it is located. Quality housing is characterized by clean air, home safety, enough space per individual, access to heating and cooling systems, and the absence of environmental risk factors. Crowded living conditions are associated with food insecurity, infectious diseases, and poorer mental health (ODPHP, 2020k). Low-income individuals are more likely to live in older homes and homes needing maintenance and repair.

Poor housing quality and poor living conditions contribute to negative health outcomes for a variety of reasons. The presence of lead, mold, asbestos, radon, poor air quality, and overcrowding are all associated with illness and disease. Children under age six are at increased risk for adverse health outcomes due to lead exposure because their bodies are rapidly growing and developing and because they tend to put their hands and other objects into their mouths. Children can be exposed to lead from touching, swallowing, or breathing in lead dust from lead paint, pipes, and water faucets. Lead exposure can result in slowed growth and development, damage to the brain and nervous system, learning and behavioral problems, and hearing and speech issues, all of which may result in lower IQs and underperformance in school (CDC, 2022f). Many of the outcomes associated with lead exposure are permanent; for example, lead poisoning may result in infertility, hypertension, heart disease, renal disease, and even premature death (NIOSH, 2021). Even low levels of lead in the blood have been linked to negative outcomes in a child's attention span and academic achievement (CDC, 2022f).

Many modifiable environmental risk factors related to housing are associated with negative health outcomes. Water issues such as leaking are associated with mold growth, increasing the likelihood of childhood asthma and triggering asthma exacerbation. Mold is also associated with respiratory illnesses, coughing, and wheezing. Exposure to asbestos, a class of mineral fibers used in various industrial products like insulation, cement, textured paint, and shingles, may place individuals at increased risk of developing several health conditions. Asbestos in good condition is not considered harmful, but handling asbestos products may release the fibers into the air; if inhaled, they accumulate in the lungs and may cause lung cancer, asbestosis, pleural disease, and mesothelioma (Agency for Toxic Substances and Disease Registry, 2016; CDC, 2023). While most modern products do not contain asbestos, homes built before the 1970s may have asbestos, placing families living in older rental homes at higher risk of exposure to it (U.S. Consumer Product Safety Commission, n.d.). Exposure to vermin such as cockroaches and rodents causes an increased risk for developing asthma and allergies and places exposed individuals at increased risk of psychosocial distress (CDC, 2009).

The Role of the Nurse in Addressing Quality of Housing

Community health nurses can promote the overall health and well-being of an entire neighborhood and community by addressing the quality of housing. Widespread deterioration in neighborhoods can negatively impact the mental health of residents in that community. The social and economic conditions in a neighborhood affect health outcomes as much as the quality of housing, further disadvantaging low-income groups, creating even more health disparities. To fulfill their core assessment function, community and public health nurses should assess the lived experience of community members; appropriately screen for issues such as lead poisoning, mold-related illnesses, mental health illness, and communicable diseases; and then work to develop policies to address these issues. By championing new laws and regulations on housing quality and strengthening support for affordable housing, the nurse is well positioned to lead effective change. Past successes in public health efforts on quality housing include banning lead paint products and creating local building codes and state statutes governing rental properties.

COMMUNITY HEALTH & WELLNESS: HEALTH SCREENINGS

Access multimedia content (http://openstax.org/books/population-health/pages/8-2-neighborhood-and-built-environment)

In this short video, FIRST 5 Santa Clara County discusses health screenings using evidence-based, standardized screening tools to identify health needs for follow-up assessments. These screenings are completed in elementary schools, preschool programs, and public health clinics, as good health is linked to readiness to learn, fostering better educational opportunities for children.

Watch the video, and then respond to the following questions.

1. How are health and education related?
2. What are some of the barriers to obtaining health care described in the video?
3. What is meant by the term *high touch, high tech*, and how is it related to the role of the nurse?

Environmental Conditions

The most common environmental conditions that may negatively impact population health are air quality, water safety, and extreme weather. Indoor and outdoor air quality is a major contributor to health.

Air Quality

Globally, air pollution is estimated to be responsible for nine million deaths per year, equating to one in six deaths worldwide (Fuller et al., 2022). The USDHHS reports that air pollution is associated with 100 to 200 thousand annual deaths in the United States (ODPHP, 2020p). Air quality is affected by pollution from smoke, dust, carbon monoxide, ozone, and nitrogen oxides. Indoor air quality can be affected by environmental smoke, cooking oils and smoke, secondhand smoke, and exposure to mold or radon. Outdoor air pollution can be affected by environmental smoke, car exhaust fumes, and other outdoor air pollutants. Pollution occurs with motor vehicles and industrial plant emissions and fires (Figure 8.4). Poor air quality can cause or exacerbate respiratory illness, and air pollution has been linked to lung cancer and heart disease. Urban communities tend to have more sources contributing to pollution and therefore tend to have worse air quality than more rural areas (ODPHP, 2020p). BIPOC communities disproportionately encounter more air pollution than predominantly White communities due to a history of structural racism. BIPOC neighborhoods are more likely to be located near factories and other industrial facilities that emit more pollution due to discriminatory city planning (ODPHP, 2020p). See Structural Racism and Systemic Inequities for more information.

Exposure to loud noises and living in close proximity to hazardous waste sites are other environmental community factors that adversely impact health. Traffic and construction contribute to noise pollution, which is associated with hearing loss and has been found to elicit stress responses in the body. BIPOC communities and low-income communities are disproportionately impacted by noise pollution. Living near hazardous waste sites or industrial facilities is also associated with increased rates of cancer, respiratory disease, skin conditions, and adverse pregnancy outcomes compared to those not living near these sites (Taylor, 2022).



FIGURE 8.4 Poor air quality affects the residents living in this area. (credit: "Wildland Urban Interface at Sherburne National Wildlife Refuge" by Russ Langford/USFWS/Flickr, Public Domain)

Water Quality

Access to safe, regulated water for drinking, bathing, and cleaning is an important determinant of health. While the U.S. water supply is generally considered safe, it can be contaminated with pathogens or chemicals that can cause illness and disease (ODPHP, 2020e). Each year, an estimated 7.2 million individuals in the United States become ill from waterborne diseases such as cryptosporidiosis, giardiasis, pseudomonas, and vibriosis (CDC, 2020b). See Epidemiology for Informing Population/Community Health Decisions. The Safe Drinking Water Act (SDWA) allows the Environmental Protection Agency (EPA) to set and enforce standards for drinking water quality (CDC, 2022e). Despite these regulations, water quality can still be affected by the natural and built environment and by sociopolitical factors. Studies have found a higher risk of exposure to water contaminants, like nitrates, and arsenic, and to poor water quality in BIPOC communities and communities with lower incomes (ODPHP, 2020p). In addition, the SDWA does not regulate private wells, placing some individuals and families at increased risk for water-related issues if their wells are not properly maintained, particularly those living in rural areas without municipal water sources. Well water also has higher levels of nitrates than water from municipal water systems (ODPHP, 2020p). Arsenic is associated with nausea, vomiting, anemia, abnormal heart rhythms, and paresthesias, and nitrates decrease the blood's ability to carry oxygen to the tissues and can cause hypotension, tachycardia, headaches, gastrointestinal upset, and vomiting (CDC, 2022d).

THE ROOTS OF HEALTH INEQUITIES

Water Quality

Access to safe drinking water is a social determinant of health. Consuming contaminated water has serious negative health consequences, such as is being seen in Flint, Michigan, where children are still experiencing the consequences of lead toxicity caused by unsafe drinking water. The problem began in April 2014, when, for economic reasons, the city changed the source of its water supply from Lake Huron to the Flint River without first taking necessary corrosion control measures. This switch caused water distribution pipes to corrode, ultimately causing dangerously high levels of lead to leach into the drinking water supply. Soon after the change, residents started complaining about the water quality, noting discoloration, smell, and taste, but they were largely ignored.

Pediatrician Dr. Mona Hanna-Attisha was concerned with the number of elevated lead levels she was seeing in her clinic. She compared the blood lead levels of 1,700 Flint children prior to the water switch with their levels after the switch and found that in areas where the water lead levels were highest, there was the greatest increase in children's blood lead levels. In 2015, Dr. Hanna-Attisha sounded the alarm about her findings and held a press conference. Two weeks later, Michigan governor Rick Snyder ordered the water to be switched back to Lake Huron (Alfonsi, 2020). However, the corroded pipes continued to release lead into the drinking water. The governor declared a state of emergency in January 2016 (Ruckart et al., 2019).

Lead poisoning is a preventable environmental health threat to children, who are most susceptible to the adverse effects of lead exposure. There is no safe level of lead; it is an irreversible neurotoxin and impacts cognition and behavior, resulting in potential developmental delays and lowered IQ levels. Lead toxicity can affect every body system, causing neurological, renal, hematological, endocrine, gastrointestinal, cardiovascular, reproductive, and developmental effects. Lead also crosses the placenta, placing pregnant clients exposed to lead in danger of exposing their developing fetus. Low levels of lead in developing babies have been found to affect cognitive development and behavior (CDC, 2020a; Ruckart et al., 2019). Following the Flint water crisis, an estimated 14,000 children under the age of six may have been exposed to lead in their water. "Three years after the crisis began, the percentage of third graders in Flint who passed Michigan's standardized literacy test dropped from 41% to 10%" (Alfonsi, 2020, para. 32).

Flint is a city with a majority BIPOC population, and 40 percent of the population lives in poverty (Kennedy, 2016). Do you think complaints of discolored and foul-smelling water would have been ignored for 18 months if the demographic profile of the Flint population were different? What is the role of a community health nurse in addressing this public health issue? What interventions could the community health nurse implement to assist families affected by this crisis?

Extreme Weather

Severe weather events such as heat waves, tornadoes, and floods may cause direct injury and death or infrastructure damage that leads to negative health effects. Individuals who experience severe weather may undergo declines in mental health and worsening chronic medical conditions. Often, during severe weather events, the health care system is unable to function normally, creating a backlog of clients in addition to the increased number of individuals who require medical care from direct effects of the weather.

Severe weather events correlate with climate change, a long-term change in weather patterns that describes how rising temperatures and changes in amounts of rainfall impact the planet, with rising sea levels, shrinking glaciers, and associated changes in the blossoms of flowers and plants (Denchak & Turrentine, 2021). More than an environmental issue, severe weather due to climate change is a "fundamental threat to human health and well-being" (Levy et al., 2018, p. 1). The effects of climate change, with increasing numbers of severe weather events and shifts in weather patterns, are expected to continue. Variable weather can include unusually harsh conditions in areas that are not used to and are therefore not prepared to deal with them. Individuals and families in affected regions may experience new or exacerbated financial hardships as they manage living with extreme heat, drought, floods, or snowfall.

In areas unaccustomed to warm weather, the warming climate increases the risk of vector-borne diseases and waterborne pathogens. Warmer temperatures increase the geographic distribution of where vectors, such as mosquitoes and ticks, can survive, breed, and spread disease. Increasing rainfall, often secondary to warming temperatures, can produce standing water, creating more breeding grounds for mosquitoes. Warmer temperatures also increase the likelihood of waterborne diseases, as warmer temperatures facilitate pathogen survival, and heavy rainfall further mobilizes pathogens and compromises water and sanitation systems (Levy et al., 2018). Extreme heat is associated with respiratory and heat-related illnesses. These heat-related ailments are especially prevalent in urban areas, where the concrete footprint traps and intensifies heat, creating what is referred to as an urban heat island, a city or metropolitan area with a higher temperature than the rural areas around it.

Weather changes disproportionately affect BIPOC communities and those with low incomes due to issues around location, access to resources, and quality of infrastructure. Additionally, individuals who are Hispanic or Latina/Latino are more likely to work construction and agriculture jobs that expose them to more severe weather (ODPHP, 2020p). A study found that in 169 of the 175 largest U.S. urban areas, BIPOC individuals were more likely than White individuals to live in urban heat islands. The temperature difference between an urban heat island and an outlying area can be as high as 20 degrees Fahrenheit (Ndugga & Artiga, 2021). See Environmental Health for more information.

HOW THE ENVIRONMENT AFFECTS OUR HEALTH

Access multimedia content (http://openstax.org/books/population-health/pages/8-2-neighborhood-and-built-environment)

This short CDC video discusses the intersection of the environment and the social determinants of health, highlighting the importance of environmental health.

Watch the video, and then respond to the following questions.

1. What are some examples of how the environment can negatively affect health?
2. How might a nurse use tools like the CDC's Environmental Public Health Tracking Network described in the video when caring for clients in their community?

The Role of the Nurse in Addressing Environmental Conditions

Community and public health nurses work within the core functions of assessment and policy development to monitor environmental conditions and their effects on health outcomes. They assess and monitor population health, investigating and addressing health hazards and their root causes. In areas with high levels of air pollution, these nurses monitor the community's respiratory health, as poor air quality can cause or exacerbate respiratory health conditions. For any increased prevalence of air pollution-related respiratory issues, these nurses educate the public and mobilize community partnerships to address the issue. By cataloging the detrimental health effects of air

pollution, public health nurses have evidence to support the implementation of new laws and policies to address its causes. For residents struggling with poor indoor air quality, educating individuals and families on the importance and use of indoor air filters is a great mitigating and possibly a primary prevention intervention.

Community health nurses assess poor health outcomes related to contaminated water and investigate or address these health outcomes. While the EPA sets standards for water quality within public municipal water systems, compliance is often left to local governments. Once a link between water quality and health outcomes is established, community and public health nurses communicate with and educate the local government and the public, and they mobilize efforts to address the root cause. Using legal and regulatory avenues, the public health nurse assures that the community can access one of the most basic human rights, safe water. See Pandemics and Infectious Disease Outbreaks for more information on waterborne disease.

Community and public health nurses should familiarize themselves with environmental health concerns and join environmental nursing groups such as the Alliance of Nurses for Healthy Environments (ANHE) (https://openstax.org/r/envirn) to stay current on the latest climate change information. A national nursing organization focused on the intersection of health and the environment, ANHE offers many learning opportunities, with podcasts, webinars, newsletters, and other events. Its goal is to advance research, incorporate evidence-based practice on the environment, and influence policy (ANHE, n.d.). Massachusetts General Hospital Institute of Health Professions (MGH IHP) has opened a Center for Climate Change, Climate Justice, and Health (https://openstax.org/r/mghihp), created and driven by nurse scholars passionate about tackling climate change issues. This center offers many opportunities for health professionals to learn about the issues and to "address mitigation, adaptation, and resilience through education, practice, research, and service related to the health effects of climate change" (MGH IHP, 2023, para. 1).

Nurses can use information from these resources to implement community interventions and to advocate for policy changes to address climate change. Some community interventions require community health nurses to collaborate with local government, city planners, and urban designers to investigate ways to mitigate the effects of climate change, such as promoting the planting of more trees and greeneries, on the street and on rooftops, to relieve heat and improve air quality. At the family level, the community health nurse can direct families struggling with heating or electricity costs to resources such as low-income home energy assistance programs.

8.3 Educational Environment, Access, and Quality

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 8.3.1 Describe the association between health indicators and educational level.
- 8.3.2 Explain the implications of poverty, disabilities, and discrimination on learning and access to quality education.
- 8.3.3 Discuss the intersection between the social determinants of health and health literacy.

The evidence is clear: individuals with higher levels of educational attainment are more likely to live longer and healthier lives (ODPHP, 2020c). Higher levels of educational attainment refer to the education a person completes after receiving a high school diploma, such as earning an associate or baccalaureate degree. Education is one of the most important modifiable SDOH, as higher education is associated with increased healthy lifestyle behaviors and improved health outcomes. Those with higher educational attainment have greater economic resources and better access to health care (RHIhub, 2020a).

In contrast, a person is said to have low educational attainment if they have not completed high school. This is associated with economic insecurity and can result in overall worse health outcomes. The cycle of poverty and economic insecurity affects both educational access and the quality of education. Individuals in impoverished neighborhoods often have less access to community resources and wield less effective political influence, rendering them less able to demand higher-quality schools. Lower-quality schools lack the resources to support students, resulting in significant educational opportunity gaps based on neighborhood and school district. For example, children from low-income families are more likely to struggle with math and reading. They are less likely to graduate from high school and go to college than children from higher-income families (ODPHP, 2020c). Academically gifted children attending public schools in low-income areas are also less likely to have access to gifted and talented programs if their schools do not offer these resources or if their families cannot afford to access them elsewhere

(Yaluma & Tyner, 2021). The stress of living in poverty can adversely affect a child's brain development, making it harder for them to do well in school (ODPHP, 2020c). This can have a domino effect, as a college education is associated with safer and higher-paying jobs; individuals who do not graduate from high school or go to college are more likely to have chronic health problems (ODPHP, 2020c).

THE ROOTS OF HEALTH INEQUITIES

The Educational Roots of Health Inequities

The educational roots of health inequities result from institutional and systemic biases in policies that separate individuals into either resource-rich or resource-poor neighborhoods, as these neighborhoods dictate school access. This separation into resource-rich or resource-poor neighborhoods is principally based on socioeconomic position and race, resulting in wide health disparities in life expectancy and health outcomes, as education is a major factor in shaping the course of an individual's life.

(See Weinstein et al., 2017.)

Early Childhood Development and Education

A child's first 5 years of life are critical for cognitive, emotional, and physical growth and development. A healthy, safe, and stable early childhood helps determine if a child will have a healthy, happy life. A variety of social, environmental, and economic factors greatly affect early childhood development. Risk factors for potential developmental delays and future poor health outcomes include early life stressors, low income, and lack of access to quality early educational programs. In contrast, protective factors include higher socioeconomic status (SES), stable relationships with caregivers, and access to quality early education programs (ODPHP, 2020m).

As mentioned previously, early life stressors and ACEs impact a child's health. Early life stressors such as physical abuse, family instability, poverty, and unsafe environments contribute to developmental delays and poor health outcomes later in life. These children may lack adequate coping skills and have difficulty regulating their emotions and behaviors, thereby struggling in early childhood education programs (ODPHP, 2020m). Inadequate social functioning skills like lack of impulse control, difficulty forming relationships, and trouble regulating behaviors can negatively impact a child's ability to learn or connect with peers in early elementary school programs.

Poverty, by itself, negatively impacts children's academic achievement. Research has demonstrated that children from disadvantaged backgrounds are more likely than other children to repeat grades and drop out of high school (ODPHP, 2020m). Children from communities with higher SES and more resources have been shown to experience safer and more supportive environments and better early education programs. Quality early childhood programs help foster the mental and physical development of children. They are linked to increased earning potential and higher educational attainment (ODPHP, 2020m).

Early childhood education programs can help reduce educational gaps. Head Start (https://openstax.org/r/eclkc) is a federally funded early childhood program that supports children from low-income families. It provides comprehensive services and strives to improve health, increase learning and social skills, and prepare young children for kindergarten. Studies have demonstrated that children who experience quality early education programs like Head Start that are comprehensive and include health care and nutritional components partake in less risky health behaviors such as binge drinking alcohol, smoking cigarettes, and using illegal substances and have lower risks for heart disease, obesity, hypertension, hyperglycemia, and hypercholesterolemia (ODPHP, 2020m). Quality comprehensive early childhood development and education programs reduce risky heath behaviors and prevent or delay the onset of chronic disease in adulthood.

The quality of education in elementary schools is an important determinant in the health and well-being of children. Receiving a high-quality elementary school education reduces educational disparities in children. Children attending a school with safety concerns, limited health resources, and low teacher support are more likely to experience adverse physical and mental health. Until disparities in access to quality early childhood development programs and quality school systems are addressed, children without access will suffer worse health outcomes (ODPHP, 2020m).

THEORY IN ACTION

Brain Architecture in Early Childhood

Access multimedia content (http://openstax.org/books/population-health/pages/8-3-educational-environment-access-and-quality)
In this University of Minnesota Center for Early Education and Development video, Dr. Megan Gunnar discusses the impact of early childhood development on the future abilities and health outcomes of children.

Watch the video, and then respond to the following questions.

1. How does early childhood development affect learning later in life?
2. List five ways families and communities can help build a strong and proper brain foundation in early childhood.
3. How does a strong brain foundation impact health outcomes?

High School Graduation

Most jobs require at least a high school (secondary) education. Individuals who do not complete high school have limited employment opportunities, earn lower wages, and are more likely to live in poverty. Disparities in high school completion rates exist by racial and ethnic groups with Black and American Indian/Alaska Native students having the lowest graduation rates (ODPHP, 2020o). Students' home and school environments impact their chances of graduating from high school. High school graduation can be affected by family support, the school district, resources within the school, and the greater community.

Lack of parental involvement in school is linked to lower graduation rates. Teacher quality is also a critical factor; students who believe their teachers are of high quality and that they care are more likely to graduate, whereas students who feel their teachers are uninterested in teaching are more likely to drop out (ODPHP, 2020o). Violence and safety concerns also affect high school dropout rates. Low-income families often live in neighborhoods where schools lack resources and underperform. These factors contribute to higher dropout rates and lower academic achievement. In 2016, low-income families were almost four times more likely than high-income families to have a student not complete high school (ODPHP, 2020o). Economically insecure BIPOC communities are disproportionately represented with lower educational attainment in comparison to economically insecure White individuals. Approximately 85 percent of economically insecure White adults have at least a high school diploma, whereas only about 50 percent of economically insecure adults who identify as Latina/Latino have attained their diploma (Langston, 2018).

Reading skill level in third grade is linked to high school completion rates. One Annie E. Casey Foundation study found that almost a quarter of students with below-basic reading skill level in the third grade failed to finish high school compared with 4 percent of students with third-grade proficient reading skills who failed to finish high school (ODPHP, 2020o). Twenty-six percent of students who were not reading at the proficient level in third grade and who had lived in poverty for at least one year during their school years did not finish high school on time or at all (ODPHP, 2020o). Teen pregnancy and parenthood are also risk factors for dropping out of high school, as only half of teens who have given birth earn a high school diploma.

Many positive outcomes come with graduating from high school. Individuals with a high school diploma have a decreased risk of premature death, more employment opportunities, and a higher lifetime earning potential (ODPHP, 2020o). Lacking a high school diploma is associated with self-reported overall poor health and chronic health issues such as asthma, diabetes, heart disease, hypertension, and hepatitis. Additionally, individuals with a high school diploma who are employed full-time earn almost 25 percent more than those who are employed full-time without a high school diploma (ODPHP, 2020o). Supporting individuals to graduate high school is an important public health intervention.

Enrollment in Higher Education

Higher education refers to any education after high school, including community colleges, vocational and technical schools, colleges, and universities. Many higher-paying jobs require a college degree; less than one in five

economically insecure individuals have a college degree, whereas half of economically secure individuals do (Langston, 2018). College graduates have more employment options than individuals without college degrees. On average, lifetime earnings for individuals with a bachelor's degree are double those of individuals without a degree (ODPHP, 2020n). Higher education is associated with better-paying, less hazardous jobs. This all supports an individual's health, as the higher their income, the greater their ability to secure material and social resources like higher-quality housing and social status (ODPHP, 2020n). Overall, higher education is associated with improved health and a decreased risk of premature death. Individuals with more education are more likely to partake in healthy behaviors, such as drinking less alcohol, exercising regularly, and seeking preventive health care when needed (ODPHP, 2020n).

How well an individual's middle and high schools prepare them for college greatly influences their likelihood of graduating. Students who attend high schools that do not provide honors or advanced courses may be less academically prepared for college-level work than students who attend high schools that provide these courses (ODPHP, 2020n). Students without access to a consistent guidance counselor may not receive help navigating the college application and admissions process. In many low-income neighborhoods, schools lack the financial resources necessary to offer these courses and dedicated guidance counselors, potentially lowering college admissions rates for their students (ODPHP, 2020n).

While the diversity of undergraduate college students is increasing, BIPOC individuals still demonstrate lower levels of academic persistence in college compared to their White counterparts (ODPHP, 2020n). Black and Hispanic individuals also have lower college enrollment and graduation rates. These lower enrollment and graduation rates may be affected by the discrimination, social isolation, and stress of debt accumulation that these students face (ODPHP, 2020n). BIPOC students experience discrimination at rates two to four times higher than White students, and in a study up to a quarter of these students reported feeling that the discrimination they experienced adversely affected their academic outcomes (Stevens et al., 2018). Barriers to higher education exist, but strengthening the curriculum in school districts in lower-income communities and offering more teacher and guidance counselor support can help to better prepare students for the admissions process and the rigors of college (ODPHP, 2020n).

The Role of the Nurse in Addressing Educational Disparities

Community and public health nurses play an important role in early childhood, primary, and secondary education. Partnering with school nurses and administrators, community and public health nurses can use their assessment data as a foundation to influence policy development at the local level. By analyzing trends in the data and presenting this information to the local school committee and city officials, nurses can advocate for meaningful change, such as creating or expanding Head Start programs to ensure equal access to evidence-based successful early childhood education programs. Community and public health nurses can also advocate for increased funding for school districts to create high-quality primary education. Community and public health nurses can advocate for and support transition programs to support students moving from middle to high school. Additionally, nurses can advocate for advanced courses and other programs that better prepare students for the future. These types of programs can encourage students to continue with their studies.

EDUCATION GAP: THE ROOT OF INEQUALITY

Access multimedia content (http://openstax.org/books/population-health/pages/8-3-educational-environment-access-and-quality)

In this video, Harvard University's Director of the Achievement Gap Initiative, Ronald Ferguson, discusses educational inequality and encouraging efforts that are being made in Boston to address these gaps. This is an example of a community-level approach to addressing educational inequalities that a community and population health nurse can spearhead and lead.

Watch the video, and then respond to the following questions.

1. Why do you think educational gaps exist?
2. How do you think the Boston Basics program can help address these educational gaps?
3. What is the community health nurse's role in addressing and responding to these educational gaps?

Language and Literacy

Literacy refers to listening and speaking skills, reading and writing skills, and cultural and conceptual knowledge. Health literacy refers to an individual's ability to find, understand, and use health-related information (ODPHP, 2020t). Low literacy skills are linked with lower educational attainment, poorer health outcomes, and chronic diseases like diabetes and cancer (ODPHP, 2020l).

Limited English proficiency (LEP) can be a barrier to accessing health care services. Individuals with limited English proficiency tend to be immigrants to the United States who may speak another language at home. In 2019, almost 22 percent of the U.S. population ages five and above spoke a language other than English at home, and among these individuals, 39 percent reported speaking English less than very well (ODPHP, 2020l). Individuals who identify as having limited English proficiency are less likely to have a primary care provider and, therefore, less likely to have preventive health care (ODPHP, 2020l). These individuals also encounter difficulty following medication instructions and communicating with health care providers.

Many barriers impede individuals with limited English proficiency from receiving appropriate health services. A lack of trained interpreters and culturally responsive health care providers adversely affects their health. Cultural barriers, language barriers, and financial difficulties create significant obstacles for immigrants trying to access health information (ODPHP, 2020l). Language barriers create a quality-of-care issue, especially if the provider is not linguistically competent, and a lack of quality trained interpreters impedes access to mental health services for individuals with limited English proficiency (ODPHP, 2020l). See Culturally and Linguistically Responsive Nursing Care for more information on this topic.

CASE REFLECTION

Client Education

Read the scenario, and then respond to the questions that follow.

Serena and her children attend the local community center's biannual fair. Twice a year, the community center hosts this one-day event for the community's residents, where they have food, games, health screenings, health promotion education events, yoga, senior center representatives, and sign-up sheets for various community groups. Serena decides to have her blood pressure (BP) taken at the screening tent. Her BP reading is 162/92. The nurse takes it manually and repeats it two times, but the readings are similar. The nurse asks Serena about any medical history of daily medications, but Serena shakes her head no. She feels lucky to be healthy overall and does not take any medications except for ibuprofen for headaches occasionally.

1. What factors could be contributing to Serena's elevated blood pressure?
2. What lifestyle questions could the nurse ask Serena to develop a health teaching plan for her?

8.4 Social and Community Context

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 8.4.1 Describe the impact of civic participation on individual health.
- 8.4.2 Define discrimination and discuss its impact on the social determinants of health.
- 8.4.3 Explain how incarceration is linked to the other social determinants of health.
- 8.4.4 Discuss the importance of social capital and cohesion in relation to health outcomes.

The social and community context determinant of health includes civic participation, discrimination, incarceration, and social cohesion. Because relationships with family, friends, colleagues, and neighbors greatly impact health and well-being, Healthy People 2030 focuses on increasing social and community support (ODPHP, 2020f). Positive relationships help buffer the negative effects of unsafe neighborhoods, discrimination, and poverty and, by extension, improve overall health and well-being (ODPHP, 2020f).

Civic Participation

Civic participation refers to a range of activities that benefit the community and provide health benefits for

participants (APA, 2023). Civic participation helps build **social capital**, the value gained from having positive interactions and connections between people that enables the community to function effectively and collaboratively in problem-solving efforts. It is these relationships and networks that support the neighborhood and community. By building social capital via civic engagement, members of civic groups are more likely to be physically active and to engage in meaningful activities, providing a sense of purpose (ODPHP, 2020g). Examples include volunteering at community parks, nature reserves, senior centers, community centers, and adult day centers. It can also include civic engagement in the form of environmentalism, education, recycling efforts, composting, farming, and community gardening. Overall, volunteers experience increased psychological well-being and emotional health (ODPHP, 2020g), and adult volunteers aged 60 and above have a lower risk of cognitive impairment (Infurna et al., 2016). Community gardening is associated with increased neighborhood pride, motivation to be involved, and access to healthy foods (Figure 8.5) (ODPHP, 2020g). Group membership has also been found to increase social capital and benefit members by increasing opportunities for social gatherings. Groups such as the Lions Club, Girl Scouts, and Rotary International clubs can be formal, and there can be informal groups, such as book clubs and walking groups (ODPHP, 2020g). Ultimately, individuals and families who are active in their community and have connections with other individuals in their community are happier and healthier.



FIGURE 8.5 Volunteering at a community garden allows residents to socialize and access fresh produce. (credit: "Community Garden" by Kevin Krejci/Flickr, CC BY 2.0)

Discrimination

As discussed in Structural Racism and Systemic Inequities, **discrimination** refers to unfair treatment of individuals and groups based on certain characteristics such as race, ethnicity, gender, age, religion, sexual orientation, and ability (ODPHP, 2020h). It assigns value based on the social interpretation of how one looks or acts, and it manifests in social actions aimed at protecting more privileged groups at the expense of less privileged ones (ODPHP, 2020h). Discrimination is prevalent in the United States, where 63 percent of adults report experiencing discrimination every day, impacting a variety of population groups, such as older adults, certain ethnic and racial groups, individuals identifying as lesbian, gay, bisexual, transgender, and queer/questioning, (LGBTQ), and individuals experiencing disabilities (ODPHP, 2020h). Discrimination is a public health threat. It can precede stress-related emotional, physical, and behavioral changes, resulting in adverse health outcomes across the age spectrum (APA, 2022). These adverse health outcomes include tachycardia, anxiety, hypertension, and gastrointestinal ulcers that lead to negative long-term health outcomes over time. Caring for Vulnerable Populations and Communities discusses the effects of discrimination on health outcomes in more detail.

Discrimination occurs at both the individual and structural levels. **Structural discrimination** refers to institutional policies, systems, laws, and practices that limit individuals' and populations' opportunities, resources, and power based on race, ethnicity, gender, ability, SES, and religion. These deeply rooted practices and beliefs propagate pervasive unjust treatment and oppression of individuals (Braveman et al., 2022).

Discrimination based on race has been linked to significant disparities in health outcomes, attributed to the cumulative effects of racism on the body. Structural racism in health care often results in Black clients receiving poorer-quality care. The 2019 National Healthcare Disparities Report found that White clients receive a better quality of care than almost 41 percent of Black clients (Taylor et al., 2019). In 2018, non-Hispanic Black infants in

the United States had 2.4 times the infant mortality rate of White infants (USDHHS Office of Minority Health, 2021). This disparity is rooted in racism; structural racism has resulted in Black women receiving poorer-quality care. On an individual level, the stress from enduring discrimination and racism is cumulative and triggers biological processes that places these women at higher risk for pregnancy-related complications such as preeclampsia, eclampsia, embolisms, and mental health related issues (Taylor et al., 2019). Structural Racism and Systemic Inequities discusses race-based structural discrimination in more detail.

THEORY IN ACTION

What Is Intersectionality?

Access multimedia content (http://openstax.org/books/population-health/pages/8-4-social-and-community-context)

This animation defines *intersectionality* and explores the reasons why common approaches of addressing discrimination fall short in addressing all the negative factors that may hinder an individual's well-being.

Watch the video, and then respond to the following questions.

1. How would you explain intersectionality?
2. How can the nurse apply the concept of intersectionality in community health nursing?
3. Can you think of any client encounters from clinical or work experiences where you witnessed the intersection of multiple forms of discrimination at one time? How did this make you feel?

Incarceration

Incarceration refers to confinement in a prison or a jail. Incarceration affects the health of those incarcerated and their families and communities. BIPOC communities and individuals with lower levels of education are disproportionately affected by higher incarceration rates due to the federal policies of the 1960s and 1970s resulting in increased police surveillance and mass incarceration. As of 2018, Black Americans were incarcerated at more than five times the rate of White Americans (Gramlich, 2020). That year, Black Americans represented approximately 12 percent of the U.S. adult population, yet they represented 33 percent of the incarcerated population, while White Americans represented 63 percent of the U.S. adult population and comprised 30 percent of the incarcerated population (Gramlich, 2020). During this same time period, Hispanic Americans represented 16 percent of the U.S. adult population but accounted for 23 percent of the incarcerated population (Gramlich, 2020). Data indicates that White men without a high school diploma or General Education Development (GED) equivalent have a significantly higher risk of being incarcerated (1 in 8) when compared to their more educated peers (1 in 57) (ODPHP, 2020i). Communities with higher rates of poverty and unemployment are disproportionately burdened by higher incarceration and recidivism (being arrested or incarcerated again) rates (ODPHP, 2020i). Structural Racism and Systemic Inequities and Caring Across Practice Settings discuss issues related to incarceration in more detail.

Individuals with a history of incarceration have been found to have worse physical and mental health compared to the general population. Women in this demographic are more likely to have experienced ACEs than women not in the criminal justice system, illustrating how early childhood experiences place certain individuals at higher risk for adverse life outcomes (ODPHP, 2020i). Individuals who have experienced incarceration have higher rates of mental health disorders, hypertension, asthma, cancer, arthritis, tuberculosis, hepatitis C, and HIV (ODPHP, 2020i). This heavy disease burden has implications for when these individuals reenter the community. Already at a financial disadvantage, they may have trouble finding employment and a place to live given their criminal record and lack the resources to seek the medical care needed to manage their conditions. This reinforces the cycle of poverty and poor health outcomes. The United States releases millions of individuals from jail and prison each year, yet recidivism is fairly common, as more than 50 percent of individuals are incarcerated again within 3 years of their initial release. This may be due to the obstacles these individuals face when reentering society (ODPHP, 2020i).

Incarceration often negatively impacts the families of those individuals who are incarcerated. Almost half of incarcerated individuals have minor children, about 19 percent of whom are age 4 or younger (Wang, 2022). Having a parent incarcerated is considered an ACE because it places these children at higher risk for cognitive and health-related challenges throughout their lives and because they are more likely to live in poverty and be homeless

(ODPHP, 2022i). These children have higher rates of developmental delays, learning difficulties, speech and language issues, attention disorders, and aggressive behaviors, and they are up to five times more likely to be involved with the criminal justice system than children without incarcerated parents (ODPHP, 2020i). Illustrating the generational effects of parental incarceration as an ACE, many incarcerated parents also grew up in challenging situations:

- 17 percent spent time in foster care.
- 43 percent are from families that received public assistance.
- 19 percent lived in public housing before the age of 18.
- 11 percent were homeless at one point before the age of 18.
- 32 percent had or currently have an incarcerated parent (Wang, 2022).

Community and public health nurses have a role in identifying children who are at risk due to parental incarceration. After identification, nurses can begin a targeted approach to secure access to resources and educational programs aimed at supporting these children and their caregivers. This involves an interprofessional team of school nurses, guidance counselors, and therapists and early childhood educational programs for those that qualify. Community and public health nurses can collaborate with the justice system to advocate for programs such as drug treatment courts to help keep individuals out of prison while treating their addiction (ODPHP, 2020i). Correctional nurses can provide and advocate for comprehensive health services during incarceration to address the individual's holistic needs (ODPHP, 2020i; see Caring Across Practice Settings). Community nurses can help individuals who reenter the community access health care, employment resources, food, and housing.

Social Cohesion

Social cohesion refers to the strengths of relationships within a community (ODPHP, 2020j). An indicator of social cohesion is the amount of social capital within a community. Places of worship, community centers, libraries, and families are common sources of social capital. **Collective efficacy** is another aspect of social cohesion and is based on trust. It refers to a community's ability to create change and influence behavior through social norms (ODPHP, 2020j). This is associated with improved self-rated health, lower rates of neighborhood violence, and improved access to medical care, healthy food, and places to exercise (Matsaganis & Wilkin, 2015).

Research has demonstrated that high levels of social support positively influence health outcomes such as healthier eating habits, exercise, and even dealing with stress (ODPHP, 2020j). For example, social support contributes to lower atherosclerosis levels (Shah et al., 2021) and is a protective barrier to the harmful consequences of discrimination for many first-generation immigrants (Szaflarski & Bauldry, 2019). Many studies have linked social isolation to detrimental health effects and increased overall mortality, especially in older adults (ODPHP, 2020j). The CDC considers loneliness and social isolation in older adults a significant public health threat, with almost one quarter of adults ages 65 and older considered socially isolated (CDC, 2019). Social isolation also disproportionately affects vulnerable populations, including immigrants and lesbian, gay, bisexual, and transgender (LGBT) populations (CDC, 2019). Social isolation and loneliness are associated with the following health outcomes (CDC, 2019):

- 50 percent increased risk of dementia
- 29 percent increased risk of heart disease
- 32 percent increased risk of stroke
- Higher rates of depression, anxiety, and suicide

Social networks are foundational to a healthy and thriving community. They create social cohesion, can spread positive health behaviors, and give a sense of community to individuals and families (ODPHP, 2020j). Community and public health nurses are well positioned to foster the development of social networks, especially in vulnerable populations. Through senior centers, councils on aging, ethnic centers, local Boys and Girls Clubs, local Y clubs (formerly known as the YMCA), libraries, local government offices, and assisted living facilities, community health nurses can nurture the development of community groups and events (Figure 8.6). By helping to develop programming to refer at-risk individuals and families to existing programs, nurses can make an impact.



FIGURE 8.6 A community center provides a location for children and families to gather and build social capital. (credit: "Community Center" by Billy Brown/Flickr, CC BY 2.0)

THEORY IN ACTION

County Health Rankings Model

Access multimedia content (http://openstax.org/books/population-health/pages/8-4-social-and-community-context)

The University of Wisconsin Population Health Institute, with the Robert Wood Johnson Foundation's support, has conceptualized a population health model illustrating a broad vision for health, demonstrating how policies and programs shape a community's health and outcomes, both quantity and quality of life. This video highlights this model, showing all the factors that impact health (the SDOH) and demonstrating that upstream interventions can be implemented at the population health level to ensure that each individual and community thrives.

Watch the video, and then respond to the following questions.

1. What are your impressions of this model?
2. Do you feel the model is an accurate representation of the intersection of health and social, economic, and environmental factors? Why or why not?
3. How might one use this model in population health nursing?

Explore the model (https://openstax.org/r/explorehealth).

8.5 The Cumulative Effect of Inequalities on Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 8.5.1 Define *health equity* and *health inequity*.
- 8.5.2 Describe health disparities in the context of SDOH.
- 8.5.3 Describe the cumulative impact of inequalities on individual and population health.

Social determinants of health contribute to preventable health disparities, and these disparities may result in **health inequities**, "differences in health status or health resources between different population groups, arising from the social conditions" (WHO, 2018, para. 2). Health inequities are more than just a lack of equal access to necessary resources; they are a result of an unjust system.

Equality refers to situations where each individual is given the same resources or opportunities. **Equity** recognizes that everyone is not the same and distributes the exact resources or opportunities needed by each individual to reach an equal outcome among individuals (Milken Institute School of Public Health [MISPH], 2020). The World Health Organization defines *equity* as the "absence of unfair, avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, geographically or by sex, gender, ethnicity, disability, or sexual orientation" (WHO, 2021, p. 2). Equity is needed to address the historical injustices that have perpetuated structural racism and discrimination. It is a means to address the imbalance and injustice in

our social systems. *Social justice* refers to overhauling social systems with the goal of sustainable, equitable access into the future (MISPH, 2020).

To achieve health equity, rather than treating everyone in the same way, individuals and communities need to be given resources and opportunities that align with their circumstances (MISPH, 2020). According to the CDC, achieving health equity requires an enduring effort to address historical and contemporary injustices to surmount obstacles to health care and eliminate health disparities (CDC, 2022g). To reduce health disparities, individual needs should be addressed holistically.

The SDOH have a greater influence on health outcomes than clinical care. Clinical care impacts only 20 percent of health outcomes, whereas socioeconomic factors account for 47 percent of health outcomes, and health behaviors account for 34 percent of overall health outcomes (Whitman et al., 2022). Social determinants have a much greater impact than biology or medicine. Within these social factors, there are many inequities. Addressing these differences in SDOH is a step toward health equity (CDC, 2022a). Racism and other SDOH are central drivers of health disparities and inequities within BIPOC communities, creating inequities in access to housing, education, wealth, and employment, thereby placing these individuals at higher risk for poor health (CDC, 2022a). The SDOH are at the root of many health inequities resulting from the unequal conditions in the social and physical environment. It is widely accepted that to influence the health of a population, there needs to be a focus on improving social conditions and addressing those SDOH (CDC, 2022a). Just as nurses assess for medication allergies and medical history, the SDOH need to become a part of every conversation as a foundation to holistically provide appropriate care and services to individuals and families in need.

THEORY IN ACTION

Screening for the Social Determinants of Health

The American Academy of Family Physicians has created a program called The EveryONE Project (https://openstax.org/r/familyphysician) to assist health care professionals in advocating for health equity. As a part of this program, it has created a screening tool to assist health professionals in screening every client for the social determinants of health.

Visit its website to read the guide, and then respond to the following questions.

1. How did you feel as you read the team-based approach of The EveryONE Project?
2. Do you think that as a nurse, you will be able to effectively screen clients for the SDOH using this tool? Why or why not?
3. Do you think the health care community has an ethical duty to act and to do more to address the SDOH? Why or why not?

Chapter Summary

8.1 Economic Stability

Economically stable individuals and families have a steady source of income with consistent access to the resources that are essential for a healthy life, such as food, clothing, safe housing, transportation, quality child care, quality education, and health insurance. Almost 12 percent of the U.S. population lives in poverty and experiences economic insecurity. BIPOC communities comprise half of the individuals who are economically insecure, and the cycle of poverty often persists across generations. Poor health outcomes, including early cardiovascular disease, metabolic disease, diabetes, and mental health disorders, are directly linked to living in poverty, illustrating the concept of the socioeconomic gradient.

8.2 Neighborhood and Built Environment

Neighborhoods and the built environment, including the quality and safety of water, air, and soil, the quality and safety of the community's infrastructure, housing, transportation, and roadways, and access to healthy foods that support positive eating patterns, directly impact health. Locations with limited options for affordable and healthy foods are considered food deserts. Neighborhood safety is a huge public health concern. ACEs are more likely to occur in lower-income communities; are linked to lifelong mental illness, chronic disease, and substance use; and negatively impact education and future earning power. Housing quality is an important determinant of health, as lead, mold, asbestos, vermin, and even crowded living conditions are all modifiable environmental risk factors associated with poor health outcomes.

8.3 Educational Environment, Access, and Quality

Education is one of the most important modifiable SDOH; increased educational attainment is associated with an increase in healthy lifestyle behaviors and improved health outcomes. Individuals living in impoverished neighborhoods often have less access to community resources, such as high-quality schools, resulting in significant disparities in educational opportunities. Quality early childhood education programs can help reduce educational gaps, but access remains an issue. Fostering quality, accessible, and affordable early childhood education programs can positively impact educational attainment levels. Encouraging and assisting all students to achieve a high school diploma is associated with better employment opportunities and higher-paying jobs, resulting in overall improved health.

8.4 Social and Community Context

Positive community relationships and civic participation can help buffer the negative impact of unsafe neighborhoods, poverty, and discrimination. Social capital is associated with more physically active, happier, and healthier lives. Discrimination in any form is a public health threat. Structural discrimination is at the root of health disparities seen in BIPOC individuals. The SDOH are intricately tied to structural discrimination, racism, and persistent health disparities. High levels of social support positively influence health outcomes and decrease the incidence of social isolation and its negative impact on mental and physical health.

8.5 The Cumulative Effect of Inequalities on Health

The SDOH have a greater influence on health outcomes than clinical care. Racism and other SDOH are central drivers of health disparities and inequities within BIPOC communities, creating inequities in access to housing, education, wealth, and employment, thereby placing these individuals at higher risk for poor health. Equity is needed to address the historical injustices that have perpetuated structural racism and discrimination. To influence the health of a population, it is necessary to focus on improving social conditions and addressing the SDOH. To reduce health disparities, individual needs must be addressed holistically. The Future of Nursing 2020-2030 report highlights health equity as a major focus for nursing, and this begins with assessing the SDOH with every client encounter.

Key Terms

adverse childhood experience (ACE) a traumatic incident such as experiencing violence or abuse, witnessing violence at home or in the community, having a family member attempt suicide, or any event or environment that undermines a child's sense of safety, security, and bonding

built environment includes transportation access and roadways, the availability of green space, locations for community gathering, and the buildings or other physical structures within the neighborhood

civic participation a range of activities that

individuals can participate in that benefit the community as well as participant health

collective efficacy a community's ability to create change and influence behavior through social norms

cost burdened describes households in which more than 30 percent of income is spent on housing

discrimination unfair treatment of individuals and groups based on characteristics such as race, gender, age, sexual orientation, and ability

economic insecurity a situation linked to poverty where an individual or family is unable to consistently afford housing, food, clothing, transportation, child care, or health care

economic stability a situation where the individual has a steady source of income and consistent access to resources essential for a healthy life

equality a situation where each individual is given the same resources or opportunities

equity the distribution of the resources or opportunities each individual needs to reach an equal outcome among individuals

food deserts areas where residents have limited or absent options for affordable and healthy foods

food insecurity a condition in which individuals or families have limited access to adequate amounts of food

generational poverty a persistent lack of a socially acceptable amount of money or possessions and disadvantage where children who grow up poor are more likely to be poor as adults

health disparities preventable differences in health between groups of individuals, usually resulting from social or economic factors, geographic location, and environment

health equity a state in which everyone has a fair and just opportunity to attain their highest level of health

health inequities differences in health status or health resources between population groups arising from social conditions

housing instability a situation where individuals and families have difficulty paying rent, live in overcrowded residences, move frequently, or spend a large part of their household income on housing

living wage payment for employment that affords a modest standard of living for the individual and family

poverty a state in which an individual lacks a socially acceptable amount of money or possessions

social capital value gained from having positive interactions and connections between people that enables the community to function effectively and collaboratively in problem-solving efforts

social cohesion the strengths of relationships within a community; an indicator is the amount of social capital, or shared group resources, within a community

social determinants of health (SDOH) the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks

social justice the view that everyone deserves equal rights and opportunities; also refers to overhauling social systems with the goal of sustainable equitable access into the future

socioeconomic gradient the association between low socioeconomic position (SEP) and increased disease risk and premature death

socioeconomic position (SEP) one's position in society based on social and economic factors of income, education, and employment

structural discrimination deeply rooted institutional policies, systems, laws, and practices that limit opportunities, resources, and power of individuals and populations based on race, ethnicity, gender, ability, SES, and religion

Review Questions

1. Which of the following is a social determinant of health?

a. Where you live
b. Health behaviors
c. Genetic makeup
d. Age

2. What is the main driver of economic stability?

a. Health
b. Food cost
c. Employment
d. Transportation access

3. Which of the following neighborhood factors is considered an adverse childhood experience?
    a. Absence of sidewalks to walk to school safely
    b. Access to green spaces
    c. Relying on readily accessible public transportation
    d. Exposure to crime and violence

4. What is the connection between education and health?
    a. Attending a lower-quality school is associated with health literary
    b. Higher education means higher socioeconomic position
    c. Higher educational attainment is associated with higher health literacy rates
    d. Health is not adversely impacted by the quality of education

5. Which of the following activities is an example of building social capital?
    a. Volunteering at the local community center
    b. Attending parent-teacher conferences at the school
    c. Composting in your own backyard
    d. Utilizing the library to check out movies

6. Which of the following scenarios is an example of health equity?
    a. Providing mobile health screenings for individuals without transportation
    b. Offering clinic appointments during standard business operating hours
    c. Providing a health education session in English only
    d. Offering all clients a fasting glucose screening at age 40

7. Which of the following is an example of a health disparity?
    a. BIPOC clients who are pregnant experience the highest rates of infant mortality
    b. Heart disease and cancer are the two leading causes of death across race, gender, and ethnicity
    c. Older adults have worse overall health outcomes compared with young adults
    d. Professional tennis players tend to have a higher prevalence of elbow injuries

8. How much does clinical care impact an individual's health outcomes?
    a. 34 percent
    b. 10 percent
    c. 20 percent
    d. 47 percent

9. Why does the nurse assess the SDOH when caring for individuals and their families in the community?
    a. The SDOH have a significant impact on the health, wellness, and quality of life of individuals and families
    b. By assessing the SDOH, the nurse can standardize interventions based on where the individual and family reside
    c. Because nursing is founded on the principle of social justice
    d. The nurse wants to investigate the reasons why certain individuals and families have asthma

10. The community health nurse is looking for a way to improve heart health. Within the framework of the SDOH and upstream thinking, what contributing factor to improving heart health would the nurse most likely focus on within the community?
    a. Vaping
    b. Low levels of physical activity
    c. Lack of safe places to exercise
    d. Unhealthy diet

CHAPTER 9

Health Disparities



FIGURE 9.1 Access to reliable and affordable public transportation such as a subway, bus, or trolley can determine whether an individual obtains health care. (credit: modification of work by David Wilson/Flickr, CC BY 2.0)

CHAPTER OUTLINE

9.1 Health Disparities Defined
9.2 Race and Ethnicity Disparities
9.3 Gender Disparities
9.4 Geographical Disparities

INTRODUCTION Marinelle is a registered nurse case manager in the Population Health Management Department for a major health insurance company tasked with managing the care of Medicaid beneficiaries in a rural county in Mississippi. Medicaid is a government health insurance program that provides free or low-cost health coverage to some low-income people, families and children, pregnant individuals, older adults, and people with disabilities. It is funded by the federal government and managed by each state. The population in the county where Marinelle works has a diverse range of income levels, from low income to upper middle class. Marinelle is tasked with ensuring that clients with the highest risk factors for poor health outcomes can obtain the health care they need, which requires her to address health disparities in the population. This chapter will define health disparities and discuss the various types of health disparities in the population.

9.1 Health Disparities Defined

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 9.1.1 Define health disparities.
- 9.1.2 Discuss how health care disparities affect access to care.
- 9.1.3 Describe the Agency for Healthcare Research and Quality priority health disparities.
- 9.1.4 Recognize disparities in health as a metric for assessing health equity.

External factors beyond a person's physical and psychological attributes, such as social, economic, and environmental factors, influence health. When one or more of these factors prevent a group from having full access to the health-related resources they need, **health disparities** result. With racial and ethnic diversity increasing in the United States, addressing these disparities is essential to improving the population's health.

Recognizing Health Disparities

Healthy People 2030 defines health disparities as health differences linked to social, economic, and/or environmental disadvantages (Office of Disease Prevention and Health Promotion [ODPHP], n.d.-c). For example, Black adults are more likely to have risk factors for cardiovascular disease, and they are more than twice as likely as White adults to die from the disease (Javed et al., 2022). The CDC (2022c) defines health disparities as preventable differences in disease, injury, or violence or in opportunities to achieve optimal health experienced by socially disadvantaged racial, ethnic, and other population groups. In the United States, individuals who have experienced prejudice or bias because of their racial, ethnic, or cultural identities, without regard for their individual qualities and stemming from circumstances beyond their control, are considered **socially disadvantaged** (Business Credit and Assistance, 2023).

According to the National Institute on Minority Health and Health Disparities (NIMHD), health disparities can cause:

- Higher prevalence of disease, including earlier onset and more aggressive progression of the disease
- Increased risk of premature death from a disease or other health condition
- More prevalent unhealthy behaviors and practices
- Poorer health outcomes

Table 9.1 provides some examples of health conditions and associated Healthy People 2030 goals.

Health Condition	Description	Healthy People 2030 Goals
Infant mortality	Infants born to non-Hispanic Black Americans have an infant mortality rate 2.4 times greater than non-Hispanic White Americans (U.S. Department of Health and Human Services Office of Minority Health [OMH], 2022a).	Prevent pregnancy complications and maternal deaths and improve women's health before, during, and after pregnancy
Maternal mortality	Black women are three times more likely to die from a pregnancy-related cause than White women (CDC, 2023c).	Prevent pregnancy complications and maternal deaths and improve women's health before, during, and after pregnancy
Dementia	Older Black Americans are twice as likely as older White Americans to have Alzheimer's disease or another dementia (Alzheimer's Association, 2023).	Improve health and quality of life for people with dementia, including Alzheimer's disease
Cancer	Individuals with lower incomes and education levels are more likely to get cancer and die from it compared to those who are more affluent (Singh, 2017; Tabuchi, 2020).	Reduce new cases of cancer and cancer-related illness, disability, and death

TABLE 9.1 Examples of Health Disparities (See ODPHP, n.d.-a.)

Health Condition	Description	Healthy People 2030 Goals
Obesity	Obesity rates are significantly higher in Black women and Mexican-America men when compared to other groups (Hill et al., 2017; OMH, 2022b).	Reduce overweight and obesity by helping people eat healthy and get physical activity
Smoking	Native Americans and Alaska Native men and women have a disproportionately higher rate of smoking than other groups. The same is true for individuals who are below the federal poverty level or unemployed (CDC, 2023a; CDC, 2020; Everding, 2019).	Reduce illness, disability, and death related to tobacco use and secondhand smoke
Binge drinking	Young White men are more likely to binge drink than other groups (CDC, 2022d).	Reduce misuse of drugs and alcohol

TABLE 9.1 Examples of Health Disparities (See ODPHP, n.d.-a.)

HEALTHY PEOPLE 2030

Health Equity in Healthy People 2030

Health equity is the state in which everyone has a fair and just opportunity to attain their highest level of health (CDC, 2022b). One of the five overarching goals (https://openstax.org/r/healthareas) of Healthy People 2030 is to eliminate health disparities to achieve health equity and attain health literacy to improve the population's health and wellbeing. Figure 9.2 provides an overview of the Healthy People 2030 goals related to health equity.



FIGURE 9.2 This infographic displays the Healthy People 2030 goals for advancing health equity. (credit: "Leveraging Healthy People to Advance Equity" by U.S. Department of Health and Human Services, Public Domain)

The populations that most often experience health disparities include racial and ethnic minorities, people with lower socioeconomic status, underserved rural communities, and sexual and gender minorities (NIMHD, 2023). Each of

these populations will be discussed in detail later in this chapter. Table 9.2 describes individual health determinants and their effect on outcomes (NIMHD, 2023).

Health Determinant	Description
Individual behaviors	The choices one makes have a direct impact on their health outcomes. For example, health-promoting behaviors such as getting regular exercise and eating a nutritious diet may lead to positive health outcomes. In contrast, behaviors that lead to negative health outcomes include smoking tobacco and driving while intoxicated.
Lifestyles	Unhealthy lifestyles secondary to individual health behaviors lead to a greater prevalence of negative health outcomes, such as those related to disease processes.
Social responses to stress	Individuals without coping skills to deal with stress tend to have less-than-optimal health outcomes, such as the presence of chronic diseases such as diabetes and hypertension.
Biological processes	Biology presents unavoidable risk factors for individuals related to health outcomes, such as inheriting certain diseases from parents like diabetes or hypertension.
Genetics	Genetics relates to a branch of biology that deals with heredity and genes passed from parent to child. Genetics are factors that cannot be altered by an individual, who can only alter behavioral risk factors such as smoking or unhealthy eating.
Epigenetics	Epigenetics refers to how behaviors and environment cause changes that impact how genes work. For example, an individual who lives in a home where other family members smoke may have an increased risk for diseases such as cancer even if the individual's genetics are not associated with cancer.
Physical environment	What individuals are exposed to where they reside has a direct impact on their health outcomes, such as exposure to pollutants in either urban or rural areas.
Sociocultural environment	Sociocultural environment relates to the combination of who individuals interact with and what their cultural beliefs, habits, and traditions are. For example, cultural norms associated with various foods can impact health outcomes. When a family is accustomed to eating high volumes of fried foods or high-carbohydrate foods, there is an increased risk for chronic diseases such as obesity, diabetes, and hypertension.
Interactions with the health care and other systems	When individuals interact negatively with the health care system, the likelihood that they will continue to utilize that particular service is limited, thus leading to poor health outcomes.

TABLE 9.2 Health Determinants and Health Disparities

CONVERSATIONS ABOUT CULTURE

Minority Health Disparities | Michelle's Story

Access multimedia content (http://openstax.org/books/population-health/pages/9-1-health-disparities-defined)
This video by John Hopkins Medicine features Michelle Simmons, a West Baltimore resident who describes the impact of health disparities on her family and her community and her efforts to reverse their negative effects.

Watch the video, and then respond to the following questions.

1. What are some of the health disparities Michelle describes in the video, and how might they negatively

affect her health and her community's health?
2. What are some of the root causes of health disparities discussed in the video?
3. What choices did Michelle need to make to prioritize her health?

As discussed in Social Determinants Affecting Health Outcomes, the social determinants of health (SDOH) are the environmental conditions that affect health, functioning, and quality of life (ODPHP, n.d.-b). Healthy People 2030 groups these determinants into five categories: economic stability, education, health care access and quality, neighborhoods, and social and community context. Health determinants influence health outcomes. For example, Black women experience lower survival rates related to breast cancer than their White counterparts (NIMHD, 2023). This health disparity is most often related to Black women's lower rates of breast cancer screening and greater chance of a late-stage diagnosis. Poverty also contributes to this disparity as individuals with lower income levels also have lower rates of breast cancer screening and overall poorer health outcomes regardless of their race (Yedjou et al., 2019). See Structural Racism and Systemic Inequities and Social Determinants Affecting Health Outcomes for more information on the implications of race and poverty on health outcomes.

SOCIAL DETERMINANTS OF HEALTH: WHAT ARE THEY AND HOW DO THEY IMPACT THE HEALTH OF POPULATIONS?

Access multimedia content (http://openstax.org/books/population-health/pages/9-1-health-disparities-defined)
This video explains the foundational impact of structural racism, social determinants of health and their impact on historically marginalized populations, and steps necessary to achieve health equity in affected communities.

Watch the video, and then respond to the following questions.

1. In the video, the narrator uses the story of sick fish to show the tendency of society to blame the individual for their health condition rather than considering the outside determinants of health. Describe an example of this from your own community.
2. The narrator describes three strategies for identifying health disparities—pay attention, be aware, and create strategies. In the example from your community, describe how this approach could be used to identify and address the disparities.

Health Care Disparities and Access to Care

While health disparities indicate different health-related outcomes among groups, **health care disparities** are differences among groups related to health care access and use. When people have full access to health care, they have the timely use of the health services they need to achieve optimal health outcomes. Access to health care consists of four key components (Agency for Healthcare Research and Quality [AHRQ], 2023):

- Coverage—Health insurance facilitates entry into the health care system.
- Services—Having a regular source of care is associated with receiving recommended screenings.
- Timeliness—Health care must be provided when it is needed.
- Workforce—Access to health care depends upon the availability of qualified and culturally competent providers.

Insurance Coverage and Related Socioeconomic Factors

Several studies have identified correlations between having health insurance coverage and positive health outcomes (AHRQ, 2022). Collectively, research has shown that insured individuals have increased financial security, improved access to primary care and screenings for health conditions, and improved compliance with medication regimes and that they are less depressed and perceive themselves to be healthier.

The Affordable Care Act (ACA) of 2010 expanded both affordable health insurance options for Americans and the number of people eligible for Medicaid, and it supported innovation in health care delivery to lower health care costs (U.S. Department of Health and Human Services [HHS], 2022a). As a result, more than 20 million Americans gained access to health insurance (HHS, 2022b). In addition, the ACA established protections for preexisting conditions and mandated coverage for essential health benefits (HHS, 2022b).

Despite the gains made by the ACA, many Americans remain uninsured. Disparities in health insurance coverage

exist primarily among individuals under age 65, as almost all adults 65 and older are covered by Medicare (AHRQ, 2022). Individuals under age 65 can be covered by private health insurance or other government-sponsored plans, such as Medicaid or a military health plan. Most of the remaining uninsured individuals are in families with at least one employed worker (Garfield et al., 2019). Not all employers offer health insurance to their employees. For example, agricultural, construction, and service workers are more likely to work for businesses that do not provide employer health plans. Also, part-time workers may not be eligible for coverage. Lastly, some workers are eligible to join an employer plan but cannot afford the premiums.

People in low-income households, minority communities, and some urban and rural communities are less likely to have health insurance. For example, Non-Hispanic American Indian or Alaska Native and Hispanic groups are less likely to be insured (AHRQ, 2022). Additionally, how Medicaid is administered from state to state may create differences in health care treatment and options between beneficiaries according to the state in which they live. For example, one state may have a higher threshold to determine who is eligible for Medicaid benefits than another state. Individuals who live in states with higher eligibility requirements but who have lower incomes will face limitations to health care access if they cannot afford private health insurance or pay out of pocket for their care.

Differences in income levels result in major differences in health outcomes. For example, individuals with limited income tend to have higher incidences of chronic diseases such as diabetes and hypertension. These individuals also have limited access to health care services because of related logistical issues. For example, they are more likely to lack reliable or timely transportation to and from a doctor's office or medical clinic.

Availability of Health Care Services and Providers

To meet the population's health needs, the health care delivery system must have adequate infrastructure and resources (AHRQ, 2022). Staffing shortages and the location and capacity of health care facilities are key concerns. The number of health care workers in hospitals and long-term care facilities has decreased since January 2020, and almost 63 percent of U.S. counties have been designated as primary care professional shortage areas. Among these areas, rural counties are disproportionately affected. Living near primary care services can increase clients' likelihood of receiving preventative care and treatment for a chronic health condition (Figure 9.3) (AHRQ, 2022). Further disadvantaging clients living in rural areas, 135 rural hospitals closed between 2010 and 2020 (AHRQ, 2022). These closures force clients to travel farther to receive hospital-related services.



FIGURE 9.3 Lack of access to a health care provider is often a barrier for clients living in rural areas or in urban areas where reliable transportation is an issue. This photo shows a provider examining a client in a COSSMA, Inc. clinic in Cidra, Puerto Rico, that was built with USDA Rural Development funds to offer the community medical, dental, and mental health services. (credit: "Opened in 2008, this COSSMA facility in Cidra, PR, is one of six health clinics on Puerto Rico built with USDA Rural Development funds" by Preston Keres/USDA/Flickr, Public Domain)

Priority Health Disparities

For over 20 years, the Agency for Healthcare Research and Quality (AHRQ) has monitored health care quality and disparities to identify opportunities for improvement. In the 2022 National Healthcare Quality and Disparities Report (https://openstax.org/r/ahrqnhqrdr) (NHQDR), the agency identified four priority issues: maternal health, child and adolescent mental health, substance use disorder, and oral health.

Maternal Health

According to the NHQDR, the United States has the highest maternal mortality rate among industrialized countries. The rate continues to increase, with higher mortality rates among marginalized racial and ethnic groups. The NHQDR notes other disparities relative to prenatal care. Hispanic, American Indian/Alaska Native, Black, and Native Hawaiian/Pacific Islander clients are less likely than White and non-Hispanic White clients to receive prenatal care. Between 2016 and 2019, rates of severe maternal morbidity, eclampsia/preeclampsia, severe postpartum hemorrhage, and venous thromboembolism or pulmonary embolism increased overall, with disparities noted among racial and ethnic groups. Between 2017 and 2019, pregnancy-related mortality ratios (per 100,000 births) differed significantly among groups (CDC, 2023b). The rate for Non-Hispanic Native Hawaiian or Other Pacific Islander was the highest at 62.8, followed by Non-Hispanic Black at 39.9, Non-Hispanic American Indian or Alaska Native at 32, Non-Hispanic White at 14.1, Non-Hispanic Asian at 12.8, and Hispanic at 11.6 (CDC, 2023b). Plans to address maternal health disparities include extending postpartum coverage, investing in rural maternal health services, creating and expanding a more diverse maternal health workforce, and creating stronger workplace protections for caregivers (AHRQ, 2022).

I KNOW MY BODY

Access multimedia content (http://openstax.org/books/population-health/pages/9-1-health-disparities-defined)
In this video, tennis player Serena Williams describes her postpartum experience with life-threatening complications despite presumably having access to quality health care.

Watch the video, and then respond to the following questions.

1. What, if anything, surprises you about Ms. Williams's story?
2. What contributed to the delay in the health care providers' recognition and treatment of her condition?
3. What can you take from this story that you can apply to your practice?

Child and Adolescent Mental Health

Mental health issues are widespread. Almost 20 percent of children and adolescents ages 3–17 in the United States have a mental, emotional, developmental, or behavioral disorder (AHRQ, 2022). However, the increasing mental health issues among this age group do not correspond to an increase in mental health service access and utilization. Recent initiatives to address this issue include the designation of "988" as the universal number for the Suicide and Crisis Lifeline (FCC, 2022). Caring for Vulnerable Populations and Communities discusses the mental health crisis in more detail.

Substance Use Disorder

Substance use disorders (SUD) are a costly, pervasive health concern. Defined as the misuse of illicit drugs, prescription drugs, and/or alcohol, these conditions negatively affect health, and they cost the U.S. economy billions of dollars. There are significant barriers and disparities related to preventing and treating SUD. Less than 50 percent of people treated for SUD complete treatment, with Non-Hispanic Native Hawaiian/Pacific Islander individuals having the lowest percentage of completion among this group (AHRQ, 2022). Rates of drug overdose deaths involving opioids increased between 2018 and 2020. The largest increases were noted among non-Hispanic Black people in large urban areas. Multiple initiatives, including expanding access to naloxone and to evidence-based treatment, aim to address these issues (AHRQ, 2022). Caring for Vulnerable Populations and Communities discusses SUD in more detail.

Oral Health

Oral health is essential for good nutrition, quality sleep, and school/work attendance and performance (AHRQ, 2022). Poor oral health is associated with chronic health conditions. Oral health care has improved for children but

not for adults. Two indicators tracked to measure the quality of oral health care delivery in the United States include the prevalence of untreated dental caries and emergency department visits for dental conditions. Key interventions for improving oral health include fluoridating the public water supply, reducing financial barriers to dental services, and improving proximity to dental care. NHQDR data show gains among children and adolescents. Disparities have decreased between Asian, Black, Hispanic, and multiracial groups and White groups and between low- and high-income households. A key reason for the improvement is the inclusion of dental benefits in Medicaid and CHIP programs. Dental care for adults is generally not included in their health insurance coverage.

Measuring Health Disparities

After health disparities are identified, assessing and monitoring their severity and impact is essential. Researchers and policymakers have identified relevant metrics that correlate with the effects of health disparities. These can be used to track the population's health and the impact of the disparity as well as to reflect the effectiveness of interventions. Ultimately, addressing health disparities leads to health equity, which Healthy People 2030 defines as the attainment of optimal health for everyone (ODPHP, n.d.-b). As discussed in The Health of the Population, the AHRQ (2022) tracks several metrics across racial and ethnic groups to monitor the effects of health disparities including:

- Life expectancy—In 2020, life expectancy in the United States decreased for the first time due to the COVID-19 pandemic. This decline was more remarkable for Hispanic and non-Hispanic Black groups than for non-Hispanic White groups.
- Leading causes of death—In 2020, the leading causes of death in the United States were heart disease, cancer, COVID-19, and unintentional injuries. Certain racial and ethnic groups have increased risks for these conditions.
- Years of potential life lost (YPLL)—This measures premature death. It adjusts mortality statistics for age at death and estimates the average time the person would have lived. Death from unintentional injuries is the leading cause of YPLL across the age spectrum. In 2020, heart disease, liver disease, and diabetes were rising rapidly as leading causes of YPLL.

Healthy People 2030 monitors progress on all the identified objectives for any differences among age groups and acknowledges that measuring health disparities is fundamental to addressing health equity (ODPHP, n.d.-b). The Health of the Population discusses Healthy People 2030 in more detail.

9.2 Race and Ethnicity Disparities

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 9.2.1 Identify contributing factors that influence race and ethnicity disparities.
- 9.2.2 Recognize internal and external system processes and structures that perpetuate racism and other forms of discrimination within health care.

As discussed in Structural Racism and Systemic Inequities, racism has physical, behavioral, and emotional effects (Javed et al., 2022). Accordingly, racial and ethnic minorities are most often impacted by health disparities. According to the AHRQ (2022), racial and ethnic minority communities have outcomes similar to those of White communities for fewer than half of all quality-of-care measures.

Characteristics of Minority Groups

Minority health refers to the characteristics and attributes of health that are specific to a racial or ethnic minority group who are socially disadvantaged in part because of racist or discriminatory acts and are underserved in health care (NIMHD, 2023). These characteristics and attributes are often secondary to discrimination, racism, and genetics. For example, Black individuals tend to have higher incidences of hypertension than their White counterparts. The U.S. Office of Management and Budget identifies the following as minority populations:

- American Indian or Alaska Native
- Asian
- Black or African American
- Hispanic or Latino American

- Native Hawaiian and Pacific Islander (OMB, 1997).

The National Institute on Minority Health and Health Disparities has developed a framework (see Figure 9.4), that identifies health determinants relevant to understanding minority health (NIMHD, 2023). The model depicts the influences on minority health at the individual, interpersonal, community, and societal levels throughout the lifespan.

		Levels of Influence*			
		Individual	**Interpersonal**	**Community**	**Societal**
Domains of Influence *(Over the Lifecourse)*	**Biological**	Biological Vulnerability and Mechanisms	Caregiver–Child Interaction Family Microbiome	Community Illness Exposure Herd Immunity	Sanitation Immunization Pathogen Exposure
	Behavioral	Health Behaviors Coping Strategies	Family Functioning School/Work Functioning	Community Functioning	Policies and Laws
	Physical/Built Environment	Personal Environment	Household Environment School/Work Environment	Community Environment Community Resources	Societal Structure
	Sociocultural Environment	Sociodemographics Limited English Cultural Identity Response to Discrimination	Social Networks Family/Peer Norms Interpersonal Discrimination	Community Norms Local Structural Discrimination	Social Norms Societal Structural Discrimination
	Health Care System	Insurance Coverage Health Literacy Treatment Preferences	Patient–Clinician Relationship Medical Decision-Making	Availability of Services Safety Net Services	Quality of Care Health Care Policies
Health Outcomes		**Individual Health**	**Family/ Organizational Health**	**Community Health**	**Population Health**

National Institute on Minority Health and Health Disparities, 2018
*Health Disparity Populations: Racial and Ethnic Minority Groups (defined by OMB Directive 15), People with Lower Socioeconomic Status, Underserved Rural Communities, Sexual and Gender Minority Groups, People with Disabilities
Other Fundamental Characteristics: Sex and Gender, Disability, Geographic Region

FIGURE 9.4 The NIMHD Minority Health and Health Disparities Research Framework includes the factors necessary to understand and promote minority health and reduce or eliminate health disparities. (credit: "National Institute on Minority Health and Health Disparities Research Framework" by U.S. Department of Health and Human Services, Public Domain)

Income Inequality

According to the U.S. Census Bureau, in 2021, the gap between the top 10 percent of households with an annual income of $211,956 and the bottom 10 percent of households with a yearly income at or below $15,660 increased by 4.9 percent from 2020 (Semega & Kollar, 2022). The household income at the top of the range did not increase significantly. Instead, the spread between the middle to lower incomes increased, meaning the lowest-income households experienced a greater income decline than middle-income households (Semega & Kollar, 2022). Minority groups are disproportionately represented in these statistics. Pay for ethnic minority individuals is significantly less than that of their non-minority White people. Black and Hispanic adults continue to earn less than White or Asian adults. In 2020, median household income was approximately $46,000 for Black and $55,500 for Hispanic workers compared to $75,000 and $95,000, respectively, for White and Asian workers (U.S. Department of the Treasury, 2022). These limited incomes make it more difficult for ethnic minorities to afford health care services, which in turn makes it more difficult to stay healthy and manage health conditions.

Environmental Factors

Approximately 24 million people in the United States live in impoverished/disadvantaged neighborhoods (Christie-Mizell, 2022). These are neighborhoods that are affected by high levels of poverty, contain dilapidated buildings and structures, have a disproportionate number of female-headed households, and have high unemployment and crime rates. Racial and ethnic minorities are more likely to live in these areas. Census data show 20.9 percent of Black Americans live in these neighborhoods compared with 4.3 percent of White Americans (Christie-Mizell, 2022). Accordingly, living in these areas disproportionately exposes minority populations to poor environmental factors including unsanitary living arrangements, increased risk of violence, or limited access to grocery stores selling healthy foods. Research has confirmed that these residents have higher rates of chronic disease and experience poorer health outcomes (Christie-Mizell, 2022).

Systemic Discrimination or Exclusion

Social drivers such as racism, sexism, ableism, classism, and homophobia exacerbate inequalities, with minorities having a disadvantage. Unfortunately, racism and other social drivers are deeply entrenched in societal and cultural norms. Systematic discrimination and exclusion result in limited access to community resources such as public transportation, quality education, and employment opportunities. Structural Racism and Systemic Inequities and Caring for Vulnerable Populations and Communities discuss this topic in more detail.

Systemic Discriminatory Practices

As discussed in Structural Racism and Systemic Inequities, racism is one of the most common contributing factors to health disparities for ethnic minorities (Braveman et al., 2022). It is frequently systemic and structural, making it difficult to recognize. Systemic and structural racism are forms of racism that are pervasively and deeply embedded in systems, laws, written or unwritten policies, and entrenched practices and beliefs that produce, condone, and perpetuate widespread unfair treatment and oppression of people of color, with adverse health outcomes. Examples of systemic and structural racism include:

- residential segregation,
- unfair lending practices,
- barriers to home ownership and accumulating wealth,
- public schools' dependence on local property taxes,
- environmental injustice,
- biased policing and sentencing of men and boys of color, and
- voter suppression polices.

Systemic and structural racism are part of the fabric of society. To address their effects, it is essential to acknowledge systemic and structural racism and to take mutually reinforcing actions in different parts of the community (Braveman et al., 2022).

THE ROOTS OF HEALTH INEQUITIES

Race, Racism, and Cardiovascular Health

The effects of historical practices that aimed to facilitate home ownership for White populations and discourage ownership for Black populations continue today. For example, the Federal Housing Administration created maps indicating mortgage insurance risk. Areas with a high Black population were colored red, indicating these areas were high-risk areas for insurance. This practice, known as redlining, essentially prevented Black Americans from being able to own homes and become economically stable. Redlining consigned populations of color to live in under-resourced and unsafe neighborhoods. Living in disadvantaged neighborhoods, a social determinant of health, is linked to poor health. Javed et al. (2022) found that neighborhood disadvantage increases the risk of cardiovascular disease and poor cardiovascular disease outcomes for the inhabitants. Structural Racism and Systemic Inequities discusses redlining in more detail.

(See Javed et al., 2022.)

The Effect of COVID-19 on Health Disparities

The COVID-19 pandemic further exacerbated racial disparities. According to the CDC (2021), COVID-19 had a disproportionate impact on individuals from certain racial and ethnic groups. For example, individuals from minority communities experienced a higher risk for infection, more hospitalizations, and more deaths related to COVID-19 when compared to their White counterparts. Such disparities occurred in each region of the United States. A mistrust of the U.S. health care system, discussed in Demographic Trends and Societal Changes, was a key factor in minorities having increased infection rates. For example, racial and ethnic minority groups, particularly Black Americans, did not readily trust the COVID-19 vaccine and often delayed receiving it (Na et al., 2023). This, coupled with delays in and the lack of access to COVID-19 testing and the presence of certain comorbidities such as diabetes and asthma, led to higher rates of infection and, ultimately, death related to the disease (Na et al., 2023). In many instances, members of minority populations did not seek care until their disease was more advanced, thus

necessitating the need for hospitalization and increasing death rates (Shearn & Kockrow, 2023). In addition to the disparities associated with health care, minority populations were disproportionally represented in "frontline" and lower-paid jobs, such as health care, food service, and other jobs that could not be performed remotely and placed them in close proximity to others (OECD, 2022). Some of these workers lost their jobs, and others continued to work in person and had a higher risk of contracting COVID compared to workers with white-collar jobs who could work remotely. Structural Racism and Systemic Inequities for a more detailed discussion.

HOW COVID-19 IS HIGHLIGHTING RACIAL DISPARITIES IN AMERICANS' HEALTH

Access multimedia content (http://openstax.org/books/population-health/pages/9-2-race-and-ethnicity-disparities)
This video discusses how COVID-19 has exacerbated health disparities associated with race in the United States. It addresses how health outcomes are worse for Black people in the United States when compared to their White counterparts and discusses how the economy impacts health outcomes.

Watch the video, and then respond to the following questions.

1. How did you feel watching the video and listening to the stories?
2. How does one's race impact their health outcomes?
3. What actions can the community health nurse take to address racial health disparities?

9.3 Gender Disparities

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 9.3.1 Describe how gender affects health outcomes.
- 9.3.2 Assess influencing factors contributing to gender disparities.
- 9.3.3 Discuss health disparities faced by the LGBTQIA+ community.

Research shows men and women experience different health outcomes beyond what would be expected for sex-specific conditions and treatments. Women and members of the LGBTQIA+ community frequently experience poorer health outcomes and face more barriers to health care access.

Concepts Related to Sex and Gender

The terms *sex* and *gender* are sometimes used interchangeably. While they are interrelated terms, they have distinct differences. **Sex** refers to the physiological and biological characteristics of males and females. **Gender** refers to male and female characteristics that are socially constructed (World Health Organization [WHO], 2023). **Gender identity** refers to a person's internal experience and belief of gender, which may or may not correspond to their physiology or designated sex at birth (WHO, 2023). LGBTQIA+ is used to refer collectively to lesbian, gay, bisexual, transgender, queer/questioning, intersex, asexual/aromantic/agender, and other related groups. The terms used to describe these groups are fluid and may change frequently, and not all people feel that they are represented by a specific term.

Physical differences can result in the development of sex-specific conditions. For example, each sex has a different reproductive system and corresponding reproductive diseases. Gender health disparities appear to encompass both sex and gender characteristics as biological, psychological, and social mechanisms intertwine to affect health outcomes in those with long-term disabling conditions (Thakral et al., 2019).

GENDER DISPARITIES IN HEALTH CARE

Access multimedia content (http://openstax.org/books/population-health/pages/9-3-gender-disparities)
In this video, women share their experiences of health care bias that delayed their diagnoses and treatments.

Watch the video, and then respond to the following questions.

1. What are the trends or consistencies in the cases described in this video?

2. What can nurses learn from these stories that they can incorporate into their practice?

Gender Differences

Gender norms are social and cultural principles that influence ideas on how different genders are supposed to behave in society. Such norms are often harmful. For example, gender stereotypes, or generalized preconceptions about what roles or traits should be performed by men and women, often limit their potential and create inequality. Society may also assign rank or status according to gender (i.e., men have a higher standing than women), which causes inequalities between genders that intersect with other social and economic inequalities. Discrimination based on gender often crosses, or intersects, with other societal factors such as ethnicity, disability, socioeconomic status, age, geographic location, gender identity, and sexual orientation (WHO, 2023). This is known as **intersectionality**, a concept that considers how multiple disadvantages can interact with clients individually and reflect the inequities and injustices at the systems level. Sexism, racism, classism, colonialism, heterosexism, and ableism are a few of the structures that result in systems-level oppression and privilege (Crenshaw, 1991).

Globally, gender norms negatively affect girls and women more than boys and men (Office of the High Commissioner for Human Rights [OHCHR], 2023). For example, over 575 million girls reside in countries where their basic rights related to education, health, and safety are violated as a consequence of inequitable gender norms (Save the Children, 2023). According to the OHCHR, gender stereotypes and discrimination, intersecting with other social and economic stereotypes, are particularly detrimental to women from minority or Indigenous groups, women with disabilities, women from lower caste groups or with lower economic status, and migrant women (OHCHR, 2023).

Boys and men may also be negatively affected by gender norms, particularly those that emphasize rigid notions of masculinity. For example, some gender norms may encourage young men to engage in risky practices such as smoking, unprotected sexual behavior, and alcohol use and abuse, and it may make them less likely than women to seek medical attention (WHO, 2023). Some conceptions of masculinity lead males to commit violence against women and make men subject to violence perpetrated by other men. These pressures may lead some individuals to develop mental health issues (WHO, 2023).

Individuals who identify as gender diverse or transgender also experience negative consequences related to gender. Gender-diverse individuals do not conform to conventional gender norms of being a man or a woman, or they may not "place themselves in the male/female binary" (OHCHR, 2023, para 1). Individuals who are transgender identify with a different sex than the one assigned to them at birth. Globally, both groups experience marginalization, exclusion, violence, discrimination, and other human rights violations related to their gender identities (OHCHR, 2023).

Gender affects people's experiences with and access to health care. How health services are organized and provided may either enable a person's access to health care services, information, and support or hinder it (WHO, 2023). Women's health and well-being is placed at risk because of gender inequality and discrimination. Women more frequently face barriers to accessing health information and services than men. Throughout the world, women face restrictions on movement in the health care system, lack of access to decision-making power, low health literacy rates, discriminatory attitudes of communities and health care providers, and a lack of training among health care providers specific to the health care needs and challenges they face (WHO, 2023).

Findings from a recent survey on women's experiences with the U.S. health care system are consistent with the WHO's conclusions. For example, 29 percent of U.S. women aged 18–64 who were surveyed reported their doctor dismissed their concerns, and another 15 percent reported their provider did not believe they were telling the truth (Long et al., 2023). Among survey participants aged 40–64, only 35 percent reported their health care provider discussed what to expect with menopause (Long et al., 2023). In another study, researchers used data from the CDC Behavioral Risk Factor Surveillance System (BRFSS) to study differences between males' and females' ability to access medical care for atherosclerotic cardiovascular disease (ASCVD). They found that women were more likely to report a delay in accessing health care and an inability to see a health care provider or take prescribed medications due to cost than men (Daher et al., 2021).

Global health-related challenges females face include (WHO, 2023):

- Higher rates of unintended pregnancies for women and girls.

- Greater risk of developing diseases and conditions such as malnutrition, lower vision, and respiratory infections.
- Greater risk of experiencing elder abuse than older males.
- Higher rates of violence directed toward them when compared to males, which includes sexual and physical violence. Approximately one in three women worldwide have experienced either physical and/or sexual intimate partner violence or non-partner sexual violence in their lifetime.
- In some developing countries, women experience female genital mutilation and early and forced marriage.

HOW THE GENDER GAP IN CLINICAL DRUG TRIALS IS AFFECTING WOMEN

Access multimedia content (http://openstax.org/books/population-health/pages/9-3-gender-disparities)
Decades ago, the United States took an important step toward addressing gender disparities in medicine. In 1986, the National Institutes of Health (NIH) established a policy requiring that women be included as subjects of clinical research. The following year, the Food and Drug Administration (FDA) began requiring pharmaceutical companies to demonstrate medication safety and effectiveness by sex, age, and race (Office on Women's Health, 2020). Despite these policy gains, more work is needed; this video offers a glimpse of the impact of the persistent gender gap in today's clinical drug trials.

Watch the video, and then respond to the following questions.

1. Beyond the immediate physical effects the women in the video experienced, what other consequences could these women face?
2. Knowledge gaps in medical research are a form of gender bias in health care. What other forms of gender bias against women exist in health care?

Special Considerations for the LGBTQIA+ Population

Research shows that the LGBTQIA+ population experiences poorer health outcomes compared to the cis-heterosexual population. In a systematic review of the literature, Medina-Martinez et al. (2021) found that as compared to the cis-heterosexual population, this community experiences higher rates of mental health problems, substance misuse, and suicide. They also found that certain cancers, including colon, liver, breast, ovarian, and cervical, are more prevalent among lesbian and bisexual women. Gay and bisexual men have higher rates of sexually transmitted infections, including HIV, as well as increased rates of anal, prostate, testicular, and colon cancers (Medina-Martinez et al., 2021). Compared with the general population, individuals who are transgender experience a higher prevalence and earlier onset of disabilities, more chronic health conditions, and higher rates of health problems related to AIDS, substance use, mental illness, and sexual and physical violence (Medina et al., 2021). For children and adolescents who identify as lesbian, gay, bisexual, transgender, questioning, or queer (LGBTQ), the risks of suicidal thoughts and behaviors is higher (AHRQ, 2022).

Along with the disease risks for members of the LGBTQIA+ population, there are the issues of homophobia, stigma, and discrimination regarding their identity (CDC, 2022c). Limited access to culturally appropriate and orientation-appropriate services can hinder treatment. Finally, members of this group may be fearful about talking about their gender identity and sexual orientation. LGBTQIA+ people face barriers when trying to access health care, including negative and discriminatory experiences with health care workers (Medina-Martinez et al., 2021). Transgender people often experience verbal and physical abuse, hostility, and refusal of care during their interactions with the health care system or with individual health care providers (Medina et al., 2021). See Caring for Vulnerable Populations and Communities for more information on health care challenges related to the LGBTQIA+ population.

UNFOLDING CASE STUDY

Part A: Addressing Disparities

Read the scenario, and then answer the questions that follow.

As part of her role as a registered nurse case manager for Medicaid clients, Marinelle works with pregnant clients to

coordinate their prenatal care. These clients are part of a group that has been identified as high risk for pregnancy-related complications. For the past few months, Marinelle has tracked her clients' prenatal appointments and detects a trend in missed appointments. Most clients who miss appointments live in the same area of the county. It is a small rural neighborhood located in the vicinity of an abandoned factory. All the clients are Black women.

1. Which of the following factors should the nurse consider as most likely contributing to the clients' poor pregnancy-related outcomes?
    a. Genetics
    b. Biological factors
    c. Cultural environment
    d. Physical environment

2. One aspect of health care access is clients' ability to attend scheduled appointments. Which of the following factors is most likely to facilitate clients' ability to access health care?
    a. Having a chronic disease
    b. Having adequate insurance coverage
    c. Having strong social support
    d. Having the ability to take time off work for appointments

9.4 Geographical Disparities

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 9.4.1 Examine how health status and health outcomes vary by geographical location.
- 9.4.2 Explain how a zip code influences health.
- 9.4.3 Assess contributing factors leading to geographical disparities.

Throughout history, **geography** has influenced the health and well-being of communities in various ways. The environment affects the nation's food supply and plays a role in disease transmission. Geography also affects health care delivery and health outcomes of the population. **Geographical disparities** refer to the differences in health care access and outcomes based upon where an individual lives. Disparities are often discussed in terms of rural or urban living; however, there can be health disparities between populations of different states.

The U.S. Census Bureau defines urban and rural areas based on population size and density. For an area to be considered urban, it must encompass at least 2,000 housing units or have a population of at least 5,000. Rural areas are considered all population, housing, and territory not included in an urban area (U.S. Census Bureau, 2023). Most counties in the United States have a mix of rural and urban populations (U.S. Department of Agriculture [USDA], 2023). According to the 2020 census, 80 percent of the U.S. population live in urban areas, while 20 percent live in rural areas (U.S. Census Bureau, 2022).

Factors Influencing Population Health Related to Location

The 2022 National Healthcare Quality and Disparities Report compares health care quality and disparities scores on over 100 health-related measures among states (AHRQ, 2022), with the following results:

- Best overall health care quality: Maine, Massachusetts, New Hampshire, Pennsylvania, Rhode Island, Iowa, Minnesota, North Dakota, Wisconsin, Colorado, and Utah
- Lowest overall health quality: Alaska, Arizona, California, Montana, Nevada, New Mexico, Wyoming, Washington D.C., Georgia, Mississippi, Oklahoma, Texas, and New York
- Fewest racial and ethnic disparities overall: Arizona, Hawaii, Idaho, Oregon, Washington, Arkansas, Kentucky, Virginia, West Virginia, Kansas, and New Jersey
- Most racial and ethnic disparities overall: Connecticut, Massachusetts, New York, Pennsylvania, Illinois, Minnesota, Ohio, Washington D.C., North Carolina, and Texas

There are several reasons for variations among states in terms of health care quality and disparities (AHRQ, 2022). First, health policy can vary by state. Some states may offer more health-related resources or social programs than others. Health care delivery infrastructure can vary by state. For example, some states regulate the construction of

new hospitals and other treatment facilities more closely. Finally, disease prevalence can vary by state. For example, diabetes, arthritis, and chronic obstructive pulmonary diseases are more prevalent in eastern U.S. states (Raghupathi & Raghupathi, 2018). Diabetes, in particular, is influenced by cultural, behavioral, and environmental factors associated with certain geographical areas (Zang et al., 2021); it is more prevalent in the southeastern and Appalachian portions of the United States (CDC, 2022a). Asthma is another disease with some geographical trends, although a lot of variation related to population density and demographics can exist in a particular state. The Northeast Mid-Atlantic asthma belt (from Greensboro, North Carolina, to Boston, Massachusetts) has been shown to have a higher prevalence of asthma possibly due to poverty, poor air quality, and less access to specialists (Pate et al., 2021). The Asthma and Allergy Foundation of America (2018) identified a second group of states with an increased prevalence of asthma and associated ED visits and deaths. The Ohio-Lake Erie asthma belt spans from Louisville, Kentucky, to Detroit, Michigan.

Health and related outcomes vary not only by state, but also by county, town, or zip code. Research has linked zip codes to health outcomes (Holmes et al., 2018). For example, people living in neighborhoods with limited access to healthy foods and safe areas to exercise are at higher risk for health problems.

ZIP CODES AND LIFE EXPECTANCY

This interactive site What makes a long life? (https://openstax.org/r/rwjf) from the Robert Wood Johnson Foundation provides a tool that illustrates the differences between life expectancy based on a person's address.

Enter a street address or zip code of interest to see how the life expectancy of people living at that location compares to others in the county, state, and nation, and then answer the following questions.

1. What address or addresses did you enter?
2. Are the findings consistent with what you expected?
3. Among the locations you searched, did you discover significant differences among nearby locations? If so, what were they?

Factors Influencing Population Health Related to Population Density

Some of the most common geographical disparities exist between those who live in rural areas and those who live in urban areas. Individuals living in rural areas face geographic isolation, lower socioeconomic status, higher rates of health risk behaviors, limited access to health care specialists and subspecialists, and limited job opportunities (Rural Health Information Hub [RHIH], 2023). Additionally, residents who live in rural areas are less likely to be employed by organizations that provide health insurance coverage. If individuals living in rural areas also live below the poverty level, they are less likely to be covered by Medicaid (RHIH, 2023). Rural health disparities are often caused by access to health care and public health services, socioeconomic status, health behaviors, and health insurance status. Rural Americans are at a greater risk of death from heart disease, cancer, unintentional injury, chronic lower respiratory disease, and stroke than Americans who live in urban areas (RHIH, 2022). Rural residents tend to be older and more obese and to have more health problems than urban residents. They are more likely to smoke cigarettes and are less likely to use seat belts (Figure 9.5) (FDA, 2021). Table 9.3 presents relevant factors affecting rural health outcomes.



FIGURE 9.5 National efforts to promote the use of seat belts include public information campaigns, such as this valentine-themed graphic from the National Transportation and Safety Board. Studies have shown that residents of rural areas are less likely to wear seat belts than residents of urban areas, which is one factor contributing to higher traffic fatality rates in rural areas (CDC, 2017). (credit: "NTSB Valentine" by National Transportation Safety Board/Flickr, Public Domain)

Factor	Discussion
Access to health care and public health services	• Rural areas tend to have shortages of quality physician offices and other health-related resources. Health care organizations in rural areas have difficulty recruiting health care providers. • Limited access to health care providers and services equates to poor health outcomes for individuals.
Socioeconomic status	• Individuals living in rural areas tend to have higher rates of poverty compared to their urban counterparts. Job opportunities tend to be scarcer in rural areas than in urban areas. • High poverty equates to limited health care access, leading to poor health outcomes.
Health insurance status	• The highest prevalence of uninsured individuals is among those living in rural areas. Higher poverty rates in these areas limit residents' ability to pay for health insurance coverage. Depending on the policies in the state in which they reside, they may not qualify for Medicaid. • Lack of adequate health insurance equates to limited access to care, leading to less-than-optimal health outcomes.
Health behaviors	• Individuals living in rural areas often have limited access to resources that lead to positive health outcomes. Additionally, these individuals tend not to exhibit other health behaviors such as physical activity, maintaining a healthy body weight, and getting sufficient sleep. • Stress and other environmental factors may lead individuals living in rural areas to adopt unhealthy behaviors such as smoking, drug use, or alcohol use.

TABLE 9.3 Factors Affecting Health Outcomes in Rural Populations (See Rural Health Information Hub, 2023.)

UNFOLDING CASE STUDY

Part B: Addressing Disparities

Read the scenario, and then answer the questions that follow based on all the case information provided in the chapter thus far. This case study is a follow-up to Case Study Part A.

Marinelle contacts the clients who have missed the most prenatal appointments. These clients report difficulty finding transportation to the appointments. Many clients feel stressed about not having enough money and resources to support their families after their infants are born. One client describes her difficulty trying to find a home closer to town and in better condition than her current home. Marinelle works to find reliable transportation for the clients to help them make it to their appointments. She also arranges for a social worker to visit the clients to discuss their economic concerns.

3. What should Marinelle consider as a factor influencing clients living in this neighborhood?
   a. Racial discrimination
   b. Residential segregation
   c. Environmental injustice
   d. Gender differences

4. Which of the following is the best indicator for Marinelle to use to evaluate the effectiveness of her interventions to address maternal health disparities in this population?
   a. Client satisfaction
   b. Provider satisfaction
   c. Rate of pregnancy-related complications
   d. Number of missed appointments

ACCESS TO MATERNAL HEALTH CARE IN RURAL COMMUNITIES: A PATIENT'S PERSONAL STORY

Access multimedia content (http://openstax.org/books/population-health/pages/9-4-geographical-disparities)
In this video, a family discusses the barriers to maternal health services they face while living in a rural area.

Watch the video, and then respond to the following questions.

1. What are some of the specific barriers faced by the family presented in the video?
2. What is the importance of having access to health care services in rural areas?
3. What lessons learned from this situation can be applied to other rural health situations?

Chapter Summary

9.1 Health Disparities Defined

Health disparities occur when there is a difference in health care access and outcomes between two or more groups of individuals. Health disparities occur for various reasons, including limited access to health services due to higher rates of poverty, which limits the ability to purchase health insurance. The key to addressing health disparities is to minimize the effects of the social determinants of health.

9.2 Race and Ethnicity Disparities

Minority health refers to the characteristics and attributes of health specific to a racial or ethnic minority group who are socially disadvantaged and are underserved in health care. Factors that exacerbate inequalities among various groups of individuals include income inequality, environment, racism, sexism, ableism, classism, and homophobia. Systemic and structural racism also disadvantages minority populations. The COVID-19 pandemic exacerbated racial disparities.

9.3 Gender Disparities

Sex refers to the physiological and biological characteristics of males and females; gender refers to male and female characteristics that are socially constructed. Gender norms are social and cultural principles that influence ideas on how different genders should behave in society. Gender affects people's experiences with and access to health care. Research shows that the LGBTQIA+ population experiences poorer health outcomes compared to the cis-heterosexual population.

9.4 Geographical Disparities

Geography has historically influenced the health and well-being of communities, health care delivery, and health outcomes of the population. Geographical disparities are differences in health care access and outcomes based upon where an individual lives. Disparities exist between rural and urban areas, populations of different states, and even by zip code in the same county. Individuals living in rural areas face issues such as geographic isolation, lower socioeconomic status, higher rates of health risk behaviors, limited access to health care specialists and subspecialists, and limited job opportunities.

Key Terms

gender male and female characteristics that are socially constructed

gender identity a person's internal experience and belief of gender, which may or may not correspond to their physiology or designated sex at birth

geographical disparities differences in health care access and outcomes based on where an individual lives

geography a science that deals with the description, distribution, and interaction of the diverse physical, biological, and cultural features of the earth's surface

health care disparities differences among groups related to access and use of health care

health disparities health differences linked to social, economic, and/or environmental disadvantages

health equity the state in which everyone has a fair and just opportunity to attain their highest level of health

intersectionality intersecting disadvantages related to the inequities, injustices, oppressions, and privileges perpetuated by structures including racism, classism, colonialism, sexism, heterosexism, ableism, and others

minority health distinctive health characteristics and attributes of racial or ethnic minority populations who are socially disadvantaged due in part to being subject to racist or discriminatory acts and are underserved in health care

sex the physiological and biological characteristics of males and females

socially disadvantaged those who have experienced prejudice or bias because of their identities as members of racial, ethnic, or cultural groups, without regard for their individual qualities and stemming from circumstances beyond their control

Review Questions

1. A public health nurse is reviewing data that shows that families living closer to an industrial plant have higher rates of cancer. Which of the following determinants should the nurse consider in this situation?
   a. Epigenetics
   b. Sociocultural environment

c. Biological processes
d. Physical environment

2. A nurse researcher has found that clients living in rural areas tend to have higher rates of hospitalization for chronic lung disease than those living in affluent urban areas. Which of the following terms describes what the nurse researcher has identified?
a. Health disparities
b. Health determinants
c. Intersectionality
d. Socially disadvantaged populations

3. A community health nurse educates a group of families on healthy eating habits to reduce their risk of diabetes. The nurse encourages them to share healthy meal ideas with each other. Which domain and level of influence does this intervention address?
a. Behavioral and community
b. Behavioral and individual
c. Sociocultural environment and interpersonal
d. Sociocultural environment and societal

4. A community health nurse is working with a group of gay Black clients who are describing some of the negative social interactions they have experienced. This group is likely affected by which of the following:
a. Intersectionality
b. Entitlements
c. Gender disparities
d. Racial disparities

5. A home health nurse notices that, among clients who were recently released from the hospital, female clients were more likely than male clients to report experiencing uncontrolled pain while hospitalized. What contributing factor should the nurse consider in this situation?
a. Gender roles
b. Gender biases
c. Biological differences
d. Environmental differences

6. A public health nurse determines that a non-English-speaking Hispanic client needs additional medical evaluation and treatment for cancer. Which of the following statements best describes the nurse's assessment of this situation?
a. This client is insured and should be able to receive treatment accompanied by a medical interpreter.
b. This client has a primary care provider who should be able to help the client navigate the system.
c. This client's access to health care may be limited by the ability of the health care system to provide services when they are needed.
d. This client's access to health care may be limited by the availability of culturally competent providers.

7. Which of the following statements by a nursing student would indicate the need for further education?
a. "A difference in health status between older adults and the young may indicate a health disparity."
b. "Race is not a determinant of health."
c. "Individuals who live in high-poverty areas may need assistance accessing health care services."
d. "If I don't have a high school diploma, my risk for chronic disease rises."

8. A nurse studying the percentage of the population that reports having a regular source of health care notices that some states have significantly higher rates of care than other states. Which of the following factors is most likely the reason for the difference?
a. Differences in health literacy rates

b. The geographic distribution of health care providers
c. The income requirements for Medicaid eligibility
d. Availability of public transportation

9. A nurse educating a group of men on the importance of performing testicular self-exams recognizes that which of the following factors influences the likelihood that they will adhere to this recommendation?
a. Low health literacy levels
b. Poor social support
c. Gender bias related to health care access
d. Gender norms related to masculinity

10. A nurse working in a rural public health clinic recognizes that which of the following risk factors for poor health outcomes is prevalent in the community?
a. An increased likelihood of engaging in risky behaviors
b. A decreased risk of experiencing chronic lung disease
c. An increased likelihood of wearing seat belts
d. A decreased risk of cancer

CHAPTER 10

Socio-Ecological Perspectives and Health



FIGURE 10.1 Each person's health is affected by a wide array of factors in their personal and professional lives and in the environments in which they live, work, and play. These workers planting a tree may get good exercise on the job, sometimes they may work in fresh air and sunshine, and they may be able to work and socialize with others on the job, all of which can benefit their health. On the other hand, they may have to work in inclement weather, their work may be physically arduous or even dangerous, they may work by busy roads or highways where they are exposed to loud noise and air pollution, and they may be exposed to other damaging chemicals—for example in fertilizers—all of which can be detrimental to their health (https://openstax.org/r/osha). (credit: modification of work "Landscaping Crew" by Lisa Chen/Flickr, CC BY 2.0)

CHAPTER OUTLINE

10.1 Factors That Influence Health Practices
10.2 Theories and Models of Health Behavior
10.3 Core Principles of the Socio-Ecological Model

INTRODUCTION Mo is a 55-year-old client who is generally in good health. He works full-time for a landscaping company where he maintains lawns and gardens most of the year and shovels and plows in the winter. Recently, Mo has started thinking about how he can stay healthy as he looks toward retirement over the next decade.

The health of clients like Mo is affected by many factors, not solely by their medications, how often they see health care providers, their physical endurance, their family's health, their health insurance coverage, their level of education, or any other single factor. Nurses use theoretical perspectives to perform comprehensive assessments and to plan effective care in partnership with clients. **Theories** provide a means to explain phenomena systematically and to guide thoughts and decision-making processes by fostering an understanding of the causal pathways between factors of health and disease (Eriksson et al., 2018). This chapter describes the many influences on health, socio-ecological models (SEMs), and other theories of health and human behavior. Mo appears throughout the chapter as an example of how an individual's health may be affected by a wide array of circumstances in their personal and professional lives.

10.1 Factors That Influence Health Practices

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 10.1.1 Identify factors that influence individual health practices.
- 10.1.2 Describe how the interaction of genetics, behavior, environmental and physical influences, medical care, and social determinants of health interact to determine a person's health and well-being.

Dynamic and complex interactions among a person, their community, the environment, and society at large influence the overall health experience of clients and communities. Clients' health depends on more than just their own decisions and personal health practices, or health behaviors. **Health behavior** encompasses the actions, habits, activities, policies, and procedures of individual clients, communities, organizations, and governments that can either support or undermine health. The term "behavior" can carry a judgmental or negative connotation that implies blame or moralizes health choices, when in reality the health behavior depends on numerous factors.

For example, whether or not a client participates in physical activity outside of their working time may appear to be their *choice*, and whether or not a client consumes microwaved meals and packaged snacks at each meal rather than eating a lot of fresh fruits and vegetables may be viewed as a *preference*. However, there may be some actions a client would like to take to support their health, but barriers to participation in their home, workplace, community, health system, or greater society may prevent them from doing so. Significant factors impact choices, compulsions, preferences, necessities, and other decision-making processes about health and related activities.

Socio-ecological models (SEMs) are models that offer a way to study and organize how personal, situational, community, societal, political, and other contexts affect client and community health behaviors and outcomes. Socio-ecological perspectives are a focus of this chapter. Before discussing SEMs in more detail, this section explores some of the concepts that can shape, and be shaped by, health behavior.

THE ROOTS OF HEALTH INEQUITIES

Labeling Client "Behavior"

Many factors influence client "compliance" or "adherence" to care plans, suggested health interventions, or engagement with what is generally accepted as a healthy lifestyle. Assigning feeling, meaning, or blame to client health behavior without a thorough consideration of other socio-ecological factors can do serious harm. For example, clients may be labeled "noncompliant" when documenting or discussing a medication plan instead of naming factors such as pharmacy access, financial situations, or unpleasant side effects. This labeling of clients can influence how other providers interact with the client, creating an inequity in providing health care.

(See Cox & Fritz, 2022.)

CASE REFLECTION

Factors That Influence Health Practices

Read the scenario, and then respond to the questions that follow.

While generally healthy, Mo has been diagnosed with dyslipidemia for which he takes atorvastatin; he also has seasonal allergies that he manages well with daily over-the-counter loratadine and fluticasone under the direction of his primary care nurse practitioner. Mo wears corrective lenses. He has the occasional tennis elbow flare-up during his busy seasons at work. About once or twice per year, he experiences respiratory bronchitis and uses an albuterol inhaler as needed. The bronchitis can be particularly bothersome, which motivates him to get his seasonal immunizations like flu and COVID-19 as soon as his local pharmacy has them in stock. Sometimes, he says it is tough to sleep because he lives near the highway, which can be noisy overnight. He has not had any prior surgeries. His family history is significant for dyslipidemia and coronary artery disease; his mother (living) and his father (deceased over 20 years) had type 2 diabetes mellitus and chronic lymphocytic leukemia. Mo has never had genetic testing but is of Ashkenazi Jewish descent. Aside from seasonal allergies, he has no known allergies, and his

immunizations are up to date.

Mo states he does not mind the physical nature of his landscaping work, but each year it seems a bit harder to work quickly. He proudly tells you he also works on his own yard, having planted 100 tulip bulbs for the coming season. He lives with his wife in a single-family home in a small town about 30 minutes by car from the capital city. He uses the 5-mile bicycle and walking path once a week in nice weather. Mo's town has several grocery stores and a large farm where he is able to buy organic produce. Mo has two adult children who do not live at home and one grandchild. His daughter is a nurse, and his son works in finance. Mo spends as much time as possible with his family and socializes with friends a few times per month.

1. Identify three components of Mo's profile that are health-promoting, are risk-reducing, or may affect his health in a positive way.
2. Identify three components of Mo's health that present health risks, present safety concerns, or may affect his health in a negative way.

The Centers for Disease Control and Prevention (CDC, 2019) recognize five main factors that influence health:

- Genetics
- Behavior
- Environmental and physical influences
- Medical care
- Social factors

These factors are discussed below. While reading about these factors, think about how each component identified as either supportive or potentially detrimental to Mo's health could be categorized. The cultural beliefs, norms, values, and practices of clients and families can influence individual definitions, understanding, and experiences of health. For more information on culture and health, see Cultural Influences on Health Beliefs and Practices.

Genetics

Family health history helps identify strong risk factors or predictors for acquiring certain conditions and disorders and alternatively for lowering the risk of health conditions. **Genetics** involves the study of how genes, traits, and diseases are passed from one generation to the next. Although genetic associations can be robust, genetics are still only one component in an overall health picture. As heritability and the presence of certain genes or attributes are measurable, scientists can calculate the impact of genetics versus lifestyle, social, and other factors on specific health risks. Some health conditions can have exceptionally strong genetic linkages, with a high likelihood that if one or both biological parents have a condition, their offspring will have it, too. For example, while the risk of developing breast cancer in the general population is 12.9 percent, children of parents with a certain gene mutation have a 50 percent risk of inheriting the mutation, dramatically increasing the risk of developing cancer (National Cancer Institute, 2020). Some aspects of health may be loosely related to genetics. The heritability of lifespan is only estimated to be between 7 and 25 percent (van den Berg et al., 2019), which suggests that there are many other factors that contribute to how long a client may live beyond the age of their oldest relatives at death.

Mo has a few possible genetic health risks. His parents were noted to have dyslipidemia and coronary artery disease as well as type 2 diabetes mellitus and cancer. Mo may be at increased risk of these conditions from a genetics standpoint, but he may also have had exposure to environmental and lifestyle factors similar to his parents that can precipitate these conditions. Mo is also of Ashkenazi Jewish descent. Ashkenazi Jews are one of several ethnic groups known to carry an increased likelihood of select genetic conditions (National Gaucher Foundation, 2023).

Behavior

Broadly, **behavior** encompasses the way a person acts, the mannerisms they display, and the conduct they employ. *Health behavior* refers to specific actions that support or undermine health. Some individual health behaviors, such as staying adequately hydrated and participating in mindfulness practices like meditation, journaling, or guided imagery, can lower the risk of conditions or lead to improved health. Other health behaviors can precipitate or worsen conditions, such as smoking and getting insufficient sleep. Behavior is one of many factors that can influence client health, and all clients do not have the same access to engaging in select health-promoting

behaviors.

Many recognized structures, inequities, and ideologies, as well as broad societal organization, have a greater influence on health behavior than individual choices and nonconscious processes (Rejeski & Fanning, 2019; Short & Mollborn, 2015). These external factors can create barriers or opportunities that influence the ease with which individuals can engage in health-promoting behaviors. Think back to the examples at the start of this section: a client who does not engage in physical activity and a client who does not eat fruits and vegetables. The client who does not participate in leisure-time physical activity may not have safe places to walk in their neighborhood or might work odd hours that leave little daylight time for walking and jogging. The client who eats mostly packaged foods may not live near a grocery store that sells any fresh fruits and vegetables or sells them at affordable prices. These situations highlight the significance of city planning, equitable access to jobs with daytime hours, and community buying power that could incentivize a full-service grocery store chain to locate a store in the neighborhood. These factors outweigh the influence of clients' personal activity and meal preferences or conscious health decisions. A comingling of other health factors affect whether individuals are aware that a particular factor supports or hinders health.

Mo engages in some health-supporting behaviors, such as keeping up social contacts and participating in physical activity. He also regularly takes medication in support of his identified health conditions and has agreed to receive immunizations as scheduled. Some of his behaviors represent health risks and require further assessment. For example, the physical nature of his job has been a challenge and at times exacerbates his tennis elbow.

Environmental and Physical Influences

When thinking of health and the environment, one may consider several aspects such as access to drinking water and exposure to air pollution. While clean air and water are essential to physical and mental well-being, other aspects of the environment can dictate health status (Figure 10.2). The primary environment for most people is their home. Even dwellings that clients note as pleasant, comfortable, and preferred can represent health risks. For example, clients who live in multiunit buildings (e.g., apartments or condominiums) and do not smoke still face a health risk if other people in their building smoke in their own home units, on balconies, or outside of the buildings in designated smoking areas that are in close proximity to the living area (Willand & Nethercote, 2020). If the physical environment around a client's home or place of work has a well-marked, smooth, tree-lined sidewalk, this can support engagement in outdoor physical activity. Similarly, living near nature or being able to see green space from a window in the home supports self-esteem, life satisfaction, and happiness and helps clients avoid depression, anxiety, and feelings of loneliness (Soga et al., 2021). Alternatively, living near a highway places a client at risk for hearing constant noise and being exposed to pollution and has been associated with neurodegenerative disorders such as Alzheimer's disease, multiple sclerosis, and Parkinson's disease (Yuchi et al., 2020). A healthy home environment may not be available in densely populated areas. For many people, opportunities to relocate from an unhealthy home environment to an improved setting may not be affordable.



FIGURE 10.2 One of the big reasons for indoor smoking bans is to protect workers from secondhand smoke, an environmental contaminant. While everyone may experience serious health consequences following exposure to secondhand smoke, not everyone faces the same risk. Children, adolescents, and individuals who are non-Hispanic Black, have lower incomes, have less education, live in rental or multiunit buildings, live with a smoker, and work in certain industries face a disproportionate risk of secondhand smoke exposure (https://openstax.org/r/cdcgovab). (credit: "Smoke-free area" by Vasile Cotovanu/Flickr, CC BY 2.0)

THE ROOTS OF HEALTH INEQUITIES

Home Air Quality: Environmental Racism

"Redlining" was a discriminatory home loan practice that emerged in the United States in the 1930s when banks would deny mortgages or offer loans on unfavorable terms to clients and families based on their race. Redlining led to neighborhood segregation and ongoing disparities. Modern-day disparities in air quality can be linked to these nearly 100-year-old practices. Researchers studied the association between air pollution and redlining in 202 cities across the United States. They determined that BIPOC communities, particularly Black and Hispanic people, are exposed to higher levels of air pollution despite general improvements in air quality across the nation. One reason for poor air quality in these communities is the presence of hazardous industrial factories in redlined neighborhoods. While banks and lenders today may have antidiscrimination practices in place and there is legislation meant to prevent redlining, the health impact of this racist practice persists. Higher levels of contaminants such as nitrogen dioxide and fine particulate matter present in formerly redlined neighborhoods can contribute to premature death, chronic conditions across body systems, environmental allergies, cognitive problems in children, and complications with reproductive and fertility health. See Structural Racism and Systemic Inequities for more information on redlining and Environmental Health for more information on the negative effects of pollution on health.

(See Lane et al., 2022; Manisalidis et al., 2020.)

The physical environment to which a client has access can impact health and behavior. Consider Mo: Mo exercises regularly in nice weather. He lives in a town that has a 5-mile biking and walking path that he uses for walking and jogging. This walking path gives Mo a safe place to participate in physical activity. If Mo lived in a city that did not have such a path, would he be able to walk for 5 miles on the sidewalk? Would he need to dodge oncoming traffic while jogging? If there was not a path designed specifically for walkers and joggers, would he consider outdoor physical activity too much of a hassle? Without a place to exercise outside, would he need to join a gym? Could he afford to join a gym? Mo is in an ideal position where he enjoys exercise and has access to resources that allow him to exercise in the community environment. On the other hand, living next to a highway may pose a threat to Mo's health due to poor air quality, conditions that are not conducive to sleep, and risk for neurodegenerative disorders.

Medical Care

Medical care refers to services rendered by a health care clinician during visits to clinics, offices, hospitals, surgical centers, schools, labs, and other places. Access to medical care can improve health through prevention, diagnosis, treatment, or palliation of illnesses, injuries, and diseases. The presence or absence of barriers to medical care for clients and communities influence their health behavior. Access to medical care provides clients with preventive health screenings, symptom management, and access to treatment and medications to manage chronic conditions. Access to care depends on many factors, such as a client's insurance status and comfort or trust in specific providers or in the health system as a whole (Greene & Ramos, 2021).

Members of marginalized communities face additional barriers to finding a provider who might welcome them and understand their needs. Older adults, LGBTQIA+ clients, and clients with language barriers are a few examples of those who might have physical access to care but do not fully receive the care they need due to factors such as systemic ageism, heterosexism, and stigma in health settings (Al Shamsi et al., 2020; D'cruz & Banerjee, 2020; Gibb et al., 2020). Caring for Vulnerable Populations and Communities shares more information regarding the care of populations vulnerable to marginalization, discrimination, and exclusion in the health setting. Even factors that change day to day can impact medical care. For example, scheduling and attending a medical appointment involves: finding time to make a phone call, being able to succinctly describe the health concern, finding a convenient day and time to attend an appointment around work and other commitments, ensuring access to and money for transportation to get to the appointment, paying for the copay in the setting of lost wages, and more. Geographic access to a hospital or care provider can also differ for many Americans in rural versus urban environments. For example, although the United States has climbing maternal morbidity and mortality rates, in recent years access to perinatal services in rural communities has decreased, and these communities have a nine percent greater probability of severe maternal morbidity and mortality compared to urban residents (Kozhimannil et al, 2019).

Mo sees his primary care provider annually and as needed. The primary care clinic is situated in Mo's town, and he finds it easily accessible. This makes his quarterly visits for monitoring of chronic conditions easy, and Mo has never missed an appointment for a cholesterol check. Mo can quickly see the primary care provider for an evaluation of his respiratory health and inhaler refills as needed. If he ever needed surgery or inpatient care, he could easily access the larger hospitals in the capital city, which is only about 30 minutes away by car. Further, his daughter is a nurse, which gives him access to extra support. She can help him make sense of any of the primary care provider's recommendations or test results and can help him prepare to explain his health issue in a succinct manner to make the most of any visit scheduled. The same is not true for many Americans. Health inequities are apparent and harmful when clients face barriers such as limited health plan coverage, living far away from hospitals and clinics, language barriers, or lack of family support. Any barrier to care access can impact a client's ability to receive care, which can lead to poor health outcomes and continuation of society-wide health inequities.

A CRISIS IN MATERNAL CARE ACCESS

An increasing number of locations in the United States are becoming "maternity care deserts," leaving pregnant clients and families without access to birth centers or hospitals and providers that can provide obstetric care. In a 2022 report (https://openstax.org/r/marchofdimessites), March of Dimes determined that the growth of these deserts was affecting nearly 7 million people of childbearing potential and over a half million babies. March of Dimes developed a companion site (https://openstax.org/r/marchofdimes) to the report with summaries and interactive maps. *Please note, the report refers to women and mothers. Authors and editors of this textbook acknowledge and support that women and mothers are not the only clients with childbearing potential.*

Visit the links, and then respond to the following questions.

1. What are the health consequences of living in a maternity care desert?
2. Is your school or home in an area considered a maternity care desert?
3. How do clients receive medical care when living in a maternity care desert?
4. What individual health behaviors are impacted when living in a maternity care desert?
5. What might it take to eliminate maternity care deserts?

Social Determinants of Health

Social determinants of health (SDOH) have crossover with the factors previously discussed, but they also bring different perspectives and antecedents to a client's full health picture. Other chapters within this textbook discuss SDOH in greater depth. Briefly, per Healthy People 2030, social determinants of health are the conditions and environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks (Office of Disease Prevention and Health Promotion [ODPHP], n.d.-a); they are discussed at length in Social Determinants Affecting Health Outcomes. Social determinants across domains, including a client's economic stability, education access and quality, health care access and quality, neighborhood and built environment, and social and community context can influence or are influenced by the factors associated with health behavior.

Not all clients have the same access to engaging in healthy behaviors and lifestyle interventions. For example, teen clients have identified support from caregivers, family members, and peers regarding healthy eating and exercising and access to organized sports as two factors essential to facilitating a healthy lifestyle (Cardel et al., 2020). What happens to teens without such supports? There are many benefits to outdoor play for children and teens alike (Chaudhury et al., 2019; McCormick, 2017), and nurses might suggest increasing outdoor play time to families during health encounters. Unfortunately, not all clients and families have the same access to recreational areas, parks with amenities such as play structures, vegetation, and outdoor spaces with tree canopy and shade coverage in their neighborhoods (Kephart, 2022). How might a nurse approach suggesting increased outdoor activity for families that are not afforded access to safe green space (Figure 10.3)? While nurses can acknowledge that health behaviors can bolster or hinder personal health and wellness, they must remember that placing ultimate accountability for engaging in health behaviors solely on an individual is not in alignment with nursing practice principles of justice and equity.



FIGURE 10.3 A preschool-aged child plays tag indoors. When communities do not have access to robust green space, nurses can counsel families on creative indoor physical activities. Nurses can recommend activities that encourage movement, fun, and family bonding, such as online guided dance or exercise classes on sites like YouTube or different indoor games for children of all ages. (credit: "Playing Tag with Milly" by Donnie Ray Jones/Flickr, CC BY 2.0)

Mo's social determinants affect his experience of health. He considers himself economically stable. He finished high school, he is employed full-time, and he owns a home. He has health plan coverage and, as discussed, can easily access health services when he needs them. He enjoys the environment in his own backyard and can access outdoor recreation space in his neighborhood. Mo has a positive social and community context. His job does pose health risks to both his musculoskeletal function (tennis elbow) and respiratory wellness (allergies and bronchitis). He knows that living near the highway can affect his sleep, and he might be surprised to hear about the risks that

traffic and pollutants pose to his respiratory conditions—and to the vibrancy of his tulip garden! All in all, Mo's social determinants contribute to a positive experience of health.

Intersectionality

None of the factors that influence health behavior exist, form, evolve, or influence on their own. Similarly, barriers or health risks relevant in one factor or category can worsen those in another and perpetuate inequalities and injustices in health. **Intersectionality** considers how more than one disadvantage can interact for clients on an individual level and reflect the inequities and injustices at the systems level. Racism, classism, colonialism, sexism, heterosexism, and ableism are a few of the structures that result in systems-level oppression and privilege (Crenshaw, 1991). Intersectionality focuses on systems of oppression and privilege, not individual identities, and while all people have intersecting social identities, not all people belong to groups that are harmed by oppressive structures or supported by subsequent privilege (Aguayo-Romero, 2021). Considering the intersectionality of genetics, behavior, environment, medical care, social determinants, and societal structures allows for a better understanding of the complexity of health and illness across the population. It also serves as a reminder to all clinicians that addressing disparities, inequities, biases, injustices, and other problems that perpetuate oppression in health care is a priority that must be addressed to promote health for all.

INTERSECTIONALITY

Access multimedia content (http://openstax.org/books/population-health/pages/10-1-factors-that-influence-health-practices)
This CDC video defines intersectionality and explores its role in health outcomes.

Watch the video, and then respond to the following questions.

1. How would you define intersectionality?
2. What different groups do you belong to?
3. The video states that public health professionals can use the intersectionality framework as an equity lens. What does this mean?

10.2 Theories and Models of Health Behavior

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 10.2.1 Explain the purpose of theories and models of health behavior.
- 10.2.2 Describe five common theories and models nurses may use with clients.

Health behavior can support or undermine client health. Healthy behaviors and lifestyle interventions can prevent illness, ameliorate symptoms, and improve overall health. Some examples of healthy behaviors and lifestyle intervention include changing one's diet, engaging in physical activity, stopping smoking, practicing harm reduction, managing stress, and attending support groups (Wang & Geng, 2019). Nurses often provide client teaching related to healthy behaviors and lifestyle interventions that, in concert with prescriptions and medical treatments, can support client well-being. Models and theories of health behavior can guide nurses in identifying health behaviors requiring change in clients and communities and methods for accomplishing health promotion and disease prevention through behavior change. As client, family, and community behaviors that promote health and reduce risk are essential to meeting population health goals, this section will discuss models and theories relevant to the study and change of health behavior. A wide range of clinicians have used Social Cognitive Theory, Theory of Planned Behavior, Health Belief Model, Transtheoretical Model/Stages of Change, and Pender's Theory of Health Promotion in various contexts to describe client health behavior and promote engagement in healthy behaviors, such as diet, mobility, and other aspects of care and treatment.

HARM REDUCTION PRACTICES

Harm reduction refers to practices in health care that support clients who engage in known risk behaviors with

kindness, compassion, and respect. Many harm reduction experts report that harm reduction is "meeting people where they are," meaning clinicians can recognize that select behaviors carry risk but that for personal want or need the client is not planning to stop the behavior. Harm reduction strategies may include educating clients who are sex workers on the use of barrier methods and birth control or providing clients who use injection drugs with clean syringes and test kits to confirm the contents of injected drugs. Harm reduction is a departure from past ineffective practices of advising clients to simply stop participating in risky behaviors.

Visit the National Harm Reduction Coalition (https://openstax.org/r/diseasecontrol) website for information and resources on key issues such as syringe access, overdose prevention, sex work, hepatitis C, supervised consumption services, and xylazine.

Click on one of the topics, and then respond to the following questions.

1. How does the information on the website differ from what you may have previously read, heard, or learned about the issue?
2. What information on the website is congruent with what you may have previously read, heard, or learned about the issue?
3. Can you name one action you can take in your future nursing practice to implement harm reduction?
4. How might you use the principles of health behavior change to partner with a client to reduce their risks?

Social Cognitive Theory

Albert Bandura developed the Social Cognitive Theory to analyze and explain human function with consideration of the dynamic interactions among the individual, the environment, and their behavior (Bandura, 2001b). Bandura's theory assumes that people are active agents in their own development and that they are proactive, self-regulating, self-reflecting, and self-organizing but that their personal agency is influenced by social systems (Bandura, 2001a). Individual factors may include personal values, self-efficacy, and outcome expectations. Environmental factors include the feedback and behaviors of others. The behavioral component may involve prior behavior and experiences. Per the Social Cognitive Theory, an individual's behaviors ultimately are determined by interactions of personal goals, self-efficacy, outcome expectations, and social factors (Bandura et al., 1999). The theory has become one of the foremost in the area of motivation and is used in health to predict and understand clients' health behavior (Schunk & DiBenedetto, 2020; Wu et al., 2021). The theory is most applicable to behaviors that are planned, requiring forethought on the part of the client, in contrast to decisions that may be made in the moment (Bandura, 1991).

Improving access to care for clients and families in rural settings can improve population health outcomes. One way to improve care access is to support client engagement as active members of their own care team. Researchers recently conducted a study to determine the impact of interventions based in Social Cognitive Theory on the self-efficacy of older rural clients in participating in their own health care (Ohta et al., 2021). A total of 156 clients aged 65 years and older from three different rural communities participated in educational sessions regarding health management, health literacy, collaboration, shared decision-making, and chronic disease, all with consideration of the personal, environmental, and behavioral factors relevant to the Social Cognitive Theory. Another 121 clients, also aged 65 years and older, did not attend any educational sessions. All clients completed questionnaires regarding participation in health management and collaboration with clinicians and participated in research interviews about engagement and collaboration in their own health care. The researchers determined that rural older adults can be motivated to participate in their own care and collaborate with clinicians. They also identified facilitators and barriers from each aspect of the Social Cognitive Theory. Education and empowerment were clear facilitating factors. Regarding barriers to participating, individual views on the hierarchy between clinicians and clients contribute to low health care self-efficacy. Researchers found that a reluctance of these individuals to speak up or challenge hierarchy contributed to a lack of motivation to meaningfully participate in care. The rural environment was also a barrier compared to an urban environment as rural residents have fewer opportunities for mutual assistance with their health needs and may socialize less often. This finding points to the need for strong community health programming to support care access and population health goals.

Theory of Planned Behavior

In developing the Theory of Planned Behavior, psychologist Icek Ajzen postulated that it is possible to predict an individual's intention to perform a behavior. Intent to behave in a certain way as well as variance in the behaviors of an individual are accurately predicted through analysis of attitudes toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). Per the theory, individuals' perception that a behavior will have an expected outcome, perception of the risks and benefits of the outcome, and attitude contribute to their intent to behave in a certain way. The following are concepts important to this theory:

- Intention: willingness or desire to perform an action
- Attitude: feelings about an action
- Subjective norms: thoughts of the greater society on the action
- Perceived behavioral control: belief in the ability to or access to carrying out an action
- Risk perception: thoughts about benefits and hazards of acting or not act

For example, if Mo perceives that wearing protective headphones while working with landscaping equipment will preserve his hearing and that the headphones are not too uncomfortable, and he cares about preserving his hearing, he is likely to wear protective headphones at work. Alternatively, if he does not think protective headphones impact his hearing or that working around loud equipment can damage hearing, and if he thinks that the headphones are uncomfortable, he is unlikely to change his behavior. The intent, or motivation, coupled with a person's actual ability to perform the behavior predict behavioral achievement. Ajzen designed the theory to help explain all behaviors that can be self-controlled. Researchers have used this theory to understand human behavior related to farming practices, consumer habits, and tourism behaviors, and this theory has been used to understand wildlife behavior as well (Choi & Johnson, 2019; Miller, 2017; Savari & Gharechaee, 2020; Ulker-Demirel & Ciftci, 2020).

Psychology researchers have used the Theory of Planned Behavior to examine the perceptions and experiences of 114 winter sports participants about sun-safe behaviors and related perceptions (Knobel et al., 2023). Although many people associate sunscreen use with outdoor summer activities, the risk of sunburn and skin cancer is present throughout all seasons (Figure 10.4). Study participants answered questions about how often they used sunscreen, their intent to use sunscreen the next time they engaged in a winter outdoor sport, how they feel when using sunscreen, norms about sunscreen use, and perceived risks of using or not using sunscreen. Concepts of the Theory of Planned Behavior were strongly associated with sun-safe behaviors. For example, winter sports participants who intended to use sunscreen the next time they participated in winter sports were most likely to engage in sun-safe behaviors. Another example of a key factor in explaining the variation in using or not using sunscreen was the perceived behavioral control, meaning the participants who found sunscreen application easy to do and accessible were more likely to practice sun safety. Using the theory to organize the survey and results, the researchers were able to suggest ways to develop guidelines for promoting sun safety among winter sports participants.



FIGURE 10.4 As noted in the Healthy People 2030 box below, skin cancer is the most commonly diagnosed cancer in the United States, and it is preventable. Nurses can lead or become involved in public and private campaigns to educate individuals on the dangers of prolonged unprotected sun exposure and on the effective use of sunscreens every day, not just at the beach or in the summer. (credit: "Sunbather" by Eden, Janine and Jim/Flickr, CC BY 2.0)

HEALTHY PEOPLE 2030

Reduce the Proportion of Students in Grades 9 through 12 Who Report Sunburn

The most commonly diagnosed cancer in the United States is skin cancer, most of which is preventable. One method for preventing skin cancer is through regular use of sunscreen. Over 50 percent of high-school-aged students report having a sunburn annually. One goal of Healthy People 2030 is to decrease the proportion (https://openstax.org/r/healthgob) of high-school-aged students that experience sunburn through implementing health promotion and educational activities about sun and skin safety.

(See ODPHP, n.d.-d.)

Health Belief Model

In the 1950s, the U.S. Public Health Service struggled to educate the public on the importance of preventing disease and engaging in screening tests to detect asymptomatic conditions, even when preventative interventions and screenings were provided at no cost (Rosenstock, 1974). The Service and behavioral researchers set out to develop a model that could describe behaviors related to the avoidance of disease. The resulting Health Belief Model (HBM) suggests that an individual's belief of how threatening an illness or disease may be, coupled with the belief in the effectiveness of a recommended behavior, predicts the likelihood of engaging in a health behavior. Many researchers and health program leaders have used this model to explain and predict acceptance of health and medical care recommendations (Janz & Becker, 1984). Through research and application of the original model, its modern interpretation includes key constructs of perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action (e.g., readiness), and self-efficacy (Skinner et al., 2015). Susceptibility and severity work together to compose an individual's perceived threat. For example, an individual may be susceptible to a common cold if they spend time with a friend who has a cold but do not consider the cold a severe illness and therefore see little health threat in socializing with an ill contact.

A group of nurse researchers studied college students' behaviors related to vaccination for preventing the human papillomavirus (HPV), using the Health Belief Model to guide their work and findings (Oh et al., 2021). HPV is the most common sexually transmitted infection in the United States and is associated with cervical cancer, genital

warts, and other cancers. Vaccination can prevent transmission of the virus as well as its progression. After surveying 306 students about their health care access, sexual activities, HPV knowledge and threat assessment, and intent to take action via vaccination, the nurse researchers were able to define barriers and facilitators of vaccine uptake based on the Health Belief Model. These findings also enabled them to determine those students most at risk of not receiving the vaccine. For example, students who self-identified as Black and did not speak English at home were less likely than other students to complete the HPV vaccine series. Knowing which students were most at risk for not completing the vaccine series allowed appropriate targeting of health promotion activities. In alignment with the Health Belief Model, the researchers also identified increasing knowledge about HPV, promoting the benefits of HPV vaccination, and health care provider recommendations to become vaccinated as factors that would support engagement in healthy behaviors among college students.

HEALTHY PEOPLE 2030

Reduce Infections of HPV Types Prevented by the Vaccine in Young Adults

A widely available vaccine can help prevent many cases of cancers caused by HPV infection. All children should be encouraged to start the HPV vaccination series at age 11–12 years. There is a critical need for nurses and other care providers to promote this vaccine series (https://openstax.org/r/healthypeopleb) and to provide education on the risks and prevalence of HPV.

(See ODPHP, n.d.-c.)

The Transtheoretical Model/Stages of Change

Researcher James Prochaska and colleagues identified six specific stages of behavior change following studies of smokers (DiClemente & Prochaska, 1982; Prochaska & Velicer, 1997). These stages, along with 10 processes of change, form The Transtheoretical Model, also known as the Stages of Change. Since its original development, the model has been applied to behavior change related to substance use, mental health, disease prevention, cancer screening, sun exposure, and pregnancy prevention (Skinner et al,, 2015). The model posits that individuals progress through precontemplation, contemplation, preparation, action, maintenance, and termination when changing a behavior. Individuals in

- *precontemplation* do not intend to take action in the next 6 months,
- *contemplation* intend to take action within the next 6 months,
- *preparation* intend to take action in the next 30 days and have taken behavioral steps toward change,
- *action* change overt behavior for less than 6 months,
- *maintenance* change overt behavior for more than 6 months, and
- *termination* have no temptation to relapse and full confidence in maintaining the change (Skinner et al., 2015).

This model allows for consideration that behavior change occurs over time and does not always happen in a linear fashion. Meaning, the thoughts and actions of clients may move “backward” through the stages as they progress to a long-term behavior change. As an example, the client who has quit smoking cigarettes for 7 months may pick up smoking again for 1 month and decide to start the cessation process once more. This client would move from maintenance to contemplation or preparation as they work toward eliminating a health risk behavior once more.

Nurse researchers developed a walking program to improve metabolic control in clients with type 2 diabetes mellitus (Kaplan Serin & Citlik Saritas, 2021). Using the Stages of Change, researchers coached a cohort of clients through walking training five times, four times, three times, two times, and one time during the precontemplation, contemplation, preparation, action, and maintenances stages, respectively, over the course of 10 weeks. They also shared concepts such as the benefits of walking, the consequences of a sedentary lifestyle, and tips for walking comfortably and enjoying exercises via 30–45-minute coaching calls. The intervention group also received daily text messages or brief calls reminding them to exercise and/or record clinical parameters such as blood glucose or blood pressure. Another cohort of clients received no training regarding the walking program but did receive twice-weekly calls reminding them to exercise. Seventy-five percent of clients in the intervention group and 17 percent of clients in the control group progressed through the Stages of Change. At the end of the study, members of the intervention group had improvements in daily average step counts, body mass index, metabolic output, and blood pressure

readings. The nurse researchers concluded that walking for behavior change supported by the Transtheoretical Model can improve metabolic control for clients with type 2 diabetes mellitus.

Health Promotion Model

Nurse theorist Dr. Nola Pender developed the Health Promotion Model over 40 years ago (Pender, 2011). The model aims to help nurses understand the determinants of health behavior to promote health through effective behavioral counseling. The major concept of the Social Cognitive Theory—that individual factors, behavior, and environment interact—is foundational to the Health Promotion Model (Srof and Velsor-Friedrich, 2006). While Social Cognitive Theory and other theories and models of health behavior might address some of the same concepts in client, family, and community care, Pender developed the Health Promotion Model with a focus on nursing. The model directs nurses to assess for eight beliefs when planning for behavior change and health intervention. Table 10.1 lists the eight beliefs. Dr. Pender developed a brief manual for the Health Promotion Model, linked here (https://openstax.org/r/deepblue), which includes a sample clinical assessment to guide nurses as they work with clients on health promotion and behavior change.

Belief	Description
Perceived benefits of action	Perceptions of the positive or reinforcing consequences of undertaking a health behavior
Perceived barriers to action	Perceptions of the blocks, hurdles, and personal costs of a health behavior
Perceived self-efficacy	Judgment of personal capability to organize and execute a particular health behavior; self-confidence in performing the health behavior successfully
Activity-related affect	Subjective states or emotions occurring before, during, and following a specific health behavior
Interpersonal influences (family, peers, providers)	Norms, social support role models—perceptions concerning the behaviors, beliefs, or attitudes of relevant others in regard to engaging in a specific health behavior
Situational influences (options, demand characteristics, aesthetics)	Perceptions of the compatibility of life context or the environment with engaging in a specific health behavior
Commitment to a plan of action	Intention to carry out a particular health behavior, including the identification of specific strategies to do so successfully
Immediate competing demands and preferences	Alternative behaviors that intrude into consciousness as possible courses of action just before the intended occurrence of a planned health behavior

TABLE 10.1 Health Promotion Model Beliefs (See Pender, 2011.)

Health promotion behaviors during pregnancy can help pregnant people prevent complications and support positive outcomes for newborns. Complications such as preterm labor and small-for-gestational-age infants are not always avoidable. However, health behaviors, including physical activity, stress management, and consuming nutrient-dense foods, can help pregnant clients avoid such complications and support a healthy pregnancy. Further, promoting health and reducing risk in individual client pregnancies supports broader population health goals related to improving infant mortality and maternal health. The Health Promotion Model guided a recent study aiming to determine predictors of health-promoting behavior in pregnant women (Jalili Bahabadi et al., 2020; please note the study specifically notes pregnant women; however, this chapter's editors and authors acknowledge that other people are capable of pregnancy). Through surveys of 300 pregnant women, researchers identified social support, perceived barriers, and perceived benefits of health-promoting lifestyles as influential on whether or not pregnant women would engage in health-promoting lifestyles. Using concepts from the established model to form the study and organize the results allows for targeted interventions going forward. For example, increasing awareness among pregnant clients of the benefits of health-promoting behaviors is one way to inspire the adoption of healthy activities.

HEALTHY PEOPLE 2030

Reduce the Rate of Infant Deaths

Changes in access to health care for pregnant people and continuation of health coverage per state policy for birthing parents and babies is one systems-level intervention that has contributed to a decreasing infant death rate over the last decade. Still, thousands of infants die from conditions such as preterm birth and low birth weight each year—and there are notable disparities by race/ethnicity, income, and geographic location. Healthy People 2030 aims to reduce the rate of infant deaths (https://openstax.org/r/healthinfants) and 3 years into the program has seen rates improve from 5.8 infant deaths before age 1 per 1,000 live births to 5.4 infant deaths before age 1.

(See ODPHP, n.d.-e.)

THEORY IN ACTION

Adopting a Health Behavior

Think back to Mo from the Case Study as you watch one of these short videos on the theories discussed earlier in the chapter. Select one video below to review a theory or model.

- Social Cognitive Theory (https://openstax.org/r/socialcognitivetheory)
- Theory of Planned Behavior (https://openstax.org/r/plannedbehaviour)
- Health Belief and Transtheoretical Models (https://openstax.org/r/healthbeliefa)
- Pender's Health Promotion Theory (https://openstax.org/r/healthpromotionmodel)

Watch the video, and then complete the following exercise.

1. Pick one of Mo's health problems or a condition he may be at risk for (the health problem may be acute, chronic, self-limiting, or requiring treatment and may be individual or a risk for his family/community).
2. Identify a health-promoting behavior that can address Mo's actual or potential health problem.
3. Use your selected theory or model of health behavior described in the video to predict barriers, facilitators, and/or nursing interventions related to the chosen health-promoting behavior.

10.3 Core Principles of the Socio-Ecological Model

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 10.3.1 Identify the core principles of socio-ecological models.
- 10.3.2 Describe how socio-ecological models serve as a framework to understand how behaviors both affect and are affected by various contexts.
- 10.3.3 Discuss health behavior using the components of a theory or model.

The Socio-Ecological Model (SEM) is a classic theory of child development that scholars and clinicians from different disciplines have adapted over time to fit the phenomena of other fields. Its core principles encourage the view of individuals as existing within many relationships and contexts. A consistent idea among similar models is that multiple factors can influence health, and clinicians, educators, researchers, and policymakers must take a broad approach to thinking about health and the many shaping factors. Using the SEM as well as theories facilitating an exploration of the nested, interdependent, intersectional, dynamic interactions of individuals and their surroundings in today's complex world will help nurses meaningfully understand and address health problems. The Socio-Ecological Model offers a way to study and organize how personal, situational, community, societal, political, and other contexts influence health behaviors and outcomes. Nurses and nursing students can guide their professional practices with this model to support thorough assessments of client health and targeted, realistic care planning, among other benefits. While SEMs can help structure the research, work, planning, and implementation processes of nurses in community/public health, remember that SEMs may not include all contextual factors that are important to a particular community or specific health problem. Further, not all findings from work guided by SEMs

will apply to individuals within a population or community.

The current version of the model has evolved from many interprofessional theories and studies of health and behavior that started in the 1970s with psychologist Urie Bronfenbrenner, who called for researchers to consider how human growth and behavior can both accommodate and change based on environments and systems and how people interact with them (Bronfenbrenner, 1977). Bronfenbrenner originally developed this model to describe child development and identified four systems nested around the individual child that impact development: microsystem, mesosystem, exosystem, and macrosystem. Years later, Bronfenbrenner added chronosystems as an additional context imperative to consider in analyzing child development (Bronfenbrenner, 1986). Table 10.2 presents definitions of each system.

System	Definition
Microsystem	Complex relations between the developing individual and environment and the immediate setting of the individual. The setting is a place with particular features in which the individual engages in particular activities in particular roles—for example, their home (a child), school (a student), or workplace (an employee).
Mesosystem	The interrelations among major settings containing the developing individual at a particular point in their life—for example, interactions among family, school, and peer groups.
Exosystem	An extension of the mesosystem that includes other specific informal and formal social structures that do not contain the individual but do encompass the settings where the individual is found—for example, major institutions of society, the neighborhood, mass media, government agencies, and social networks.
Macrosystem	Institutional patterns of the culture and subculture. Macrosystems direct norms and activities. A macrosystem may include codified laws, regulations, and rules but can also include informal and implicit norms. For example, the economic, social, educational, and legal systems shape the meaning and motivation of how individuals are treated and interact with each other in different settings.
Chronosystem	The influence of time on an individual's development, including life transitions and events over the course of life.

TABLE 10.2 Systems of Bronfenbrenner's Socio-Ecological Model (See Bronfenbrenner, 1977; 1986; 1995.)

UNICEF Socio-Ecological Model

Specific to population health, the United Nations Children's Fund (UNICEF) uses a SEM as a conceptual framework for many health-promoting initiatives (Baudot, 2015). The model facilitates an analysis of barriers and benefits to health. For example, researchers have used the model to study and improve health in complex settings related to organization priorities, including childhood immunization in Nigeria, nutrition in the Marshall Islands, suicidal ideation in China, and the relation of poverty, the environment, and menstrual health management in India (Angeli et al., 2022; Kodish et al., 2022; Olaniyan et al., 2021; Zhou et al., 2022). Levels of the UNICEF model include individual, interpersonal, community, organizational/institutional, and policy/systems (also known as enabling environments). UNICEF also specifies methods or actions to take to effect change at each level. Table 10.3 provides definitions of the levels and actions for health change.

Level	Definition	Method for Change
Individual/ Interpersonal	Knowledge, attitudes, and practices among a person (individual) and families, friends, and social networks (interpersonal) that affect decisions and actions	Advocacy Social mobilization
Community	Social beliefs and norms, economic conditions, community resources, knowledge, and attitudes about an issue among community members, and the sense of empowerment and efficacy in a community that impacts choices, decisions, and practices	Behavior change communication and social change communication
Organizational/ Institutional	Conditions of a system (e.g., educational system, health care system) that affect inclusion and quality, such as specific institution policies, guidelines, access, geographical proximity, physical infrastructure, resource management, capacity, and safety	Social mobilization
Policy/System Enabling Environments	Policies and governance that either facilitate or discourage inclusivity and quality	Advocacy

TABLE 10.3 UNICEF Socio-Ecological Model Levels and Methods for Change (See Baudot, 2015.)

CDC Social-Ecological Model

The CDC has also used a social-ecological model (also SEM) for violence prevention to help community health clinicians and other workers in the field of violence prevention better understand the factors that influence violence, place people at risk of violence, and protect people from perpetrating or experiencing violence (CDC, 2022). The CDC model has four levels: individual, relationship, community, and societal. Table 10.4 defines the levels of the model and includes proposed prevention strategies to address violence at each level.

Level	Definition	Prevention
Individual	Factors of an individual's biological or personal history that increase the likelihood of experiencing violence or becoming a perpetrator. For example, age, education, income, substance use, and history of abuse may correlate with violence.	Promote violence-prevention attitudes, beliefs, and behaviors (e.g., healthy relationship skill programs and conflict resolution training).
Relationship	Close relationships, meaning those with social peers, partners, and family members, influence an individual's behavior and can contribute to the violence experience.	Prevention and mentoring programs for parents and families that strengthen parent-child communication and promote healthy relationships.

TABLE 10.4 CDC Social-Ecological Model Levels and Prevention Strategies (See CDC, 2022.)

Level	Definition	Prevention
Community	Schools, workplaces, and neighborhoods in which social relationships occur. Some communities have characteristics that are associated with becoming victims or perpetrators of violence.	Improving the physical and social environment across community settings and addressing other conditions, such as poverty and alcohol access, that support violence in communities.
Societal	Broad societal factors that either encourage or inhibit violence. Social and cultural norms and health, economic, educational, and social policies that maintain inequalities between groups may promote violence.	Promote societal norms that are protective against violence, and bolster household economic security, opportunities for education and employment, and policies that affect structural determinants of health. Figure 10.5 shows an example of change at the societal level.

TABLE 10.4 CDC Social-Ecological Model Levels and Prevention Strategies (See CDC, 2022.)

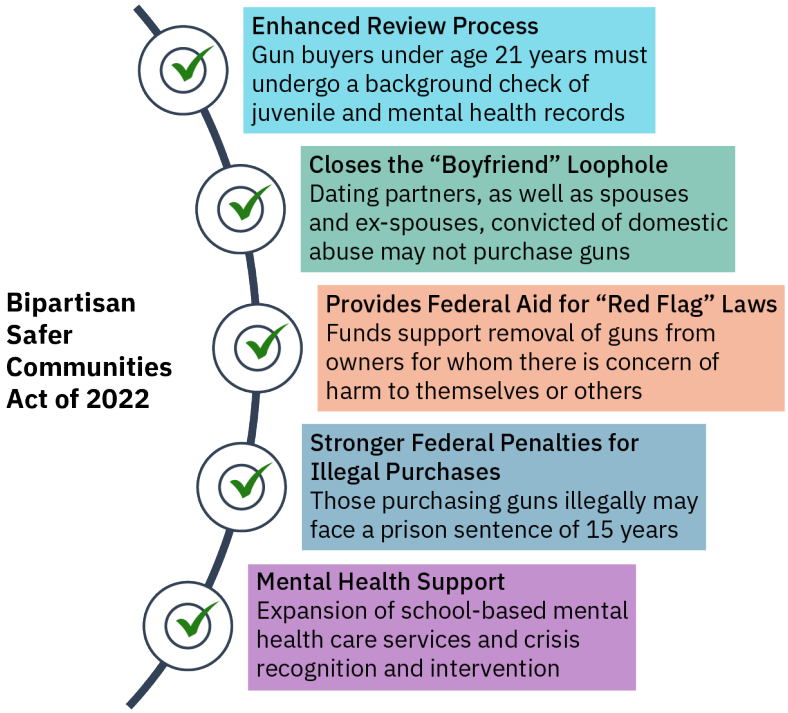


FIGURE 10.5 Access to a weapon can significantly increase the harm caused by violent incidents. Legislative measures included in the 2022 Bipartisan Safer Communities Act can mitigate the occurrence and impact of violence in communities. This bill represents the most significant federal legislation to address gun violence in nearly 30 years. (See National Institute for Health Care Management, 2023; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

HEALTHY PEOPLE 2030

Reduce Firearm-Related Deaths

Firearm-related injuries and deaths are a major health issue in the United States, and the problem is worsening. In 2018, there were 11.9 firearm-related deaths per 100,000 people in the United States, and by 2021 that number had increased to 14.6. The United States averages almost two mass shootings per day in which four or more people are killed or injured. Deaths and injuries following homicides, suicides, unintentional injuries, and mass shootings are both tragic and preventable with comprehensive policy and community-focused approaches. Generating such solutions (https://openstax.org/r/healthfirearm) remains elusive and contentious and must start with acknowledgement of gun violence as a public health problem. For more information on ending gun violence, visit the Everytown for Gun Safety (https://openstax.org/r/everytownresearch) site.

(See ODPHP, n.d.-b; O'Rourke, 2023.)

THEORY IN ACTION

The Social-Ecological Model, Health Promotion, and Gun Violence

Access multimedia content (http://openstax.org/books/population-health/pages/10-3-core-principles-of-the-socio-ecological-model)

In this video, Mighty Fine of the American Public Health Association shares information about deaths and injuries secondary to gun violence. He notes that homicides, unintentional shootings, assaults, suicides, and mass shootings are events that contribute to gun violence being a major public health problem in the United States.

Watch the video, and then complete the following exercise.

Categorize each of the interventions that Fine discusses based on the level of prevention and the level of the CDC Social-Ecological Model.

Levels of prevention include:

- primordial,
- primary,
- secondary,
- tertiary, and
- quaternary.

The CDC Social-Ecological Model levels include:

- individual,
- relationship,
- community, and
- societal.

Models in Research and Practice

Using models and frameworks is not just for major organizations. Nurses and care teams can demonstrate, assess, evaluate, and plan for the complex and interacting nature of individual, community, and system factors through the use of models and frameworks. Nurses can impact change across levels by using these models and frameworks and considering the many factors that can impact the development of health problems and the success in or failure to adequately address problems. Client behaviors can affect their health, institution, community decisions, and larger system policies. Occurring concurrently, institutions, communities, policies, and social factors affect client health and behavior. Research teams also use these models to direct studies and organize data so meaningful clinical change can result. This section will explore several recent population health projects that were guided by the SEMs.

Health literacy measures how well clients can find, understand, and use information and services to make informed health decisions for themselves or others. When health literacy is poor, clients may not engage in health care services, may lack sufficient access to care, and may not employ health-promoting behaviors. Researchers used the SEM to guide a study of factors at the interpersonal and organizational levels that impact health literacy among clients seeking care at a **federally qualified community health center** (FQHC) (Greaney et al., 2020). FQHCs are clinics providing primary care services to all clients regardless of their ability to pay (Centers for Medicare and Medicaid Services, 2017). Ensuring that the clinicians of FQHCs are prepared to address and improve health literacy is important in helping clients access their care and improve their health. As the SEM posits that individual behaviors are influenced by intrapersonal, interpersonal, organizational, community, and policy-level factors, the researchers determined that exploring the interpersonal and organizational levels via staff interviews was essential to understanding health literacy at these critical centers. Staff participants recognized the impact of health literacy on client and population health outcomes and discussed creating a centralized health information database for clients of varying levels of health literacy. Such a database could include pictures and other visual aids to communicate health information. Training for staff on assessing health literacy among clients was also suggested, representing an

organizational-level change that supports interpersonal clinician-client health communication.

Pregnancy in children and adolescents poses significant health risk to both the pregnant person and the infant. Pregnant children and adolescents are at a higher risk of mortality, preterm delivery, and delivering low birth weight babies (World Health Organization [WHO], 2023). In addition to physical health risks, young pregnant people face challenges completing their education and maintaining employment, which have both immediate and long-term implications for the health of the individual and their family. Researchers used the SEM to guide a study of contraceptive service use in the Ebonyi State of Nigeria, given the model's ability to help describe the multiple layers and influences of environmental, social, and community factors that influence health behavior (Ezenwaka et al., 2020). Table 10.5 provides a listing of factors impacting contraceptive access at each SEM level related to this study. The research team determined that many barriers to accessing contraception existed across the SEM levels for youth in the Ebonyi State, and most were not within the control of children or adolescents. Strategic involvement of community partners, clinicians, and community adults would be essential in promoting contraceptive service use among children and adolescents.

SEM Level	Factors
Individual	Poor awareness and knowledge of contraception Fear and experience of side effects Cost of services Lack of confidence/low self-esteem related to seeking contraception
Interpersonal	Poor parental communication of sexual health matters
Community (cultural, societal, religious)	Gendered cultural norms Cultural and religious norms Societal shaming Misconceptions about contraceptive use
Organizational	Unfriendly/judgmental providers Lack of privacy and confidentiality Poor support for youth-friendly health centers
Societal	Peer and media influence Restricted sexuality education Lack of social and community support Poverty level

TABLE 10.5 Factors Affecting Contraceptive Service Use among Adolescents by SEM level

Beyond the challenge of developing a vaccine for COVID-19, clinicians and scientists faced obstacles in addressing vaccine hesitancy among the global population during the pandemic. Researchers conducted an online survey of 592 adults in the United States to examine intentions to obtain a COVID-19 vaccine, using the SEM to determine relations between vaccine intentions and the intrapersonal, interpersonal, institutional, and community-level factors (Latkin et al., 2021). Intrapersonal factors of the respondents who felt negative or ambivalent about becoming vaccinated against COVID-19 included Black race, lower educational attainment, conservative political ideology, no influenza vaccination in the last year, skepticism about COVID-19, and lower engagement in preventative behaviors. Lower levels of perceived social norms (i.e., social rules or typical behaviors and actions) and preventative behaviors were interpersonal factors contributing to negative or ambivalent intention to become vaccinated. Institutional factors such as lower trust in national health agencies also contributed to negative or ambivalent feelings. At the community level, lower perceived likelihood of becoming ill with COVID-19 was associated with negative vaccine intentions. At the time of vaccine development through today, studies that evaluate vaccine hesitance in the context of all SEM levels are important to developing targeted interventions. Targeted interventions are important to supporting vaccine uptake among a sufficient enough percentage of the global population to avoid acquisition, recurrence, or resurgence of vaccine-preventable illnesses such as COVID-19.

Intimate partner violence (IPV) is a global health issue affecting people of all genders and across age groups. In Mexico, nearly 44 percent of women have reported experiencing IPV in their lifetime (Willie et al., 2020). Femicide, the intentional murder of women because they are women, is prevalent in Mexico with an estimated seven women killed each day (Meyer, 2017). These circumstances inspired a research team to investigate access to IPV resources

among women in Mexico. A research team collected information via a survey of 950 Mexican women who experienced IPV to determine the socioecological factors that influenced their utilization of community-based supports (Willie et al., 2020). The socioecological levels used to organize the study were individual, partner, family, and community. At the individual level, the team determined that women who were separated or divorced from their partner used 70 percent more IPV resources than women in common-law marriages. Women who knew about more community resources accessed more resources. The severity and manner of the violence also mattered: The women surveyed indicated that they were more likely to use community resources when there was a greater risk of lethality, as well as when a family member of the violent partner was encouraging the abuse. Also, at the relationship level, women being likely to disclose IPV to family and friends increased the resources used. In the community, strong norms regarding resource utilization also supported resource access by women experiencing IPV. The study's results can aid researchers and clinicians in developing targeted interventions to promote IPV services available at community sites, such as emergency medical services, counseling, and hotlines. Additionally, these findings can support the creation of community-wide outreach efforts to strengthen social norms around utilizing support and interventions for IPV.

THEORY IN ACTION

Socio- and Social-Ecological Models

Visit the CDC website (https://openstax.org/r/uniceforg) page about the socio-ecological model, view the UNICEF report online (https://openstax.org/r/Transtheoretical), or review this video Health Belief and Transtheoretical Models—Fundamentals of Nursing (https://openstax.org/r/transtheoreticalmodels) to see how SEMs can be depicted via illustration. Select a model that you would like to use to conduct a practice application, and then sketch the model on a piece of paper.

Think back to Mo from the chapter opening scenario, and then complete the following exercise.

1. Pick one of Mo's health problems or a condition he may be at risk for (the health problem may be acute, chronic, self-limiting, or requiring treatment and may be individual or a risk for his family/community).
2. Fill in each level of your sketched model with information from his scenario.
3. Add information to each level that you know about barriers and facilitators to health from your other foundational nursing courses.
4. Identify at least one nursing action at each level of the model that can contribute to ameliorating Mo's health problem and to helping clients in the future that may have similar health problems.

The chapter began with a reminder that clients do not exist in isolation and emphasized the interdependence of clients and the environment. Multilayered external influences impact a client's symptoms, health conditions, access to care, quality of care, and opportunities for improved health. Nurses can identify and address the intrapersonal, interpersonal, community, organizational, policy, behavior, genetic, environmental, and social factors that influence the health and well-being of people and populations.

By using SEMs and theories of health behavior, nurses can comprehensively organize and address health. While SEMs are not a replacement for individual-level assessment and intervention in health care, the SEM recognizes the complexity of health status, health promotion, risk reduction, and disease prevention given the interplay between clients and their own situations and environments. SEMs help provide a comprehensive perspective of population health problems and offer insights into solutions across levels. By considering individual, interpersonal, community, and societal factors, the SEMs allow for a more holistic understanding of health problems that can arise from multiple sources. SEMs also acknowledge that individual behavior or choice is not solely responsible for the health outcomes of a particular client or the larger population, collectively. Instead, SEMs emphasize the importance of broader contextual factors and encourage clinicians and researchers to intervene at multiple levels to create sustainable and meaningful health change.

Chapter Summary

10.1 Factors That Influence Health Practices

Nurses are well-positioned to explore the health of clients and communities and to provide meaningful intervention across levels. Nurses need a thorough understanding of health behavior and the factors that may be supportive of or detrimental to health. Individual client behaviors can greatly influence health, but a person's participation in a healthy lifestyle or motivation to adopt a health habit are not simply a function of wanting or not wanting to be well. Genetics, individual and collective behaviors, environmental and physical influences, medical care, and social determinants influence the health of an individual and community. Further, these factors can impact each other. The ever-changing nature and dynamic relations among these factors make the experience, processes, and outcomes associated with health highly complex.

10.2 Theories and Models of Health Behavior

Nurses may apply theories of health behavior to address the health needs of clients and communities in a thorough and systematic way. Models and theories relevant to the study and change of health behavior include the Social Cognitive Theory, Theory of Planned Behavior, Health Belief Model, Transtheoretical Model/ Stages of Change, and Pender's Theory of Health Promotion. These allow nurses to explore and recommend interventions to meet the unique needs or circumstances of clients and communities. Nurses can use theories to promote health, prevent disease, and facilitate well-being across populations.

10.3 Core Principles of the Socio-Ecological Model

Clients and communities are unique, dynamic, complex, and constantly evolving. As such, nurses, researchers, educators, and policymakers must analyze and address the health of clients and communities with a broad lens that considers the interaction of many factors. SEMS have been used in health, education, and other disciplines as a guiding framework to evaluate, identify, and improve health and the human experience globally. SEMs provide a way for nurses, clinicians, and others to perform thorough health assessments, identify barriers and facilitators of health, and plan for interventions that can support health across personal, community, and system-wide levels. SEMs can help describe and organize the complex interplay between clients and their environments and specific contextual factors. SEM facilitates a more holistic understanding of health problems and promotes sustainable and effective interventions for supporting population health.

Key Terms

behavior the way a person acts, the mannerisms they display, and the conduct they employ

federally qualified community health center (FQHC) clinics providing primary care services to all clients regardless of their ability to pay

genetics the study of how genes, traits, and diseases are passed from one generation to the next

health behavior the actions, habits, activities, policies, and procedures of individual clients, communities, organizations, and governments that can either support or undermine health

intersectionality a concept that considers how disadvantages interact for clients at both an individual level and systems level to identify and describe the inequities, injustices, oppressions, and privileges perpetuated by structures including racism, classism, colonialism, sexism, heterosexism, ableism, and others

medical care services rendered by a health care clinician during visits to clinics, offices, hospitals, surgical centers, schools, laboratories, and other places

socio-ecological model (SEM) a model that facilitates the study and organization of how client and community health behaviors and outcomes are affected by personal, situational, community, societal, political, and other contexts

theories used to explain phenomena in a systematic way and to guide thoughts and decision-making processes

Review Questions

1. The nurse is providing education to a client with a family history of hypertension. Which statement by the client does the nurse recognize as requiring further teaching about familial risk?
   a. "My family history increases my risk for hypertension."
   b. "Genetics alone predict my own health and diagnoses."

c. "The interaction of genetics and environment affects health."
d. "Lifestyle factors affect the genetic expression of a disease."

2. The nurse is developing an education program for a client on healthy family nutrition using Pender's Health Promotion Model as the framework. Which client statement indicates to the nurse that the client has a high level of perceived self-efficacy?
a. "Eating healthy is expensive but within our family budget."
b. "I am confident that I can create a healthy weekly meal plan."
c. "My children's school encourages healthy lunches."
d. "It is hard to find time to shop and prepare healthy meals."

3. The nurse is creating a community program to promote outdoor exercise using Bronfenbrenner's Socio-Ecological Model and is working with town planners to obtain funding and approval for sidewalks and walking and biking trails. Which of Bronfenbrenner's systems is the nurse utilizing?
a. Microsystem
b. Mesosystem
c. Chronosystem
d. Macrosystem

4. The nurse is working to change negative social beliefs towards breastfeeding in a rural area using the UNICEF Socio-Ecological Model. At which level of this model is the nurse effecting change?
a. Individual
b. Community
c. Organizational/institutional
d. Policy/system and enabling environments

5. Which situation is an example of a nurse engaging in the Socio-Ecological Model to guide nursing care?
a. Administering insulin to a client with type 2 diabetes who has seen a worsening of their glycemic control despite taking metformin
b. Evaluating the causative factors of an observed increase in the number of grade-school children with newly diagnosed asthma
c. Evaluating the impact of lisinopril on a client's blood pressure 3 months after starting the medication
d. Planning an education session for a client following surgery with a goal of independently changing the surgical site dressing

6. Which statement by a client with a family history of diabetes indicates an understanding of the genetic component of this disorder?
a. "Since I have a family history of diabetes, I will also develop diabetes."
b. "A family history alone does not mean I will develop diabetes."
c. "Eating healthy will not prevent diabetes since it's in my family."
d. "Diabetes skips a generation, so I will not get it."

7. Using the UNICEF Socio-Ecological Model, which statement is an example of a community health center working at the organizational level to promote health care?
a. Teaching a client how to self-administer insulin injections
b. Assisting a new mother with breastfeeding
c. Treating all clients regardless of their ability to pay
d. Lobbying to ensure health care for transgender clients

8. The nurse is caring for a client with diabetes who is having a hard time managing blood glucose levels. Using Bronfenbrenner's Socio-Ecological Model, which factor would the nurse identify as most likely contributing to the client's difficulty managing their diabetes at the exosystem level?
a. Limited access to healthy food options

b. Family history of diabetes
c. Sedentary job
d. Lack of reliable transportation

9. The nurse is counseling a client who is trying to stop smoking. According to the Theory of Planned Behavior, which factor would the nurse recognize as representing risk perception?
a. The client's partner smokes.
b. The client's clothes smell of smoke.
c. The client has tried to quit several times.
d. The client believes smoking is unhealthy.

10. The nurse is discussing the importance of exercise and eating healthy to a client with hypertension. Which client behavior would the nurse assess as being in the precontemplation stage of the Transtheoretical Model?
a. The client states they will think about changing their diet.
b. The client begins walking three times a week.
c. The client meets with a dietitian to learn about healthy eating.
d. The client believes that exercise will not lower blood pressure.

CHAPTER 11

Evidence-Based Decision-Making



FIGURE 11.1 Public health initiatives seek to protect and enhance the health of people and the communities in which they live, work, and play. Furthermore, evidence-based practice interventions help implement these initiatives safely and effectively. These protective initiatives help teenagers enjoy life milestones such as graduating from high school. (credit: modification of work "Transit Tech CTE High School Graduation" by Marc A. Hermann/MTA/Flickr, CC BY 2.0)

CHAPTER OUTLINE

11.1 What Is Evidence-Based Decision-Making?

11.2 Where to Find Evidence-Based Interventions

11.3 Evaluating the Quality of the Evidence

INTRODUCTION Amari and Milo are two nurses working in a community health clinic. When they notice an increasing rate of anxiety in teens within the community, they find that the interventions they have used successfully in the past to help clients reduce anxiety, such as providing educational packets and programs regarding anxiety reduction, are no longer eliciting the same results.

To efficiently identify intervention changes they can make to improve outcomes for their teenage clients, Amari and Milo must combine what they find in current research with their extensive experience as client advocates. They will use evidence-based decision-making strategies to develop effective interventions. This chapter walks Amari and Milo through the process of addressing their identified community concern. It also discusses the foundations of evidence-based decision-making, where to find evidence-based information and interventions, and how to evaluate the quality of evidence for use. Furthermore, it explains the importance of evidence-based practice and evidence-based decision-making and specific tools health care providers, including nurses, can use to find and implement evidence-based interventions.

11.1 What Is Evidence-Based Decision-Making?

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 11.1.1 Describe evidence-based decision-making in public health.
- 11.1.2 Describe the steps of evidence-based decision-making.
- 11.1.3 Explain the importance of evidence-based decision-making in public health.
- 11.1.4 Identify tools to support evidence-based public health decision-making.

Health care is designed to help enhance the quality of life for clients through preventative care, maximization of development, care of acute illness, and guidance toward death. Health care providers should use the most up-to-date information on care and treatment plans in these efforts. Evidence-based public health (EBPH) uses the best available current research and information to make decisions that encourage health promotion, disease prevention, and health maintenance. Comprehensively, "EBPH involves accessing the best available research to inform decisions, systematically using data and information systems, applying appropriate frameworks in program planning, engaging the community in assessment and decision-making activities, evaluating the program, and disseminating lessons learned to key stakeholders" (Ruebush, 2019, p. 1). **Evidence-based decision-making** (EBDM) is an essential element of EBPH. A key part of effective practice is applying evidence-based information.

EBDM is similar to **evidence-based practice** (EBP), yet each has its nuances for use in nursing. EBP uses the best available research, clinical experience, and client preferences to inform client-care interventions and evaluation. EBDM is the process of using the most recent research and clinical practice experience to make optimal decisions regarding a policy, practice, and/or program. Foundationally, EBDM extends from EBPH as they both consider the context of the community in conjunction with found evidence to identify and implement appropriate interventions. Additional considerations in the EBDM process include community partner buy-in, feasibility, cost-effectiveness, sustainability, health equity, and public sentiment.

Use of Evidence-Based Decision-Making

Public health is a sector of health care that seeks to protect and enhance the health of people and the communities in which they live, work, and play. Public health decisions and initiatives can have a broad impact, so it is important that they direct health care providers to use the most efficient and effective practices to promote the best possible results. Public health decision makers use EBDM to methodically determine which interventions work best in public health and then share this information with clients and other health care professionals.

The following are fundamental characteristics of EBDM that nurses and health care providers must consider (Cincinnati Children's Hospital Medical Center [CCHMC], 2023):

- Using the best available peer-reviewed information to make decisions
- Using multiple forms of evidence
- Systematically utilizing data and information systems
- Employing program planning frameworks
- Optimizing community participation in decision-making and assessment, followed by a comprehensive evaluation
- Providing learned information to affected individuals and decision makers
- Implementing successful communication, scientific methods, common sense, and political concerns throughout each step

The National Collaborating Centre for Methods and Tools (NCCMT) has outlined seven steps in the evidence-based decision-making process in public health. Figure 11.2 breaks down these steps—define, search, appraise, synthesize, adapt, implement, and evaluate—to describe the process of EBDM.

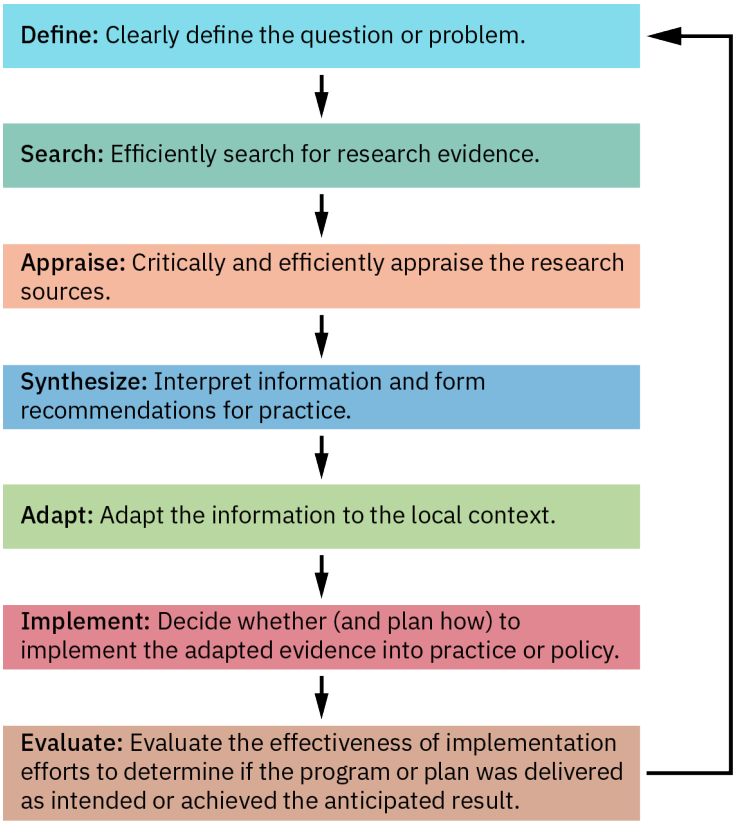


FIGURE 11.2 The National Collaborating Centre for Methods and Tools (NCCMT) has outlined seven steps in the evidence-based decision-making process in public health. These steps include define, search, appraise, synthesize, adapt, implement, and evaluate. (See National Collaborating Centre for Methods and Tools, 2023a; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Defining the Problem

The first step in the EBDM process is to clearly **define** the concern, the problem or question that needs to be addressed. Questions to consider in this step include:

- Who is the target group?
- Which problem or problems need to be solved?
- What is the anticipated plan to implement necessary changes?

The concern is generally formatted as an answerable **PICOT question**. A PICOT question frames the problem in terms of the affected population, the proposed intervention, the groups in the population that will be compared to determine the effectiveness of the intervention, the outcome being studied, and the time frame in which the study will take place. Table 11.1 presents the breakdown of a PICOT question.

P	Population	Outlines the client or client population affected by the problem and with whom the nurse will be in contact. Populations may be defined in multiple ways, some of which include the following: • General population: population as a whole • Specific community types: rural or urban dwelling • Population-based descriptors: age, socioeconomic status, risk status, demographics, or literacy levels
I	Intervention	Refers to the change or treatment that will be implemented for the outlined client (population).
C	Comparison	Outlines the reference groups for whom the population in question will be compared. This would be a comparison for the chosen intervention.
O	Outcome	The result that the project will be studying or evaluating.
T	Time	The time interval in which this project will take place, such as when and for how long the intervention will be in place and then compared to the outlined control group.

TABLE 11.1 PICOT Question Breakdown

Identifying each component of a PICOT question helps to clearly define the problem. This question then guides the literature search and the steps in EBDM in public health. As noted, the population may include individuals, communities, or a larger population group. The nurse must decide if the population will be further defined, such as by age, literacy level, or socioeconomic status. Interventions may involve a specific change or treatment, or they may test an approach to health not previously used or studied in this specific population with the outlined concern. The comparison may be a different intervention, often the one currently in practice, or the absence of the proposed intervention. Outcomes will contain measurable results or the aftermath of the implemented intervention. Time outlines how long the intervention will be in place and/or how long outcomes will be measured. Table 11.2 provides example PICOT questions as well as the breakdown of the elements for each question.

Examples	Population	Intervention	Comparison	Outcome	Time
Do early intervention programs provided between 14 and 16 years of age prevent underage drinking among adolescents who live in rural areas within the United States?	Adolescents in rural areas within the United States	Early intervention programs	No early intervention programs	Prevent underage drinking	14–16 years of age
For adults over age 60, does a daily 20-minute exercise regimen reduce the risk of hypertension compared with no daily exercise regimen over 3 years?	Adults over age 60	20-minute daily exercise regimen	No daily exercise regimen	Risk of hypertension	3 years
Are women ages 18–25 years who use intrauterine devices (IUDs) for contraception at an increased risk for developing blood clots compared to women 18–25 years who use oral contraception over 5 years?	Women ages 18–25 years	IUD contraception	Oral Contraception	Risk for blood clot development	5 years

TABLE 11.2 Example PICOT Questions

Searching the Literature

The next step in the process, **searching**, involves reviewing the literature to examine what research is available to address the defined concern and additional data points, which should consider the population in question. A clearly defined question guides nurses' evidence search. Where to Find Evidence-Based Interventions will further discuss potential sources. Public health may utilize both qualitative and quantitative data or information as they both may apply to this subset of health care, and both may be used to help answer questions in public health. **Quantitative research** contains numbers and objective data to evaluate outcomes and determine results. Quantitative data are expressed by amounts in numerical terms. Often in public health, this is epidemiologic data. **Qualitative research** deals with nonnumerical data such as experiences, attitudes, and behaviors. Qualitative data are expressed in word form, cannot be quantified, and describe perspectives of individuals and populations. Another option for seeking information is a focus group. **Focus groups** are interviews conducted with small groups of participants who share similar traits or interests that will inform the current problem or issue in discussion. These groups are often used to gauge health beliefs, evaluate programs, and provide information fitting the needs assessment.

A community **needs assessment** is an appraisal that identifies a community's strengths and resources. The needs assessment gives reviewers a quick overview of existing systems and policies and areas that need improvement or additional resources. Assessment, Analysis, and Diagnosis covers conducting a community needs assessment in more detail. Often a windshield survey is part of the community assessment. This is the process of observing the community while driving or walking through it to obtain a visual overview. Creating a Healthy Community discusses windshield surveys in more detail. An additional part of this needs assessment is identifying any possible community partners. Community partners are those individuals or organizations who are impacted by the project's evaluations and outcomes and thus are interested in the process. While selecting search modalities, health care providers should consider all public health angles, such as issues in the community context, community and political actions and preferences, research, and public health resources. These link closely with the NCCMT model for evidence-based decision-making (see Where to Find Evidence-Based Interventions). Finally, public health nurses may also obtain information regarding a population's morbidity and mortality rates through the National Vital Statistics System (https://openstax.org/r/nchsnvss). Public health care providers may also utilize public health surveillance to obtain data. The four types of broad categories for public health surveillance are noninfectious health conditions, infectious diseases, both infectious and noninfectious diseases and health conditions, and risk factors and exposures (Centers for Disease Control and Prevention [CDC], 2023a).

While searching the literature, nurses must seek data that note the experiences and requirements of marginalized

communities. Since research and scientific work are driven, and thus inhibited, by the perspectives and biases of those who conduct the work, there are notable communities and populations that lack accurate representation within studies, scientific theories, policies, and fact statements. To gather accurate information regarding these marginalized communities, nurses should utilize disaggregated data, or data that has been further broken down into subcategories, such as gender or race, to evaluate health inequities. Additionally, nurses must have a full understanding of the social determinants of health and how these apply to the root causes of inequitable health care access and availability. Ultimately, to identify disparities that may go otherwise unnoticed, data should be analyzed from an intersectional vantage point that recognizes the interdependence of different social identities such as gender, race, ethnicity, age, religious beliefs, developmental abilities and disabilities, and socioeconomic status.

Appraising the Literature

While a significant amount of published research may be available for any given concern, the studies may not be of equal quality. Critically **appraising**, or assessing each study for relevance and credibility, is necessary to ensure the information provided is meaningful, trustworthy, and relevant. Literature that is meaningful will be useful in some way and/or produce important information. Information is considered trustworthy based on its confirmability and the reviewer's confidence in the believability of the information produced in the literature. Finally, relevance considers how pertinent the evidence is to the current problem and population. While there may be literature and evidence that provide valuable information, if the information is irrelevant to the topic in discussion or does not consider similar circumstances for the population, it may not be useful or applicable. This appraisal step should help nurses and other health care providers determine if the methods used in the selected studies or data points are strong enough to use in the problem-solving process. Once each source has been appraised for validity and then reviewed, the information can be synthesized. Where to Find Evidence-Based Interventions in this chapter will further discuss where to find evidence-based interventions, and Evaluating the Quality of the Evidence will discuss evaluating the quality of evidence.

In addition to appraising research articles themselves, all other forms of data should be appraised accordingly. Depending on the population, problem, and resources available, some sources may hold a greater weight based on the specific topic and community in question.

Synthesizing the Data

Synthesizing the data involves compiling the information to determine what the research says about the concern. The nurse synthesizing the articles and other data points should consider overlapping themes or messages from different sources. If the research offers conflicting messages, referring back to the appraisal step will be helpful in determining which may be more trustworthy or applicable to the current project. The research that the appraisal process determines to be of the highest quality should hold more weight in decisions. Additionally, in this step, health care providers should synthesize the information gathered from other data sources to identify common themes or attributes of the community or client.

Adapting the Information

The **adapting** step of this process involves determining if this synthesized information can apply to the client (which may be a single person, a family, a community, or a population). In population health, the client is often a community or a whole population, and therefore interventions must work broadly. Referring to the synthesizing step, the nurse should identify actionable steps as possible interventions. In the adapting stage, nurses should consider whether these interventions will be successful or relevant to the client in question and/or if the intervention will need adaptation to work efficiently. Components to consider are the identified problem, the identified intervention, the level of client (single person, family, community, or population), and any other affected individuals that need to be considered, such as organizations or partners in the process. An intervention that is successful in one community may not be successful in another community. Community and population attributes should be considered to determine applicability across clients. These should be considered and discussed during the dissemination phase of the project. Limitations or additional factors to consider should be discussed to help others determine if the intervention(s) can be applied to their specific population.

Implementing the Intervention

The **implementation** stage involves acting on the information and carrying out the determined plan after a possible intervention or action is identified and brainstorming has taken place regarding how this may need to be adapted to

the client in question. In this step, public health nurses will identify actionable and tangible steps for the process. In the public health sector, these often include changes in practice, programs, or policies. This may mean revision of the previously designed practice, program, or policy or delivery of a new version of these components. Client characteristics are crucial at this step as they drive how interventions may be implemented.

Thinking back to the appraisal step, recall that interventions that seem optimal based on research may not be the best option for the current problem. For example, literature might state that frequent time away or vacation would benefit the mental health of teens and young adults. Yet this population may have limited financial means or transportation that make this intervention less feasible. While multiple pieces of evidence may support an intervention, a public health nurse can use their expertise to determine whether an intervention is appropriate for a specific population. If this is discussed in the adapt stage, it may be possible to alter aspects of an intervention to meet the needs of the local context.

Evaluating the Effectiveness of the Plan

Evaluation, the final step in this process, entails determining if the plan accomplished what was intended and, if not, what may need to be changed moving forward. The previously determined indicators are used as an objective measurement of success for the project. Once the effectiveness has been reviewed and evaluated, the team may then determine if they should continue with the intervention(s) as designed or adjust them based on the evaluation.

THEORY IN ACTION

The Importance of Evidence in Decision-Making

Access multimedia content (http://openstax.org/books/population-health/pages/11-1-what-is-evidence-based-decision-making)

The NCCMT has created the video "Using Evidence in Public Health Decisions: Why It Matters" to emphasize why using evidence-informed decision-making is essential in public health.

Watch the video, and then respond to the following questions.

1. How does EBDM impact financial decisions regarding implementation of health interventions?
2. Discuss how EBDM can help build the relationship between health care providers and the public.

(See NCCMT, 2017.)

Additionally, the information should be disseminated for use by other health care providers or systems. An essential step in all health care research is sharing results to benefit the population as a whole. Sharing information within the nursing community increases the scope of knowledge within the field and helps to ensure all parties stay up-to-date with policies, practices, programs, and interventions. This may also optimize the cost and quality of care by sharing what has or has not worked in the past. This eliminates multiple steps of trial and error regarding the same topic.

UNFOLDING CASE STUDY

Part A: Evidence-Based Decision-Making

Read the scenario, and then answer the questions that follow.

Recall from the beginning of this chapter that Amari and Milo have noticed an increased rate of anxiety in teens within their community and that the interventions they have used previously are not eliciting the same results. To efficiently identify possible interventions for this population, they know their best option is to use evidence-based practice strategies and that they must first draft a PICOT question as the foundation for their EBP project.

Amari and Milo develop the following PICOT question: *Does daily exercise have an impact on anxiety rates in adolescents compared to those who do not engage in daily exercise over 3 months?*

1. Which of the following components must be covered to be an effective PICOT question?
   a. Population, interest, cost, outcome, time

b. Population, intervention, comparison, outcome, time
c. Price, interest, comparison, overhead, time
d. Price, intervention, company, outcome, time

2. In the PICOT question developed by Amari and Milo, which of the following is the proposed intervention?
a. Anxiety rates
b. Adolescents
c. Daily exercise
d. 3 months

Importance of Evidence-Based Decision-Making

The intent of health care is to ultimately improve client outcomes with the goal of providing the most effective care available. The EBDM process increases the objectivity of public health decision-making. Historically, health care treatments and skills relied on wisdom passed from one person to another in the form of anecdotes and demonstrations, which may be unreliable. This informal transmission of knowledge, skills, and treatments exemplifies a 19th-century technique that American surgeon William Stewart Halsted called "see one, do one, teach one" (Ayub, 2022). Following this philosophy, nurses should see a skill or technique being completed by another nurse, perform this skill or technique themselves, and then teach a less experienced nurse how to do the skill as needed. While this technique has been relatively effective historically, and while the nursing field as a whole is based on collaboration and knowledge sharing, the technique has flaws. If the original nurse did not perform the skill safely based on the most recent evidence, any nurses who learned the skill from the original nurse would follow the same unsafe pattern. For example, if the first nurse demonstrating insertion of a peripheral intravenous line chooses to rip the finger off their glove to touch the vein site after cleaning the identified site, each subsequent nurse may follow this unsafe process, increasing infection risks to all clients moving forward based on this inappropriate protocol. Similarly, the "see one, do one, teach one" technique relies on each nurse's memory and the efficacy of each nurse who follows, leading to many opportunities for subjective error. Furthermore, this practice is more difficult to implement on a larger scale such as public health nursing where there is often not an opportunity to directly view the application of a skill.

EBP and EBDM are objective and concrete methods for finding relevant information and applying it to a particular problem. In public health, EBDM is used to ensure that interventions are supported by data and thus should be effective and that they reach the intended population (CCHMC, 2023). It also considers the available resources within the community. The EBDM process provides a compelling rationale for a course of action, whether that action is the continuation of an existing practice or the adoption of a new intervention. The process is thorough and can be replicated. According to NCCMT, evidence-based decision-making in public health should consider research, community health issues (with local context), community and political preference and actions, public health resources, and the public health expertise of decision makers (NCCMT, 2023a) (Table 11.3). Though there may be more steps involved in EBDM than in historic methods of teaching and decision-making, it enables the nurse to use informed and objective data to make the best and safest decision for the client (Erwin et al., 2020).

Public Health Expertise	Sources of Evidence
Decision makers use their public health expertise and consider evidence from these sources:	• Available public health resources • Community and political preferences and actions • Available research findings • Community health issues and the local context

TABLE 11.3 Evidence-Based Decision-Making (See NCCMT, 2023a.)

THEORY IN ACTION

Evidence-Informed Decision-Making

Access multimedia content (http://openstax.org/books/population-health/pages/11-1-what-is-evidence-based-decision-making)

The video "NCCMT - URE - Evidence Informed Decision Making - A Guiding Framework for Public Health" presents an overview of the EIDM model. It examines the five overlapping ovals depicted in the model as types of evidence used to inform decision-making. The video uses the example of respiratory illness rates to show how two communities might use other sources of evidence to reach different evidence-informed decisions.

Watch the video, and then respond to the following questions.

1. How might health inequities impact the research phase of the evidence-based decision-making process?
2. Discuss how the unique sources of evidence discussed in the model overlap with one another and with public health expertise.

(See NCCMT, 2018.)

Tools to Support Evidence-Based Decision-Making

Multiple resources and tools are available to assist health care providers in using EBDM. To effectively use these tools and resources, it is necessary to have a strong foundational understanding of the specific client, from a single person up to a whole population. Though much of the information will be gathered from research, to align interventions, these tools must also connect to the designated population and the identified concern for them to prove valuable in the decision-making process. Some tools and resources are designed to support clinical decisions, while others are aimed at working through the EBDM process.

Clinical decision-making support tools are formatted as resources in which health care providers can quickly look up information on clinical practices, assessments, diagnostics, and treatments. One example is UpToDate, which focuses on point-of-care utilizing EBP to make recommendations (Wolters Kluwer, 2023b). This user-friendly, broadly accepted tool provides information for all subspecialties of internal medicine. Another available tool is Lexicomp, which houses detailed drug information in real time (Wolters Kluwer, 2023a). These tools can help health care providers at all levels make and discuss clinical decisions to determine what is currently in practice and help determine what may need to change.

Just as there are support tools available to facilitate clinical decisions, many tools are available to assist with the multistep process of EBDM. Some of these tools help determine a searchable question, while others help with the organization and categorization of identified research articles. Resources to help users define the problem focus on turning the identified concern into an answerable question and identifying key terms to guide an efficient search. Search tools are available to help users sift through data points and document results to track trends and highlighted usable factors. Tools for the appraisal step allow users to organize the data and appraise them accordingly. These tools have prompts and helpful formatting templates to keep appraised information organized. Synthesizing tools then help users pull out relevant information from their search and appraisal process. Adapting tools helps users evaluate the evidence for applicability and usability regarding their current concerns. Approaching the tactical aspect of the process, implementation tools help users plan for and carry out implementation based on their specific circumstance. Finally, evaluation tools and resources provide checklists of key aspects of EBDM and how to review the process that has taken place, starting with defining and moving through implementation (NCCMT, 2023b). To complete the process, there are tools to help with the reflection process of the evaluation phase. For example, McMaster University's Health Evidence website has multiple tools specifically designed for this process in the public health sector.

TUTORIAL: HOW TO USE HEALTHEVIDENCE.ORG

Access multimedia content (http://openstax.org/books/population-health/pages/11-1-what-is-evidence-based-decision-making)

McMaster University's Health Evidence website offers tools for evidence-informed decision-making. Examples of tools include an EIDM checklist, a resource guide, a search tracker, and search strategies for developing a PICOT question.

Watch the video, and then answer the following questions.

1. What are the three main methods for searching within Health Evidence?
2. Health Evidence utilizes sources at which level of evidence to evaluate the effectives of public health interventions? Why is this evidence leveling important?
3. What rating system is used in this database?

By utilizing these tools, nurses and other health care providers can make the complex process of EBDM more attainable by breaking these steps into manageable tasks.

11.2 Where to Find Evidence-Based Interventions

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 11.2.1 Identify examples of databases and registries to locate research and evidence-based prevention services.
- 11.2.2 Identify evidence-based programs that contribute to meeting core public health functions and the 10 Essential Public Health Services.
- 11.2.3 Understand how to use data to inform decision-making in public health nursing.

Once nurses and other health care professionals understand EBP and EBDM and when to use them, the next step is to determine where to find evidence-based practice interventions. The PICOT question guides the search for relevant evidence. This section discusses the different resources nurses may use to find research and to identify evidence-based prevention services. It discusses how the 10 Essential Public Health Services and the social determinants of health are key factors that must inform all public health and population health decision-making.

Databases and Registries

With the vast amount of research available, it is crucial to be efficient while searching for relevant evidence. **Databases**, collections of information organized in a systematic method, are helpful during the process of searching for sources of existing literature related to the topic of one's inquiry. Multiple databases are available to assist nurses and other health care providers with the process of selecting evidence-based interventions. Table 11.4 provides examples of commonly used and reliable databases.

Database	Description
Agency for Healthcare Research and Quality (AHRQ) https://www.ahrq.gov/ (https://openstax.org/r/ahrqgov)	Includes evidence summaries and clinical guidelines
Cumulative Index to Nursing and Allied Health Literature (CINAHL) Complete https://www.ebsco.com/products/research-databases/cinahl-complete (https://openstax.org/r/ebsco)	Includes scholarly nursing journal articles
Cochrane Library https://www.cochranelibrary.com/ (https://openstax.org/r/cochranelibrary)	Noted as a core source for EBP; includes systematic reviews that are regularly updated and clinical trials
Joanna Briggs Institute EBP Database https://jbi.global/ebp (https://openstax.org/r/jbiglobal)	Database specifically designed to house EBP articles; includes systematic review, recommended practices, evidence summaries, and tools that can be used in professional EBP

TABLE 11.4 Commonly Used Databases

Database	Description
Medline with Full Text https://www.ebsco.com/products/research-databases/medline-full-text (https://openstax.org/r/ebscoproducts)	Includes articles covering biomedical and health fields; specifically noted for public health and public policy
PubMed (National Library of Medicine) https://pubmed.ncbi.nlm.nih.gov/ (https://openstax.org/r/pubmed)	Provided by the National Library of Medicine; specifically noted for reviews of clinical effectiveness

TABLE 11.4 Commonly Used Databases

In addition to databases, registries are available to provide guidance and information. **Registries** are collections of information regarding people and typically outline a specific condition or diagnosis (National Institutes of Health [NIH], 2023). Table 11.5 provides examples of commonly used registries and resources for nurses.

Registries	Description/Link
Alzheimer's Prevention Registry	Links researchers with those participating in Alzheimer's studies and educating the public by sharing factual and reliable information. https://www.endalznow.org (https://openstax.org/r/endalznow)
Autoimmune Registry	Provides a hub for statistics, research, and client data for all autoimmune diseases. The goal of this registry is to support research and reduce time of diagnosis for clients while establishing appropriate funding for autoimmune disease treatment. https://www.autoimmuneregistry.org (https://openstax.org/r/autoimmuneregistry)
Breast Cancer Surveillance Consortium	Provides a collaborative network of breast imaging and historic registries to improve screening protocols and overall outcomes in the United States. https://www.bcsc-research.org (https://openstax.org/r/bcsc)
Clinical Trials Public Data Share Website	Hosted by the National Institute on Drug Abuse (NIDA), which shares completed trials with investigators and the public. The goal of this registry is to share information and promote new research. https://datashare.nida.nih.gov (https://openstax.org/r/datashare)
Mother to Baby	Provides evidence-based information regarding the safety of drugs and other substances for clients who are pregnant or breastfeeding. While information on exposure to chemicals, herbs, and household products is provided here, more specific observational research is conducted and shared regarding medications and vaccines. https://mothertobaby.org/our-work/ (https://openstax.org/r/mothertobaby)
National Amyotrophic Lateral Sclerosis (ALS) Registry	Compiles research and information provided by clients who have ALS. Direct links to current clinical trials are provided for clients. https://www.cdc.gov/als/GeneralPublic_AboutRegistry.html (https://openstax.org/r/generalpublic)

TABLE 11.5 Commonly Used Registries

Registries	Description/Link
The National Institutes of Health (NIH) Registry List	The National Institutes of Health (NIH) has compiled a list of over 50 registries available for reference. Many of these registries are diagnosis or population specific. This is an excellent resource for nurses and other health care providers seeking specific research to support their EBP intervention. https://www.nih.gov/health-information/nih-clinical-research-trials-you/list-registries (https://openstax.org/r/health)
The Community Guide	A collection of evidence-based findings from the Community Preventive Services Task Force. This informative guide helps nurses and other health care providers find interventions to prevent disease and improve health within businesses, schools, health care organizations, communities, or states. https://www.thecommunityguide.org (https://openstax.org/r/communityguide)

TABLE 11.5 Commonly Used Registries

HEALTHY PEOPLE 2030

Evidence-Based Practices Resource Center

As an additional means of finding EBP tools and information, the Healthy People 2030 initiative offers an EBP resource center (https://openstax.org/r/healthypeopletools) to support health care providers, public health professionals, and policymakers in incorporating EBP interventions into their communities. These resources center on prevention, treatment, and support services for recovery in substance misuse and mental health disorders.

(See HHS, 2023a.)

Data to Inform Decision-Making in Public Health

As discussed previously, public health nurses and other health care providers must consider multiple data points while searching for background and support, including surveillance, interviews, focus groups, and qualitative or quantitative research articles. While considering this information, nurses must also consider the makeup of their community and the overall functions of public health. The World Health Organization (WHO) is the United Nations agency dedicated to global safety and health. The WHO provides multiple sources to help nurses and other health care professionals achieve their public health goals. Within these resources, the WHO has created Essential Public Health Functions (EPHF) for population health, deemed an indispensable set of actions to achieve the goal of public health. These include (WHO, 2021, p. xii):

1. Monitoring and evaluating the population's health status, health service utilization, and surveillance of risk factors and threats to health
2. Public health emergency management
3. Ensuring effective public health governance, regulation, and legislation
4. Supporting efficient and effective health systems and multisectoral planning, financing, and management for population health
5. Protecting populations against health threats, including environment and occupational hazards, communicable disease threats, food safety, and chemical and radiation hazards
6. Promoting prevention and early detection of diseases, including noncommunicable and communicable diseases
7. Promoting health and well-being and actions to address the wider determinants of health and inequity
8. Ensuring community engagement, participation, and social mobilization for health and well-being
9. Ensuring adequate quantity and quality of the public health workforce
10. Ensuring quality of and access to health services

11. Advancing public health research
12. Ensuring equitable access to and rational use of essential medicines and other health technologies

The function of public health can be summarized as monitoring the health status of the community to identify and investigate health problems and hazards and to educate and empower people to address them (WHO, 2023). To do so, public health nurses should use multiple forms of data to gather the best available information and apply this to program planning frameworks. This evidence may be research articles, community needs assessments, and statistics on medical risk, morbidity, mortality, and the social determinants of health. Examples of programs that align with the EPHF include cancer prevention and screenings, behavioral risk factor surveillance systems, injury prevention campaigns, sudden infant death syndrome (SIDS) education and prevention programs, and smoking cessation campaigns.

Along with the EPHF, public health services must also be considered in decision-making. In order to achieve public health goals to protect and enhance the health of people and the communities in which they live, work, and play, the CDC has outlined 10 Essential Public Health Services (EPHS) that describe the activities all communities should undertake (CDC, 2023b); see Foundations of Public/Community Health for more information. Originally published in 1994, the EPHS framework was revised in 2020. Foundationally, the 10 EPHS actively promote systems, policies, and overall environments to enable optimal health for all who seek to eradicate barriers that have resulted in health inequities. Examples of possible barriers to equity in health care are those based on socioeconomic status, education level, age, sex, disability, location, race, and ethnicity. The 10 EPHS strongly state that all members of the community should have just and fair opportunity to attain optimal health and overall well-being. The 10 EPHS center on monitoring the status of the population's health, identifying problems for the population, and educating people accordingly about these problems. The foundations of public health center on creating policies, programs, and interventions to address these problems. Additionally, these steps help outline a pathway for nurses and other health care providers to increase equity across the population by building support and organizations to support a diverse population of clients and health care providers.

The decision-making process must also consider the social determinants of health (SDOH) and how they may impact public health functions. See Social Determinants Affecting Health Outcomes for more information. The SDOH ultimately contribute to personal and community-wide disparities and inequities. For example, if clients lack access to stores with nutrient-rich foods or the economic means to obtain them, they are less likely to make healthier food choices, which will then likely increase their risk of conditions such as type 2 diabetes, obesity, metabolic disorders, or heart disease. This will impact their quality of life as well as life expectancy.

All of these factors must be considered in the decision-making process as they impact one another and how interventions may ultimately succeed or fail. While one public health nurse may go through the EBDM process and eventually implement a successful program in their specific community, the success of that program may not translate to other communities or populations. For example, in a community where members do not feel safe or where distance and transportation are a concern, a program or intervention that relies heavily on the whole community participating in one physical space may not work well.

Ethical and Equitable Research

If nurses cannot find the information they need in the existing literature, they must do their own research or data extraction to inform their decisions. It is not uncommon for public health nurses to fail to find information fitting a specific population as the literature often has large gaps in representation. A significant factor to consider is **research ethics**. Nurses should already be familiar with the ethical codes that govern nursing practice. These ethical standards direct nursing conduct and allow for trust within the community. Similarly, there are ethical considerations related to research and those who conduct it. Research ethics employ fundamental principles guiding the design and implementation of research. These ethics center on respect for society and participants, resources, and regulation of research to prevent misconduct. These are especially important when research impacts human or animal subjects directly. In this process, there are multiple steps and checkpoints researchers need to make to follow safe channels.

The emphasis on research ethics can be traced to the National Research Act of 1974, which created the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. In response to the unethical research practices used in the U.S. Public Health Service's Syphilis Study, known as the Tuskegee Syphilis

Study, this commission identified basic ethical principles that should inform the conduct of biomedical and behavioral research involving human subjects and developed guidelines to ensure that such research is conducted in accordance with those principles (CDC, 2021). The Tuskegee study sought to evaluate the natural course of untreated syphilis in Black men. Participants were not informed of the study's true nature and thus did not give informed consent. Although penicillin became available as a treatment for syphilis during the study, it was never offered to study participants (Brandt, 1978; CDC, 2022). In 1976, the commission published the Belmont Report (https://openstax.org/r/ohrpregulations) outlining three basic ethical principles to protect subjects in research studies and/or clinical trials—respect for persons, beneficence, and justice—as well as applications of these principles, including informed consent, assessment of risk and benefits, and selection of subjects (U.S. Department of Health and Human Services [USDHHS], n.d.). These principles work to protect participants from harm, maintain their autonomy, and distribute benefits from the research. Nurses in public health settings must obtain information regarding these steps and follow them accordingly. This may look different depending on the community setting and level of research. Research must be conducted with the goal of promoting health equity. Health equity means allowing everyone to have a fair and just opportunity to attain their highest level of health. As public health considers a group of people or a community as a whole, there are many facets to consider while seeking equity of care.

HEALTHY PEOPLE 2030

Health Equity in Healthy People 2030

As Healthy People has evolved over the decades to reflect the most current science and address the latest public health priorities, it has strengthened its focus on health equity (https://openstax.org/r/priorityareashealth) (USDHHS, 2023b, para. 1). To find out more about Health Equity within Health People 2030, click on the link above and explore.

Equity in health research specifically means all who are affected by research and/or who may benefit from its outcomes should have an equal opportunity to contribute to the research. These equity concerns can exacerbate already-existing health dipartites. Nurses must consider their role in protecting the population being researched and promoting equity in research to better serve their communities. Unfortunately, nurses and other health care providers have not always conducted research and trials in an ethical manner. One historical example of unethical medical research is the participation of nurses and doctors in the ill-treatment and execution of tens of thousands of German citizens who were mentally, physically, and emotionally ill both before and during the Holocaust (Copeland, 2021). Another example is the role public health nurse Eunice Rivers Laurie played in the previously mentioned Tuskegee Syphilis Study conducted from 1932 to 1972. Rivers worked for the study, forming a relationship with the men, providing them with transportation and hot meals, and giving them noneffective treatments. As a Black nurse, she was trusted by the men and provided continuity of care for the duration of the study (Brandt, 1978).

INTERVIEW WITH TUSKEGEE STUDY NURSE EUNICE RIVERS LAURIE

Access multimedia content (http://openstax.org/books/population-health/pages/11-2-where-to-find-evidence-based-interventions)

This 1972 interview from National Public Radio (NPR) features Eunice Rivers Laurie, a public health nurse who worked for the Tuskegee Syphilis Study for 39 years. Laurie discusses her experience working with patients and answers questions about what patients were told.

Listen to the interview, and then respond to the following questions.

1. What was Nurse Laurie's role as a public health nurse in the Tuskegee Syphilis Study?
2. Why were the men in the study not told they had syphilis, according to Nurse Laurie?
3. If you had an opportunity to ask Nurse Laurie about her experience in the Tuskegee Syphilis Study, what would you ask her?

Research equity in health care is imperative to improve community health and promote social change. Diverse perspectives and backgrounds must be represented in research to broadly provide effective and efficient care to all. Health interventions and policies that do not represent these perspectives and backgrounds are likely to fail to meet

the needs of marginalized communities. The biases and perspectives of those conducting research combined with the historical lack of focus on marginalized communities in health care result in notable gaps in information and thus gaps in solutions for these populations. Researchers must identify biases within the data they are using as well as the power dynamics at each step of the decision-making process to support those who may otherwise be overlooked. Accessibility must be considered within each step of the process regarding appropriate education and information sharing per population. This may mean catering to health literacy level, cultural perspectives, and/or resource availability. Foundationally, participants should receive fully transparent information regarding the intent of the research and how this information will be used. Informed consent incorporates fully transparent direction with the option to opt out at any point. As trusted care providers, nurses have a responsibility to advocate for ethical and equitable research. They have a duty to question practices they feel are not following ethical or equitable standards and to seek to rectify these gaps in research and care. They also have a duty to obtain proper approval before conducting any of their own research and to report any researchers who violate the rights of participants.

WHAT IS PUBLIC HEALTH ETHICS AND WHY IS IT IMPORTANT?

Access multimedia content (http://openstax.org/books/population-health/pages/11-2-where-to-find-evidence-based-interventions)
This video reviews basic concepts related to public health ethics.

Watch the video, and then respond to the following questions.

1. What are the four principles of medical ethics?
2. What distinguishes public health ethics from medical ethics?
3. Why do public health and community health nurses need to be aware of issues related to public health ethics?

UNFOLDING CASE STUDY

Part B: Evidence-Based Decision-Making

Read the scenario, and then answer the questions that follow based on all the case information provided in the chapter thus far. This case study is a follow-up to Case Study Part A.

Amari and Milo have developed the following PICOT question: *Does daily exercise have an impact on anxiety rates in adolescents compared to those who do not engage in daily exercise over 3 months?* They are now ready to move on to the next step of the evidence-based decision-making process.

3. After developing their PICOT question, what is the next step that Amari and Milo will take?
   a. Begin to develop an exercise program for adolescents
   b. Critically appraise the evidence found in the literature
   c. Search the literature for supporting research
   d. Implementing the intervention of daily exercise

4. Amari and Milo are ready to start searching the databases and want to find one specific to public health and public policy. Which database would serve them best regarding these specifications?
   a. PubMed
   b. AHRQ
   c. Cochrane Library
   d. Medline Full Text

11.3 Evaluating the Quality of the Evidence

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 11.3.1 Demonstrate an understanding of the different levels of evidence.
- 11.3.2 Describe how to evaluate a research study.

In the process of EBP and EBDM, nurses and other health care providers need to understand how to evaluate the quality of evidence. Furthermore, they need to understand why this evaluation should take place. Taking the necessary steps to evaluate the quality of each piece of evidence ensures that each adds value to the project and helps meet the user's needs and expectations. This process may also help identify gaps in what has previously been researched and/or implemented.

Levels of Evidence

Once evidence has been collected from the literature, the information must then be organized and categorized. To help determine the best and most accurate information available, Johns Hopkins University created the Nursing Evidence-Based Practice (JHNEBP) Model, which utilizes a three-step process for a problem-solving approach to decision-making in clinical practice (Johns Hopkins Hospital, 2017; Johns Hopkins University & Medicine, 2020). Information regarding the JHNEBP Model (https://openstax.org/r/welch) can be reviewed at the Johns Hopkins website.

THEORY IN ACTION

Johns Hopkins Nursing Evidence-Based Practice Model

Access multimedia content (http://openstax.org/books/population-health/pages/11-3-evaluating-the-quality-of-the-evidence)
This video discusses the JHNEBP Model.

Watch the video, and then respond to the following questions.

1. What are two goals of this model, and why are they important for implementation?
2. Discuss the three-phase process used in this model.

(See Henry, 2022.)

EVIDENCE-BASED PRACTICE

Access multimedia content (http://openstax.org/books/population-health/pages/11-3-evaluating-the-quality-of-the-evidence)
Utah State University Library has created a video to help explain EBP and how it can be used in nursing and medical practice.

Watch the video, and then respond to the following questions.

1. What are the three main elements of evidence-based practice?
2. Why are a client's values and preferences a component of evidence-based practice?

Evaluating the Evidence

After understanding the levels of evidence available during the literature review, the next step is to appraise the evidence. The three main steps in evidence appraisal are identifying the type of evidence, determining the evidence level and strength, and then evaluating the quality of the evidence.

Evidence appraisal entails reviewing acquired information and systematically assessing its intended audience, purpose, relevance, applicability, validity, and reliability. The **intended audience** is the demographic that the writer or writers expect to read and interact with the information. The **purpose** of an article, often presented in a purpose

statement early in the article, identifies the reason for the project or study. An article's statement of purpose can help a nurse to quickly identify whether the article will help answer the research question. Furthermore, the article should be reviewed for **relevance**, meaning how closely the source's elements relate to the research question and whether the results can be applied to the intended population. **Applicability**, or how well the results and data pertain to a broad or specific population, is an important piece of appraisal. **Validity** refers to the degree to which the information within the article is factual. This is sometimes referred to as accuracy or credibility in research articles. Correspondingly, **reliability** is the extent to which results can be reproduced if research is completed under the same conditions. Figure 11.3 demonstrates the search pyramid tools researchers use to rank the evidence they gather. Each level of evidence pulls from the research obtained at lower levels, meaning the highest and most synthesized information is at the top of the pyramid. The highest quality, most reliable evidence from the highest level of the decision pyramid is most likely to support effective action and should be used first.

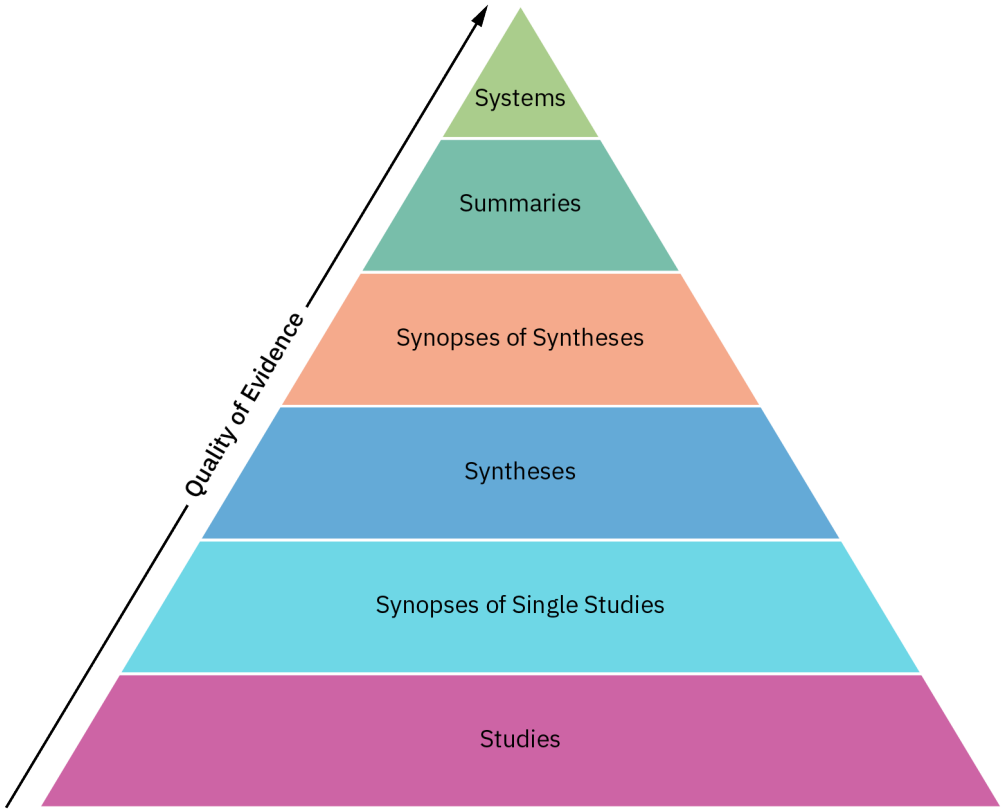


FIGURE 11.3 The National Collaborating Centre for Methods and Tools provides the 6S search pyramid outlining evidence from the lowest to the highest level. (See National Collaborating Centre for Methods and Tools, 2023c; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

UNFOLDING CASE STUDY

Part C: Evidence-Based Decision-Making

Read the scenario, and then answer the questions that follow based on all the case information provided in the chapter thus far. This case study is a follow-up to Case Study Part B.

Using research databases, Amari and Milo found four quantitative studies and three qualitative studies regarding exercise and mental health. Additionally, they surveyed the community to identify components of community exercise programs. This survey included physical locations, cost, and general attendance of these classes and programs. They also spoke with the local school systems to determine how physical education is incorporated into the high school curriculum. Amari and Milo must now appraise the evidence in order to select which data points to use and to what degree.

5. Which factor should Amari and Milo consider in their appraisal of the evidence they found?

a. The reputation of the researcher
b. The cost of the study
c. The length of the study
d. The trustworthiness of the study

6. During their appraisal of the evidence, which type of study would provide Amari and Milo with the highest quality of evidence?
   a. Randomized controlled studies
   b. Anecdotal reports
   c. Cross-sectional studies
   d. Summaries

CONVERSATIONS ABOUT CULTURE

Minority Representation in Medical Research

Access multimedia content (http://openstax.org/books/population-health/pages/11-3-evaluating-the-quality-of-the-evidence)
This PBS video outlines gaps in representation of racial and ethnic groups in clinical trials and medical research. These gaps limit the amount of information available about diverse populations, which can skew perspectives on care. Nurses in public health must find ways to combat these gaps.

Watch the video, and then respond to the following questions.

1. How can public health nurses help mitigate the discrepancies in representation currently seen in medical trials and research?
2. Reverend Alvin Hathaway states, "That's not really bias, that's just accessibility" when discussing funding slanted toward a European data set. What does this mean? How can public health nurses help to broaden this data set?

Each article or source identified in the literature review of a project should be appraised considering the aspects discussed above. The Johns Hopkins Toolkit (https://openstax.org/r/upstate) provides a guide to evidence level and quality, which can facilitate this process. Once this appraisal has been completed, the sources can be categorized and ranked to determine which ones may be helpful to use as a foundation for the research ahead. Nurses should use this process to identify strong research that can support the outcomes of their EBP intervention.

CASE REFLECTION

The Final Step in the EBDM Process

Read the scenario, and then respond to the questions that follow.

Throughout this chapter, Amari and Milo have applied the EBDM process to a concern in their community. This segment reveals the outcome of their process. Read the scenario, and then respond to the following questions.

After synthesizing the data, Amari and Milo note that consistent interventions discussed to support mental health in adolescents are regular exercise, appropriate sleep, and relaxation techniques. Specifically, the literature supports structured exercise classes and group movement as a successful method to reduce adolescent anxiety.

While the research supports specific interventions, as public health nurses, Amari and Milo know they need to also take into consideration the NCCMT Model for evidence-based decision-making as it incorporates research, community health issues in the local context, community and political preferences and actions, public health resources, and public health expertise. With that, their assessment notes the limited access to workout facilities such as public gyms for many of the adolescents in the community. Additionally, they note a high price for

membership compared to the average family income. They are also aware that many adolescents in the community work to help support themselves and their families. This not only limits their time availability but also speaks to the additional monetary strain. After speaking with a representative of the public school system, they note that physical education classes are optional for high school juniors and seniors. They find many students opt out of this class as their other option is early release or study hall.

Due to all these factors, the nurses identify that although the literature is clear on a specific intervention for exercise, it may not be the best option for their current community. Instead, the two decide they can still implement interventions for daily exercise that consider these community factors.

This leads them to the adapt phase. They decide to implement the following interventions:

Offer free daily classes at the community health center lead by volunteers. These classes will be offered at two different times each day and will be available to all adolescents within the community.

Compile a list of free exercise resources on the health department website that adolescents can use directly by streaming them at home, if possible, or in the community center with free internet. Additionally, Amari and Milo have worked with the high school and obtained support for two computers to be used for this resource that will be available for students during their study hall.

Each participant who attends a class will sign in to track use of this resource. Those who access the electronic resources will have a unique log-in passcode. These will be used to track the amount of exercise over 3 months for each participant. This data will then be looked at in comparison to the level of anxiety reported by adolescents in the community.

After three months of implementation, Amari and Milo review the rates of exercise and rates of anxiety for adolescents in the community. They find a decrease in anxiety for those who participated in exercise at least 5 times a week. Due to these results, the nurses begin brainstorming how they can expand these interventions. They will support daily exercise but note that activity at least 5 days a week helps reduce anxiety. They plan to obtain data for three more months and then disseminate their results at that time.

1. Identify and discuss the last step in the public health decision-making process. What takes place during this step, and why is it important?
2. Do you agree with the implemented interventions? Why or why not?
3. What other interventions would you propose? How would you ensure your recommendations are evidence-based? Provide at least two alternative interventions with resources cited for support.

Chapter Summary

11.1 What Is Evidence-Based Decision-Making?

Evidence-based decision-making in public health is an objective method that involves seven steps: define, search, appraise, synthesize, adapt, implement, and evaluate. The first step is to define the problem, usually as a PICOT question. This leads the way for the rest of the process. Often, interventions outlined in research may not fit the designated community and require adaptation. The NCCMT's Model for evidence-based decision-making assists with this process.

11.2 Where to Find Evidence-Based Interventions

Databases and registries are potential sources of reliable, evidence-based interventions. Additional frames of reference include the WHO's Essential Public Health Functions (EPHF) and the CDC's 10 Essential Public Health Services (EPHS). Research ethics are fundamental principles that guide the design and implementation of research. Nurses must consider their role in protecting the population being researched and promoting equity in research to better serve their communities.

11.3 Evaluating the Quality of the Evidence

Evaluating the quality of each piece of evidence ensures that each adds value to the project and helps meet the user's needs and expectations. This process may also help identify gaps in what has previously been researched and/or implemented. Evaluating the quality of evidence involves reviewing the acquired information and systematically assessing its intended audience, purpose, relevance, applicability, validity, and reliability.

Key Terms

adapt a part of the EBDM process that determines if synthesized information can apply to the client (which may be a single person or a community) in discussion

applicability when evaluating the evidence, assesses how well the study's results and data pertain to broad or specific populations

appraise a part of the EBDM process that involves critically assessing each study for relevance and credibility to ensure the information provided is meaningful, trustworthy, and relevant

database collection of information organized in a systematic method that is helpful when searching for sources of existing literature related to the topic of inquiry

define a part of the EBDM process that clearly identifies the problem or question to be addressed

evaluation a part of the EBDM process that determines the effectiveness of the implemented plan by deciding if it accomplished what was intended and, if not, what may need to be changed

evidence appraisal systematic critique of acquired information to review its purpose, intended audience, relevance, validity, and applicability to the specific question being asked

evidence-based decision-making (EBDM) the process of using the most recent research and clinical practice experience to make optimal decisions regarding a policy, practice, and/or program

evidence-based practice (EBP) using the best available research, clinical experience, and client preferences to inform patient-care interventions and evaluation

focus groups interviews conducted with small groups of participants who have similar traits or interests; informs the current problem or issue in discussion

implementation a part of the EBDM process that involves acting on research information to carry out the determined plan

intended audience demographic that a writer or writers expect to read and interact with an article

needs assessment an appraisal that identifies strengths and resources from the community and gives reviewers a quick overview of existing systems and policies and areas that need improvement or additional resources

PICOT question as part of the EBDM process, involves the problem or concern being formatted to address the population, intervention, comparison, outcome, and time frame in the form of an answerable question

purpose component of a research study or article that identifies the reason it was conducted; often identified as a purpose statement

qualitative research deals with nonnumerical data such as experiences, attitudes, and behaviors; expressed in word form, cannot be quantified, and describes perspectives of individuals and populations

quantitative research contains numbers and objective data to evaluate outcomes and determine

results; expressed by amount in numerical terms

registries collections of information regarding people, typically outlining a specific condition or diagnosis

relevance how closely source elements match the current question and whether the results can be applied to the population in question

reliability the extent to which results can be reproduced if research is completed again under the same conditions

research ethics fundamental principles guiding the design and implementation of research centering on respect for society and participants, resources, and regulation of research to prevent misconduct

search a part of the EBDM process that involves reviewing the literature to examine what research is available to address a concern

synthesize a part of the EBDM process that involves compiling information, looking for specific trends in data to determine what the research says about the concern or issue

validity how factual the information within the article is; sometimes referred to as accuracy or credibility in research articles

Review Questions

1. The nurse is discussing the importance of evidence-based decision-making (EBDM) with a group of students. Which statement by a student indicates understanding of this process?
   a. "EBDM is a one-step process to make clinical decisions."
   b. "EBDM utilizes subjective decision-making."
   c. "EBDM uses interventions with replicable results."
   d. "EBDM relies on past nursing experiences."

2. Which information is the nurse assessing when appraising the applicability of a research article?
   a. The intended audience of the article
   b. The degree to which the results relate to a specific population
   c. The accuracy or credibility of the research
   d. The purpose of the research

3. While conducting a literature review for an evidence-based project, the nurse recognizes that which type of study represents the lowest level of evidence?
   a. Case reports
   b. Cohort studies
   c. Randomized control trials
   d. Cross-sectional studies

4. A nurse has developed the following PICOT question: In adult men, is zinc supplementation as effective as vitamin C supplementation in reducing the length of respiratory viral infections over six months? The nurse identifies "zinc supplementation" as which part of the PICOT question?
   a. Population
   b. Intervention
   c. Comparison
   d. Outcome

5. A public health nurse has developed a research question and searched the literature for supporting evidence. In which step of evidence-based decision-making would the nurse compile the research findings and identify specific trends in the data?
   a. Defining the problem
   b. Synthesizing the literature
   c. Appraising the literature
   d. Adapting the information

6. Which database would the public health nurse use when conducting research to locate regularly updated systematic reviews?
   a. Cochrane Library

b. Agency for Healthcare Research and Quality (AHRQ)
c. Medline with Full Text
d. Cumulative Index to Nursing and Allied Health Literature (CINAHL)

7. Which action will the public health nurse perform when conducting an ethical community study?
a. Require each participant who provides informed consent to complete the study.
b. Obtain informed consent only from vulnerable populations.
c. Get informed consent only if the risks of participating in the study are high.
d. Obtain informed consent from each participant in the study.

8. The nurse is developing a PICOT question to study methods to promote smoking cessation in high school students in a rural community. Which statement identifies the targeted population?
a. The rural community
b. Community members who smoke
c. All high school students in the community
d. High school students in the rural community who smoke

9. Which type of study will the nurse use to understand the experiences of an immigrant group in the community?
a. Qualitative
b. Randomized control
c. Needs assessment
d. Quality improvement

10. Which activity would the nurse perform during the evaluation phase of evidence-based decision-making (EBDM)?
a. Carrying out the proposed plan
b. Deciding if the evidence is applicable to the population
c. Determining the effectiveness of the plan
d. Compiling the data

CHAPTER 12

Epidemiology for Informing Population/ Community Health Decisions



FIGURE 12.1 Public health professionals often bring vaccine clinics to the community as a primary method to prevent disease and improve the health of the community. (credit: modification of work "Public Health at Work" by Thad Zajdowicz/Flickr, Public Domain)

CHAPTER OUTLINE

12.1 Epidemiology Defined
12.2 Historical Perspective
12.3 Epidemiological Approaches
12.4 Types of Study Design
12.5 Epidemiologic Measures
12.6 Communicating Inferences from Epidemiologic Data
12.7 The Role of Epidemiology in Scientific Decision-Making and Policy Development

INTRODUCTION Did you ever wonder where clinical guidelines originate? For example, screening for lung cancer with computed tomography is recommended for adults 50–80 years of age who have a 20-pack-a-year smoking history. On what evidence is this recommendation based? Recommendations like this one are the result of epidemiological study. This chapter will introduce basic concepts of epidemiology, how it has evolved, and how it is used today, focusing on the application of epidemiology to public health practice.

12.1 Epidemiology Defined

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 12.1.1 Define epidemiology.
- 12.1.2 Explain the objectives of epidemiology.
- 12.1.3 Examine the role of epidemiology in public health.

Epidemiology is the scientific study of the distribution and determinants of diseases and health outcomes in populations in order to develop methods of controlling health problems, limit the consequences of illness, and maximize health. Epidemiology relies on a methodical and unbiased approach to data collection, analysis, and interpretation. This multidisciplinary science draws from the biologic, economic, social, and behavioral sciences and the scientific disciplines of biostatistics and informatics. Epidemiology is described as the basic science of public health because it provides the foundation for overseeing public health interventions (Centers for Disease Control and Prevention [CDC], 2012).

Epidemiology seeks to establish causal factors for **health events**, defined as disease, injury, or death (CDC, 2012). Epidemiologists define the populations to be studied. These populations may be as small as one town or as large as an entire country. They may be selected based on geography, biologic factors such as gender or age, or social factors such as race, lifestyles choices, or income level. Epidemiologists view the entire health spectrum, from safety and injury prevention—such as bicycle or motor vehicle safety—to disease prevention and control.

Epidemiological Objectives

Epidemiology is founded on principles of health, safety, and wellness. It focuses on the overall health and welfare of populations of individuals, studying patterns of disease frequency and distribution and determinants of health and illness (Frérot et al., 2018). Epidemiological objectives include (Celentano & Szklo, 2019):

- Identifying the causes of disease or factors that increase an individual's risk for disease
- Identifying how diseases are transmitted
- Determining the extent of disease in a community or specified population
- Evaluating preventive and therapeutic measures of health care delivery
- Providing the foundation for developing public policy regarding disease prevention and health promotion

Application of Epidemiology to Public Health

By identifying causes and risk factors for disease development, public health nurses can use evidence-based information to intervene early to reduce morbidity and mortality. For example, in 1950, epidemiologists Doll and Hill demonstrated a causal link between the development of lung cancer and smoking cigarettes. Their studies laid the foundation for public health initiatives to decrease rates of cigarette smoking. In 1965, 42 percent of adults in the United States smoked cigarettes, but by 2021 the rate had fallen to 11.5 percent (CDC, 1999; CDC, 2023).

Epidemiologic studies can identify how diseases are transmitted, enabling public health nurses to advocate for appropriate control programs. Diseases can be transmitted from person to person or from nonhuman sources, such as ticks or mosquitoes, to the human population. Well-designed epidemiologic studies have demonstrated how major communicable diseases are transmitted. For example, measures to ensure staff and client safety where tuberculosis may be present are based on the 1956 work of epidemiologists Riley and Wells (Thomas, 2020).

Determining the prevalence and extent of disease in a community is another function of epidemiology. Public health nurses can use this information to prepare for communicable disease outbreaks. For example, by using epidemiological statistical models, public health nurses can prepare adequate vaccine supplies and plan health services needed to respond to seasonal influenza outbreaks.

Public health nurses can also use evidence-based epidemiological information in health promotion education. For example, epidemiologists study whether screening improves survival for men with prostate cancer. Nurses can use the results of those epidemiological inquiries to assist them in educating at-risk communities. Epidemiological studies, such as studies seeking to discover whether high levels of radon in homes causes disease, can also inform nurses' work to advocate for public policy at the local, state, and federal levels.

12.2 Historical Perspective

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 12.2.1 Describe the historical origins of epidemiology.
- 12.2.2 Identify key figures influential in the field of epidemiology.
- 12.2.3 Examine the contribution of nursing to the field of epidemiology.

The origin of epidemiology has been traced to physician Hippocrates' "On Airs, Waters, and Places." This medical textbook, written in ancient Greece circa 400 BCE, details Hippocrates' belief that disease was caused not by the supernatural but instead by environmental factors and his recommendations that healers observe their patients' lifestyle choices (Kleisiaris et al., 2014). Several important figures followed Hippocrates in the evolution of epidemiology; this chapter will highlight four of the most influential: Edward Jenner, Ignaz Semmelweis, John Snow, and Florence Nightingale.

Edward Jenner (1749–1823) developed an immunization against smallpox that ultimately resulted in its eradication (Riedel, 2005). Smallpox affected all levels of society in 18th-century Europe, killing 400,000 people each year. Many of those who survived went blind (Louten, 2022; Riedel, 2005). The case-fatality rate in London was estimated to be as high as 80 percent in infants and 60 percent in children and adults. Edward Jenner had heard that dairy maids seemed to be protected from smallpox after having contracted cowpox. He theorized that inoculating a person with matter from a cowpox lesion would provide them with protection from smallpox. To test his theory, Jenner inoculated a young boy with matter from the cowpox lesions of a dairy maid and then inoculated the child 6 weeks later with matter from a fresh smallpox pustule. Jenner's experiment seemed to work: the child did not contract the disease. This is the first recorded scientific attempt to control an infectious disease by the deliberate use of vaccination, a method that eventually saved millions of humans from death and disability worldwide (Celentano & Szklo, 2019). On May 8, 1980, the World Health Assembly recommended ceasing smallpox vaccination as the world was smallpox-free (Riedel, 2005). Jenner operated solely on observational data that provided the basis for a preventative intervention.

In the early 19th century, puerperal fever (childbed fever) had mortality rates as high as 25 percent among women shortly after childbirth (Celentano & Szklo, 2019). Theories about its causes included solar and magnetic influences and air. In 1846, Ignaz Semmelweis (1818–1865), a physician specializing in obstetrics, was put in charge of the General Hospital in Vienna where there were two obstetrical clinics, the First and Second. The First Clinic was staffed by physicians and medical students and the Second Clinic by midwives. Semmelweis noticed the mortality rates in the two clinics were very different; in 1842, the rate in the First Clinic was more than twice as high as the rate in the Second Clinic (Celentano & Szklo, 2019). Knowing that physicians and medical students began their days performing autopsies before providing care in the First Clinic and that midwives did not perform autopsies, Semmelweis suggested mortality was higher in the First Clinic because the hands of physicians and students were transmitting disease from the cadavers to the women in labor.

In 1847, Semmelweis's colleague contracted an infection after being accidentally punctured while performing an autopsy on a woman who had died of childbed fever. An autopsy on Semmelweis's colleague demonstrated similar pathology to the women dying from childbed fever, confirming Semmelweis's suspicions regarding the transmission of the disease (Celentano & Szklo, 2019). Based on these causal findings, Semmelweis implemented a handwashing policy for physicians and students in the First Clinic. In 1848, mortality in the First Clinic dropped to rates comparable to those in the Second Clinic. Reinforcing this causal relationship, when Semmelweis was replaced by another obstetrician, the handwashing policy was eliminated, and mortality rates rose again in the First Clinic. Semmelweis's findings and recommendations had a global impact on the practice of medicine. His observations and interventions came before there was any knowledge of germ theory, proving it is possible and may be effective to implement a prevention strategy without knowledge of the exact cause of disease (Celentano & Szklo, 2019).

British physician John Snow (1813–1858) is often considered the "father of field epidemiology" (CDC, 2012) for his work translating epidemiologic observations into public policy during the 1850s cholera epidemic in London. His work illuminates the sequence from descriptive epidemiology to hypothesis generation to analytic epidemiology (hypothesis testing) to application. Snow approached his investigation of the source and transmission of the disease by examining where the people affected with cholera lived and worked. He marked each residence on a map of the

area. This type of map is called a **spot map**, and it shows the geographic distribution of cases of illness or disease. On this map, Snow also marked the location of water pumps to look for a relationship between the residences with cases of cholera and the location of pumps. He noticed a pattern of affected residences clustered around Pump A, more so than around Pumps B or C. He concluded that Pump A was the primary source of water and most likely the source of cholera infection. Snow gathered information on where those affected with cholera obtained their water and found that, confirming his suspicions, Pump A was the one common factor. After presenting these findings, the handle of the pump was removed, and the outbreak ceased (CDC, 2012). Visit this site (https://openstax.org/r/ucla) to see what a spot map looks like.



FIGURE 12.2 Florence Nightingale was named "the Lady with the Lamp," as she worked tirelessly to care for soldiers during the Crimean War, making her rounds during the night after the medical officers had retired. She spent her days organizing, leading, and fighting with military officers to make sanitary changes. (credit: "Florence Nightingale during the Crimean War" by Illustrated London News/Wellcome Collection, CC BY 4.0 International)

Florence Nightingale (1820–1910), long considered the founder of professional nursing, is also considered the first nurse epidemiologist. Nightingale devoted her life to the prevention of illness and death and used statistical methods to visualize data and bring about health reforms (Bradshaw, 2020; Fee & Garofalo, 2010; McDonald, 2014). In 1854 she joined a group of nurses aiding troops in Crimea (Figure 12.2). She saw the suffering in the hospital barracks—not due to battle injuries, but due to the rodent-infested buildings, filthy environment, and overflowing sewers. Soldiers suffered from wounds, dysentery, malnutrition, cholera, typhus, and scurvy, with a high mortality rate (Bradshaw, 2020; Fee & Garofalo, 2010; McDonald, 2014). Nightingale gathered data and documented the results of her sanitation reforms to illustrate the unnecessary deaths in military hospitals. After the war, she continued documenting negative health outcomes associated with poor sanitation. She eventually convinced the government to implement her sanitary reforms and continued to track the data (Bradshaw, 2020; McDonald, 2014). Nightingale monitored disease mortality rates, used a research framework to study the distribution and patterns of disease in a population, used applied statistical methods to visualize the data, and published statistical reports to gain the support of politicians and powerful people to bring about public health reforms that ultimately created changes in hygiene and treatment of clients. As one of the first to apply statistics to health care, Florence Nightingale was a pioneer who brought the field of public health to international attention and became the first woman to be awarded Britain's Order of Merit in 1907 (Fee & Garofalo, 2010).

12.3 Epidemiological Approaches

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 12.3.1 Discuss the interaction and interdependence of agent, host, and environment (epidemiologic triad) in communicable disease transmission.
- 12.3.2 Explain the components of the natural history of disease.
- 12.3.3 Describe the chain of infection and implications for understanding causative factors.
- 12.3.4 Discuss the web of causation.

The **epidemiological triad** posits that disease is caused by the interaction between a susceptible host, an external agent, and an environment that brings the host and agent together (CDC, 2012). It reflects the idea that health is not the result of one factor but rather results from the interaction of these elements (Celentano & Szklo, 2019).

The **host** can be an individual, a family, a group of high-risk individuals, or a community. Host factors include immunologic characteristics such as prior history of infection or immunization; modifiable factors such as exercise level, nutrition, and lifestyle; and non-modifiable factors such as age, race, and genes.

The **agent** is something that can cause a health issue, and the environment is the context within which the agent and host interact. Agents are classified into five categories: physical (trauma, radiation, heat), chemical (pollutants, medications, drugs, alcohol, smoke), nutritional (lack of or excess of), psychosocial (stress, social isolation), and biologic (bacteria, viruses, arthropods, toxins). The **pathogenicity** of the agent, or its ability to cause disease, influences disease onset. An agent must be present for a disease to occur, but the presence of an agent does not always cause disease; a variety of factors influence whether exposure to an agent will result in disease (CDC, 2012).

Environmental factors include the biologic environment of plants, animals, and toxins, including *vectors* (life forms such as mosquitoes or ticks that carry infectious agents) and the *reservoirs* where vectors and infectious agents are normally found. Other environmental factors are physical and social in nature, such as neighborhoods, housing, temperature, altitude, presence of crowding, air pollution, radiation, water quality, and noise.

The epidemiological triad (Figure 12.3) shows how host, agent, and environment can interact to cause disease. (Note that this model is incomplete for diseases that have other kinds of contributing causes, such as cardiovascular disease.) A good example of the epidemiological triangle is cholera, the diarrheal illness that John Snow linked to contaminated water. In the John Snow example, the host was the susceptible individual who consumed the contaminated water. The agent was *Vibrio cholerae* bacteria. The environment was the contaminated water system.

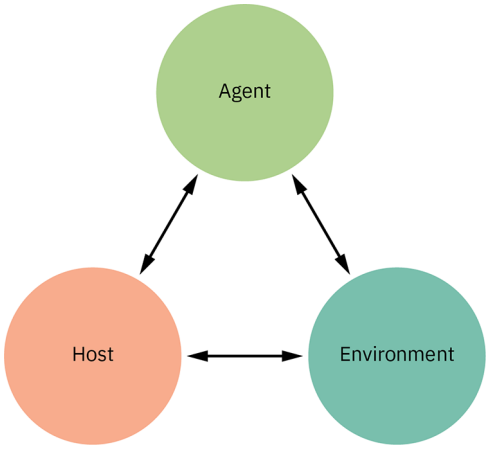


FIGURE 12.3 The epidemiological triad demonstrates the three factors that interact to cause illness. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Natural History of Disease

In the absence of treatment, diseases in individuals follow a natural progression, referred to as the **natural history of disease** (CDC, 2012). The natural history of disease encompasses events that occur before, during, and after the conclusion of a disease. The process involves multiple interactions between host, agent, and environment.

The natural progression of a disease has four stages: susceptibility, subclinical (preclinical) disease, clinical disease, and resolution (recovery, disability, or death) (CDC, 2012) (Figure 12.4). The initial interactions between agent, host, and environment occur during the susceptibility stage, or the pre-pathogenesis period, during which primary prevention measures could be implemented to prevent onset of the disease. Pathogenesis (onset and progression of a disease) begins when the host has clinical disease, and secondary prevention measures focus on early diagnosis and treatment to limit resulting disabilities (CDC, 2012).

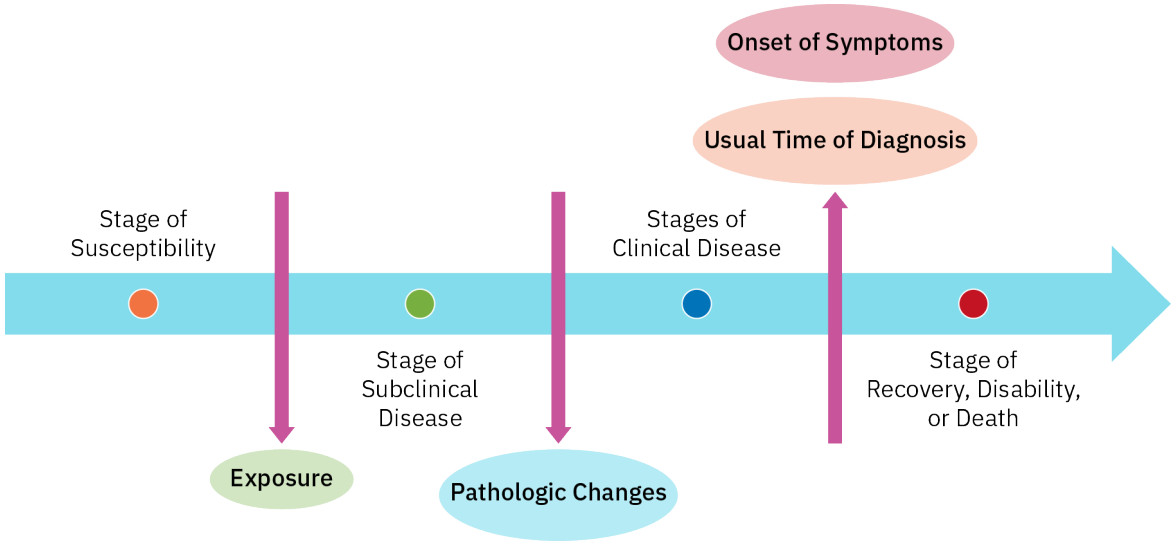


FIGURE 12.4 There are four stages of disease progression: susceptibility, subclinical (preclinical) disease, clinical disease, and resolution (recovery, disability, or death). (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

The process begins with the **susceptibility stage**, or exposure of a susceptible host. In communicable diseases, the exposure is to a microorganism. In noncommunicable diseases like cancer, the exposure could be a factor that instigates the process, such as tobacco smoke (lung cancer). Once the disease process begins, pathologic changes occur without the host being aware of them. In this **subclinical disease stage**, individuals have no overt symptoms. In infectious diseases, this stage includes an incubation period during which the pathogen multiplies to produce clinical symptoms. In noninfectious disease, it includes a latency period (the time from exposure to onset of symptoms). The latency period may be as brief as seconds for acute hypersensitivity (allergic) reactions or as long as decades for certain chronic diseases. In the **clinical disease stage**, signs of the disease develop, and diagnosis may occur. In the resolution stage, the disease may end with a return to health, a chronic form of the disease with limitations, or death (CDC, 2012).

In the subclinical stage, although disease is not yet apparent, there may be pathologic changes that can be detected with laboratory evaluation of blood work, radiographic evidence, or other screening methods. Many screening programs aim to identify the disease process early, as intervention in the early stage is often more effective than after the disease has progressed to symptoms (CDC, 2012).

The onset of symptoms marks the clinical disease stage in which most diagnoses occur. Some individuals may never progress to clinical disease, while others may have mild to severe illness. The severity of a disease is impacted by the infectivity, pathogenicity, and virulence of infectious agents. With any infectious disease, there are often many undiagnosed cases, as there will always be individuals who never progress to the clinical stage.

Individuals who have only subclinical disease but are infectious are termed **carriers**. Carriers are individuals with incubating disease or preclinical infection. For example, an individual infected with measles becomes infectious days before symptoms appear. Carriers are usually unaware they are infectious and are more likely to spread infection than those with obvious illness (CDC, 2012). Chronic carriers carry pathogens after recovering from the initial illness and may carry these pathogens for months or years. Examples include chronic carriers of hepatitis B virus and *Salmonella* Typhi, the causative agent of typhoid fever. Typhoid Mary, Mary Mallon, was an asymptomatic chronic carrier of *Salmonella* Typhi who, as a cook in the early 1900s, unknowingly infected many individuals in New York before her condition was identified and she was quarantined (CDC, 2012).

Chain of Infection

The **chain of infection** is an epidemiological model that allows for a more complex and nuanced interplay between the host, agent, and environment of the epidemiological triad (Figure 12.5). The *agent* is the virus or bacteria itself. The other elements of the chain of infection are discussed below.

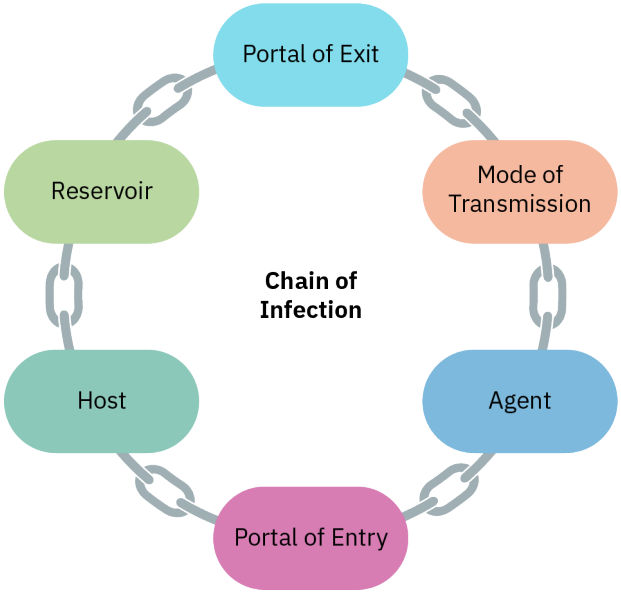


FIGURE 12.5 The components of the chain of infection are interlinked, similar to the epidemiological triad but with the added inclusion of transmission modes. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Reservoir

The **reservoir** is where the causal agent normally lives and reproduces. Reservoirs include the environment, humans, and animals. Communicable diseases that are transmitted from person to person—for example, sexually transmitted infections (STIs), measles, mumps, and many respiratory pathogens—are considered to have human reservoirs (CDC, 2012). As discussed, human reservoirs may be symptomatic, asymptomatic, or chronic disease carriers. With animal reservoirs (when the disease is transmissible from animals to humans, referred to as zoonosis), humans become accidental hosts. Examples include plague (from rodents) and rabies (from bats, dogs, and other mammals). Many newly recognized infectious diseases in humans, including West Nile encephalitis, acquired immunodeficiency syndrome (AIDS), Ebola infection, and severe acute respiratory syndrome (SARS), are thought to have emerged from animal hosts (CDC, 2012). Soil, water, and plants are considered environmental reservoirs. Many fungal agents live in the soil, and Legionella bacteria, the cause of Legionnaires' disease, often live in water within evaporative condensers (CDC, 2012).

Portal of Exit

The **portal of exit** from the reservoir is how the agent leaves its home, which enables it to act as the mode of transmission. Respiratory viruses such as influenza or tuberculosis exit the respiratory tract where the pathogen resides within its host. In pregnant individuals, some bloodborne agents such as syphilis can cross the placenta and infect the baby. Another portal of exit for bloodborne agents can be via cuts or needle punctures in the skin as can occur with hepatitis B or C, or even via a blood-drinking mosquito, as occurs with malaria (CDC, 2012).

Mode of Transmission

Diseases can be transmitted directly or indirectly (CDC, 2012). See Table 12.1 for more information.

Transmission Method	Description	Example
Airborne transmission	Transmission occurs via infectious agents capable of remaining suspended in the air over long distances and long periods of time, in stark contrast to droplets that fall to the ground within a few feet. Airborne transmission is considered a form of indirect transmission since the agent can be suspended in air particles for long periods of time.	The measles virus remains suspended in the air for long periods of time and is capable of infecting susceptible hosts even after the person with measles has left the room.
Direct transmission	• Transmission occurs when an infectious agent is transmitted by direct contact or **droplet spread**. This person-to-person direct contact can occur via skin contact, kissing, and sexual intercourse. Transmission may also occur from direct contact with soil that harbors infectious pathogens. • Droplet spread is considered direct transmission as infected material is transmitted by direct spray of relatively large, short-range aerosols of the pathogen over a few feet prior to the droplets falling to the ground.	• Examples include infectious mononucleosis, which is transmitted through kissing and sharing saliva; chlamydia, which spreads from person to person via direct contact; and hookworm, which is transmitted by direct contact with contaminated soil. • Many illnesses such as influenza, pertussis, and meningococcal disease are spread when an infected host talks, sneezes, or coughs near a susceptible host who then breathes in these infected droplets.

TABLE 12.1 Methods of Transmission

Transmission Method	Description	Example
Indirect transmission	• Transmission occurs when an infectious agent is transmitted via an inanimate object, also known as a vehicle or vector intermediary. • Vehicle-borne vectors that may indirectly transmit infectious agents include food, water, and inanimate objects such as bedding, countertops, or surgical equipment. A vehicle such as food or water can passively carry pathogens. • Diseases can also be transmitted indirectly from touching a contaminated surface such as a countertop and then touching the eyes, nose, or mouth. • Indirect transmission can also occur via vectors such as mosquitos or ticks. These vectors carry the infectious agent to a susceptible host.	• Hepatitis A is a vehicle-borne vector disease; it can be passively carried in food or water, and once ingested, it transmits disease. • Lyme disease and malaria are examples of vector-borne diseases. • Lyme disease is transmitted by ticks, and malaria is transmitted by mosquitoes. • Influenza, norovirus, COVID-19, and conjunctivitis are all examples of diseases that can also be transmitted indirectly from touching a contaminated surface.

TABLE 12.1 Methods of Transmission

Portal of Entry

The **portal of entry** is how the agent infects a susceptible host. The portal of entry must provide contact with tissues that will allow it to reproduce or allow the toxin of the agent to act (CDC, 2012). Many infectious agents use the same portal to enter a host that they used to exit the source; for example, pertussis (whooping cough) exits the respiratory tract of the original host and enters the respiratory tract of the new host. The portal of exit and portal of entry can be the same, as in the case of malaria via a mosquito bite. Some infectious pathogens exit the source host in feces and are carried via unwashed hands to a vehicle-borne vector, such as food, to enter the new host through the mouth. This is known as the fecal-oral route (CDC, 2012). The skin, mucous membranes, and blood are other portals of entry (CDC, 2012).

Host

A susceptible host is a key component and final link in the chain of infection. Host susceptibility depends on a multitude of genetic, nonspecific, and lifestyle factors. Genetic factors of age, gender, physical health, and immune status; nonspecific factors such as skin integrity, gastric acidity, and respiratory tract anatomy; and lifestyle factors such as malnutrition, chronic disease, and alcoholism (CDC, 2012) all contribute to a host's susceptibility. An example of a genetic makeup that decreases a host's susceptibility is the sickle cell trait. Individuals with this genetic alteration are partially protected against certain types of malaria. Immunity refers to either prior immunization or prior exposure to a pathogen affording protective antibodies. By interrupting and stopping the chain of causation at any of the links, disease can be prevented.

Web of Causation

By the mid-20th century, antibiotics and vaccines to prevent or treat infections shifted public health attention away from infectious diseases to noninfectious diseases like cancer and diabetes. In the 1960s, the web of causation

became an epidemiological model to demonstrate the concept of multiple causation in the health and illness spectrum (Ventriglio et al., 2016). This model helps describe the multiple factors that underlie many chronic illnesses, giving each causative factor equal prominence in identifying determinants of disease. The emergence of the web of causation represented a shift in thinking about disease and suggested that the combination of multiple factors was the determining influence in the development of poor outcomes (Ventriglio et al., 2016). Epidemiologists today continue to make associations among lifestyle choices, behaviors, the environment, and even the social determinants of health and their relationship to health outcomes.

12.4 Types of Study Design

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 12.4.1 Describe the differences between descriptive and analytic epidemiology.
- 12.4.2 Discuss the purpose of experimental studies.
- 12.4.3 Describe the purpose of observational studies.
- 12.4.4 Discuss the different types of observational studies.
- 12.4.5 Describe how epidemiologists interpret epidemiological studies.

Epidemiology has two main branches: descriptive and analytical. **Descriptive epidemiology** considers person, place, and time of health events and seeks to describe disease variables (CDC, 2012). **Analytic epidemiology** searches for the why and how of diseases or other public health issues by testing hypotheses about causal relationships (CDC, 2012). **Causality** is the relationship between a cause and its effect. Data from descriptive studies suggest hypotheses that analytic epidemiologists test by assessing for causation patterns.

Descriptive epidemiology depicts the occurrence of health events within a population, focusing on the frequency and pattern of these events by examining the characteristics of person, place, and time in relation to each event (CDC, 2012). Descriptive epidemiology evaluates all the conditions surrounding a person who is affected by a health event and may look at factors such as age, education, health care access, race, gender, and socioeconomic position concerning that health event (CDC, 2012). When the people and places affected and the timing of an event are described, patterns may emerge that can be considered potential risk factors for similar events.

Analytic epidemiology searches for causes and effects of diseases or other health events, asking *why* and *how,* attempting to quantify a relationship between two variables (CDC, 2012). Since it focuses on the quality and the amount of influence that determinants have on the occurrence of diseases or other health events, analytic epidemiology requires a comparison, or control, group (CDC, 2012). Epidemiologists use analytic epidemiology to measure associations between exposures or risk factors and outcomes and to test hypotheses regarding causal relationships. The results of analytic epidemiology provide the evidence necessary to recommend appropriate prevention and control measures. The goal of analytic epidemiology is to reduce the incidence of health events or diseases by understanding their risk factors.

Types of Epidemiological Studies

The purpose of analytic epidemiologic studies is to identify and quantify the relationship between an exposure to a variable and a health outcome. Such studies require using two groups because one serves as the control or comparison group. Analytic epidemiologic studies fall into two broad categories: experimental and observational.

EPIDEMIOLOGICAL STUDIES: A BEGINNER'S GUIDE

Access multimedia content (http://openstax.org/books/population-health/pages/12-4-types-of-study-design)
This video provides an overview of the many types of widely used epidemiological studies, including interventional studies, cohort studies, case-control studies, and cross-sectional studies, described in this chapter. The video also discusses ecological studies, case series studies, and systemic reviews that are beyond the scope of this chapter.

Watch the video, and then respond to the following questions.

1. If you had to come up with a topic for an epidemiologic study question, what would it be? Why?

2. The video notes that all studies must be done in an “ethical way.” What do you think this means?
3. What are some advantages of a case-control study?

Experimental Studies

Experimental studies, also known as interventional studies, are considered the gold standard for a study when they are randomized and conducted under rigorous conditions. In experimental studies, the investigator controls or changes the factors thought to cause the health event under investigation and then observes what happens to the health state. These studies are conducted under carefully controlled conditions. An example is a clinical trial of a new vaccine. The investigator randomly assigns some participants to the placebo group (control group, those who do not receive the new vaccine) and others to the group that will receive the new vaccine (experimental group). The investigator then tracks all the participants over time to observe which participants get the disease that the new vaccine is intended to prevent. The researcher then compares the two groups to see if the intervention group (experimental vaccine group) has a lower rate of disease (Figure 12.6) (CDC, 2012).

A community trial is an experimental study conducted at the community level where one community is assigned an intervention and another community serves as the control, non-intervention group. The two communities are compared to determine whether the intervention demonstrated a positive change.

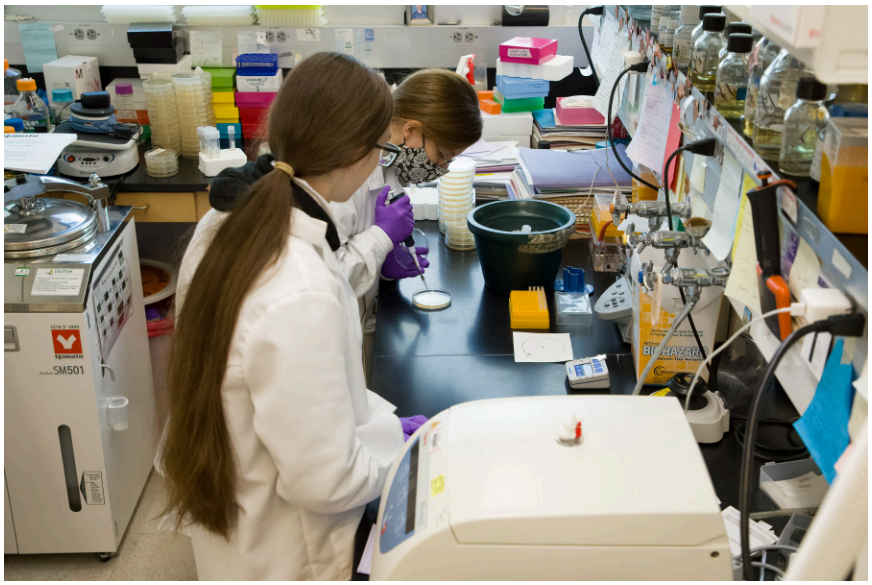


FIGURE 12.6 Vaccines undergo experimental testing with randomized controlled trials. In this photo, researchers engage in vaccine development. (credit: “NMRC Continues Phase 1 Testing of Diarrhea Vaccine” by Michael Wilson/U.S. Navy/Flickr, Public Domain)

Observational Studies

Observational studies are based on investigator observations of exposure and disease status. It is unethical to knowingly expose individuals to potentially harmful agents, so observational studies are commonly used when investigators suspect an agent’s effects are harmful. John Snow’s cholera studies were observational. Cohort studies, case-control studies, and cross-sectional studies are the most common types of observational studies used in epidemiological research (CDC, 2012).

A **cohort study** is an observational study of a cohort, a group of individuals who all share a certain characteristic. For instance, a group of people who have all contracted Lyme disease is a cohort.

In some ways, a cohort study is similar to an experimental study. As in an experimental study, the investigator documents whether or not study participants were exposed to what is being studied. For example, investigators might recruit a cohort of participants who have been exposed to cigarette smoke and compare the cohort’s rate of disease with the rate of disease of a group that has not been exposed to cigarette smoke. The investigator would then track participants of both groups to see if they developed the disease of interest.

A cohort study differs from an experimental study, however, in that the investigator in a cohort study only observes participants whose exposure status is already known. The investigator does not actively determine the participants’

exposure status (for example, by deliberately exposing a study group to cigarette smoke). After a set period, the investigator in a cohort study compares the disease rate in the exposed group to that of the unexposed group. The unexposed group acts as the comparison group and serves as an estimate of the expected amount of disease in a community. If the disease rate is significantly different in the exposed group, then the said exposure is considered to be associated with the disease (CDC, 2012).

Cohort studies may be classified as prospective or retrospective. In a prospective cohort study, participants are enrolled as the study begins and are followed over time, whereas in a retrospective study, the participants' exposure and outcome have already occurred. Retrospective cohort studies are helpful in disease investigations of distinct groups, such as investigations into outbreaks of uncommon diseases in health care or residential facilities. A major drawback of cohort studies is the possibility of differences between the two groups being studied with regard to risk factors and other exposures outside of the agent of interest, whereas experimental studies avoid this problem with randomization of subjects.

THEORY IN ACTION

The Framingham Heart Study

Access multimedia content (http://openstax.org/books/population-health/pages/12-4-types-of-study-design)
This short video highlights one of the largest and longest prospective cohort studies ever undertaken in the United States. In the video, study director Dr. Ramachandran discusses how it was not until this study that smoking cigarettes, hypertension, and hypercholesterolemia were implicated as risk factors for heart disease and stroke.

Watch the video, and then respond to the following questions.

1. Had you ever wondered how hypertension and hypercholesterolemia were identified as major risk factors for heart disease and stroke?
2. Why do you think this study employed a prospective cohort study design?
3. Why do you feel it is still beneficial today to have this study ongoing?

For further information on the Framingham Heart Study, see Honoring Their Legacy: The Framingham Heart Study's Original Cohort (https://openstax.org/r/framinghamheartstudy).

In a **case-control study**, investigators enroll a group of individuals with a disease and a control group of individuals without the disease and compare previous exposures between the groups. While cohort studies measure and compare the incidence of disease in exposed and unexposed groups, case-control studies compare the frequency of exposure in a group that already has the disease to a group without the disease. The rates of exposure in the cases and in the controls are compared. Similar to the cohort study, if the amount of exposure among the case group is significantly higher than the amount in the control group, then the disease or illness is thought to be associated with that exposure. In this study design, it is important to identify an appropriate control group that is comparable to the case group in most ways in order to provide a fair estimate of the baseline exposures in a given population (CDC, 2012). Case-control studies can often be completed in less time and with less expense than cohort studies and tend to work well in the study of uncommon diseases (Omair, 2016).

THEORY IN ACTION

Analytic Epidemiology in Action: Case-Control Study

This vignette is based on an example of a real-world scenario of a 2003 outbreak of hepatitis A in Pennsylvania. Public health epidemiologists had been asked to investigate a cluster of hepatitis A cases. Investigators found that almost all affected individuals had eaten at a specific restaurant before the onset of their illness. Discovering the location of the likely outbreak source helped refine the hypothesis, but investigators did not know which foods were contaminated. Instead of assessing only the foods consumed by the ill individuals, the investigators knew they needed to compare the foods consumed by the ill individuals to foods consumed by well individuals who had eaten at the same restaurant during the same time period, looking for significant differences in the

foods consumed by the two groups.

The investigation found that 94 percent of the affected individuals ate mild salsa compared with 39 percent in the control group. This narrowed the investigation, and ultimately the green onions in the salsa were found to be the source of infection. Shortly after, the FDA issued an advisory to the public about the risk of hepatitis A and green onions.

(See Centers for Disease Control and Prevention, 2003; Wheeler et al., 2005.)

In a **cross-sectional study**, investigators enroll sample individuals from a specified population and simultaneously measure each participant's exposure and disease outcome to get a snapshot of a specified population at a given time. Cross-sectional studies do not determine the long-term development or risk of a disease. In this study approach, the identified cases are considered prevalent cases (the proportion of people with a disease at a certain time) because investigators know only that the cases existed at the time of the study but do not know their duration or whether the exposure happened before the outcome. These types of studies are used to document the prevalence of health behaviors (prevalence of smoking), health states (prevalence of obesity), and health outcomes (chronic conditions like hypertension) in a community at a given time (CDC, 2012). These studies are an excellent tool for descriptive epidemiological purposes.

Interpretation of Epidemiological Studies

Epidemiologists seek to understand and discover whether a causal relationship exists between an agent or exposure and a disease. Therefore, the study's first question is whether an association exists between the agent or exposure and the disease. Using comparison, an association exists when the agent or exposure and disease occur together more frequently than the baseline occurrence. A causal relationship is one possible explanation for observed associations, but an association by itself does not equate to a causal relationship. The next section describes frequency measures, the mathematical means of expressing risk, and the strength of associations between exposure and disease.

Epidemiology often uses frequency measures such as ratios, proportions, and rates. Ratios and proportions describe the characteristics of populations, while proportions and rates quantify morbidity and mortality. Frequency measures permit inferences to suggest risk among different groups, detect groups at high risk, and develop hypotheses about why these groups might be at increased risk. With any epidemiologic study, comparison is the foundation for analysis, comparing the observed amount of disease in a population with the expected amount of disease. The comparisons are then further quantified using such measures of association as risk ratios, rate ratios, and odds ratios that provide evidence regarding causal relationships between exposures and disease. The next section will look at epidemiologic measures in more detail.

12.5 Epidemiologic Measures

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 12.5.1 Define significant terms related to disease occurrence in a population.
- 12.5.2 Discuss mathematical terms used in epidemiology.
- 12.5.3 Describe epidemiological measures used to define and quantify health problems in and across defined populations.
- 12.5.4 Identify analytic methods for calculating key measures of morbidity, mortality, and measures of association.
- 12.5.5 Describe possible sources of error in epidemiological studies.
- 12.5.6 Understand epidemiological criteria used to establish causal relationships.

Epidemiologists often categorize the amount of a disease present in a community as a specific level of disease: endemic, hyperendemic, sporadic, epidemic, outbreak, or pandemic. Public health officials use this information to assist in planning appropriate interventions. The **endemic** level is the continual and constant presence of a disease within a geographic area—the observed level in a defined area; it may also be referred to as the usual rate of disease at any given time or the baseline level.

Persistent high levels of disease in a defined area are characterized as **hyperendemic**. Diseases that occur occasionally at irregular intervals are considered **sporadic** or infrequent. When the level of disease in a defined area rises above the endemic levels—a sudden increase in the number of cases of a disease above what is normally expected—it is referred to as an **epidemic**. Both infectious and noninfectious diseases can become epidemics. An **outbreak** is an epidemic that affects a limited geographic area. A pandemic is a worldwide epidemic. See Pandemics and Infectious Disease Outbreaks.

Common Epidemiological Measures

Using epidemiological measures is one way of knowing when there is an excess of what is expected (Celentano & Szklo, 2019). Common frequency measures in epidemiology are ratios, proportions, and rates.

Ratios

A **ratio** is a comparison of any two values, calculated by dividing one interval by the other. The numerator and denominator do not have to be related. After dividing the numerator by the denominator, the result is expressed as the result "to one" or ":1" See Calculating Ratios for more detail on the calculation.

Ratios can be used as a descriptive measure, such as describing the man-to-woman ratio of participants in a study. They can also be used in calculations for the occurrence of illness or death between two groups. **Death-to-case ratio** is used as a measure of illness severity because it refers to the number of deaths attributed to a disease during a specific period of time divided by the number of new cases during the same period. As an example, rabies has a death-to-case ratio of almost 1, meaning that almost everyone who develops it dies from it (CDC, 2012).

CALCULATING RATIOS

Recall that:

$10^0 = 1$

$10^1 = 10$

$10^2 = 10 \times 10 = 100$

$10^3 = 10 \times 10 \times 10 = 1{,}000$

Basic Calculation for Ratios:

$$(\text{Numerator} \div \text{Denominator}) \times 10^n$$

Calculating Ratios: Example 1

You are a research nurse reviewing the medical histories of the study participants. Given this study's parameters, they are categorized as having hypertension or not having hypertension.

Men with hypertension: 305

Men without hypertension: 4,702

Based on the data, calculate the ratio of men without hypertension to men with hypertension. Since this will be a one-to-one ratio, you will use 10^0.

Ratio $= \frac{4{,}702}{305} \times 10^0 = 15.4{:}1$ (15.4 men without hypertension to 1 with hypertension)

Calculating Ratios: Example 2

Imagine you are the public health nurse for a county in a rural part of the United States. You have been tasked with calculating the ratio of county citizens to the number of health clinics in the county—in other words, how many county residents each health clinic must serve.

Number of health clinics: 8

County population: 9,000

Ratio = $\frac{9{,}000}{8} \times 10^0 = 1{,}125{:}1$ (Each clinic must serve 1,125 county citizens.)

(See Centers for Disease Control and Prevention, 2012.)

Proportions

A **proportion** is a form of ratio where the numerator represents a subset of the denominator. An example is looking at the percentage of a population that is younger than 18 years. Proportions can be communicated as a decimal, fraction, or percentage. See Calculating Proportions for more details on the calculation. Proportions are often used as descriptive measures, such as the proportion of children in a community vaccinated against the flu or the proportion of individuals at a boarding school who developed illness (CDC, 2012). Proportions also describe the extent of disease attributable to a particular exposure. Proportionate mortality is the proportion of deaths in a defined population during a defined time period that are attributed to different causes. Each cause is communicated as a percentage of all deaths, where the sum of causes equals 100 percent (CDC, 2012). These proportions are not rates, as the denominator is all deaths.

CALCULATING PROPORTIONS

Basic Calculation for a Proportion

(Number of persons or events with a particular characteristic ÷ Total number of persons or events, with the numerator being a subset of this total number) $\times 10^n$

With proportions, 10^n is usually expressed with $n = 2$, or 100, and conveyed as a percentage.

Calculating a Proportion

Refer to Calculating Ratios and the study looking at hypertension.

Men with hypertension: 305

Men without hypertension: 4,702

Based on the data, calculate the proportion of men who had hypertension.

Numerator (305) plus Denominator (4,702) = Total number of men; $(305 + 4{,}702) = 5{,}007$

Proportion of men who had hypertension = $\frac{305}{5{,}007} \times 10^2 = 6.09\%$

(See Centers for Disease Control and Prevention, 2012.)

Rates

In epidemiology, a rate is a measure of how often an event occurs in a specified population over a defined period of time. Rates are useful for comparing disease frequency in different locations, at different times, or among different groups of individuals, often considered a measure of risk (CDC, 2012). Epidemiologists use rates to describe incidence, prevalence, case-fatality, and attack rates. It is important to note that attack rate, prevalence rate, and **case-fatality rate** are not considered "true" rates by some as they are not expressed in units of time, but these proportions provide valuable information in looking for patterns and using data for comparison (CDC, 2012).

Morbidity is another term for having a disease, illness, or medical condition and includes disease, injury, and disability. Measures of morbidity characterize the number of individuals in a population who become ill or are ill at a specified time. Commonly used measures of morbidity are **attack rate**, also known as incidence proportion, secondary attack rate, **incidence rate**, point prevalence, and period prevalence. See Incidence Rate, Prevalence Rate, Attack Rate, and Case-Fatality Rate for more detailed definitions of these rates. The **mortality rate** measures the frequency of death in a defined population during a specific time interval. See Mortality Rate for more details on the various mortality rates often used.

INCIDENCE RATE

An incidence rate is a proportion in which the numerator is all new cases of a disease or health condition during a given period of time. The denominator is the population at risk during the same period. Incidence rates describe how quickly a disease or illness occurs in a specified population. Incidence rates of a health condition in a population are often expressed as the incidence rate per 100,000 population.

Example:

In 2020, 70,000 new cases of disease X were reported in the United States. The estimated midyear U.S. population was approximately 319,000,000. Calculate the incidence rate of disease X in the United States in 2020.

Numerator: 70,000 new cases of disease X

Denominator: 319,000,000 estimated midyear population

$10^n = 10^5 = 100{,}000$

$$\text{Incidence rate} = \left(\frac{70{,}000}{319{,}000{,}000}\right) \times 100{,}000$$

$$\text{Incidence rate} = 21.94 \text{ new cases of disease X per } 100{,}000 \text{ population}$$

(See Centers for Disease Control and Prevention, 2012.)

PREVALENCE RATE

A **prevalence rate** is the proportion of a population with a health condition at a certain point in time or over an interval of time. An example is how many individuals in a population have or have had influenza in the month of February. Unlike incidence, prevalence includes all cases of a particular disease, both new and pre-existing, in the population at the specified time. Incidence is limited to new cases only. Prevalence is often measured for chronic diseases as they have long durations and unclear onsets.

Calculating Prevalence of a Disease

Numerator: All new and pre-existing cases during an established time period

Denominator: Population during the same period

Multiply the result by 10^n. A value of 100 is most often used for 10^n; therefore, $10^n = 10^2 = 100$.

Point prevalence refers to the prevalence measured at a specified point in time, the proportion of individuals with a disease on a specified date.

Period prevalence refers to prevalence measured over a span of time.

(See Centers for Disease Control and Prevention, 2012.)

ATTACK RATE (INCIDENCE PROPORTION)

The attack rate is the proportion of a population that develops an illness during an outbreak. Another term for an attack rate is **incidence proportion**, and it can be thought of as a measure of risk.

Calculating Attack Rate

In a food poisoning outbreak, 50 out of 150 individuals develop nausea, vomiting, and diarrhea (n/v/d) after attending a party where the 150 individuals all ate cheddar cheese. To measure the *food-specific attack rate*, the numerator is the number of individuals who ate a specific food and became ill divided by the total number of

individuals who ate that food.

Numerator: 50 individuals who ate the cheddar cheese and developed n/v/d

Denominator: 150 individuals who ate the cheddar cheese

Multiply the result by 10^n. A value of 100 is most often used for 10^n; therefore, $10^n = 10^2 = 100$.

Food-specific attack rate $= \left(\frac{50}{150}\right) \times 100 = 33.3\%$

Calculating Incidence Proportion (also known as risk)

In a study of men with and without hypertension, 165 of the men with hypertension (out of a total of 305 men with hypertension) had died during the follow-up study 10 years later. Calculate the risk of death for these men.

Men with hypertension: 305

Numerator: 165 deaths among men with hypertension

Denominator: 305 men with hypertension

$10^n = 10^2 = 100$

Incidence proportion (Risk) $= \left(\frac{165}{305}\right) \times 100 = 54.1\%$

(See Centers for Disease Control and Prevention, 2012.)

CASE-FATALITY RATE

A case-fatality rate is the proportion of individuals with a disease who die from it. With this proportion, the numerator can only include deaths among individuals included in the denominator, but the time periods do not need to be the same. It is a measure of disease severity.

For example, a multistate outbreak of hepatitis A was traced to contaminated strawberries. There were 300 cases and two deaths as a result of the infection.

Case-fatality rate $= \left(\frac{2}{300}\right) \times 100 = 0.67\%$

(See Centers for Disease Control and Prevention, 2012.)

MORTALITY RATE

A mortality rate is the measure of death in a defined population during a specific time period.

Numerator = Deaths occurring during a specific time period

Denominator = Size of the population where deaths occurred

Multiply the result by 10^n. Values of 1,000 or 100,000 are often used for 10^n; therefore, $10^n = 10^3$ or 10^5.

Commonly Used Measures of Mortality:

Crude death rate is the mortality rate from all causes of death for a population.

Numerator: Total number of deaths during a given time interval

Denominator: Mid-interval population

$10^n = 10^3$ or 10^5

For example, suppose that a total of 3,000,000 deaths occurred in 2020. The estimated population was

400,000,000 at the midpoint of 2020. Therefore, the crude mortality/crude death rate in 2020 was $\left(\frac{3{,}000{,}000}{400{,}000{,}000}\right) \times 100{,}000 = 750$, or 750 deaths per 100,000 population.

Cause-specific death rate is the mortality rate from a specific cause in a population.

Numerator: Number of deaths assigned to a specific cause during a given time interval

Denominator: Mid-interval population

$10^n = 10^5$

For example, in 2020, there were 91,799 drug overdose deaths in the United States (CDC, 2022b). The midyear population of 2020 was 333,287,557. Therefore, the cause-specific (drug overdose) mortality rate was 27.5 per 100,000 population.

Infant mortality rate

Numerator: Number of deaths among children < 1 year of age during a specified time period

Denominator: Number of live births during the same time period

$10^n = 10^3$

Maternal mortality rate

Numerator: Number of deaths assigned to pregnancy-related causes during a specified time period

Denominator: Number of live births during the same time period

$10^n = 10^5$

(See Centers for Disease Control and Prevention, 2012.)

Measures of Association

Epidemiologists seek to identify causal relationships between agents and disease by first assessing whether they are associated. An observed association between an exposure or an agent and a disease may indicate a causal relationship, but it may be a result of an error with the sampling method used (Green et al., 2011). Measures of association, such as relative risk (risk ratio), rate ratio, odds ratio, and attributable risk, assess the degree to which the risk of disease increases when exposed to an agent, thereby demonstrating the strength of an association—or, put another way, the strength of a causal relationship. Measures of association essentially compare disease occurrence among two groups—one being the primary interest group and the other being the comparison group—and serve as epidemiological criteria to establish causal relationships (CDC, 2012).

Relative Risk

Relative risk (RR), or **risk ratio**, compares the risk of a health event among one group with the risk among another group, the comparison group. RR is the ratio of the incidence proportion of the health event in exposed individuals (or the group of primary interest) to the incidence proportion in unexposed individuals (or the comparison group). RR of 1.0 indicates equal risk between the two groups. RR greater than 1 indicates an increased risk for the group in the numerator, the exposed group. RR less than 1 indicates a decreased risk for the exposed group, signaling the exposure may protect against the disease or health event occurrence. See Relative Risk for more information on the calculation of RR and an example.

RELATIVE RISK

Calculating Relative Risk (RR)

Numerator: Risk of disease or health event, the incidence proportion, in primary interest group

Denominator: Risk of disease or health event, the incidence proportion, in comparison group

Example

A researcher is studying 300 individuals exposed to a potential carcinogen and 500 individuals who were not exposed to this potential carcinogen. After a five-year follow-up, 125 of the exposed individuals are diagnosed with the disease, and 75 of the unexposed individuals are also diagnosed with the disease. The relative risk of contracting the disease is calculated by:

Incidence proportion of the primary interest group (exposed group) is $\left(\frac{125}{300}\right) = 0.42$

Incidence proportion of the comparison group (unexposed group) is $\left(\frac{75}{500}\right) = 0.15$

Therefore, the RR is $\left(\frac{0.42}{0.15}\right) = 2.8$. This RR of 2.8 suggests the risk of disease in the exposed group is 2.8 times as high as the risk of disease in the unexposed group.

Rate Ratio

A **rate ratio** compares the incidence rates or mortality rates of two groups. Similar to the risk ratio, the two groups are usually differentiated by exposure to a suspected causative agent and a comparison group or are differentiated by demographic factors such as gender or age. The rate for the primary interest group (exposure group) is divided by the rate for the comparison group. A rate ratio of 1.0 indicates equal risk between the two groups. A rate ratio greater than 1 indicates an increased risk for the group in the numerator, the exposed group. A rate ratio less than 1 indicates a decreased risk for the exposed group, signaling the exposure may protect against the disease or health event occurrence. See Rate Ratio for more information on the calculation of rate ratio and an example.

RATE RATIO

Calculating Rate Ratio

Numerator: Incidence rate (or mortality rate) in primary interest group (exposure group)

Denominator: Incidence rate (or mortality rate) in comparison group (non-exposed group)

Example

A public health nurse is investigating a perceived increase in flu-related deaths in January–March of 2022 in a large city compared to flu-related deaths the year prior in January–March 2021 in the same city. In 2021, there were 129 flu-related deaths among a midyear population of 500,000. In 2022, there were 310 flu-related deaths among a midyear population of 502,000. Calculate the rate ratio as follows:

Mortality rate of the primary interest group (2022 incidence rate) is $\left(\frac{310}{502{,}000}\right) \times 1{,}000 = 0.62$

Mortality rate of the comparison group (2021 incidence rate) is $\left(\frac{129}{500{,}000}\right) \times 1{,}000 = 0.26$

Therefore, the rate ratio is $\left(\frac{0.62}{0.26}\right) = 2.4$. This suggests the risk of disease in the primary interest group is 2.4 times as high as the risk of disease in the comparison group, suggesting that in 2022 there was a higher mortality rate due to flu than in the year prior.

Odds Ratio

The **odds ratio** (OR) is similar to the RR as it quantitatively expresses the association between an exposure and a disease or health outcome. The OR is most often used to estimate the RR in case-control studies when the disease being investigated is rare. It is the ratio of the odds of developing a disease when exposed to an agent to the odds of developing the disease when not exposed. Investigators can use the OR to estimate the RR since RRs cannot be calculated from a typical case-control study. See Odds Ratio for more information on the calculation of the odds ratio and an example.

ODDS RATIO

Calculating Odds Ratio in a Case-Control Study

Numerator: Odds a case was exposed

Denominator: Odds a control was exposed

Odds ratio $= \frac{(a \times d)}{(b \times c)}$ where

a = number of individuals exposed and with disease

b = number of individuals exposed but without disease

c = number of individuals unexposed but with disease

d = number of individuals unexposed and without disease

Example

	Cases with Disease	Controls with No Disease	Totals
Exposed	$a = 190$	$b = 2{,}000$	2,190
Not exposed	$c = 140$	$d = 10{,}000$	10,140
Total	330	12,000	12,330

TABLE 12.2

Calculate the OR as follows:

$$\frac{(190 \times 10{,}000)}{(2{,}000 \times 140)} = 6.79$$

Now, using the same data in the table, calculate the RR as follows:

$$\frac{\left(\frac{190}{2{,}190}\right)}{\left(\frac{140}{10{,}140}\right)} = 6.28$$

The OR and the RR are close as the OR provides a realistic estimation of the RR.

Attributable Risk

The **attributable risk** (AR) is an often-used measurement of risk, representing the amount of disease among exposed individuals attributed to the exposure. AR represents the maximum proportion of disease that can be attributed to the exposure and is the maximum proportion of disease that can possibly be prevented by eliminating the exposure (Green et al., 2011). AR can also be stated as the attributable proportion of risk, the proportion of the disease among exposed individuals that is associated with the exposure, and can be used as a measure of the public health impact of a causative factor. It assumes the incidence of disease in the unexposed group is the baseline and expected risk for that disease. It also assumes that if there is a difference between the incidence of disease in the two groups, the difference is due to the exposure. This is an appropriate tool to measure risk when a single risk factor or exposure is being considered but does not work well when there are multiple exposures to various agents. See Attributable Risk for more information on the calculation of attributable risk and an example.

ATTRIBUTABLE RISK

Calculating Attributable Risk (AR)

Numerator: (Incidence in the exposed) – (Incidence in the unexposed)

Denominator: Incidence in the exposed

Example

A researcher is studying 300 individuals exposed to a potential carcinogen and 500 individuals who were not exposed to this potential carcinogen. After a five-year follow-up, 125 of the exposed individuals are diagnosed with the disease and 75 of the unexposed individuals are also diagnosed with the disease.

The incidence of disease in the exposed group is 125 individuals out of 300 $\left(100 \times \frac{125}{300} = 41.7\%\right)$ who contract the disease.

The incidence of disease in the unexposed group is 75 individuals out of 500 $\left(100 \times \frac{75}{500} = 15\%\right)$ who contract the disease.

To calculate the AR:

$\frac{(41.67-15)}{41.67} = 0.64$ or 64 percent, meaning that the proportion of disease that is attributable to the exposure is 64 percent. *Attributable to* does not equate to *caused by*, as this calculation is addressing association, not inferring causation.

Sources of Error

While reviewing epidemiological studies, the nurse must assess the strength of associations demonstrated in the study. A source of error can be a positive association discovered between an exposure and a health event when there is no true association. Another potential source of error occurs when no association is found between an exposure and health event when there is an association. A study may also find an association, but the strength of the association is greater or less than the actual association. These types of errors may be a result of chance, bias, or confounding. The nurse has a duty to examine each study for the possibility of these types of errors, which are explained in the following sections.

Chance

Chance refers to a random error that may occur within any study. The larger the **sample size** (the higher the number of participants), the less likelihood of a random error, but a large sample size does not eliminate the risk of a random error (Green et al., 2011). To assess for random error, epidemiologists use **statistical significance** and confidence intervals to permit an assessment of the study's risk for random error (Green et al., 2011). Studies with statistically significant results are unlikely to be the result of random error. **Confidence intervals** provide the relative risk (or other risk measure) found in the study and an interval within which the risk would most likely fall if the study were repeated multiple times. If a 95 percent confidence interval is chosen, the range includes results expected 95 percent of the time if the samples for new studies were continually drawn from the same population.

A ***p* value** represents the probability that the observed association could be the result of random error (Green et al., 2011). A *p* value of 0.2 means there is a 20 percent chance the values found could have occurred by random error with no actual association present. Epidemiologists strive to minimize false positives by using *p* values that fall below a selected level—often 0.05—known as **alpha**, or the significance level, for the results of the study to be statistically significant (Green et al., 2011). The 0.05 alpha level means there is a 5 percent probability that the association found in the study would occur without an actual association, occurring by chance. The outcome will be deemed statistically significant if the observed alpha (*p* value) falls below the preselected significance level (Green et al., 2011). Note that the *p* value does not give the probability that the risk estimate in the study is correct; similarly, the confidence interval does not provide the range within which the true risk lies.

Bias

Bias, also referred to as a systematic error (tendency to underestimate or overestimate the value of a parameter), is another source of error in a study's outcome, arising in the design or conduct of the study, data collection, or data analysis (Green et al., 2011). Researchers attempt to minimize bias through strong data collection protocols and overall study design. Bias results in a non-random error in a study result. When present, it may invalidate the results.

The two common categories of bias are selection bias and information bias. Selection bias results from an

inappropriate method of selecting study participants, particularly the control group; the control group should be drawn from the same population as the participants with the health event or health exposure that is under study. Selection bias also occurs when participants decline to participate after agreeing to do so or when they drop out before study completion.

An example of selection bias occurred in a study looking at the effect of hormone replacement therapy (HRT) on coronary heart disease (CHD) in women. Several observational studies demonstrated a decrease in CHD in women using HRT. Later randomized controlled trials found the opposite effect—that HRT may increase the risk for CHD in this population. The difference in the findings was related to selection bias. Among the women in the observational studies, those taking HRT tended to be younger, more health conscious, and more physically active than those who were not using HRT. This resulted in a health-conscious bias as the observational studies represented the usual woman who initiated HRT (Catalogue of Bias Collaboration et al., 2017). Women who participated in the randomized control trials were older, more likely to be overweight or obese, and were using HRT for a much shorter duration than the women in the observational studies (Hodis & Mack, 2022).

Information bias results from a weakness in measuring the exposure or disease in the study group. In particular, in a case-control study, information bias is a consideration because the researcher depends on information from the past to determine exposure and disease and their relationship (Green et al., 2011). Research has demonstrated individuals with disease (cases) recall past exposure better than individuals without disease (control), creating a potential for recall bias. With case-control studies, researchers sometimes need to rely on interviews with surrogates when study subjects have died of the disease under investigation or are not well enough to be interviewed (Green et al., 2011). For example, in a case-control study looking at Alzheimer's-type dementia, determining past exposures between the case and control groups could lead to information bias. In the cases, clients with Alzheimer's-type dementia may have difficulty recalling past exposures compared to the control group, clients without Alzheimer's-type dementia. Due to this recall bias, the presence of potential exposures as risk factors may be underreported in the case group, resulting in the researchers miscalculating the importance of these potential risk factors in disease development.

Confounding

Confounding is another type of error that may result in an incorrect causation or conclusion. This occurs when another factor (the confounder) is mistakenly identified as the agent associated with the outcome (Green et al., 2011). Confounding occurs when a confounder is both a risk factor for the disease and a factor associated with the exposure being investigated. This may result in an incorrect conclusion about causation, since the misidentified agent is not the true causal factor (Green et al., 2011). Confounding can be more of an issue with observational studies because in observational studies the participants are not assigned randomly to the comparison groups. Randomization helps to ensure that exposures, outside of the one being investigated, are evenly distributed between groups. Other techniques to limit confounding occur in the design stage with appropriate and thoughtful methods for selecting participants. If factors of age, gender, or certain lifestyle habits are potential confounders in a study, the investigators can limit the impact by selecting controls that match cases (Green et al., 2011). An example of confounding occurred when researchers were trying to link cigarette smoking to lung cancer. There was an established association that cigarette smokers had higher lung cancer rates, but this could have been due to other exposures or lifestyle factors and not the cigarette smoking. An argument could be made that individuals who smoke cigarettes are more likely to live in areas of higher pollution and that the pollution is causing the cancer. The confounding variable here is air pollution.

Establishing Causation

Causation refers to an increase in disease incidence among exposed subjects that would not have occurred if these subjects had not been exposed. Epidemiology cannot prove causation, but causation can be inferred from the data that epidemiologists and public health professionals analyze and interpret. In assessing causation, epidemiologists look for alternative explanations for the association, such as chance, bias, or confounding as mentioned previously. After this process has ruled out these sources of error, epidemiologists use the following nine factors—the Bradford Hill criteria, commonly referred to as Hill's criteria for causation—to guide them in making judgments about causation (Table 12.3).

1	Temporal relationship	The exposure (causal factor) must occur prior to disease development.
2	Strength of the association	The stronger the association (the higher the relative risk), the more likely the relationship is causal.
3	Dose-response relationship	The greater the exposure to the causal factor, the higher the risk of disease.
4	Replication of the findings	If the relationship is causal, the study results will have been replicated in different populations with consistent study results.
5	Biological plausibility (coherence with existing knowledge)	The causal relationship should be consistent with current biologic information.
6	Consideration of alternative explanations	The causal relationship is reinforced when bias and confounding have been ruled out and other possible explanations have been considered.
7	Cessation of exposure	If a causal factor results in disease, the risk of the disease is decreased when the causal factor is removed.
8	Specificity of the association	The causal factor or exposure is associated with one disease.
9	Consistency with other knowledge	If the relationship is causal, the findings would fit and be consistent with other information and data.

TABLE 12.3 Hill Criteria for Causation (See Green et al., 2011.)

12.6 Communicating Inferences from Epidemiologic Data

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 12.6.1 Discuss real-world applications of epidemiologic data in public health nursing.
- 12.6.2 Describe strategies to communicate epidemiological information to improve the population's health.

Nurses from all fields use epidemiologic data to inform client care. This can range from health promotion education on the heart health benefits of exercise, to a nutritious diet to support healthy bone growth, to smoking cessation to prevent lung cancer, to avoiding addiction by using the least amount of pain medication needed. The fields of nursing touched upon include acute bedside nursing, rehabilitation nursing, emergency nursing, nursing research, school nursing, corrections nursing, occupational health nursing, and community and public health nursing.

Application of Epidemiologic Data in Public Health Nursing

Epidemiologic research can assist in the identification of problems within a community or population and can assist in discovering the etiology of the problem or risk factors for the development of the issue. Epidemiologic health research can be descriptive or analytical and guide nurses and other public health professionals on a path of evidence-based interventions and recommendations to address the issue.

Community health nurses use health research from epidemiology as the foundation of evidence-based nursing practice and to inform and educate the public. A great example is Racial and Ethnic Approaches to Community Health (REACH (https://openstax.org/r/reach)), a program administered by the CDC to reduce racial and ethnic health disparities. This program provides grant money to local health departments, communities, and related agencies to establish local and culturally appropriate programs that address various health issues among Black, Indigenous, and people of color (BIPOC) communities (CDC, 2022c). One such program is the fruit and vegetable prescription program in the Navajo Nation. A Community Outreach and Patient Empowerment (COPE) group in New Mexico created a fruit and vegetable prescription program (FVRx) to promote healthy eating (Society for Public Health Education, 2020). Clinic providers and community health workers identified eligible families and asked them to participate. The organizers collaborated with local stores so that these families received monthly vouchers to purchase fruits and vegetables. These families also met with community health workers to learn more about healthy eating and its impact on the incidence of obesity, heart disease, and diabetes. The FVRx led to community-level changes with improved access to nutritious food (Society for Public Health Education, 2020).

As the Agency for Healthcare Research and Quality (AHRQ) (2019) notes, research translation refers to the practice of taking scientific research and evidence and applying it to a practical setting. This is a vital aspect of a nurse's role as health promoter, educator, and advocate. Population and public health professionals can translate research into a usable tool to help prevent or address health events and diseases. For the underlying research to be trusted and used appropriately, public health professionals must learn to communicate the scientific findings in an easy-to-understand yet hard-to-forget manner. Technical terms must be put into simple language before they are disseminated. Communication techniques include tailoring the message, targeting the message to groups, using storytelling, and framing the message in a hard-to-forget manner (AHRQ, 2019).

Dissemination is the distribution of information to a particular audience to spread knowledge about a disease and its associated interventions. Dissemination can occur through different channels, settings, and contexts to increase the reach of the evidence and increase the motivation and ability to apply it (AHRQ, 2019). Using history as a guide, Semmelweis would have been more effective in his quest to save lives via handwashing had he clearly presented his supporting evidence and communicated the need for intervention based on it. If he had been able to garner professional and political support and articulate the case for why or how his intervention was feasible and cost-effective, the lives of many more women in labor could have been saved (Celentano & Szklo, 2019).

Communicating Epidemiological Information

Nurses play a large role in communicating important health-related epidemiological information to individuals, communities, and government departments. Before implementing a health promotion program, nurses must be sure they understand the underlying research and have reviewed the studies for quality and rigor. They can then tailor their message to the target population. The goal is to effectively educate individuals and community members on health-promoting behaviors such as lifestyle changes, appropriate health screenings, and vaccines. Having a strong foundation in epidemiologic research makes the information the nurse presents more persuasive and trustworthy. Recent examples include vaccine campaigns for COVID-19 and campaigns educating the public on the new guidelines for colon cancer screening.

Outbreak communication requires a different approach. Before communicating with the public during an outbreak, it is key for the nurse to think about how risk perception may influence the community (Trumpey et al, 2018). Many individuals view public health recommendations as just that: recommendations—suggestions for actions they do not necessarily need to follow. That is, they view advice through their own risk-benefit lens. It is important for nurses to consider factors influencing risk perception when working with communities during an outbreak or other public health crisis. See Table 12.4 for factors influencing risk perception (Trumpey et al, 2018).

Acceptable Risks Are Perceived as	Less Acceptable Risk Is Perceived as
Being voluntary	Being imposed
Being under an individual's control	Being controlled by others
Having clear benefits	Having vague or delayed benefits
Naturally occurring	Human-made
Generated by a trusted source	Generated by an untrusted source
Being familiar	Being new
Affecting adults	Affecting children

TABLE 12.4 Factors Influencing Risk Perception

During an outbreak, trust and credibility of the individual delivering any communication significantly influences the communication's ability to persuade others to follow public health recommendations. Risk communication literature has recognized several factors associated with coming across as trustworthy and credible. They are empathy and caring, honesty and openness, dedication and commitment, and competence and expertise (Trumpey et al., 2018).

During an outbreak, public health professionals must effectively engage the community with information and guidance to promote disease control and prevention efforts. At the beginning, there are a lot of unknowns, and it can be difficult to communicate effectively. It is crucial to determine and define the roles and responsibilities of individuals involved in the outbreak response (Trumpey et al., 2018). For a public health nurse, this may include

interfacing with the community, or it may be more behind-the-scenes. Either way, determining one's role is the first step. After role delineation, the nurse must be able to identify the target audience and tailor health-related recommendations to that population.

12.7 The Role of Epidemiology in Scientific Decision-Making and Policy Development

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 12.7.1 Discuss the role of epidemiology in scientific decision-making.
- 12.7.2 Describe the role of epidemiology in policy development.
- 12.7.3 Describe how epidemiology supports the 10 essential public health services.

As the pioneers of epidemiology have demonstrated, when rigorously conducted, reported, and communicated, epidemiological studies can result in major health policy changes. Edward Jenner demonstrated that vaccination effectively protects the public from infectious diseases (Riedel, 2005). He operated purely on observational data and then used his observations to experiment with a "volunteer." There are many current ethical issues with how Jenner demonstrated the efficacy of vaccination against smallpox, but at the time, he followed the causal relationships he observed (Celentano & Szklo, 2019). Ignaz Semmelweis used data and astute observations to link childbed fever to dirty hands. He used his knowledge to implement a basic intervention that saved many childbearing individuals' lives. Unfortunately, he did not disseminate his findings widely or communicate them effectively, and this caused a significant delay in handwashing policy adoption (CDC, 2012; Mawdsley, 2022).

There is a need to clearly present supporting scientific evidence for a proposed intervention to gain public acceptance of evidence-based prevention policies. This involves gathering professional and political support (CDC, 2012). John Snow was able to use his observations and gather hard data by knocking on people's doors in cholera-affected areas. He documented his findings and then correlated them on visual platforms such as the spot map (CDC, 2012; Celentano & Szklo, 2019; Wills, 2018). He could use his data and rigorous study design to write reports and communicate them to local authorities. Ultimately, he was able to direct public health action on water safety (CDC, 2012). Florence Nightingale also used statistics and data to document and report on unnecessary deaths within the military. She created graphs and other visual representations to demonstrate how simple sanitary interventions could save lives. She gained the support of politicians and other influential people and was able to bring about public health reforms (Andrews, 2022; Gershon, 2020).

Epidemiology: The Foundation of Scientific Decision-Making

Epidemiology is at the foundation of scientific decision-making in health care and public health. Recall that epidemiology is the scientific study of the distribution and determinants of diseases and health outcomes in populations. Epidemiology aims to develop methods of controlling health problems, limit the consequences of illness, and maximize health. It is a broad definition with major implications for scientific decision-making. Health care clients, professionals, and public health practitioners, including nurses, base their health care decision-making and health education on sound epidemiological studies. These studies form the basis for the education that health care professionals provide at all levels. For example, epidemiological studies have demonstrated an association between screening for certain diseases and overall decreased morbidity and mortality. Other epidemiological studies have shown that decreased saturated fat intake and increased exercise are associated with better cardiovascular health.

The U.S. Preventive Services Task Force

The U.S. Preventive Services Task Force (USPSTF (https://openstax.org/r/uspstf)) is an independent organization of national experts in disease prevention and evidence-based medicine. The goal of the USPSTF is to improve the nation's health by making evidence-based recommendations about clinical preventive services (USPSTF, n.d.). The evidence that the task force reviews for scientific decision-making comes from epidemiological studies that are rigorously reviewed by the task force members. The task force assigns a letter grade (A, B, C, or D) or an insufficient statement based on the strength of the evidence and the balance with the benefits and harms of the preventive service in question, focusing on the primary care setting and the services that are referred by the primary care provider. Each year the task force reports to Congress on evidence gaps in research on clinical preventive services

and recommends priority areas that should be further evaluated.

U.S. PREVENTIVE SERVICES TASK FORCE

Access multimedia content (http://openstax.org/books/population-health/pages/12-7-the-role-of-epidemiology-in-scientific-decision-making-and-policy-development)
This two-minute video provides an overview of the USPSTF, explaining its purpose and the benefits of its recommendations to primary care clinicians and their clients.

Watch the video, and then respond to the following questions.

1. How does the USPSTF make recommendations about ways to prevent disease?
2. In what ways does the work of USPSTF improve population health?

The Agency for Healthcare Research and Quality

The AHRQ (https://openstax.org/r/nhqrdr) is another organization that uses epidemiological studies as a foundation for clinical practice guidelines. AHRQ is an official government organization under the Department of Health and Human Services (HHS) with a mission to produce evidence to ensure health care quality; make health care safer, more accessible, equitable, and affordable; and work with the HHS and other governmental partners to ensure that clinical health care evidence is understood and used appropriately (AHRQ, 2023b). AHRQ provides a great example of the role of epidemiology in scientific decision-making through its evidence-based practice center (EPC) that produces reports providing comprehensive, science-based information on common, costly medical conditions and new health care technologies and strategies to combat them (AHRQ, 2023a). These EPC reports are used for informing and developing quality measures, coverage decisions, educational materials, clinical practice guidelines, and research agendas (AHRQ, 2023a).

The Framingham Heart Study

An example of epidemiology's role in scientific decision-making is the Framingham Heart Study (FHS). As mentioned, the FHS is the longest-running prospective cohort study in the United States and one of the largest; it has had over 15,000 participants over the past 70 plus years (Andersson et al., 2021; Soto, 2018). Founded in 1948, the FHS initially was designed to look for common characteristics contributing to cardiovascular disease (CVD) as one out of every two deaths was caused by CVD in the 1940s (Soto, 2018). The study's findings—that smoking, high cholesterol, hypertension, and obesity are all common characteristics contributing to CVD and stroke risk—seem common knowledge to many in the health care field now, but they were unexpected when the study was first envisioned (Soto, 2018). From the FHS, many public health campaigns were initiated. Some are targeted to health care professionals, such as the Framingham Heart Score, which was used to calculate the risk of developing heart disease over a 10-year period (subsequently replaced by the American Heart Association and the American College of Cardiology Atherosclerotic cardiovascular disease calculator), and many are targeted to the public, such as campaigns to increase exercise and encourage a lower-fat diet. This cohort study demonstrates the power of epidemiology in scientific and health care decision-making.

Epidemiology: The Basis for Policy Development

Public health policy is based on evidence, and evidence can be garnered through well-designed epidemiological studies. Undergirding the development of policies that positively affect health outcomes of populations is one of the key roles of epidemiology.

Findings from epidemiological studies affect population health through a primary and secondary prevention lens and as a way to control disease. As mentioned, epidemiology is defined as the scientific study of the distribution and determinants of diseases and health outcomes in populations to increase understanding of disease and disease determinants to improve health outcomes. These are the intentional and practical applications of the study of epidemiology. They are investigations originated to address current and evolving health challenges with direct applications to public health through formulating and evaluating public policy. Developing public policy is, in fact, considered integral to the practice of epidemiology. John Snow's examination of the cholera outbreaks in London is a classic example of this direct application for public policy. His removal of the handle from the Broad Street pump demonstrates the policy implications of his research findings. He was able to clearly document his findings, build

trusting relationships within the London community and with lawmakers, and effectively affect health policy.

A contemporary example of the role of epidemiology in policy development is the history of youth tobacco control in the United States, using epidemiology to drive change and create a positive difference in health outcomes. By the 1960s, smoking had been linked to poor health outcomes such as lung cancer and other respiratory diseases, and great strides throughout the 1970s through the 1980s resulted in a dramatic decrease in adult smoking habits but did not impact youth smoking rates (Aldrich et al., 2015). In 1994, to address this issue based on descriptive and analytic epidemiological studies, the Surgeon General's report recommended a paradigm shift in thinking about youth smoking. It shifted the focus from individuals, historically the target of youth smoking prevention programs, to populations and communities. This was accomplished through policy, and the American Stop Smoking Intervention Study for Cancer Prevention (ASSIST) exemplified this paradigm shift. The ASSIST program, with funding from the National Cancer Institute, many state health departments, and the American Cancer Society, changed economic, social, and cultural environmental factors in the states with participating health departments to discourage youth from smoking, motivated by epidemiologic evidence that secondhand smoke was dangerous (Aldrich et al., 2015). By reframing the issue as a societal concern over an individual problem, the community approach had a wider reach and could integrate tobacco-free norms into community institutions. ASSIST focused on four policy areas:

1. Elimination of tobacco smoke in public places
2. Decreased advertising and promotion of tobacco products
3. Decreased youth access to tobacco
4. Increased taxes on tobacco

By the time ASSIST ended in 1999, there were small but statistically significant reductions at the population level in smoking prevalence among adults compared with non-ASSIST states, and this decrease has continued. In 2021, 11.5 percent of adults (18 years and older) in the United States currently smoked cigarettes, a major decline from 20.9 percent of the population in 2005, a population health victory (CDC, 2023).

Intersection of Epidemiology and the 10 Essential Public Health Services

As introduced in Foundations of Public/Community Health, the 10 Essential Public Health Services (EPHS) are the public health activities necessary to ensure healthy communities. This framework was developed under the auspices of the CDC and the National Institutes of Health (NIH). Originally released in 1994, it was updated in 2020 to better align with contemporary community and public health practice. The goal of the EPHS is to achieve equity by promoting policies, systems, and community conditions that facilitate optimal health for everyone. This is accomplished by removing systemic and structural barriers that have resulted in health inequities (CDC, 2022a).

Epidemiology supports the 10 Essential Public Health Services in the following ways (CDC, 2022a):

Investigation and Monitoring

1. Assesses and monitors population health status (factors that influence health as well as community needs and assets) by
    - using vital statistics to track population changes in natality and mortality, and
    - using disease statistics to trend rates of communicable and noncommunicable diseases in the community.
2. Investigates, diagnoses, and addresses health problems and hazards affecting the population by
    - providing population health data to track diseases,
    - investigating unusual disease activity, and
    - launching epidemiologic investigations.

Policy Development

3. Communicates effectively to inform and educate people about health, factors that influence it, and how to improve it by
    - developing and distributing appropriate health information and resources,
    - using a variety of communication methods including social media, mass media, and peer networks,
    - developing and using culturally and linguistically appropriate information, and
    - engaging in two-way communication to build trust.

4. Strengthens, supports, and mobilizes communities and partnerships to improve health by
    - facilitating partnerships in the community that affect health,
    - building relationships with diverse groups within a community that reflect the population, and
    - supporting existing community partnerships with public health expertise.
5. Creates, champions, and implements policies, plans, and laws that impact health by
    - developing policies that improve public health and strengthen communities,
    - developing and implementing health improvement strategies,
    - providing input into policies and laws to ensure that health impact is reflected,
    - examining and improving existing policies and laws to correct past wrongs, and
    - ensuring that policies and laws are equitable for all to achieve health.
6. Uses legal and regulatory actions designed to improve and protect the public's health by
    - ensuring that laws are equitably implemented,
    - conducting enforcement of sanitation with food preparation, safe drinking water, and hazardous exposures,
    - monitoring the quality of health care–related services, and
    - licensing of the health care workforce.

Assurance

7. Ensures an effective system with equitable access to the individual services and care needed to be healthy by
    - connecting populations to needed services,
    - ensuring access to cost-effective and quality health and social services,
    - sharing data across partnerships to foster health and well-being, and
    - contributing to the development of a safe and competent health care workforce.
8. Builds and supports a diverse and skilled public health workforce by
    - providing education and training,
    - building partnerships with schools and training programs,
    - promoting a culture of learning in public health, and
    - incorporating public health principles in non–public health curricula.
9. Improves and innovates public health functions through ongoing evaluation, research, and continuous quality improvement by
    - linking public health research with practice,
    - using research to inform decision-making, and
    - contributing to the base of evidence in public health.
10. Builds and maintains a strong organizational infrastructure for public health by
    - ensuring that resources are allocated equitably,
    - exhibiting ethical and effective decision-making, and
    - being accountable and inclusive with all community partners.

CASE REFLECTION

Epidemiological Information and the 10 Essential Public Health Services

Read the scenario, and then respond to the questions that follow.

Pedro is a public health nurse who works for a city health department. One afternoon, he receives a call from Suri, a college student who will be spending a semester in Cambodia. Suri has heard that dengue is a health risk in tropical and subtropical climates. She would like more information from the health department as she prepares for her trip.

After reviewing the CDC website for the most up-to-date information on dengue, Pedro explains that it is an infectious disease transmitted by the bite of an infected Aedes mosquito. The mosquito becomes infected with dengue virus when it bites a person—or in some locations, a monkey—who has dengue. Suri interrupts to ask if she could catch dengue directly from an infected person since dengue is an infectious disease, and Pedro says no, dengue cannot be spread directly from person to person. Pedro explains that one in four people who are infected with dengue will become sick and that symptoms range from mild to severe, but severe dengue can be life-

threatening within a few hours. Suri tells Pedro that she'll be living in Phnom Penh and spending lots of time indoors, so she assumes living in a city will reduce her risk of infection. Pedro explains that dengue rates actually tend to be higher in urban areas with higher concentrations of people. Living in a high-risk area like Cambodia where the disease is endemic increases Suri's chances of infection. Pedro advises Suri to protect herself by wearing long-sleeved shirts and pants, using an approved insect repellent, sleeping under a mosquito net, and avoiding locations where mosquitoes tend to thrive, such as near standing water. He also directs her to the CDC website (https://openstax.org/r/dengue) for more information.

1. What causes dengue?
2. Utilizing the chain of infection, describe the process of infection with dengue.
3. How can Suri protect herself from mosquito bites while abroad?
4. What 10 Essential Public Health Services is Pedro utilizing when working with Suri?

This chapter has highlighted the important role epidemiology plays in public health, particularly in disease control and prevention. Epidemiology is the scientific underpinning of all public health efforts, from prevention of disease, illness, accidents, and injuries to early identification of chronic diseases via screening to management of disease outbreaks and complications from disease. The mission of public health is to ensure the conditions in which people can be healthy, and epidemiology provides the evidence for scientific decision-making and education efforts to fulfill that mission. Nurses must have a basic understanding of epidemiological principles to speak knowledgeably about the evidence underlying recommended public health interventions. Community and public health nurses fulfill the mission of public health by participating in the 10 Essential Public Health Services within the community and population in which they serve.

Chapter Summary

12.1 Epidemiology Defined

Epidemiology is the scientific study of the distribution and determinants of diseases and health outcomes to improve the health and safety of populations by establishing causal factors for health issues. Epidemiological objectives include identifying the cause of disease or factors that increase an individual's risk for disease, identifying how diseases are transmitted, determining the extent of disease in a community, evaluating preventive and therapeutic measures of health care delivery, and providing the foundation for developing public policy regarding disease prevention and health promotion. By identifying causes and risk factors of disease development, public health nurses can intervene early to reduce morbidity and mortality from the disease. Epidemiology provides the opportunity to develop an evidence-based foundation for prevention programs.

12.2 Historical Perspective

Epidemiology has been traced back to Greek physician Hippocrates circa 400 BCE. Since then, epidemiologists Edward Jenner, Ignaz Semmelweis, John Snow, and Florence Nightingale, among others, helped to shape epidemiology into the science and the action of public health. They used their observation skills and disseminated their findings widely to gain support from politicians and other government officials and to promote the health and well-being of the public.

12.3 Epidemiological Approaches

The epidemiologic triad describes disease as a result of the relationship among a susceptible host, an external agent, and an environment that brings the host and agent together. The chain of infection is an epidemiological model that depicts the complex, nuanced interplay between the host, agent, and environment and includes a reservoir, portal of exit, mode of transmission, agent, portal of entry, and host. The natural history of disease follows diseases through stages: susceptibility in a host, subclinical disease where disease carriers become a concern, and clinical disease in which overt symptoms are present. Understanding these epidemiological approaches enables nurses to direct the most appropriate public health intervention at any link in the chain of infection.

12.4 Types of Study Design

Descriptive epidemiology covers the time, place, and person of epidemiologic events and seeks to describe disease variables. Analytic epidemiology searches for the why and how of diseases or other public health issues by testing hypotheses about causal relationships. In experimental studies, the investigator determines the exposure for the participants. In observational studies, participants are exposed under natural conditions. Cohort studies, case-control studies, and cross-sectional studies are the most common types of observational studies used in epidemiological research.

12.5 Epidemiologic Measures

Ratios can be used as a descriptive measure or to calculate the occurrence of illness or death between two groups. Proportions are often used to describe the extent of disease attributable to a particular exposure. A rate measures the frequency of an event's occurrence in a specified population over a defined period. Epidemiologists use rates to describe incidence, prevalence, case-fatality, and attack rates. Measures of morbidity characterize how many individuals in a population become or are ill at a specified time. Mortality rate measures the frequency of death in a defined population during a specific interval. Measures of association assess the degree to which the risk of disease increases when exposed to an agent, thereby demonstrating the strength of a causal relationship.

12.6 Communicating Inferences from Epidemiologic Data

Research translation applies scientific research and evidence to a practical setting. Population and public health nurses can translate epidemiological research into a tool to help prevent or address health events and diseases. Dissemination is the distribution of information to a particular audience to spread knowledge about a disease and its associated interventions.

12.7 The Role of Epidemiology in Scientific Decision-Making and Policy Development

Epidemiologic research can help identify problems in a community or population, assist in discovering the etiology of a problem or risk factors for its development, and guide nurses and other public health professionals toward evidence-based interventions and recommendations to address the issue. When rigorously conducted, reported, and communicated, epidemiological studies can result in major health policy changes. Findings from epidemiological studies affect population health from a primary and secondary

prevention lens and as a way to control disease.

Key Terms

agent something physical, chemical, nutritional, psychosocial, or biologic that can cause a health issue; must be present for a disease to occur

airborne transmission occurs when infectious agents are capable of remaining suspended in air over long distances and long periods of time, in contrast to droplets that fall to the ground within a few feet

alpha the *p* value or the significance level for the results of a study to be deemed statistically significant

analytic epidemiology the study of the causes and effects of diseases or other health events, looking for the *why* and the *how,* attempting to quantify a relationship between two variables

attack rate the proportion of a population that develops an illness during an outbreak (synonym of *incidence proportion*)

attributable risk (AR) a measurement of the amount of disease among exposed individuals that is attributed to the exposure

bias a systematic error that underestimates or overestimates the value of a parameter; a source of error in a study's outcome arising in the design or conduct of the study, data collection, or data analysis

carriers individuals with incubating disease or preclinical infection but without overt symptoms who are still capable of transmitting disease

case-control study a study design in which investigators enroll a group of individuals with a disease and a group of individuals without the disease and compare previous exposures between the groups

case-fatality rate the proportion of individuals with a disease who die from it

causality the relationship between cause and effect

chain of infection an epidemiological model that allows for a complex and nuanced interplay between the host, agent, and environment of the epidemiological triad

chance a random error in a study

clinical disease stage stage within the natural history of disease during which signs of the disease develop and diagnosis may occur

cohort study a study in which the investigator documents whether or not study participants were exposed to what is being studied

confidence intervals the relative risk (or other risk measure) found in the study and an interval within which the risk would most likely fall if the study were repeated multiple times

confounding a type of error that may result in an incorrect causation or conclusion

cross-sectional study a study in which a sample of individuals from a specified population is enrolled and the exposure and disease outcome are measured simultaneously for each participant; provides a snapshot of any specified population at a given point in time

death-to-case ratio the number of deaths attributed to a disease during a specific period of time divided by the number of new cases of that disease during the same period

descriptive epidemiology the frequency and pattern of health events within a population according to the characteristics of person, place, and time

direct transmission transmission of an infectious agent from a reservoir to a host by direct contact or droplet spread of infected material

droplet spread infected material transmitted by direct spray of relatively large, short-range aerosols of the pathogen over a few feet prior to the droplets falling to the ground

endemic the continual and constant presence of a disease within a given geographic area

environmental factors in the epidemiologic triad, the biologic environment of plants, animals, and toxins, including vectors that carry infectious agents and the reservoirs where infectious agents are normally found

epidemic when the level of disease in a defined area rises above endemic levels

epidemiological triad a model of disease causation; classically describes disease as a result of the relationship between a susceptible host, an external agent, and an environment bringing the host and agent together

epidemiology scientific study of the distribution and determinants of diseases and health outcomes in populations

experimental studies in epidemiology, studies in which the investigator controls or changes the factors thought to cause a health event and then observes what happens to the health state

health events disease, injury, or death

host an individual, a family, a group of high-risk individuals, or a community within the context of the epidemiological triad

hyperendemic persistent high levels of disease in a defined area

incidence proportion the proportion of a population that develops an illness during an outbreak (synonym of attack rate)
incidence rate during a given time period, all new cases of a disease or health condition divided by the population at risk
indirect transmission transmission that occurs when an infectious agent is transmitted from a reservoir to a host by suspended air particles, inanimate objects also known as vehicles, or vector intermediaries
morbidity having a disease, illness, or medical condition; includes disease, injury, and disability
mortality rate the frequency of death in a defined population during a specific time interval
natural history of disease events that occur before development of a disease, during the course of the disease, and at the conclusion of the disease
observational studies epidemiological studies based on investigator observations of exposure and disease status
odds ratio (OR) odds a case was exposed divided by the odds a control was exposed; quantitatively expresses the association between an exposure and a disease or health outcome; most often used to estimate the relative risk in case-control studies when the disease being investigated is rare
outbreak an epidemic affecting a limited geographic area
***p* value** the probability that an observed association could be the result of random error
pathogenicity the ability of an agent to cause disease, influencing disease onset
portal of entry how an agent infects a susceptible host
portal of exit how an agent leaves its home base in the chain of causation/infection
prevalence rate proportion of a population that has a health condition at a certain point in time or over a time interval
proportion a form of a ratio in which the numerator represents a subset of the denominator
rate ratio compares the incidence rates or mortality rates of two groups
ratio a comparison of any two values, calculated by dividing one interval by the other
relative risk (RR) the ratio of the incidence proportion of the health event in exposed individuals (or the group of primary interest) to the incidence proportion in unexposed individuals (or the comparison group); compares the risk of a health event among one group with the risk among another group; see also risk ratio
reservoir where the causal agent normally lives and reproduces in the chain of causation
risk ratio synonym of *relative risk*
sample size the number of participants in a study
sporadic diseases that occur at irregular intervals
spot map a type of epidemiological map that shows the geographic distribution of cases of illness or disease by marking each case with a dot on a map
statistical significance an assessment for random error in a study
subclinical disease stage the natural history of disease stage after exposure but prior to clinical disease in which individuals have pathologic change but no overt symptoms
susceptibility stage the initial interactions between the agent, host, and environment during the pre-pathogenesis period, during which time primary prevention measures could be implemented to prevent disease onset

Review Questions

1. Which of the following activities best defines epidemiology?
   a. Prescribing prophylactic antibiotics for an individual suspected of having been exposed to anthrax
   b. Teaching a community class to those newly diagnosed with diabetes
   c. Recommending that a restaurant temporarily close for deep cleaning after implicating it as the source of a norovirus outbreak
   d. Encouraging families in the community to eat dinner together every night

2. Which factors make up the epidemiological triad?
   a. Agent, host, environment
   b. Person, place, time
   c. Source, mode of transmission, host
   d. Portal of entry, agent, portal of exit

3. The school nurse is developing a plan to reduce direct transmission of disease. Which mode of transmission will be included in this plan?

a. Droplet spread
b. Foodborne
c. Mosquito borne
d. Surface spread

4. Which description of disease activity in a single area corresponds to endemic levels of disease?
a. There are usually 20–30 cases each week, and this past week there were 29 cases.
b. There are usually fewer than 20 cases per year, and this past week there were 2 cases.
c. There are usually up to 10 cases per week, and this past week there were 40 cases.
d. There are usually 100,000 cases worldwide each month, and this past month there were 10 million cases worldwide.

5. What type of study is the public health nurse using to collect exposure and lifestyle information to assess the relationship between these factors and consequent occurrence of disease?
a. Experimental
b. Cross-sectional
c. Cohort
d. Case-control

6. What is the hallmark feature of an analytic study in epidemiology?
a. Use of an appropriate comparison group
b. Randomization in recruiting study participants
c. Confirmation of diagnosis via lab testing
d. Testing a hypothesis

7. What type of study randomly assigns an individual to receive the currently available formulation of a blood pressure medication or the newly formulated slow-release formulation of the blood pressure medication?
a. Experimental
b. Observational
c. Case-control
d. Cohort

8. Which action highlights Florence Nightingale's role as an epidemiologist?
a. Dressing soldiers' infected wounds
b. Connecting poor sanitation with negative health outcomes
c. Developing training schools for nurses and midwives
d. Changing linens and frequently bathing clients

9. In which stage of disease progression would the nurse classify a client who has elevated blood pressure but no symptoms?
a. Susceptibility stage
b. Subclinical stage
c. Clinical stage
d. Carrier stage

10. The public health nurse is studying the proportion of the population in a certain county that had pneumonia during the winter months. Which epidemiological measure will the nurse use?
a. Attack rate
b. Incidence rate
c. Prevalence rate
d. Risk ratio

CHAPTER 13

Pandemics and Infectious Disease Outbreaks



FIGURE 13.1 Public health nurses prepare stretchers during the 1918 flu pandemic. (credit: modification of work "St. Louis Red Cross Motor Corps on duty Oct. 1918 Influenza epidemic" by American Red Cross/Library of Congress, No Known Restrictions)

CHAPTER OUTLINE

13.1 Pandemics Throughout History

13.2 Types of Infectious Disease Outbreaks

13.3 Infectious Disease Prevention and Control

INTRODUCTION Sally, a newly hired public health nurse with the board of health department, receives a call from a local pediatrician, Dr. Liu, who reports that in one day she has seen eight children with fever, abdominal cramping, vomiting, and diarrhea. While normally these symptoms would not cause much concern, seeing this many cases in one day is unusual. Dr. Liu mentions that each child has been swimming at the town pool, and Sally and Dr. Liu discuss the testing Dr. Liu has ordered for her clients.

Public health nurses like Sally play a critical role in managing infectious disease outbreaks, including pandemics like COVID-19. This chapter discusses pandemics throughout history that have served as a catalyst for public health disease surveillance and interventions. It describes the types of infectious disease outbreaks, highlighting common communicable diseases nurses encounter. Finally, the chapter examines infectious disease control and prevention, the steps in an outbreak investigation, public health surveillance, and vaccine-preventable diseases, highlighting the role of the nurse.

13.1 Pandemics Throughout History

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 13.1.1 Differentiate between pandemics, endemics, and epidemics.
- 13.1.2 Compare the major pandemics afflicting humanity over the past two centuries.
- 13.1.3 Discuss how the 1918 pandemic changed history.

Recall from Epidemiology for Informing Population/Community Health Decisions that endemic disease occurs when an infection or disease becomes common in a population or area. Examples include the annual flu strains, influenza A and B. An epidemic is a notable increase in infection that surpasses the criteria for an endemic level within a defined population or area. These terms can also refer to a new infectious agent that emerges or reemerges. A **pandemic** is an epidemic that spreads worldwide (Centers for Disease Control and Prevention [CDC], 2012). Pandemics have been recorded throughout history. One of the earliest occurred during the Peloponnesian War in 430 BCE as a disease, most likely typhoid fever, passed through Libya, Ethiopia, and Egypt and into Athens, killing as much as two-thirds of the population. The pandemic weakened the Athenians, contributing to their defeat by the Spartans (Onion et al., 2021). Throughout time, pandemics have shaped the course of history and society. The COVID-19 pandemic is the most recent example. This section discusses major pandemics throughout history, beginning with the bubonic plague and then focusing on the 20th- and 21st-century infectious pandemics that have shaped public health and policy.

The Plague

The plague, also called the bubonic plague and the Black Death, has caused a few distinct pandemics. The first recorded outbreak of plague, the Plague of Justinian (541–542), claimed the lives of half of Europe's population (Piret & Boivin, 2020). Beginning in Egypt, it spread throughout the Roman Empire, killing an estimated 100 million people as it rapidly moved along trade and military routes. After this initial outbreak, the plague returned intermittently (Piret & Boivin, 2020).

Likely originating in East Asia, the Black Death pandemic spread through Central Asia and Europe via trade routes. In 1347, 12 ships from the Black Sea docked at a Sicilian port, with most of the sailors dead or ill, covered in boils oozing blood and pus. The authorities ordered the removal from port of these "death ships," but it was too late. By this time in Europe, the Black Death had claimed an estimated 200 million lives (Frith, 2012; Piret & Boivin, 2020). In 1347, as the pandemic ravaged Europe, Africa, and Asia, officials in Ragusa, Italy, slowed its spread by isolating arriving boats and sailors for an initial 30, and later 40 days, or *quaranta,* the origin of quarantine (Frith, 2012; Hajar, 2012). By the 1350s, the plague had dissipated but continued to reappear intermittently.

- Successive waves of the plague from 1630 to 1722 affected France, Italy, the Netherlands, and England.
- Throughout the 1800s, outbreaks continued in Asia.
- In 1865, an outbreak began in Southern China and spread south and west. In 1893, the plague reached colonial India, where public health measures slowed its spread. Approximately 12 million people died during this pandemic (Frith, 2012; Piret & Boivin, 2020).

The plague is spread by a flea-borne bacteria, *Yersinia pestis*, that is associated with rodents. Fleas ingest an infected rodent's blood and then transmit the bacteria to new rodent hosts. The plague has three presentations: bubonic, septicemic, and pneumonic. The most common bubonic form begins with flu-like symptoms followed by extreme lymph node swelling and oozing (plague-boils). Untreated, bubonic plague is often fatal. The plague can also present with a blood infection or progress from bubonic to a blood infection, classified as septicemia, with a high fatality rate if untreated. The extremely contagious, rapidly fatal pneumonic plague occurs when infection spreads to the lungs and is spread via droplet contact from person to person. The cause of the plague was unknown until 1897 when, during the plague pandemic in India, it was discovered to be caused by a bacterium (Frith, 2012).

Over the 19th and 20th centuries, sanitation and public health practices alleviated the plague's high mortality rate and economic devastation, but they did not eradicate it completely. According to the CDC, most U.S. human plague cases occur in northern New Mexico, northern Arizona, southern Colorado, southern Oregon, and western Nevada. More than 80 percent of cases of plague are bubonic (CDC, 2022aa). From 2015 to 2020, 36 cases were documented in the United States, with six recorded deaths. Plague epidemics continue globally today; most cases

since 1990 have been in Africa among individuals living in small towns, villages, or agricultural areas (CDC, 2022aa). Many public health measures used during the COVID-19 pandemic, such as medical inspections, isolation of sick individuals, ship restrictions and quarantines, or the control of the movement of individuals and materials, originated during the Black Death (Frith, 2012; Piret & Boivin, 2020).

Influenza Pandemic of 1918

The avian vector-borne influenza pandemic of 1918, also called the Spanish Flu, was one of the most severe pandemics in recent history. Caused by the influenza A H1N1 virus, it spread globally in 1918–1919, coinciding with World War I (WWI) (CDC, 2019a). The overcrowding and global troop movements associated with WWI likely facilitated its global transmission. A main characteristic of this influenza virus was that it resulted in a high mortality in healthy people aged 20–40 (CDC, 2019a; Klein, 2020). Lack of a vaccine and treatment and the susceptibility of young, healthy adults created a public health crisis, resulting in almost 700,000 deaths in the United States and at least 50 million deaths globally (CDC, 2018a; CDC, 2019a). This flu lowered the average life expectancy in the United States by more than 12 years (Klein, 2020).

1918 FLU PANDEMIC

Access multimedia content (http://openstax.org/books/population-health/pages/13-1-pandemics-throughout-history)

This video describes this pandemic and how it changed history. As you watch this video, keep in mind it was produced before the COVID-19 pandemic.

Watch the video, and then respond to the following questions.

1. How was the 1918 flu pandemic similar to the COVID-19 pandemic?
2. Do you feel public health preparedness has evolved enough over the past 100 years? Explain your reasoning.
3. How well do you feel the CDC was prepared for the COVID-19 pandemic?

The response to the 1918 flu pandemic was fragmented. No pharmacologic treatments or vaccines existed, and the United States lacked a government agency dedicated to disease control and prevention. In the fall of 1918, the number of professional nurses deployed to military camps throughout the United States and abroad to aid in the war effort resulted in a significant nursing shortage, further exacerbated by the failure to use trained Black nurses (CDC, 2018a). The American Red Cross issued urgent requests for volunteers to assist in nursing the sick. In Philadelphia, where the pandemic hit hard, hundreds of corpses awaited burial in cold-storage plants that served as temporary morgues (CDC, 2018a). Many cities closed theaters, movie houses, and night schools and prohibited public gatherings. By the end of 1918, public health officials began educating the public about the danger of coughing, sneezing, and carelessly disposing of nasal discharge (CDC, 2018a). The American Public Health Association encouraged businesses to stagger their hours to prevent public transportation overcrowding (CDC, 2018a). Cities like San Francisco implemented mask mandates, physical distancing, isolation, quarantine, disinfection, and hygiene measures. The implementation of these measures and reporting of actual disease numbers were inconsistent (CDC, 2018a; CDC, 2019a). Although the military created field hospitals dedicated to soldiers infected with influenza to isolate them from healthy soldiers, more soldiers died from the flu than in combat (Figure 13.2) (National Archives and Records Administration, n.d.; CDC, 2019a). Finally, by the summer of 1919, the flu faded as immunity developed (CDC, 2019a).



FIGURE 13.2 During the 1918 flu pandemic, some clients were isolated in outdoor sick wards. (credit: "Influenza ward, Walter Reed Hospital, Wash., D.C. [Nurse taking patient's pulse]" by Harris & Ewing/Library of Congress, No Known Restrictions)

Pandemic Viruses of 1957, 1968, and 2009

In 1957, 1968, and 2009 , new strains of the flu virus to which people lacked immunity caused flu pandemics (CDC, 2019a; Jordan et al., 2019; see Table 13.1). Following the 1918 pandemic, public health policies and practices continued to improve with each subsequent pandemic due to surveillance and education, sanitation, and isolation strategies (Matta et al., 2020).

Name	Virus	Most at Risk	Estimated Deaths	Public Health Significance
Pandemic of 1957 *Asian Flu* Duration: 1957–1959	H2N2 Avian influenza A	Those with underlying heart or lung disease	• 1 to 2 million global deaths • 116,000 in the United States	• Disease surveillance measures rapidly recognized H2N2 as a new influenza virus • Rapid vaccine development saved many lives
Pandemic of 1968 *Hong Kong Flu* Duration: 1968–1972	H3N2 Avian influenza A	Individuals > age 65 experience more severe illness, death	• 1 million global deaths • 100,000 in the United States	• Vaccine was developed in 1970 • Virus continues to circulate as seasonal influenza A virus
Pandemic of 2009 *Swine Flu* Duration: 1968–1970	H1N1 Influenza A similar to 1918 strain but with new genes	Children, young- to middle-age adults (< 65)	• 151,700–575,400 global deaths • 12,469 in the United States	• Older adults had some immunity due to previous H1N1 infection • This pandemic had less global impact • Virus still circulates seasonally in the United States and has caused illness, hospitalization, and death

TABLE 13.1 Comparison of the Flu Pandemics of 1957, 1968, and 2009 (See CDC, 2019a, 2019b, 2019c, 2019d, 2019e; Jester et al., 2020; Jordan et al., 2019; Little, 2020; Piret & Boivin, 2020.)

HIV Pandemic

In June 1981, the CDC went on alert when five healthy young men in California developed Pneumocystis carinii pneumonia (PCP), a rare and often deadly disease. Health officials next recognized an unusual increase in Kaposi's sarcoma (KS) cases among gay men in New York. Outbreaks of these rare diseases were alarming, especially since they occured within the same population (CDC, 2021a). The media and health care professionals used the term *gay-related immune deficiency* (GRID) to describe the new virus, resulting in severe stigmatization of the gay community (Ayala & Spieldenner, 2021). In late 1981, cases appeared in heterosexual intravenous (IV) drug users and, shortly thereafter, in individuals with hemophilia. In response, the CDC issued guidelines on the care of individuals with HIV, including wearing gloves when exposed to blood and other specific bodily fluids (CDC, 2021a). At the start of the pandemic, the median survival time for a person with AIDS was one to two years (Eisinger & Fauci, 2018). The identification in 1983 of a retrovirus that causes HIV led to the first HIV test in 1985 (Beyrer, 2021).

While the pandemic officially began in 1981, the infection is believed to have developed in the late 1800s from a chimpanzee virus in Central Africa that spread slowly, reaching the United States in the mid-to-late 1970s (CDC, 2022a). At that time, sporadic cases in the United States were not known to be caused by HIV (CDC, 2022a). In the 21st century, AIDS has become one of the largest public health challenges, killing more than 39 million people worldwide, including 500,000 in the United States (CDC, 2021a). Today, an estimated 1.2 million people in the United States (CDC, 2023a) and an estimated 39 million people globally, the majority in sub-Saharan Africa, live with HIV or AIDS (UNAIDS, n.d.). The United Nations (2022) reports that the "AIDS pandemic continues to be responsible for more than 13,000 deaths each week" (paragraph 1). Although the number of new HIV infections in the Sub-Saharan Africa has declined, and despite better treatment options and decreased U.S. mortality rates, HIV and AIDS is still a global pandemic (Eisinger & Fauci, 2018). HIV infections continue to expand in parts of eastern Europe, central Asia, the Middle East, and North Africa (Beyrer, 2021). While HIV can be managed with antiretroviral drug therapy, no current vaccine or cure for AIDS exists (CDC, 2021a).

HIV SURVIVORS REFLECT ON THE AIDS EPIDEMIC

Access multimedia content (http://openstax.org/books/population-health/pages/13-1-pandemics-throughout-history)

This ABC News video discusses the beginning of the AIDS epidemic, when this new disease created fear within the health care workforce and among many Americans. The video shows how fear and stigma around the illness prevailed for years.

Watch the video, and then respond to the following questions.

1. What parallels do you see between the AIDS epidemic and the COVID-19 pandemic?
2. After listening to the survivor's stories, what inequities in care can you identify that these individuals face?
3. Do you feel these inequities still exist today? Why or why not?

COVID-19 Pandemic

In December 2019, a cluster of individuals in Wuhan, China, began experiencing symptoms of an atypical pneumonia-like illness that was unresponsive to standard treatments. In January 2020, the WHO announced that these outbreaks were caused by the 2019 Novel Coronavirus, or 2019-nCoV (CDC, 2022e). The organization officially named the disease *COVID-19* and declared the outbreak a pandemic in March 2020, after it had affected over 100 countries and caused over 4,000 deaths. By August 2020, COVID-19 had become the third leading cause of death in the United States. More than 1,000 people died each day, with the number of confirmed cases surpassing 5.4 million. In a 10-month period, the reported mortality from COVID-19 exceeded 1 million globally (Figure 13.3) (CDC, 2022e).

Developing a vaccine to prevent COVID-19 became a global imperative. Approximately one year after the initial outbreak, in December 2020, the U.S. Food and Drug Administration (FDA) issued an Emergency Use Authorization for two different COVID-19 vaccines for people age 16 years and older.

Like other pandemics throughout history, COVID-19 helped shape the public health system and the government response to public health threats. Pandemic responses have led to advances like sanitation, isolation, quarantine,

and vaccine development and have taught public health workers lessons about the importance of early response and mitigation efforts to decrease morbidity and mortality. The HIV and AIDS pandemic shaped domestic public health policy by challenging the stigmatization of groups of individuals, protecting human rights, and ensuring scientific evidence guides the actions of public health with the dissemination of correct information on modes of transmission, prevention, and potential treatments (Somse & Eba, 2020).

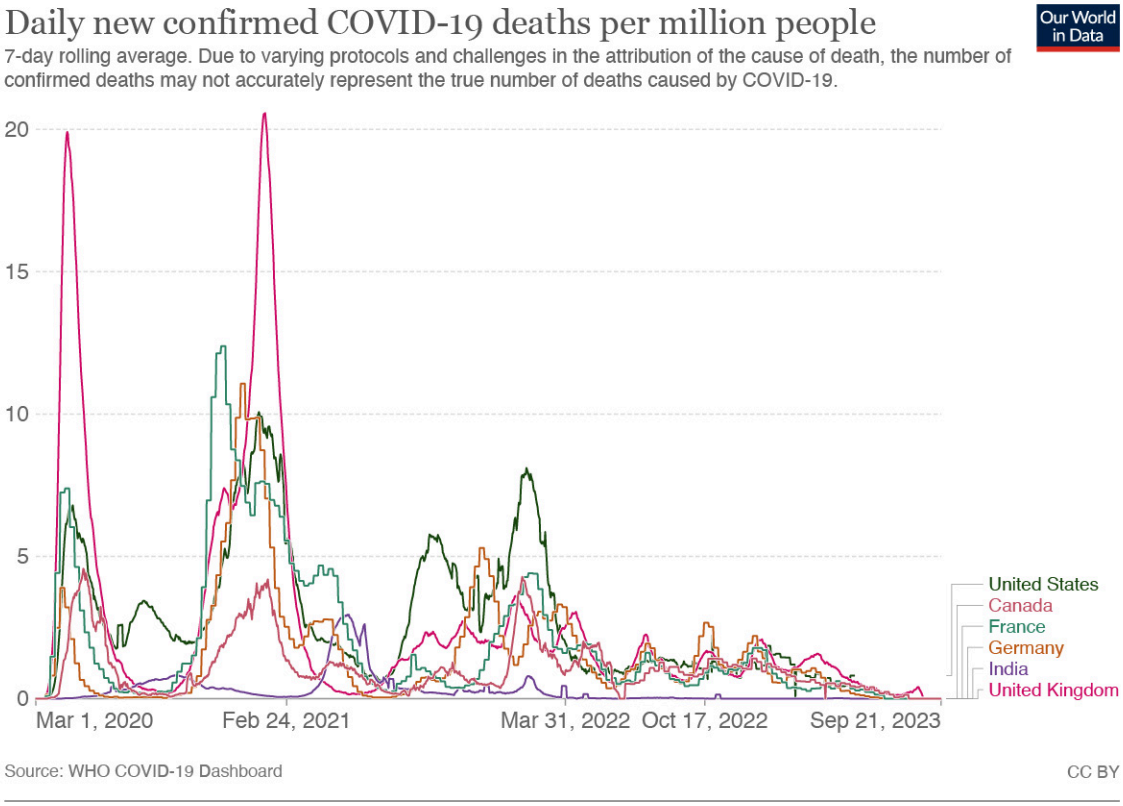


FIGURE 13.3 This chart presents COVID-19 deaths per million people from March 2020 through April 2023. (data source: World Health Organization, COVID-19 Dashboard; credit: "Daily new confirmed COVID-19 deaths per million people" by Our World in Data, CC BY 4.0 International)

13.2 Types of Infectious Disease Outbreaks

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 13.2.1 Define the term infectious disease.
- 13.2.2 Explain how infectious agents are transmitted.
- 13.2.3 Describe the types of infectious disease outbreaks.
- 13.2.4 Discuss the impact of vaccines on infectious disease control and prevention.
- 13.2.5 Explain the nurse's role in infectious disease control and prevention.
- 13.2.6 Identify emerging infectious diseases and potential bioterrorism agents.

Diseases are **infectious** if they are easily transmitted between individuals. To understand how outbreaks of infectious diseases occur, community and public health nurses should understand disease communicability and transmissibility. Health promotion and disease prevention efforts are geared toward breaking the chain of transmission. To break this chain, nurses must implement appropriate public health measures based on the transmission mode and educate communities effectively on how to protect and prevent disease transmission. Public health nurses, like Sally, play a role in disease surveillance.

The Epidemiology (Communicability) of Infectious Diseases

Infectious diseases are caused by pathogenic microorganisms—agents such as bacteria, viruses, parasites, or fungi—that enter a human host, multiply, and cause infection that can spread via direct or indirect transmission

(CDC, 2022ap). Epidemiology for Informing Population/Community Health Decisions introduced the epidemiological triad and the chain of infection; both are central in the transmission of infectious disease. The epidemiological triad includes the host, agent, and environment and describes the *who, what*, and *where* of the infectious process. The chain of infection builds on this triad; a disease is considered communicable or contagious (capable of spreading from one person to another) if the infected host has a portal of exit, a means of transmission, and a portal of entry into another susceptible host. Some infectious diseases can be spread by germs in the air, food, water, or soil and by vectors or by animals to humans. While these diseases are still considered infectious, as they are caused by bacteria, viruses, parasites, or fungi, they are not considered communicable from person to person.

The agent's **pathogenicity** (the potential ability to cause disease in a susceptible host) depends on the agent's infectivity and its ability to invade the host, destroy host body cells, and produce toxins that result in the virulence, or severity, of the infectious disease.

The susceptibility of a host is a key component in the epidemiological triad and chain of infection. Susceptibility depends on many factors, such as age, sex, physical health, and immune status. Portals of entry and exit can include the skin, conjunctiva, respiratory tract, GI tract, genital tract, and vertical transmission during the birthing process. The environment is a component common to both the epidemiologic triad and the chain of infection. It refers to reservoirs of infectious agents, which may be humans, animals, plants, insects, water, and soil. The environment and any environmental changes can have a significant impact on the transmission of waterborne, foodborne, and vector-borne agents. Transmission of infectious agents includes airborne, direct contact, indirect contact, and droplet transmission. If an environment is favorable for the survival of an infectious agent and there is an opportunity for the host to be exposed to the agent, infection and disease will ensue (The Alliance for Child Protection in Humanitarian Action, 2018).

Common Communicable Diseases

As the COVID-19 pandemic showed, communicable diseases are a major global health and security threat, negatively impacting social and economic development (WHO, 2023b). Older communicable diseases such as tuberculosis (TB) remain global public health threats. Public health nursing is founded on the practice of promoting health, preventing disease and disability, and protecting the health of populations (Association of Public Health Nurses, 2022). Public health nurses require knowledge of communicable diseases and basic epidemiological principles to promote the health of individuals and communities by implementing measures to prevent and control the spread of communicable diseases.

Influenza

Influenza viruses cause influenza (flu) A and B, which result in a respiratory infection affecting the nose, throat, and lungs, causing mild to severe illness and sometimes death. Influenza viruses are categorized as follows:

- Influenza A viruses cause the most severe and widespread disease, undergoing minor mutations (**antigenic drift**) each year and periodically undergoing a major mutation (**antigenic shift**), which results in a flu pandemic.
- Influenza B virus often causes milder disease outbreaks, mutating gradually via antigenic drift but not undergoing antigenic shift.

Flu often occurs in the winter months but may be found year-round with testing. Each year, approximately 8 percent of the U.S. population becomes ill from flu viruses, with children twice as likely as adults over the age of 65 to develop symptomatic flu illness (CDC, 2022x). The seasonal incidence of flu changes based on the severity of the flu season. Seasonal flu is very different from pandemic flu. Seasonal flu viruses often undergo antigenic drift, necessitating an annual flu vaccine that is updated yearly to reflect current circulating influenza strains. In contrast, a major mutation resulting in a new influenza strain (antigenic shift), such as those that have occurred four times in the last 100 years, is often responsible for pandemic flu (CDC, 2022t). Hosts are more susceptible to these new disease strains as they often have little to no immunity against them (CDC, 2022t).

Flu is easily transmitted by droplets of infected material. When infected individuals talk, sneeze, or cough, infectious droplets can land in the mouths or noses of individuals nearby, spreading the disease. The flu can also be spread through indirect contact transmission (CDC, 2022x). Infected individuals are most contagious during the first three to four days of illness, but some are contagious beginning one day prior to symptom onset and up to seven days

after becoming ill. Anyone can get the flu, and serious problems may occur at any age. Older adults, children under five, pregnant persons, and individuals with chronic conditions such as asthma, diabetes, and heart disease are at higher risk for developing flu-related complications. Flu symptoms include fever, chills, cough, sore throat, nasal congestion, body aches, headaches, fatigue, and sometimes vomiting and diarrhea (CDC, 2022x).

Pneumonia

Pneumonia is a lung infection that causes mild to severe illness in individuals of all ages. Risk factors are age (older than 65, younger than five years), co-occurring chronic medical conditions, and cigarette smoking. Viruses, bacteria, and fungi are agents that can cause pneumonia. In the United States, the most common causes of pneumonia include:

- Viral: Influenza, respiratory syncytial virus (RSV), and SARS-CoV-2
- Bacterial: *Streptococcus pneumoniae* (pneumococcus), *Mycoplasma pneumoniae*, and *Chlamydophila pneumoniae*
- Fungal: Coccidioidomycosis found in Southern California and the Southwest deserts, histoplasmosis mostly found in the Ohio and Mississippi River Valleys, and cryptococcus found in soil contaminated with bird droppings (American Lung Association [ALA], 2022)

Some types of pneumonia are contagious, spreading via droplet transmission similar to the flu. Individuals may also spread pneumonia through indirect contact transmission, and not everyone exposed to pneumonia will develop active disease (ALA, 2022). In 2021, over 40,000 individuals died from pneumonia in the United States. Many of these deaths could have been prevented or avoided with vaccines and appropriate treatments (CDC, 2022ab). Current vaccine options for bacteria and viruses that can cause pneumonia include COVID-19, Haemophilus influenzae type b (Hib), influenza, measles, pertussis, pneumococcal (PCV), and varicella. PCV protects against 13 or 15 (PCV-13 vs. PCV-15) of the most common serotypes and is a part of the routine infant vaccination schedule, while the 23-valent pneumococcal polysaccharide vaccine (PPSV23) is available for individuals in high-risk groups.

Pneumonia symptoms vary greatly but may include fever, chills, a productive cough, shortness of breath, rapid or shallow breathing, sharp or stabbing chest pain, chest pain worsening with deep breathing or coughing, loss of appetite, fatigue, nausea and vomiting, and confusion (ALA, 2022). In 2019, pneumonia killed 2.49 million individuals globally, one-third of whom were children under age 5 making it a leading cause of death in this population (Dadonaite & Roser, 2019). Within the United States, community-acquired pneumonia is a leading cause of hospitalization and results in significant mortality (Regunath & Oba, 2022).

Hepatitis

Hepatitis is inflammation of the liver and may result from a viral infection. In the United States, its most common viral forms are hepatitis A, B, and C (Table 13.2). Viral hepatitis infections affect millions of people globally, with hepatitis B and C resulting in chronic infections and liver cancer, disproportionately affecting lower-income countries. However, progress in treatment is being made globally. Hepatitis C is curable with a three-month course of medication taken once a day, and medications are available to slow the progression of hepatitis B and prevent liver damage (CDC, 2021e). Both hepatitis A and B can be prevented with safe, effective vaccines.

	Hepatitis A (HAV)	Hepatitis B (HBV)	Hepatitis C (HCV)
U.S. incidence in 2020	~ 19,900 estimated infections	• ~ 14,000 new infections disproportionately affect individuals of Asian Pacific Islander descent; an estimated 880,000 cases of chronic HBV infection in adults, a leading cause of liver cancer. • Most infants and 33% of children under age 6 with HBV will have lifelong chronic infection; children over 6 and adults usually recover completely.	• ~ 67,000 new infections and an estimated 2.2 million adults with chronic HCV infection, a leading cause of liver cancer occured. • Rates of HCV-related deaths were highest in BIPOC individuals.
Transmission	• Ingesting the virus through contaminated food (fecal-oral route) or through person-to-person contact. • Hepatitis A outbreaks are rare in the United States but common in many countries, especially those without adequate sanitation and water.	• Direct contact with infected blood, semen, other bodily fluids, or open sores, such as through the birthing process, sexual intercourse, sharing contaminated equipment (needles, syringes, toothbrushes, razors), and through poor infection control in health care facilities. • HBV is not spread through kissing, sharing utensils, sneezing, coughing, or breastfeeding or through food or water (CDC, 2023p).	• Direct contact with infected blood such as through sexual contact, the birthing process, sharing contaminated equipment (needles, syringes), getting a tattoo or body piercing with contaminated instruments, or via poor infection control in health care facilities. • Transmission could also occur through a blood transfusion or organ transplant prior to 1992.

TABLE 13.2 Comparison of Hepatitis A, B, and C in the United States in 2020 (See CDC, 2020f; CDC, 2022n; CDC, 2023e; CDC, 2023f; CDC, 2023p.)

	Hepatitis A (HAV)	Hepatitis B (HBV)	Hepatitis C (HCV)
Illness	• Mild to moderate illness, lasting several weeks to several months. • Most individuals recover without permanent damage, and death rarely occurs.	• Acute infection occurs within the first 6 months of exposure. • Acute infection may be asymptomatic or result in mild to moderate disease, rarely causing severe disease. Up to two-thirds of all asymptomatic individuals may not know they are infected (CDC, 2023p). • Symptoms include fever, fatigue, appetite loss, nausea, vomiting, abdominal pain, arthralgias, and jaundice. • Acute infection can lead to chronic infection that could result in serious health issues of liver damage, cirrhosis, and liver cancer.	• Acute infection may last a few weeks or become a serious chronic condition. Usually asymptomatic or mild symptoms such as fever, fatigue, nausea, vomiting, abdominal pain, or arthralgia. • Chronic disease develops in approximately half of adults yet usually remains asymptomatic or presents with nonspecific symptoms such as chronic fatigue and depression. 5–25% progress to cirrhosis over a 10 to 20-year period.

TABLE 13.2 Comparison of Hepatitis A, B, and C in the United States in 2020 (See CDC, 2020f; CDC, 2022n; CDC, 2023e; CDC, 2023f; CDC, 2023p.)

	Hepatitis A (HAV)	Hepatitis B (HBV)	Hepatitis C (HCV)
Prevention	A highly effective vaccine is typically incorporated into the routine childhood vaccination schedule.	Hepatitis B vaccination is a part of the routine infant and child vaccination schedule.	There is no vaccine available for hepatitis C.
Recommendations	• Vaccination for previously unvaccinated adults if at increased risk, such as individuals who experience homelessness, use illegal drugs, have occupational risk of exposure, travel internationally, or have chronic liver disease or HIV. • Men who have sex with men (MSM) are also identified as high risk.	• Vaccination for all adults under age 60, but anyone may request it and receive it. • Universal screening at least once in the lifetime of all adults, and more often with ongoing risk factors such as pregnancy, hepatitis C infection, and individuals who are incarcerated, have a history of sexually transmitted infections, or have multiple sexual partners.	• Universal screening at least once in the lifetime of all adults, and more often with risk factors such as pregnancy, IV drug use, concomitant HIV infection, children born to mothers with HCV infection, and any individual who received a blood transfusion or organ transplant prior to July 1992. • Available treatment involves once-daily medication for 2 to 3 months, resulting in 95% cure rates with minimal side effects.

TABLE 13.2 Comparison of Hepatitis A, B, and C in the United States in 2020 (See CDC, 2020f; CDC, 2022n; CDC, 2023e; CDC, 2023f; CDC, 2023p.)

HIV and AIDS

Human immunodeficiency virus (HIV) is a virus that attacks the body's immune system and, if untreated, progresses to acquired immunodeficiency syndrome (AIDS). No current cure or vaccine exists for HIV, but with proper treatment, it can be controlled and those affected can live long, healthy lives (CDC, 2022a). In the United States, an estimated 1.2 million individuals are infected with HIV, with almost 160,000 unaware of their HIV status (CDC, 2022s). Almost 40 percent of new HIV infections are transmitted by individuals who are unaware they have the virus. Risk factors include men having sex with men (MSM); individuals who have had anal or vaginal sex with an individual who is HIV+; having multiple sex partners; sharing needles, syringes, or other drug equipment; having a history of other STIs; and concomitant hepatitis or tuberculosis (TB) (CDC, 2022ah). The CDC recommends HIV testing for everyone between the ages of 13 and 64 at least once as part of routine health care and annual testing for individuals with risk factors (CDC, 2022r, 2022s).

HIV is transmitted through direct contact with infected blood and specific body fluids, most often through anal or vaginal sex or sharing needles, syringes, and other drug injection equipment. HIV transmission may also occur perinatally (pregnant person-to-child) during pregnancy, birth, or breastfeeding; however, this is now rare in the United States due to advances in HIV prevention and treatment (CDC, 2022a). The three stages of HIV infection include:

- Stage 1, acute HIV infection: Heavy HIV load in the blood, flu-like symptoms occurring 2–4 weeks after initial infection and lasting days or weeks. Individuals are very contagious during this time.
- Stage 2, chronic HIV infection (also called asymptomatic HIV infection or clinical latency): Individuals often have no symptoms but can transmit HIV. Individuals who adhere to prescribed HIV treatment may remain at

this stage and never progress to stage 3. Without treatment, this stage may last a decade or longer, or may progress faster.
- Stage 3, AIDS: individuals have a high viral load and damaged immune systems resulting in opportunistic infections or other serious illnesses. Without HIV treatment, individuals with AIDS generally survive 3 years (CDC, 2022a).

The three available HIV tests are antibody tests, antigen/antibody tests, and nucleic acid tests (NAT). While these tests are accurate, no test can detect HIV immediately after infection. HIV antibodies may be undetectable to existing tests for up to 90 days after infection. Antigen/antibody tests can detect HIV 18–45 days after exposure, and NAT can detect HIV 10–33 days post exposure. NAT should be considered for people who have had a recent exposure or possible exposure with early HIV symptoms (CDC, 2022s).

Antiretroviral therapy (ART) is an effective HIV treatment that reduces viral loads to undetectable levels, keeping the individual healthy and potentially at stage 2 (CDC, 2023g). ART is recommended for all individuals with HIV, as soon as possible after diagnosis, regardless of CD4 cell count levels, since it is associated with a large reduction in morbidity and mortality compared with those who defer treatment (CDC, 2023g). When ART therapy is taken as prescribed and in conjunction with undetectable viral loads, multiple studies have demonstrated no risk of oral, anal, or vaginal sexual HIV transmission (CDC, 2023g). ART therapy coupled with undetectable viral loads also reduces the risk of transmission during pregnancy, labor, and delivery by 99 percent (CDC, 2023g). Many individuals achieve undetectable viral loads within 6 months of beginning ART (CDC, 2023g). Treatment as prevention (TasP) helps keep individuals who are HIV positive healthy and helps them to avoid transmitting HIV to others. Some individuals with HIV refer to TasP as undetectable = untransmittable, or U=U (CDC, 2023g).

THE ROOTS OF HEALTH INEQUITIES

HIV

The U.S. HIV epidemic is marked by historical social injustices and disparate access to prevention, care, and treatment. The social determinants of health (SDOH) reinforce what the surveillance data demonstrate: inequities in HIV incidence, prevalence, and needs. Poverty, low education level, inequitable access to health care, and income inequality are factors related to HIV high-impact areas. Stigma, structural discrimination, and racism result in notable health disparities in individuals with HIV and AIDS. Deeper disparities are associated with intersectional identities such as being a Hispanic MSM or a Black woman living in the rural South.

- Gay and bisexual men are most disproportionately affected by the HIV epidemic. MSM represent 2 percent of the total U.S. population but account for 61 percent of all new U.S. HIV infections.
- Black individuals are the most affected racial/ethnic population, representing 14 percent of the total population but accounting for 44 percent of new infections, with an infection rate almost eight times higher than White individuals.
- Latino individuals account for 20 percent of all new HIV infections, an HIV rate three times higher than that of White individuals.
- Individuals who inject drugs represent 9 percent of all new HIV infections.
- Individuals who are transgender have an average prevalence rate of 28 percent among male-to-female women.
- The southern United States has experienced the highest rates of new HIV diagnoses over the past decade, and researchers have suggested that this may be attributed to the refusal of many of these states to expand Medicaid, the lack of access to health care providers in rural areas, low health literacy levels, high rates of sexually transmitted infections, and ongoing stigma associated with HIV.

(See CDC, 2020g and Sullivan et al., 2021.)

Tuberculosis

TB is caused by a bacterium, *Mycobacterium tuberculosis* (MTB), which often attacks the lungs but can attack any part of the body. TB is spread via airborne transmission. When inhaled, TB bacteria can settle into the lungs, grow, and spread to other parts of the body (CDC, 2022u). Anyone can become infected, but certain populations, such as BIPOC individuals, individuals experiencing homelessness, and those living in congregate settings (correctional

facilities, detention centers) are at higher risk of TB disease than the overall population (CDC, 2022p). Because TB infection does not always result in illness, it is often classified as latent TB infection (LTBI) vs. TB disease (Table 13.3). Individuals infected with MTB have an estimated 5 to 10 percent lifetime risk of becoming ill with TB disease. Some will have LTBI, others will clear the infection, and some, such as those with weakened immune systems (for example, individuals living with HIV, malnutrition, or diabetes) and individuals with alcohol use disorder and tobacco dependence, will have a higher risk of becoming ill with TB disease (WHO, 2022b). See Caring for Vulnerable Populations and Communities.

	Latent Tuberculosis Infection	Active Tuberculosis Disease
Diagnostic Method	Positive skin or blood test indicating TB infection	Positive skin or blood test indicating TB infection Chest X-ray and sputum culture positive for MTB
Description	Presence of TB bacteria in the body, but the bacteria is inactive	Presence of actively replicating TB bacteria in the body
Symptoms	No symptoms; individuals are not ill and cannot transmit the bacteria to others	Symptoms of weight loss, fever, night sweats, cough, chest pain, hemoptysis Highly contagious
Treatment	Can be given medication to prevent the development of TB disease	Requires treatment
Prevalence	Affected an estimated 13 million individuals in the United States in 2022	2.5 cases per 100,000 persons in the United States in 2022, an increase from 2021 levels

TABLE 13.3 Comparison of LTBI and TB Disease (See CDC, 2023n, 2023o.)

Globally in 2021, 1.6 million individuals died from TB; it remains the 13th leading cause of global death and the second leading infectious killer after COVID-19 (WHO, 2022b).

TB may be detected through testing (Table 13.4).

TB Test Name	Type of Test	Mode of Test	Interpretation
Mantoux tuberculin skin test (TST)	Intradermal test for active TB or LTBI	Requires two visits to a health care provider. First visit: injection of small amount of tuberculin into the skin of the lower arm. Second visit: must occur within 48 to 72 hours to read skin test for a reaction. *Preferred test for children under 5 who have not received the bacille Calmette-Guérin (BCG), which may cause false positive reactions.	Positive skin test: individual has MTB but requires additional screening or testing to determine LTBI or TB disease. Negative skin test: LTBI and TB disease unlikely.
QuantiFERON®-TB Gold Plus (QFT-Plus) and T-SPOT®.TB test (T-Spot)	Blood tests for active TB or LTBI	Interferon-gamma release assays (IGRAs) blood tests. *Preferred for those who have received the BCG vaccine as it does not give false positive results in those vaccinated.	Positive TB blood test: individual has MTB but requires additional screening for symptoms of active TB, plus a chest X-ray to assess for signs of active disease. Negative blood test: LTBI and TB disease unlikely.

TABLE 13.4 Tuberculosis Tests (See CDC, 2022al.)

Despite its global presence, TB is curable and preventable (WHO, 2022b). Treatment takes anywhere from four to nine months and can be expensive without adequate health insurance, creating barriers for clients who are unable or unwilling to take medication for that duration or who cannot afford the cost of treatment (CDC, 2023m; Viney et al., 2019). Treatment for active TB disease often consists of multiple drugs, some with a high side effect profile. Inadequate treatment may result in treatment failure, ongoing transmission to others, and the development of drug resistance. Drug-resistant TB, which occurs when the bacteria become resistant to the antibiotics normally used to treat it, is a public health crisis. Drug resistance is more common in individuals who do not take their TB drugs regularly, in those who develop TB re-infection after being treated for TB in the past, and in individuals from areas of the world where drug-resistant TB is common (CDC, 2022i).

DRUG-RESISTANT TUBERCULOSIS

Access multimedia content (http://openstax.org/books/population-health/pages/13-2-types-of-infectious-disease-outbreaks)

The three classifications of drug-resistant TB are multidrug-resistant TB (MDR-TB), pre-extensively drug-resistant TB (pre-XDR TB), and extensively drug-resistant TB (XDR TB). In this video, Khayr reflects on his experience with LTBI that ultimately transformed into MDR-TB and his long journey to survivorship. The clip sheds light on the importance of adhering to medication treatment for LTBI.

Watch the video, and then respond to the following questions.

1. What might have changed Khayr's behavior when he first learned he had latent TB?
2. What do you feel is the nurse's role in preventing MDR-TB?

Role of the Nurse in Preventing Communicable Diseases

Educating the public is the nurse's first priority in preventing and mitigating many communicable diseases. Primary prevention of illness and disease focuses on the individual and the health and well-being of the entire community.

Table 13.5 shows examples of primary, secondary, and tertiary prevention interventions for communicable diseases.

Primary Prevention Educate individuals and communities on the importance of these disease-prevention behaviors.				
	Seasonal Influenza and Pneumonia	**Hepatitis A**	**Hepatitis B and Hepatitis C**	**HIV**
Vaccination	• Seasonal influenza, COVID-19, Hib, measles, pertussis, and varicella • Pneumococcal, PCV-13, PCV-15, and PPSV23	Hep A	Hep B	None
Education	• Frequent handwashing or hand sanitizing • Isolating oneself when ill • Staying away from ill individuals • Coughing or sneezing into the crook of the arm	• Disease transmission; disease can be spread at daycare centers and restaurants from inadequate hygiene practices • Handwashing after changing diapers or using the bathroom	• Not sharing needles, syringes, or equipment contaminated with infected blood • Not sharing toothbrushes or razors with an infected individual • Using appropriate protection if having sexual relations with an infected partner • Researching tattoo and body piercing parlors to ensure they have appropriate infection control measures in place	• *Everything listed for Hepatitis B and C* • Treatment as prevention: HIV+ individuals who take ART as prescribed and have undetectable viral loads can help avoid transmission to their sexual partners. U = U. • Using appropriate protection if having sexual relations with an infected partner • Nurses also provide referrals for pre-exposure prophylaxis (PrEP) for HIV-negative sexual or drug-injecting partners

TABLE 13.5 Prevention of Communicable Diseases

Secondary Prevention Identify diseases early via screening, before the onset of signs and symptoms, allowing for early treatment to delay or avoid potential complications and helping decrease potential transmission to others.			
	Hepatitis B and Hepatitis C	**Tuberculosis**	**HIV**
Referrals for	None.	None.	Pre-exposure prophylaxis (PrEP) for HIV-negative sex or drug-injecting partners
Screening for	• Hep B and Hep C at least once, more if necessary for risk factors or exposures • Substance use • Risky sexual behaviors • STIs as this may indicate unprotected sexual activity, thereby increasing risk of disease transmission	• TB with either the tuberculin skin test or one of the blood tests	• HIV at least once, more if necessary for risk factors or exposures • Risky sexual behaviors • STIs as this may indicate unprotected sexual activity, thereby increasing risk of HIV transmission • Substance use
Tertiary Prevention			
Treatment to manage the disease post-diagnosis to slow or stop disease progression: • Referrals for Hep A, B, or C treatment • Referrals for HIV treatment • Referrals for TB treatment			

TABLE 13.5 Prevention of Communicable Diseases

Foodborne Diseases

Within the United States, foodborne illness is fairly common, with an estimated one out of every six individuals becoming ill from contaminated food or drinks and approximately 3,000 deaths related to foodborne illnesses each year (CDC, 2022b). Table 13.6 describes the top pathogens responsible for foodborne illnesses and death.

Pathogens Causing Food Poisoning Illness	Pathogens Causing Food Poisoning-Related Deaths
Norovirus	Salmonella (non-typhoidal)
Salmonella (non-typhoidal)	Toxoplasma gondii
Clostridium perfringens	Listeria monocytogenes
Campylobacter	Norovirus
Staphylococcus aureus	Campylobacter

TABLE 13.6 Top Five Pathogens Responsible for Foodborne Illnesses and Death (See CDC, 2022l.)

Noroviruses

The highly contagious norovirus is the leading cause of vomiting and diarrhea from acute gastroenteritis in the United States across all age groups (CDC, 2023l). Each year, there are between 19 million and 21 million cases, with over 100,000 hospitalizations and approximately 900 deaths; these cases occur more commonly between November and April (CDC, 2021c; CDC, 2023l). Older adults and children under 5 are most likely to have

complications related to norovirus. By age 5, one in 110,000 children will die from norovirus and one in 160 will be hospitalized (CDC, 2023k). Though they are often referred to as a "stomach bug" or "stomach flu," none are related to influenza viruses (CDC, 2023l).

Norovirus is transmitted via the fecal-oral route through contaminated hands, food, or water or by contact with contaminated surfaces. The most common symptoms include nausea, vomiting, diarrhea, and stomach pain that often resolves within 48 hours (CDC, 2023l).

Common settings for norovirus outbreaks include hospitals, long-term care facilities, restaurants, schools, childcare centers, colleges, and cruise ships. Foods commonly implicated are leafy green vegetables, fresh fruits, and shellfish (CDC, 2021c).

HEALTHY PEOPLE 2030

Safe Food Handling

Healthy People 2030 features many objectives related to safe food handling (https://openstax.org/r/safefoodhandling). These objectives highlight the importance of consumer education to prevent disease and focus on the importance of washing hands and surfaces and separating cutting boards when preparing food, cooking food to a safe internal temperature, and refrigerating food within two hours after cooking.

(See also CDC, 2022m.)

Non-typhoidal Salmonella

Salmonella bacteria are classified as "typhoidal" or "non-typhoidal." Typhoidal salmonella serotypes cause typhoid fever. This discussion focuses on non-typhoidal salmonella, which causes an estimated 1.35 million illnesses and 420 deaths annually in the United States (CDC, 2022ae). For every confirmed positive lab test, an estimated 30 cases go unreported (CDC, 2022ad). Children under age 5 are more likely to become infected; this age group, adults over 65, and individuals who are immunocompromised are most likely to have severe infections (CDC, 2022ae).

Salmonella bacteria live in the intestinal tracts of humans, amphibians, reptiles, poultry, and other birds and in the feces of some animals (CDC, 2022ae) and infect individuals who do not wash their hands after contact with animals or animal feces. Salmonella can also be found in foods like chicken, turkey, beef, pork, eggs, fruits, and vegetables. Salmonellas contaminate an estimated one out of every 25 packages of supermarket chicken, infecting individuals if the contaminated chicken is not cooked thoroughly or if its juices leak onto surfaces or foods that are not cooked such as fruit and produce (CDC, 2022ad).

Salmonella illness, salmonellosis, results in a mild to severe diarrheal illness, acute gastroenteritis. Symptoms include sudden onset of diarrhea that may or may not be bloody, abdominal cramping, and fever. Less commonly, nausea, vomiting, and headache may be present. Diarrhea may last for days, increasing the risk of severe dehydration, especially in infants, young children, and older adults. Most individuals recover within seven days without antibiotic treatment; however, it can take months before bowel habits return to normal. Occasionally, salmonella infection can spread to other body areas, referred to as extra-intestinal infections, and it may be severe enough to cause disability and death (CDC, 2022ae).

SALMONELLA ILLNESS LINKED TO CHICKEN

Access multimedia content (http://openstax.org/books/population-health/pages/13-2-types-of-infectious-disease-outbreaks)

In this video, 14-year-old AJ and his mother tell their story of illness related to a multistate outbreak of salmonella from contaminated chicken.

Watch the video, and then respond to the following questions.

1. What was the role of the public health nurse in responding to foodborne illnesses?
2. What purpose did the actions of the public health department in response to AJ's case serve?
3. AJ's mother mentions several food safety measures she takes in the kitchen. What other measures can you

think of that she does not mention?

Listeria Monocytogenes

The bacteria *Listeria monocytogenes* causes listeriosis, a serious but rare infection. In the United States, an estimated 1,600 individuals become ill with listeriosis each year, and 260 individuals die from it (CDC, 2023i). Listeriosis most often infects and sickens pregnant clients, their newborns, adults over 65, and individuals with weakened immune systems. Listeriosis is usually a mild illness in pregnant people, but it may cause severe disease in the fetus or newborn. Sometimes listeriosis becomes invasive—causing sepsis, meningitis, or encephalitis—and affects other parts of the body (CDC, 2023i).

Listeria bacteria are difficult to remove from food processing facilities, where they will spread to food that touches contaminated surfaces (CDC, 2023i). Refrigeration does not kill *Listeria*, but the bacteria is easily killed by heating food to a high enough temperature (CDC, 2023i). Foods more likely to be contaminated with *Listeria* include soft cheeses; deli products such as sliced cold cuts or cheese; deli salads such as coleslaw, potato salad, tuna salad, and chicken salad; sprouts; unpasteurized milk and associated products; hot dogs; and fermented or dry sausages such as chorizo, pepperoni, and salami (CDC, 2023i).

Listeriosis often results in fever and diarrhea, similar to other foodborne illnesses, but it is rarely diagnosed. More often, it is only identified if it becomes invasive or occurs during pregnancy. Signs of invasive listeriosis are meningitis-like symptoms of headache, nuchal rigidity, fever, confusion, and convulsions. Invasive listeriosis is serious, requiring inpatient hospital care; it causes death in one in five infected individuals (CDC, 2023i). Pregnant people often experience fever and flu-like symptoms; however, listeriosis can lead to miscarriage, stillbirth, premature delivery, or life-threatening infections of the newborn. Listeriosis during pregnancy results in a fetal loss in 20 percent of the cases and results in newborn death in about 3 percent of the cases (CDC, 2023i).

Escherichia Coli

Escherichia coli (*E. coli*) bacteria are normally found in human and animal intestines. While most are harmless, some may cause diarrhea, respiratory illness, and urinary tract or bloodstream infections ranging in severity (CDC, 2022k). Older adults, children under age 5, those with weakened immune systems, pregnant persons, and individuals who travel to certain countries are at higher risk for infection, although it can affect anyone (CDC, 2022k). The six types of pathogenic *E. coli* strains that cause diarrhea are often called diarrheagenic *E. coli*. Of this group, Shiga toxin-producing *E. coli* 0157 (STEC) is most commonly associated with foodborne outbreaks. An estimated 265,000 STEC infections occur in the United States each year; however, the actual number is likely higher as many infected individuals do not seek medical care and, if they do, may not have their stool tested (CDC, 2022j).

STEC is transmitted through ingestion of tiny amounts of human or animal feces, such as through contaminated food, unpasteurized milk, untreated water, or contact with cattle or with the feces of infected individuals. The CDC recommends avoiding unpasteurized milk, unpasteurized apple cider, and soft cheeses made from raw milk as these carry a high risk of STEC infection. Individuals have contracted infections by swallowing lake water while swimming, touching the environment in petting zoos, not washing hands after changing diapers, and eating food prepared by people who did not follow hand hygiene after using the restroom. In the United States in 2021 and 2022, there were a total of seven STEC outbreaks. These outbreaks were associated with prepared food items such as packaged salads, baby spinach, cake mix, frozen falafel, ground beef, and other unknown food sources (CDC, 2022j).

STEC infections often cause diarrhea (which may or may not be bloody), stomach cramps, vomiting, and low-grade fever. Symptoms usually last five to seven days with illness severity ranging from mild to life-threatening. Typically, individuals will begin to feel ill three to four days after ingesting STEC. Between 5 and 10 percent of individuals will develop hemolytic uremic syndrome (HUS), a condition that can lead to kidney failure, about a week after symptoms first appear when the diarrhea is improving (CDC, 2022k).

CLIENT TEACHING GUIDELINES

Food Poisoning—Know the Signs

Recognize the following signs of mild to moderate food poisoning:

- Fever
- Diarrhea
- Stomach pain or cramps
- Nausea and vomiting

Recognize the following signs of severe food poisoning and see a health care provider:

- Fever higher than 102°F
- Bloody diarrhea
- Diarrhea lasting more than 3 days
- Frequent vomiting causing inability to keep liquids down
- Dehydration

If you think you got sick from food, report it to your local health department.

(See CDC, 2023d.)

Role of the Nurse in Preventing Foodborne Diseases

Providing appropriate education to clients is the number one priority for the nurse in preventing and mitigating many foodborne illnesses. Primary prevention of illness and disease serves not only the individual but also the health and well-being of the entire community. Table 13.7 shows examples of primary, secondary, and tertiary prevention interventions for foodborne diseases.

Primary Prevention	
Against Norovirus, Salmonella, and *Escherichia coli*	**Against Listeriosis**
• Educate individuals and communities on the following topics: ◦ Follow the four steps to food safety: Clean, Separate, Cook, and Chill Guidelines (https://openstax.org/r/foodsafety) ◦ Wash hands well after using the restroom or changing a diaper ◦ Wash hands well after touching animals or animal environments or visiting a petting zoo or farm (*E. coli* and salmonella) ◦ Cook shellfish thoroughly (norovirus) ◦ Take precautions with food and water when traveling abroad (*E. coli*) ◦ Do not drink untreated water (*E. coli*) ◦ Do not swallow water when swimming in lakes, ponds, streams, backyard "kiddie" pools, or swimming pools (*E. coli*) ◦ Avoid unpasteurized dairy products, juices, and ciders (*E. coli*, Listeria)	• Educate individuals and communities on the following topics: ◦ Heat deli meats and cheeses prior to eating ◦ Avoid eating soft cheeses or cheeses made with unpasteurized milk ◦ Heat all raw sprouts prior to eating ◦ Avoid consuming unpasteurized milk or juice and avoid eating deli salads if at high risk for severe listeriosis, such as pregnant or immunocompromised individuals
• Decrease community spread ◦ When ill and for 48 hours after symptoms stop, stay home and avoid preparing food for others ◦ Disinfect potentially contaminated areas within the household	
Secondary Prevention Against Salmonella and *E. coli*	

TABLE 13.7 Prevention of Foodborne Disease

• Health department screening and initiation of food recalls
Tertiary Prevention Against Foodborne Illnesses Requiring Hospital-Level Care
• Treatment and prevention of complications ◦ Close monitoring for evidence of complications ◦ Antibiotics as indicated or ordered ◦ Oral hydrating solutions ◦ Potentially IV fluid and electrolyte preplacement

TABLE 13.7 Prevention of Foodborne Disease

Vector-Borne Diseases

Vector-borne diseases are illnesses caused by infections transmitted by **vectors**, living organisms such as ticks and mosquitos that feed on human or animal blood (WHO, 2020). When vectors ingest infectious pathogens via blood from an infected host, they can transmit the pathogens to a new host. Once infectious, vectors can often transmit the disease for the remainder of their lives during each subsequent bite of a new host (WHO, 2020). Globally, vector-borne diseases are responsible for over 17 percent of all infectious diseases, causing more than 700,000 annual deaths (WHO, 2020). Global travel and urbanization have contributed to increasing vector-borne diseases, making everyone susceptible to diseases spread by mosquitos and ticks (CDC, 2019i, 2020b). In the United States, vector-borne diseases more than doubled from 2004 to 2018. The CDC reported nearly 650,000 cases between 2004 and 2016, with a high likelihood that the actual number was significantly higher due to underreporting.

Lyme Disease

Lyme disease is the most commonly reported vector-borne illness in the United States, with approximately 300,000 annual infections (CDC, 2019i). It is most often found in the Upper Midwest, Northeast, and Mid-Atlantic, where it is spread by the Ixodes scapularis tick. The Ixodes pacificus tick is implicated in cases in northern California, Oregon, and Washington (CDC, 2022y). The geographic range of the ticks that spread Lyme disease is expanding, due in part to a changing landscape and climate (Johns Hopkins Bloomberg School of Public Health, n.d.).

Symptoms of early localized disease, within a month after the tick bite, include fever, chills, fatigue, headache, myalgias, arthralgia, lymphadenopathy, and **erythema migrans** (EM), a red, ring-shaped rash at the bite site that expands over several days, often to sizes greater than five centimeters in diameter with a central clearing that results in a "bull's eye" appearance, although the rash can appear different on darker skin tones (Figure 13.4, Figure 13.5). EM occurs in up to 80 percent of those infected with Lyme, but the classic rash is not always present (CDC, 2022y). Untreated or undiagnosed early Lyme progresses to disseminated disease in about 60 percent of clients, with symptoms appearing months after the tick bite. Disseminated disease may present with skin, neurologic, cardiac, or rheumatologic manifestations. Performing serologic testing for Lyme disease is recommended when disseminated Lyme disease is being considered. However, clinical diagnosis is recommended over serologic testing for clients who present with an EM rash after frequenting an area where Lyme is common (CDC, 2022y).

In a study by Ly (2021), the researcher found that Black clients with Lyme disease seem to be diagnosed later in the disease process than White clients. Black clients are more often diagnosed with disseminated disease upon initial diagnosis and appear to be diagnosed outside of the months that Lyme disease is most frequently diagnosed, reinforcing the idea that they are diagnosed later in the disease process. A study by Palmiere et al. (2019) looked into missed and delayed Lyme diagnoses in dark-skinned populations of Appalachia with findings that echo the work by Ly. A potential reason for these missed or delayed diagnoses may be related to the varying appearance of EM in individuals with dark skin (Minority Nurse, 2013). The EM is an early sign of Lyme disease, whereas late symptoms include arthritis and neurological symptoms. Ly (2021) found that 34 percent of Black clients were diagnosed with neurological symptoms in comparison to only 9 percent of White clients, reinforcing the earlier diagnosis in White clients (Eldred, 2022; Ly, 2019). Another study showed similar findings among Black children—that they were less likely to be diagnosed with Lyme disease and were more likely to be diagnosed with the arthritis manifestations related to Lyme disease and not the skin or cutaneous manifestations (Hunt et al., 2023). It is imperative that nurses remain aware of the risks of Lyme disease in all clients and educate clients who are darker skinned on the signs and symptoms of Lyme disease to be aware of. Early diagnosis of Lyme disease and proper treatment with antibiotics usually results in a rapid and complete recovery (CDC, 2022y). Education on tick bite prevention and tick

removal can help prevent spread of the disease.



FIGURE 13.4 A bull's-eye rash (erythema migrans) is often a characteristic sign of Lyme disease. (credit: CDC, Public Domain)



FIGURE 13.5 The appearance of erythema migrans can vary and appear different on dark skin tones, which may be a factor in the late diagnosis of Lyme disease in individuals with darker skin. (credit: modification of work by CDC, Public Domain)

West Nile Virus

Spread by the bite of an infected mosquito, the West Nile virus (WNV) is the leading cause of mosquito-borne disease in the United States. The disease is now considered native to the United States, with outbreaks reported each summer through the fall (CDC, 2019i). Mosquitos become infected with WNV by feeding on infected birds and then spread it to people and animals by biting them. In rare cases, WNV has been spread through blood transfusion, organ transplant, and perinatal transmission from mother to baby during pregnancy, delivery, or breastfeeding. It is not spread through droplets, by touching live animals or birds, or by eating infected animals (CDC, 2022am).

Although most infected individuals have no symptoms, one in five experiences fever, headache, body aches,

vomiting, and diarrhea. Serious, sometimes fatal, disease occurs in one out 150 infected individuals, and of this group, one out of 10 die (CDC, 2022am). This severe infection often affects the central nervous system (neuroinvasive disease), causing encephalitis, acute flaccid paralysis, or meningitis. Recovery can take several months, and some effects may be permanent (CDC, 2022am).

WNV should be considered in any client with a febrile or acute neurologic illness with a recent exposure to mosquitos, blood transfusion, or organ transplant (CDC, 2023c). Lab diagnosis can be accomplished by testing the cerebrospinal fluid (CSF) and detecting WNV-specific IgM antibodies. Viral cultures and reverse transcriptase-polymerase chain reaction tests can be performed on blood specimens and confirm infection (CDC, 2023c). This is a **nationally notifiable condition**, a disease that, by law, must be reported to government authorities, allowing for case surveillance to assess transmission patterns and determine interventions to control outbreaks. Local and federal laws and regulations determine which diseases and conditions must be reported for case surveillance (CDC, 2022v). This will be discussed in more detail in the next section, Infectious Disease Prevention and Control.

Zika Virus

The Zika virus is caused by infected *Aedes aegypti* and *Aedes albopictus* mosquitoes found throughout the United States (CDC, 2019i). It can be passed from a pregnant person to their fetus, and fetal infection during pregnancy may cause birth defects such as microcephaly and other severe fetal brain defects (CDC, 2022aq). Zika can also be passed from an infected person via sexual activity including vaginal, anal, and oral sex and sharing sex toys, but male and female condoms can reduce this risk. Sexual transmission is especially concerning as many individuals infected with Zika are asymptomatic and may be unaware they are infected. Blood or urine tests can confirm infection. In 2015–2016, a large outbreak of travel-associated Zika cases occurred in the United States, along with local transmission cases of Zika in Florida and Texas. In 2017, the number of Zika cases in the United States started to decline, and no cases of Zika transmission by mosquitos have been reported since 2018; however, Zika remains a global health threat (CDC, 2022aq).

Clinical findings in symptomatic disease include acute onset of fever with maculopapular rash, arthralgia, or conjunctivitis (CDC, 2019m). Other symptoms may include myalgias and headaches with clinical illness lasting a week or less. Zika infection during pregnancy causes severe fetal brain defects, including **microcephaly**, a condition where a baby's head is much smaller than expected, often resulting in abnormal brain development. Infants born to individuals with Zika infection during pregnancy must be evaluated for congenital infection and neurologic abnormalities (CDC, 2019m). Zika is a nationally notifiable condition reported to state and local health departments. No specific treatment for Zika exists as it is supportive in nature including rest, fluids, and use of analgesics or antipyretics. Those who are infected should be protected from further mosquito exposure for a few days after illness to prevent transmission to other mosquitos, thereby reducing the risk of local transmission (CDC, 2022aq).

Malaria

A mosquito-borne disease, malaria is caused by a parasite (*Plasmodium falciparum, P. vivax, P. ovale, P. malariae,* and *P. knowlesi*) that frequently infects the Anopheles mosquito and is then transmitted to humans through this infected mosquito's bite (CDC, 2022z). It can also be transmitted through a blood transfusion, through an organ transplant, perinatally, or by sharing needles contaminated with blood. Malaria can result in serious illness and death (CDC, 2022z). *P. falciparum* causes the most severe malaria and is common in many African countries. Individuals living in poverty or rural areas lacking access to health care are at the greatest risk for life-threatening illness (CDC, 2022z). An estimated 241 million malaria cases occurred globally in 2020, with over 600,000 deaths. An estimated 90 percent of these deaths occurred in children under age 5 in sub-Saharan Africa, where the disease perpetuates a cycle of disease and poverty (CDC, 2022z). Almost half of the world's population is at risk for malaria, and lower-income countries are disproportionately affected (WHO, 2023a). Within the United States, approximately 2,000 cases are diagnosed yearly, with most cases occurring in immigrants and travelers returning from countries where malaria is endemic, such as sub-Saharan Africa and South Asia (CDC, 2022z).

Clinical findings in acute malaria include flu-like symptoms of fever, chills, headache, myalgias, fatigue, GI symptoms, and sometimes anemia and jaundice. Untreated malaria may cause kidney failure, seizures, mental status changes, coma, and death. *P. vivax* and *P. ovale* may result in relapsing malaria because these parasites can remain dormant in the liver and then come out of hibernation, resulting in acute illness (CDC, 2022z). Available malaria treatments are highly effective when started at the onset of symptoms (CDC, 2022z). Malaria is a nationally notifiable condition that must be reported to state health departments and the CDC through the National Malaria

Surveillance System (NMSS). The CDC investigates locally transmitted malaria, such as transfusion malaria, and supports health professionals in preventing, diagnosing, and treating malaria (CDC, 2020a). In June 2023, the CDC issued a health alert advisory notifying clinicians, public health authorities, and the general public about the identification of a handful of cases of locally acquired *P. vivax* malaria in Florida and one in Texas (CDC, 2023j). This was the first time in 20 years that a case of locally acquired malaria was identified in the United States. Although the risk of locally acquired malaria remains low, vigilance is needed to prevent mosquito bites (CDC, 2023j).

Role of the Nurse in Preventing Vector-Borne Diseases

The community health nurse is crucial in stemming disease burden from vector-borne diseases. Primary prevention can help to decrease the number of individuals infected with vector-borne diseases through education campaigns. Because no known treatments aside from supportive care exist for WNV or Zika virus, education and interventions are essential to prevent the spread of these diseases. Table 13.8 shows examples of primary, secondary, and tertiary prevention interventions for vector-borne diseases.

Primary Prevention			
	Lyme Disease	**West Nile Virus**	**Zika Virus**
Educate individuals and communities on how to avoid insect bites	• Use Environmental Protection Agency (EPA)-approved insect repellants containing DEET, picaridin, or oil of lemon eucalyptus. • Wear clothing that covers the body and is treated with permethrin when entering grassy or wooded areas. • Check the body daily for ticks. • Shower after coming indoors. • Teach how to remove ticks safely. • Prevent ticks on family pets. • Keep grass short. • Create tick-safe zones by keeping play areas away from shrubs and bushes, clearing tall grass/brush around the home, placing wood chips or gravel between lawns and wooded areas, using tick pesticides, and discouraging deer.	• Use EPA-approved insect repellants containing DEET, picaridin, or oil of lemon eucalyptus. • Keep body parts covered with loose-fitting, long-sleeved shirts and pants. • Use clothing treated with permethrin. • Control mosquitoes indoors and outdoors by using screens and removing any standing water from your property.	• Use EPA-approved insect repellants containing DEET, picaridin, or oil of lemon eucalyptus. • Review geographic locations where Zika is more prevalent; pregnant persons and those who wish to become pregnant within a short-defined period of time should avoid these locations during travel.

TABLE 13.8 Prevention of Vector-Borne Disease

Educate individuals and communities on sexual transmission	N/A	N/A	• Discuss risk of transmission via sex with an individual infected with Zika and that the only way to eliminate the risk of getting Zika from sex is abstinence. • Educate on condom use to reduce the risk of transmission.
Secondary Prevention			
	Lyme disease	**West Nile Virus**	**Zika Virus**
Educate individuals and communities on signs and symptoms	• For any bull's-eye rash, get evaluated. • For any known tick bite and onset of symptoms such as fevers, chills, myalgias, etc., get evaluated by a health professional.	• For any febrile illness with neurological symptoms and potential exposure to mosquito bites, blood transfusion, or organ transplant, get evaluated by a health professional.	• Fever with a maculopapular rash, arthralgias, conjunctivitis, myalgias, and headaches. • For any symptoms in a pregnant client who has recently traveled to active Zika areas or had sex with someone who lives in or recently traveled to areas with a risk of Zika, diagnostic testing should be performed.
Routine screening	• Routine screening is not recommended.	• Routine screening is not recommended.	• Screening is generally not recommended for asymptomatic pregnant clients regardless of travel status.
Tertiary Prevention			
• Lyme disease, WNV, and Zika require referral for treatment and support. • With confirmed Zika in a pregnant client, screening the newborn for any congenital or neurological deficits is imperative.			

TABLE 13.8 Prevention of Vector-Borne Disease

Waterborne Diseases

Many individuals become ill each year from waterborne diseases (CDC, 2020h). In the early 20th century, pathogens in drinking water caused most waterborne illness such as cholera and typhoid, but consistent sanitation measures and drinking water treatment have made these conditions rare in the United States. The Safe Drinking Water Act of 1974 also allows the EPA to set and enforce standards for drinking water quality (CDC, 2022h).

The CDC estimates that one out of 44 individuals become sick from waterborne diseases each year, and an estimated 7,000 people die from waterborne-related illnesses (CDC, 2020c; CDC, 2020e). The two most common types are respiratory or intestinal in nature. Legionella is the leading cause of drinking water outbreaks, and cryptosporidium is a leading cause of intestinal waterborne disease (CDC, 2019j; 2019l; 2022ai).

Today in the United States, waterborne pathogens infect individuals when they breathe in contaminated water droplets (as in heating and cooling systems) or when infected water gets in the ears or nose from recreational water

sports and swimming (CDC, 2020e).

CHOLERA: THE PANDEMIC THE WORLD HAS FORGOTTEN

Access multimedia content (http://openstax.org/books/population-health/pages/13-2-types-of-infectious-disease-outbreaks)

Globally, drinking water access and safety are not guaranteed, and clean water is scarce in many places. Safe drinking water is characterized by an adequate supply of affordable clean drinking water free of pathogens and chemicals located near the home (WHO, 2023c). According to the WHO (2019), one in three individuals, 2.2 billion globally, lack access to safely managed, contaminant-free drinking water. Cholera is responsible for seven distinct pandemics over the past two centuries (WHO, 2022a). In this video, Dr. Anita Zaidi discusses the origins, transmission, symptoms, treatment, and prevention and control efforts.

Watch the video, and then respond to the following questions.

1. Why are so many individuals still affected today by this preventable disease?
2. What is the link between cholera pandemics and the global social determinants of health?

HEALTHY PEOPLE 2030

Environmental Conditions

Healthy People 2030 includes important objectives related to water safety (https://openstax.org/r/environmentalconditions) under the priority area of social determinants of health and environmental conditions. The objectives highlight the need to increase the number of people who have access to water that meets the Safe Drinking Water Act. Objectives include:

- Increase the proportion of people whose water supply meets Safe Drinking Water Act regulations.
- Reduce health and environmental risks from hazardous sites.
- Reduce the number of toxic pollutants released into the environment.

Legionnaires' Disease

Legionnaires' disease is a dangerous type of pneumonia caused by *Legionella bacteria*. Normally found in lakes and streams, *Legionella* become a health concern when they grow and spread in water systems, such as sink faucets, centralized building cooling towers, decorative fountains, hot water tanks, and heaters. As *Legionella* grow and reproduce, water containing the bacteria can spread in droplets (CDC, 2021f). Individuals can also become ill by aspirating drinking water containing *Legionella*. Legionnaires' disease symptoms often begin within two weeks post exposure, are similar to other types of pneumonia, and include cough, shortness of breath, fever, myalgias, and headaches; some individuals experience diarrhea, nausea, and confusion (CDC, 2021f). While easily treated with antibiotics, Legionnaire's disease causes death in one in 10 individuals who contract it (CDC, 2021f).

Cryptosporidium

Cryptosporidium (Crypto) is a microscopic parasite that causes cryptosporidiosis, a diarrheal disease. Protected by an outer shell, the parasite can survive outside a host's body for long time periods and avoid disinfection with chlorine (CDC, 2019j). Crypto parasites are found worldwide and in every U.S. region, where an estimated 823,000 cases occur each year. Anyone can become sick with crypto, but individuals who are immunocompromised are more likely to have severe symptoms (CDC, 2019j). High-risk populations include children attending childcare centers, childcare workers, older adults, hikers who drink unfiltered and untreated water, individuals who drink from untreated shallow wells, swimmers, individuals who handle infected cattle, and international travelers (CDC, 2019j).

Crypto is transmitted by the fecal-oral route. The parasites live in an infected host's intestines; the host will shed millions of Crypto parasites in a bowel movement. Many community outbreaks have been linked to consuming municipal or recreational water (CDC, 2019j). Causes of cryptosporidiosis may include:

- Swallowing recreational water (https://openstax.org/r/healthywater) contaminated with crypto
- Drinking water contaminated by stool from an infected individual

- Swallowing something that has come in contact with an infected individual's stool
- Touching the mouth with hands after coming in contact with an infected individual's stool (CDC, 2019j)

Symptoms of cryptosporidiosis begin about a week following infection and include watery diarrhea, stomach cramping, dehydration, nausea, vomiting, fever, and weight loss; they usually persist for one to two weeks. Those who are immunocompromised may develop a more severe and sometimes fatal illness. Healthy individuals generally recover without treatment.

Role of the Nurse in Preventing Waterborne Diseases

The nurse, utilizing primary prevention, can educate individuals and communities on how to avoid waterborne diseases, similar to the role of the nurse in foodborne diseases. Table 13.9 shows examples of primary, secondary, and tertiary prevention interventions for waterborne diseases.

Primary Prevention
Educate individuals and communities on water safety. • Drink only treated or filtered water. • Have private home wells checked regularly for water safety reasons. • Ensure the water in swimming pools, hot tubs, and splash pads is treated. • Avoid swallowing the water while swimming. • Require all individuals to take a quick shower to rinse off the body prior to entering any pools. • Educate families to ensure children who are not toilet trained wear swim diapers and are taken for bathroom breaks every hour to avoid defecation in the water. • Reiterate that anyone with any diarrheal illness should be excluded from swimming in any recreational body of water. • The CDC offers more guidelines on Diarrhea and Swimming (https://openstax.org/r/diarrheal).
Secondary Prevention
No screening tests or secondary prevention measures are recommended for waterborne diseases, but reinforcing the signs and symptoms that require follow-up from a health care provider can help ensure ill individuals receive timely assistance.
Tertiary Prevention
Tertiary prevention efforts focus on reducing the burden of disease by treating illnesses promptly and avoiding complications.

TABLE 13.9 Prevention of Waterborne Diseases (See CDC, 2021d.)

Sexually Transmitted Infections

Sexually transmitted infections (STIs), also called sexually transmitted diseases (STDs), are infections that transmit from person to person through vaginal, oral, and anal sex and less commonly through intimate physical contact (CDC, 2022f). An estimated one in five individuals in the United States are affected by STIs, with 26 million new STI cases in 2018 (CDC, 2022af). STIs are preventable, and many are easily treatable if diagnosed promptly. Some STIs do not cause obvious symptoms, while others only cause mild symptoms; therefore, screening is extremely important for sexually active individuals. Untreated STIs are associated with increased risk of HIV, chronic pelvic pain, and reproductive issues associated with pregnancy. In the United States, those most affected by STIs are people ages 15 to 24, gay and bisexual men, pregnant individuals, and racial and ethnic minority groups (CDC, 2022af). The eight most common STIs are chlamydia, gonorrhea, hepatitis B, herpes simplex virus type 2, HIV, human papillomavirus, syphilis, and trichomoniasis (CDC, 2022af).

Chlamydia

Caused by infection with *Chlamydia trachomatis*, chlamydia is the most frequently reported bacterial STI, resulting in cervicitis, urethritis, and proctitis. In 2018, there were an estimated 4 million chlamydia infections in the United States (CDC, 2022c). Many individuals are asymptomatic and do not seek testing. Screening is necessary to identify most infections and can reduce the rates of adverse outcomes in women. In women, untreated infections can lead to pelvic inflammatory disease (PID), tubal infertility, ectopic pregnancy, and chronic pelvic pain (CDC, 2022c). In men, untreated infections rarely result in major health problems but may cause infertility. Chlamydial infections are

most common in young people ages 15 to 24 and BIPOC individuals. In 2020, chlamydia rates for Black individuals were six times the rate seen in White individuals (CDC, 2022c).

Chlamydia is transmitted via vaginal, anal, or oral sex with an infected partner. Ejaculation is not necessary to transmit the infection. It can infect the pharynx, cervix, urethra, upper reproductive tract, rectum, and conjunctiva. Symptoms in women may include abnormal vaginal discharge and dysuria. Symptoms may include penile discharge, dysuria, and pain and swelling in one or both testicles in men. Symptoms of rectal chlamydia may include rectal pain, discharge, and bleeding. Pregnant individuals can pass chlamydia to their baby during childbirth, resulting in pre-term delivery, conjunctivitis, and pneumonia in the neonate (CDC, 2022c).

When used correctly and with each sexual encounter, condoms can reduce the risk of chlamydia. Avoiding oral, vaginal, and anal sex is the only way to prevent chlamydia. Being in a mutually monogamous relationship with a partner who does not have chlamydia also lowers one's risk (CDC, 2022c).

Gonorrhea

Caused by *Neisseria gonorrhoeae*, gonorrhea is the second most commonly reported bacterial STI. Approximately 1.6 new infections occurred in the United States in 2018, with more than half among individuals ages 15 to 24. Because many infections are asymptomatic, the true number of cases may be much higher than reported (CDC, 2022o). Any sexually active individual can become infected, but most cases are among teenagers, young adults, and Black individuals (CDC, 2022o).

Gonorrhea is transmitted via sexual contact with the penis, vagina, mouth, or anus of an infected partner. Ejaculation is not needed for transmission. It infects the mucous membranes of the reproductive tract in women and of the mouth, throat, eyes, and rectum of both men and women (CDC, 2022o). Gonorrhea can also be spread during childbirth. Infection in newborns may result in blindness, joint infection, or sepsis; treatment of gonorrhea in pregnant individuals reduces the risk of these complications.

Symptoms in women are often mild, nonspecific, and mistaken for bladder or vaginal infections. Initial symptoms include dysuria, increased vaginal discharge, and bleeding between menses. Symptoms in men occur one to 14 days after infection and include dysuria; white, yellow, or green urethral discharge; and potential testicular or scrotal pain indicative of concomitant epididymitis, a complication of urethral infection (CDC, 2022o). Rectal infection may also be asymptomatic or cause discharge, anal itching, pain, bleeding, or painful bowel movements. Pharyngeal infection may result in a sore throat or may be asymptomatic (CDC, 2022o). Complications of gonorrhea include PID in women, which may lead to chronic pelvic pain, infertility, or increased risk of ectopic pregnancy. In men, complications include epididymitis and infertility. Untreated gonorrhea can potentially spread to the blood, resulting in disseminated gonococcal infection (DGI), a life-threatening infection characterized by arthritis, tenosynovitis, and dermatitis (CDC, 2022o).

When used correctly and with every sexual encounter, latex condoms reduce the risk of gonorrhea. Avoiding oral, vaginal, and anal sex is the surest way to prevent gonorrhea. Being in a long-term, mutually monogamous relationship with a partner who does not have gonorrhea is another way to lower one's risk (CDC, 2022o).

HEALTHY PEOPLE 2030

Sexually Transmitted Infections

Healthy People 2030 has a focused goal of reducing sexually transmitted infections (https://openstax.org/r/sexuallytransmitted) and improving access to quality STI care. Data demonstrates worsening rates for three of the 22 objectives that apply to this goal: reducing syphilis rates in females, reducing gonorrhea rates in male adolescents and young men, and reducing congenital syphilis rates. These worsening rates have led to a push to increase screening for these diseases and to provide updated STI treatment guidelines for providers.

Syphilis

Rates of syphilis, a bacterial STI caused by *Treponema pallidum*, have steadily risen over the past 20 years. In 2021, the United States reported 176,713 cases, an approximately 73 percent increase over a four-year period (CDC, 2022ak). MSM accounted for 43 percent of all primary and secondary cases, but cases are increasing among heterosexual individuals. Congenital syphilis, another growing concern, occurs when a pregnant person passes

syphilis to the fetus. Over 2,800 cases of congenital syphilis were reported in 2021, a 185 percent increase since 2017 (CDC, 2022ak).

Syphilis spreads through direct contact with a syphilitic chancre (sore) that is usually located on or around the penis, vagina, anus, rectum, lips, or mouth (CDC, 2022ak). It is also transmitted during vaginal, anal, or oral sex and pregnancy. When a pregnant client has syphilis, the infection can spread to the fetus, resulting in a high risk of stillbirth or death shortly after birth. Untreated syphilis in pregnant clients results in infant death in up to 40 percent of cases (CDC, 2022ak). A newborn with congenital syphilis may be asymptomatic, but without immediate treatment, serious problems such as developmental delays, seizures, and death may ensue (CDC, 2022ak).

Often beginning three weeks after initial infection, symptoms may resemble those of many other diseases, yet they follow a typical progression, with each stage potentially lasting for weeks, months, or years. At any stage of infection, syphilis can invade the nervous system (neurosyphilis), the visual system (ocular syphilis), and the auditory and vestibular systems (otosyphlis). The four stages are as follows:

- The primary stage starts with a single or multiple firm, round, painless chancres located where syphilis entered the body that last three to six weeks and then heal, regardless of treatment. Without treatment, syphilis will progress to the secondary stage (CDC, 2022ak).
- In the secondary stage, lesions develop in the mouth, vagina, or anus, and skin rashes that are not usually itchy and may appear as rough red or reddish-brown spots appear on the palms of the hands and soles of the feet. They can be very faint, making them difficult to see. Condyloma lata—large, raised gray or white lesions—may develop in moist, warm areas such as the mouth, axilla, and groin. Other symptoms are fever, swollen lymph nodes, sore throat, headaches, weight loss, myalgias, fatigue, and patchy hair loss. These symptoms will resolve with or without treatment, but an untreated infection will progress to the latent and potentially tertiary stage of disease (CDC, 2022ak).
- In the latent stage, there are no visible symptoms, and without treatment, it will remain in the body. This stage can last for years.
- Tertiary syphilis may develop in some untreated syphilis infections, appearing 10 to 30 years after initial infection and affecting multiple organ systems. This stage is rare, but it can be fatal.

Condoms, when used correctly, can reduce the risk of syphilis; however, transmission can occur if the condom does not cover the lesions. Avoiding oral, vaginal, and anal sex is the only way to avoid syphilis. Being in a mutually monogamous relationship with a partner who does not have syphilis is another way to lower one's risk of getting syphilis (CDC, 2022ak).

THE ROOTS OF HEALTH INEQUITIES

The Tuskegee Syphilis Study

Access multimedia content (http://openstax.org/books/population-health/pages/13-2-types-of-infectious-disease-outbreaks)

In 1932, the U.S. Public Health Service (USPHS) authorized a study to evaluate the effects of untreated syphilis. Six hundred Black men from Tuskegee, Alabama, were selected to be a part of the study. These men were mostly poor sharecroppers with limited education. They were recruited under the false pretense that were being treated for "bad blood." Two-thirds of the men were confirmed to have syphilis but did not receive treatment despite the availability of penicillin, which by 1943 was the treatment of choice to cure syphilis.

Watch the video, and then respond to the following questions.

1. Why do you think the USPHS and the Tuskegee Syphilis Study investigators allowed this study to continue for 40 years while withholding treatment for 32 of those years?
2. Do you think these investigators would have conducted this study on higher-income or White individuals? Why or why not?
3. What role, if any, does nursing have in preventing this type of unethical medical research from occurring?

Role of the Nurse in Preventing Sexually Transmitted Infections

The nurse has an important role to play in preventing STIs, identifying them early, and getting them treated appropriately. The CDC provides guidelines for teaching clients about reducing the risk of getting or transmitting STIs (https://openstax.org/r/prevention). Table 13.10 shows examples of primary, secondary, and tertiary prevention interventions for STIs.

Primary Prevention
Education regarding the transmission of STIs and how to avoid them • Abstinence is the only way to be sure to avoid contracting an STI. • If sexually active, correctly and consistently using protection, such as a condom, with every sexual encounter can significantly decrease the risk of contracting an STI but does not eliminate the risk. • Any contact with a syphilitic chancre may result in transmission of syphilis. • Instruct clients to have conversations with their sexual partner(s) regarding the number of sexual partners and testing frequency.
Secondary Prevention
Screening for STIs • Screen all sexually active women under the age of 25 for chlamydia and gonorrhea and retest three months after treatment for these infections. • Screening sexually active MSM annually at sites of contact (urethra, rectum) for chlamydia, at sites of contact (urethra, rectum, pharynx) for gonorrhea, and for syphilis. Additionally, screen every three to six months if at increased risk. • Adapt screening recommendations for transgender and gender diverse persons to anatomy, meaning extend the annual routine screening for chlamydia in cisgender women under the age of 25 to all transgender men and gender diverse individuals with a cervix. • Educate client at every visit that for any signs and symptoms of an STI, it is important to get evaluated and screened.
Tertiary Prevention
Prompt referral for treatment for any positive STI screening.

TABLE 13.10 Prevention of Sexually Transmitted Infections (See CDC, 2022w.)

HEALTHY PEOPLE 2030

Infectious Disease

Healthy People 2030 includes many objectives related to infectious diseases (https://openstax.org/r/infectious), STIs, and vaccination. Reducing the rates of hepatitis B and C deaths and the overall rate of viral hepatitis diseases along with decreasing the incidence of tuberculosis and pertussis are major goals. Healthy People also includes objectives related to increasing the number of individuals who get recommended vaccines and the maintenance of these vaccination records in an information system.

Vaccine-Preventable Diseases (VPDs)

The introduction of vaccines is a significant public health victory as many notifiable infectious diseases, such as diphtheria, measles, polio, tetanus, and rubella, have nearly been eliminated in the United States (CDC, 2022q). By the time a child reaches age 2, they can be vaccinated against 14 potentially life-threatening illnesses if the vaccine guidelines have been followed (CDC, 2022q). In adolescence, additional vaccines are available to prevent pertussis, meningococcal disease, and human papillomavirus. Since 2020, COVID-19 has remained in the top 10 leading causes of death, in the number three spot behind heart disease and cancer (CDC, 2023h). This illustrates the importance of monitoring for communicable disease and the role of public health in keeping individuals and communities safe.

The CDC (2022g) recommends vaccines to prevent the following vaccine-preventable diseases

(https://openstax.org/r/globalhealth) (VPDs):

- Hepatitis A
- Hepatitis B
- Human papillomavirus
- Influenza
- Hib (Haemophilus influenzae type b)
- Measles
- Meningococcal disease
- Mumps
- Pertussis
- Pneumococcal disease
- Polio
- Rotavirus
- Rubella
- Tetanus
- Varicella
- COVID-19

While vaccines are considered the best way to prevent diseases and outbreaks, not everyone gets vaccinated. Only 70 percent of children born in the United States in 2016 received their recommended vaccines by age 2 (CDC, 2022q). Non-Hispanic Black children were less likely to receive their early childhood vaccine series than non-Hispanic White children (CDC, 2022q). As fewer children are vaccinated, the United States has seen the reemergence of VPD outbreaks. Unvaccinated children risk becoming infected and transmitting these infectious diseases to others, including to individuals who are too young or too immunocompromised to be vaccinated.

GET VACCINATED AND PREVENT MEASLES

Access multimedia content (http://openstax.org/books/population-health/pages/13-2-types-of-infectious-disease-outbreaks)

Globally, measles remains a highly contagious disease, and each year, unvaccinated Americans contract it while traveling abroad and then spread it to other individuals who are unvaccinated (Vaccinate Your Family [VYF], 2022). Measles outbreaks have occurred more frequently in the United States over the past decade, often in communities with groups of unvaccinated individuals. In 2019, the CDC reported almost 1,300 cases of measles in 31 states, and of these individuals, 10 percent were hospitalized (VYF, 2022). This is concerning, especially for children under age 1 who are unable to be vaccinated. Prior to the measles, mumps, rubella (MMR) vaccine, three to 4 million individuals in the United States contracted measles, and about 500 died (VYF, 2022).

This video from the CDC demonstrates how unvaccinated individuals can transmit VPDs to the most vulnerable individuals in our communities—babies, individuals who are immunocompromised, and older adults.

Watch the video, and then respond to the following questions.

1. Which populations are most at risk of contracting measles? What makes them vulnerable?
2. As a nurse, what is your responsibility in relation to preventing measles?
3. How would you explain the importance of getting a measles vaccination to a client who is hesitant to get a vaccination?

An endemic disease in the United States, whooping cough (pertussis) is transmitted easily from person to person, with outbreaks occurring in schools, childcare centers, hospitals, and even in large geographic areas (CDC, 2022ao). Like any endemic disease, whooping cough may cause an outbreak, during which public health officials focus on protecting those at higher risk of getting sick and dying. Outbreaks are often difficult to identify; many cases go unreported because a variety of other illnesses cause similar symptoms. Whooping cough is a nationally notifiable disease with local and state health departments taking the lead on investigations. During an outbreak, public health nurses may be involved in active screening at schools, hospitals, and childcare centers to reduce exposure to individuals with pertussis, recommend timely medical evaluation, and promote prompt use of antibiotics to high-risk

close contacts.

In the United States, up to 20 babies die each year due to pertussis (VYF, 2022). To decrease the risk in young babies, the CDC recommends women receive Tdap vaccination during each pregnancy, preferably between the 27th and 36th weeks (CDC, 2022ao). Before routine vaccination, pertussis was one of the most common childhood diseases and a major cause of death in children. While the vaccine has decreased its incidence, immunity diminishes, highlighting the importance of receiving recommended vaccinations at the recommended times.

Nurses play a critical role in educating individuals and communities about the importance of adhering to the recommended vaccination schedule. This includes being fully informed of the vaccine schedule, indications, contraindications, and types of available vaccines. The CDC has published You Call the Shots (https://openstax.org/r/vaccines), an interactive, web-based immunization training course for nurses and other health care professionals discussing VPDs and current recommendations for vaccine use. Holding immunization clinics, visiting clients in their homes, providing pre–school entry immunization reviews, and offering accessible and convenient community information sessions are pivotal to gaining acceptance by vaccine-hesitant individuals. Nurses should follow the guidelines on nationally notifiable diseases and prepare accordingly by ordering the appropriate vaccines and necessary supplies to administer them.

Emerging Infectious Diseases

Emerging infectious diseases (EIDs) are those that are newly affecting populations or existing diseases that previously only caused isolated disease but are now significantly increasing in incidence and geographic range (National Institute of Allergy and Infectious Diseases [NIAID], 2018; Wang et al., 2021). Bioterrorism Category A, B, and C priority pathogens are also considered EIDs (Table 13.11) (NIAID, 2018). Because these diseases are new or were once less common, there are often minimal effective treatments and no cures. Without the benefit of prior knowledge and a lack of immunity, health care providers often contract EIDs as they tend to ill clients (WHO, 2014). Many EIDs are zoonotic in origin, emerging from animals and crossing the species barrier to infect humans (WHO, 2014). EIDs remain a global health threat as they can spread rapidly, posing a risk to the health and development of every country. As the COVID-19 pandemic has demonstrated, infectious diseases can cause significant death and disability and wreak havoc on the world economy, disrupting every level of society. Table 13.12 lists some emerging infectious diseases (Wang et al., 2021).

	Category A Pathogens	Category B Pathogens	Category C Pathogens
Definition	Organisms/biological agents that pose the highest risk to public health and national security	Pathogens that are the second-highest-priority organisms	Pathogens that have the third-highest priority; include emerging pathogens that could be engineered for mass dissemination
Characteristics	Easily disseminated and transmitted from person to person, resulting in high mortality rates and potentially causing public panic and social disruption, requiring special action for public health preparedness	Moderately easy to disseminate, resulting in moderate morbidity rates and low mortality rates, requiring enhanced diagnostic capacity and disease surveillance	Easily available, easy to produce and disseminate, with the potential for high morbidity and mortality rates resulting in a major health impact
Examples	• *Bacillus anthracis* (anthrax) • *Clostridium botulinum toxin* (botulism) • *Yersinia pestis* (plague) • *Variola major* (smallpox) • *Francisella tularensis* (tularemia) • Viral hemorrhagic fevers	• *Burkholderia pseudomallei* (melioidosis) • *Coxiella burnetii* (Q fever) • Brucella species (brucellosis) • Epsilon toxin (*Clostridium perfringens*) • Ricin toxin (*Ricinus communis*) • Typhus fever (*Rickettsia prowazekii*) • Food and waterborne pathogens such as Diarrheagenic *E. coli*, pathogenic vibrios, Shigella species, Salmonella, Listeria monocytogenes, hepatitis A, *Cryptosporidium parvum*, *Giardia lamblia*, and *Toxoplasma gondii* • Mosquito-borne viruses such as WNV, Eastern Equine Encephalitis, Japanese encephalitis virus, yellow fever virus, and Chikungunya virus	• Nipah and Hendra viruses • Hantaviruses • Tick-borne hemorrhagic fever viruses such as bunyaviruses and flaviviruses • Tick-borne encephalitis complex flaviviruses • Tuberculosis, including drug-resistant TB • Influenza virus • Rabies virus • Prions • Severe acute respiratory syndrome associated coronavirus • Antimicrobial resistance

TABLE 13.11 Bioterrorism EIDs/Pathogens

Infectious Disease	Pathogen	Primary Transmission
Hantavirus pulmonary syndrome	Hantavirus	Zoonotic
Hendra virus infection	Hendra virus	Zoonotic
Nipah virus infection	Nipah virus	Zoonotic
Highly pathogenic avian influenza	H5N1, H7N9 influenza virus	Zoonotic

TABLE 13.12 Emerging Infectious Diseases

Infectious Disease	Pathogen	Primary Transmission
Severe acute respiratory syndrome	SARS-CoV-1	Respiratory droplet
Middle East Respiratory Syndrome	MERS-CoV	Zoonotic
Lyme disease	Borrelia	Vector-borne
Bartonellosis	Bartonella	Zoonotic
Cryptococcus gattii infections	*Cryptococcus gattii*	Environmental
Cyclosporiasis infections	*Cyclospora cayetanensis*	Foodborne, waterborne
Variant Creutzfeldt-Jakob disease	Prion	Zoonotic, foodborne

TABLE 13.12 Emerging Infectious Diseases

13.3 Infectious Disease Prevention and Control

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 13.3.1 Define public health surveillance.
- 13.3.2 Explain the steps in public health surveillance for infectious diseases.
- 13.3.3 Describe how an outbreak is established.
- 13.3.4 Discuss the steps in an outbreak investigation.
- 13.3.5 Describe efforts to prevent foodborne and waterborne diseases.
- 13.3.6 Explain the nurse's role in emergency preparedness and disaster response during an infectious disease outbreak.

In the 20th century, improvements in sanitation and hygiene, the discovery of antibiotics, and the implementation of immunization programs resulted in disease control and a major shift in life expectancy and the diseases causing death (CDC, 1999). By 1900, 40 states had established health departments, and from the 1930s to the 1950s, they oversaw progress in sewage disposal, water treatment, food safety, and handwashing and food-handling education. Improvements in housing and TB-control programs decreased the incidence of TB deaths (CDC, 1999). In addition to these public health achievements, 1946 saw the creation of the Communicable Disease Center (CDC) with a primary mission of preventing the spread of malaria (CDC, 2018c). Over the next 40 years, the CDC provided disease surveillance and immunization programs. In 1992, it was officially renamed the Centers for Disease Control and Prevention to reflect its leadership in public health initiatives (CDC, 2023b). Communicable disease control and prevention is one of the greatest public health achievements of the 20th century (CDC, 1999). The development of new vaccines has continued into the 21st century, resulting in fewer serious illnesses and deaths due to VPDs. Eight of the 10 leading causes of death (https://openstax.org/r/injury) for 2021 were related to chronic diseases, a significant shift from the last century (CDC, 2023h). Chronic diseases such as heart disease and cancer are leading causes of death and disability and the primary drivers of annual health care costs (CDC, 2021b). This evolution in infectious disease prevention and control would not have occurred without the efforts of public health professionals who recognized the importance of sanitation, education, vaccine development, and public health surveillance.

Public Health Surveillance

Public health surveillance is the "ongoing, systematic collection, analysis, and interpretation of health-related data essential to planning, implementation, and evaluation of public health practice" (CDC, 2018b, para 1) and more specifically refers to the monitoring of communicable diseases, noncommunicable diseases, injuries, and risk factors for these health outcomes in a population. Using data to monitor health problems is a key function of public health surveillance as it assists in prevention or control. Public health officials can use data to prioritize planning prevention and control programs (CDC, 2012).

Although numerous health issues affect global populations, many are neither urgent nor directly threaten health. Some health issues, such as breast cancer, are persistent and chronic, with a stable incidence and prevalence in the community. Therefore, the first step in public health surveillance is to identify which health problems to monitor. Selecting and prioritizing health problems for surveillance involves identifying issues that impact public health. The second step relates to the incidence, prevalence, severity, mortality, socioeconomic impact, and communicability of the disease or problem and the ability to prevent or control it. In general, communicable diseases are more

commonly under surveillance, given their possibility of causing an increased threat to public health. Within the United States, surveillance begins at local and state-level public health departments as each state sets local laws for diseases and conditions that must be reported. Local health departments work with laboratories, hospitals, and health care providers to obtain information on reportable diseases and then convey it to the state health department. The state health department uses the data to locate the source of a potential outbreak to prevent its spread and sometimes will involve the CDC, depending on the scope of the issue (CDC, 2022aj).

Local and state health departments are also responsible for notifying the CDC about agreed-upon notifiable diseases and health conditions. The Council of State and Territorial Epidemiologists (https://openstax.org/r/cste) and the CDC identify this list together, and states voluntarily inform the CDC when an individual meets the criteria to become a case. The CDC then uses this data to monitor and alert communities about potential health threats (CDC, 2022aj). The CDC also partners with the WHO through the Global Outbreak Alert and Response Network (https://openstax.org/r/goarn) (Christensen et al., 2021).

The CDC conducts public health surveillance through the National Notifiable Diseases Surveillance System (https://openstax.org/r/nndss) (NNDSS) to track reportable and notifiable diseases and conditions with the assistance of local health departments. Currently, approximately 120 diseases are under NNDSS surveillance, including communicable and noncommunicable diseases and bioterrorism agents, with almost 2.7 million disease cases reported each year (CDC, 2022aj).

Each time a public health agency collects information about an individual diagnosed with a health condition that could threaten others, it is called **case surveillance**. This case surveillance is at the foundation of public health practice (CDC, 2022an). Recall John Snow's cholera outbreak investigation in London in Epidemiology for Informing Population/Community Health Decisions. Case surveillance usually includes infectious diseases, such as COVID-19, or foodborne outbreaks, like *E. coli*. However, some noninfectious conditions are also surveilled, such as lead poisoning (CDC, 2022aj). Health departments notify the CDC to report instances of an estimated 120 diseases and conditions monitored under NNDSS surveillance. Case surveillance captures information about the population affected, the geographical area involved, and the course of illness and treatment that public health professionals can use to inform prevention and control efforts (CDC, 2022aj).

A surveillance **case definition** is a set of criteria used to define a disease for public health surveillance. Case definitions include clinical criteria such as expected signs or symptoms and often have restrictions by time, place, and person, especially in the setting of potential health threats to others. This enables public health officials to be consistent in case classifications and counting across states. Surveillance case definitions are not the criteria that health care providers use to diagnose, manage, and treat conditions in the clinical setting; they are used for data reporting and tracking purposes only (CDC, 2022ah). Surveillance data are also included in the CDC's Morbidity and Mortality Weekly Report (https://openstax.org/r/mmwr) (MMWR) series. This publication is the agency's main dissemination of authoritative, useful public health information and recommendations. MMWR is targeted toward scientists, health professionals, epidemiologists, and public health professionals, including public health and community health nurses (CDC, 2023k).

THEORY IN ACTION

National Notifiable Diseases Surveillance System

Access multimedia content (http://openstax.org/books/population-health/pages/13-3-infectious-disease-prevention-and-control)

In this informational video by the CDC National Notifiable Diseases Surveillance System, Dr. Paula Yoon discusses current public health threats and efforts to control and prevent these threats.

Watch the video, and then respond to the following questions.

1. What is the role of the public health nurse in disease surveillance and reporting?
2. What contemporary examples of applying the National Notifiable Disease Surveillance System can you think of?
3. How does the National Notifiable Disease Surveillance System contribute to public health safety?

Outbreak Investigation

A disease outbreak refers to more cases of a certain disease or health condition than expected. Gathering surveillance data is one method of establishing the existence of an outbreak. This process can occur at the local or state health department and in hospital facilities looking to identify any hospital-acquired infections. Similarly, the CDC regularly reviews surveillance data and laboratory patterns of disease-causing organisms to detect clusters of illness. Another way to detect an outbreak is when a health care provider alerts the local health department about unusual cases—unusual due to the frequency or type of condition. An example is the 1999 WNV infection, which was discovered after a New York City health department received a call from a physician who had recently evaluated two clients with encephalitis (CDC, 2012, pp. 6–2). Community members may also call local health departments to report abnormal clusters of illness. An example is foodborne-related illness where an individual calls the health department and reports that seven of their friends are ill with similar symptoms after eating at the same restaurant. Another example would be a concerned community member reporting a cancer cluster in their neighborhood. A health department's decision to investigate a potential outbreak depends on many factors, such as illness severity, number of cases, mode of transmission, and availability of prevention and control measures (Figure 13.6). Typically, the more individuals affected or the more serious the illness, the greater the likelihood of an outbreak investigation with the ultimate goal to assist in disease prevention and control (CDC, 2012).



FIGURE 13.6 A team screens for disease by taking a nasal sample. (credit: by Kaylianna Genier/U.S. Navy/Flickr, Public Domain)

SOLVING THE PUZZLE: A STEP-BY-STEP GUIDE TO OUTBREAK INVESTIGATION

Access multimedia content (http://openstax.org/books/population-health/pages/13-3-infectious-disease-prevention-and-control)

This video breaks down the eight steps of an outbreak investigation.

Watch the video, and then respond to the following questions.

1. What are the steps in an outbreak investigation?
2. What are some reasons a nurse may see an increased number of cases of a certain disease compared with the baseline level normally seen?
3. What necessary information does the nurse need to describe an outbreak?
4. How are control measures utilized in an outbreak? Give some examples of control measures.

Surveillance for and Prevention of Foodborne Diseases

Prevention of foodborne diseases requires careful oversight and monitoring along the food supply chain. The CDC works collaboratively with the U.S. Department of Agriculture (USDA), the Food and Drug Administration (FDA), and local and state public health departments to ensure food safety along the steps in the food chain. This work involves

identifying foodborne illness, investigating multistate foodborne disease outbreaks, providing education to prevent outbreaks, and implementing systems to better address, detect, and stop outbreaks (CDC, 2022b). The CDC helps to track and investigate foodborne illnesses through the following surveillance systems:

- PulseNet (https://openstax.org/r/pulsenet)
- Foodborne Diseases Active Surveillance Network (FoodNet FAST (https://openstax.org/r/foodnet))
- System for Enteric Disease Response, Investigation, and Coordination (SEDRIC (https://openstax.org/r/outbreaks))
- Foodborne Disease Outbreak Surveillance System (https://openstax.org/r/fdoss) (FDOSS)

Whole genome sequencing (WGS) is an advanced technology that assists epidemiologists in finding foodborne outbreaks. WGS data helps scientists determine DNA similarities in strains of pathogens, indicating they come from the same source and allowing the CDC and its partners to detect outbreaks more quickly and to solve outbreaks while they are still small. When PulseNet scientists determine the same strain causes a group of illnesses, disease detectives can investigate the illness to determine if they came from the same food or food source (Figure 13.7). This has improved the ability to link foodborne illnesses and detect outbreaks (CDC, 2022b).

The CDC investigates multistate foodborne outbreaks using a seven-step process (CDC, 2022ag):

1. Detect a possible outbreak through data surveillance.
2. Find individuals included in the outbreak and look for additional ill individuals.
3. Generate hypotheses by interviewing ill individuals.
4. Test hypotheses by comparing what ill individuals ate to what well people of a similar group ate.
5. Solve by confirming the contaminated food using epidemiologic and lab information to identify the contamination point.
6. Control and stop the outbreak by recalling the food, cleaning or closing facilities, and educating those involved.
7. Decide the outbreak is over when illness ends and the contaminated foods are no longer available.



FIGURE 13.7 A disease detective works in the community to interview and gather data on a disease outbreak. (credit: "Disease Detectives in Guatemala" by CDC/Flickr, CC BY 2.0)

Surveillance for and Prevention of Waterborne Diseases

Preventing waterborne illnesses is multifaceted. Consumers need to know where their drinking water comes from and understand their water supply's testing frequency and test results. Many community water systems use groundwater and are regulated by the EPA, but some municipal water supplies are unsafe, as was the case for years in Flint, Michigan (CDC, 2020d, 2022ac; Ruckart et al., 2019). Private wells must also be maintained and tested to ensure they are far enough away from septic tanks (CDC, 2022ac). The CDC provides guidance to consumers about ways to mitigate waterborne pathogens that can grow in pipes and devices that use water, such as humidifiers.

Pathogens thrive in stagnant water or water that is not treated with enough disinfectant. Due to EPA requirements, public water utilities provide water that meets certain quality and safety standards, but tap water is not sterile. The small number of pathogens in the water can congregate in pipes and potentially multiply, especially if taps are unused for long periods and water sits in the pipes (CDC, 2022ac).

CASE REFLECTION

Waterborne Illness

Read the scenario, and then respond to the questions that follow.

Janessa Jones is a 6-year-old client who presented to Dr. Liu's office complaining of a fever, abdominal cramping, vomiting, and diarrhea for the past two days. She is a generally healthy child with no significant medical history and does not take any medications on a daily basis. Sally, a public health nurse, received notification from Dr. Liu about the unusually high number of children presenting with similar symptoms in the past day. Janessa was the first child Dr. Liu evaluated with these complaints, but by the end of the day, she had seen eight children with similar presentations. Dr. Liu mentioned that each of the children had a recent history of swimming in the town's recreational pool.

1. What is Nurse Sally's role in this case?
2. Identify Nurse Sally's next steps in addressing Dr. Liu's concerns.
3. Discuss interventions the public health nurse can implement to reduce the risk of waterborne diseases.

A waterborne disease outbreak is defined when two or more individuals contract the same illness from the same contaminated water source. Waterborne disease surveillance data informs policy in developing drinking water regulations and regulations for certain recreational water activities (CDC, 2019f). The CDC oversees waterborne disease and outbreak tracking to help guide efforts to decrease and prevent future outbreaks. The national Waterborne Disease and Outbreak Surveillance System (WBDOSS (https://openstax.org/r/cdchealthywater)) collects data on waterborne illnesses related to recreational, drinking, and environmental water (CDC, 2019f). The WBDOSS also gathers information on hospitalizations, deaths, agents, types of water implicated, and water settings, which collectively inform next steps during an outbreak. Determining the etiology of waterborne illness is a complicated process as many pathogens spread by water can also be spread in other ways, making it difficult to link illness to water. Without an outbreak investigation, it is nearly impossible to link illness to water (CDC, 2019g). Therefore, anyone suspecting a possible outbreak is encouraged to contact their local health department, which will often enlist the assistance of the state health department (CDC, 2019h).

Waterborne disease outbreaks became nationally notifiable in 2009, and every state is responsible for identifying, investigating, and reporting them electronically through the CDC's National Outbreak Reporting System (NORS (https://openstax.org/r/nors)). WBDOSS collects the data reported to NORS on waterborne disease and outbreaks associated with recreational water, drinking water, and non-recreational water exposures (CDC, 2019h) and publishes annual surveillance data reports in the MMWR (CDC, 2019k). These data have supported efforts to reduce waterborne disease outbreaks by assisting the EPA in developing drinking water regulations, guiding the CDC's recreational water activities program, and highlighting the emergence of *Legionella* outbreaks through various exposures and settings, supporting prevention efforts (CDC, 2019k).

Nurse's Role During an Infectious Disease Outbreak

Nursing plays a distinct role in pandemics and other infectious disease outbreaks. As part of the three core functions of public health nursing, nurses are involved with assessment in terms of epidemiological surveillance and detection, such as contact tracing. A school nurse working in New York City is credited with first observing and notifying the CDC about the 2009 H1N1 flu pandemic (National Academies of Sciences, Engineering, and Medicine [NASEM], 2021). During the COVID-19 pandemic, nurses conducted most contact tracing at the local board of health, at the state level, and in school districts. Public health nurses assist with coordinating and implementing disaster plans at the local and state levels, an aspect of policy development. Preparedness is a multidisciplinary effort to understand a health care system's capacity in advance of a public health emergency, including workforce capacity, access to personal protective equipment, and medical supplies, an aspect of assurance (NASEM, 2021).

During an evolving infectious disease outbreak, the nursing role may shift as health care shifts from routine care to public health care, emergency preparedness, and disaster response. Nurses working in various practice settings serve on the front line of public health emergencies, assisting individuals and communities through a crisis. Promoting health and well-being is one of the essential roles of nursing. Nurses engage and connect with individuals and communities to ensure they have what they need to be healthy (NASEM, 2021).

As the COVID-19 pandemic revealed, this engagement, ability, and willingness to respond to public health crises takes a toll on nursing; during that pandemic, many nurses reported feeling unsafe, unsupported, and unprepared, resulting in a profound mental health burden (NASEM, 2021). The COVID-19 pandemic required nurses to take on multiple roles: for example, outpatient endoscopy nurses were asked to care for medical-surgical clients, and non–critical care nurses were asked to care for critically ill clients. Nurses also provided end-of-life care and served as a means of communication between dying or ill clients and their families. This most recent pandemic has illustrated the vital importance of protecting nurses' well-being and mental health so that they can respond to disasters effectively and safely (NASEM, 2021).

Nurses also have a role within the health promotion and disease prevention framework along the three levels of prevention. Within an infectious disease outbreak, the public health nurse plays a vital role in primary, secondary, and tertiary prevention (Table 13.13).

Primary Prevention
• Administer immunizations if available • Educate individuals and communities regarding disease transmission and how to protect oneself
Secondary Prevention
• Engage in contact tracing to identify those at high risk for the disease to screen them • Screen for disease symptoms • Perform lab-based screening tests
Tertiary Prevention
• Provide direct bedside care and treatment of impacted individuals

TABLE 13.13 Prevention of Infectious Disease Outbreaks

HEALTHY PEOPLE 2030

Emergency Preparedness

Healthy People 2030 has a focused goal of improving emergency preparedness and response (https://openstax.org/r/healthgov) by building community resilience. The objectives are divided into the following categories of emergency preparedness: general, global health, health communication, and heart disease and stroke. Most of these objectives are in the developmental stage but recognize the value of individuals who are prepared for a disease outbreak.

Chapter Summary

13.1 Pandemics Throughout History

The lessons of pandemics throughout history have shaped how public health addresses emerging infectious disease threats. These lessons illustrate the vital need for public health organizations at the federal, state, and local levels to guide disease control and prevention efforts.

13.2 Types of Infectious Disease Outbreaks

Pathogenic microorganisms cause infectious diseases that spread by direct or indirect transmission. A disease is communicable if the infected host has a portal of exit, a means of transmission, and a portal of entry into another susceptible host. If an environment is favorable for the infectious agent's survival and opportunity exists for the host's exposure to it, infection and disease will ensue. Some infectious disease outbreaks result from direct contact with an infected individual's respiratory secretions, while others are transmitted through blood or bodily fluids. Still others result from an intermediary, such as vectors, water, or food. Breaking the chain of transmission is key to control and prevention of these illnesses and outbreaks.

13.3 Infectious Disease Prevention and Control

Local health care providers, state or local data surveillance, or the CDC's review of surveillance data and laboratory patterns detect illness clusters to identify outbreaks. Public health surveillance uses data to monitor communicable and noncommunicable diseases, injuries, and risk factors for health outcomes in a population and prevent or control them. Steps in outbreak prevention include preparation; establishing an outbreak's existence; forming a case definition; finding cases; conducting descriptive epidemiology; developing, evaluating, and refining the hypothesis about the cause; implementing control and prevention measures; maintaining surveillance; and communicating the findings. Nursing's distinct role in pandemics and outbreaks includes assessment (epidemiological surveillance) and detection (contact tracing). Public health nurses assist with coordinating and implementing local and state disaster plans and participate in the multidisciplinary effort of understanding a health care system's capacity before a public health emergency strikes.

Key Terms

antigenic drift when viruses undergo minor mutations each year, such as the influenza A viruses

antigenic shift when viruses undergo a major mutation; has occurred with flu viruses four times over the past 100 years

case definition a set of criteria used to define a disease for the purpose of public health surveillance

case surveillance when public health agencies collect information about an individual diagnosed with a health condition that could potentially pose a health threat to others

emerging infectious diseases (EIDs) diseases that are newly affecting populations or diseases that have existed previously but only caused isolated disease that are now increasing in incidence and geographic range

erythema migrans (EM) also known as the "bull's eye" rash of Lyme disease; is erythematous, annular, and homogenous at the site of the actual tick bite and expands over several days to sizes greater than 5 centimeters in diameter with a central clearing as the rash expands

infectious easily transmitted between individuals

infectious disease disease caused by pathogenic microorganisms such as bacteria, viruses, parasites, or fungi; enters a human host, multiplies, and causes infection that can spread to others

microcephaly condition where a baby's head is smaller than expected, impacting brain development

nationally notifiable condition a disease required by law to be reported to government authorities, allowing for case surveillance to assess transmission patterns and determine interventions to control outbreaks

pandemic an epidemic that spreads worldwide

pathogenicity the potential ability to cause disease; the more pathogenic an agent is, the greater the ability it has to cause disease in a susceptible host

public health surveillance the ongoing, systematic collection, analysis, and interpretation of health-related data essential to planning, implementation, and evaluation of public health practice

vectors living organisms, such as ticks and mosquitoes, that can transmit infectious pathogens to humans

Review Questions

1. Public health surveillance can be described primarily as which of the following actions?
    a. Monitoring occurrences of public health problems
    b. Developing interventions to control disease outbreaks
    c. Collecting health-related information from community members
    d. Tracking individuals who have been exposed to an infectious disease

2. Which factor related to the agent will the nurse include when discussing the epidemiological triad?
    a. Pathogenicity
    b. Susceptibility
    c. Reservoirs
    d. Environmental changes

3. Which disease does the elementary school nurse identify as being spread via airborne transmission?
    a. Measles
    b. Influenza
    c. Pertussis
    d. Pneumonia

4. Which of the following factors is a component of the epidemiological triad?
    a. Susceptibility
    b. Environment
    c. Portal of exit
    d. Pathogenicity

5. The community health nurse is conducting a health screening of an immigrant family. Which finding is an indication of the need for T-Spot testing instead of Mantoux TST testing?
    a. Prior vaccination with BCG
    b. Family member who is 10 years of age
    c. Symptoms of night sweats, fevers, chills, and hemoptysis
    d. A negative chest X-ray and negative sputum testing for MTB

6. Which primary prevention strategy will the nurse include in a community program on the prevention of hepatitis C?
    a. Advising individuals with risky sexual behaviors to be screened for hepatitis C
    b. Stressing that handwashing is important after changing diapers or using the bathroom
    c. Recommending immunizations against the other viral hepatitis infections
    d. Instructing individuals to avoid sharing needles, syringes, or other equipment contaminated with blood

7. Which manifestation would the nurse include when teaching about mild to moderate food poisoning at a community health fair?
    a. Bloody diarrhea
    b. Diarrhea lasting more than 3 days
    c. Dehydration
    d. Fever less than 102°F

8. Which diagnosis would the nurse anticipate when observing a “bull’s eye” rash on a client’s leg?
    a. Zika virus
    b. West Nile virus
    c. Lyme disease
    d. Dengue fever

9. Which surveillance system would the CDC utilize to track and investigate foodborne illnesses?

a. System for Enteric Disease Response, Investigation, and Coordination (SEDRIC)
b. National Notifiable Disease Surveillance System (NNDSS)
c. Global Outbreak Alert and Response Network (GOARN)
d. Waterborne Disease and Outbreak Surveillance System (WBDOSS)

10. Which action by the nurse during an infectious disease outbreak is an example of a secondary prevention measure?
a. Administering immunizations
b. Engaging in contact tracing
c. Providing direct care to infected individuals
d. Educating the public about disease transmission

CHAPTER 14
Environmental Health



FIGURE 14.1 A healthy planet is needed for a healthy environment. (credit: modification of work "Keep My Air Clean" by Kevin Krejci/ Flickr, CC BY 2.0)

CHAPTER OUTLINE

14.1 Understanding Environmental Health
14.2 Environmental Exposure and Health Outcomes
14.3 Environmental Health Assessment
14.4 Climate Change and Population Health
14.5 Nursing Practice and Responsibilities in Environmental Health

INTRODUCTION A rural community, nestled against a mountain that was extensively mined and then abandoned, is home to several hundred residents. Most of these residents are retired miners and their families living in older homes that lack adequate ventilation and are often perched next to mounds of mining waste—silent but potentially hazardous reminders of the past. Lately, public health officials have expressed growing concern about severe storms, combined with an eroding landscape, depositing heavy metals into the community's water supply. Air quality is also compromised, with measurements showing higher than acceptable levels of **particulate matter**, a type of pollution. Despite these issues, emotional bonds to their homes and financial constraints deter the residents from considering relocation. A team of public health nurses specializing in **environmental health** is responsible for assessing the local environment and emerging health crises while respecting the community's deeply rooted lifestyle and sentiments. Mr. Harper, a retired miner, is among the community members who have been experiencing health concerns in recent years. Later in this chapter you will read about Mr. Harper's case, how the environment is impacting his health, and how climate change is potentially exacerbating both.

On July 3, 2023, the previous global high temperature record was broken as the Earth's surface averaged 62.6°F. That record was shattered the following day when the planet reached 62.9°F. Then, on July 6, the record was again

broken with a global average temperature of 63.0°F (Herscher, 2023). These records came on the heels of another record making the headlines: June 2023 was the hottest June worldwide since recording began, with the global surface temperature soaring 1.89°F above the 20th-century average (NOAA National Centers for Environmental Information, 2023). Our planet's environment is changing at a historically unprecedented rate. The impact of this warming on earth's environment—and consequently, human health—cannot be overstated.

The field of environmental health studies the impact of the natural and built environment on human health. As a branch of public health, environmental health aims to prevent or reduce disease, disability, and death by reducing exposure to and risk of hazardous agents, promoting behavioral change, and advancing science and policies. Environmental health brings the importance of public health into focus. Although medical advances are important to individual care, unprecedented gains in public health have doubled life expectancy in the United States since 1880 (Our World in Data, n.d.). These achievements include improved sanitation, nutrition, safe drinking water and food supply, vaccines, and antibiotics. Notably, sanitation, water, and lead poisoning, three of the most significant public health achievements in human history, are integral to environmental health. This chapter provides an overview of environmental health and then discusses nursing practice and responsibilities in relation to it.

14.1 Understanding Environmental Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 14.1.1 Discuss how the environment and human health are linked.
- 14.1.2 Describe the principles and frameworks used in environmental health.
- 14.1.3 Explain Nightingale's environmental theory and its ongoing impact on nursing.

Nearly one-fourth of the worldwide burden of disease could be avoided by creating healthier environments (World Health Organization [WHO], 2023a). The conditions for a healthy environment include clean air, a stable climate, sufficient water, sanitation, safe chemical usage, radiation protection, healthy and safe workplaces, sound agricultural practices, healthy communities and built environments, and preserved nature (WHO, 2023a). Healthy People 2030 includes environmental health, considered a social determinant, as an objective. However, environmental hazards and their impact are not equally distributed, with some communities, such as those with lower-income residents or BIPOC populations, shouldering a disproportionate burden. As discussed in Structural Racism and Systemic Inequities, such communities are more likely to be located in areas with high levels of pollution and hazards, often resulting from discriminatory practices in land use, zoning, and the siting of industrial facilities and waste. Furthermore, these communities may lack or have limited access to resources and political influence to advocate for a healthier environment or mitigate the impact of hazards, leading to an increased risk for numerous adverse health outcomes, including respiratory illnesses, cancer, neurological disorders, and developmental delays.

Nurses are critical for promoting and protecting public health, and knowledge about environmental health is essential to provide optimal, targeted care to populations and individuals. Nurses can identify, prevent, and address environmental health issues, which is particularly important given the increasing impact of environmental hazards on human health.

Linking the Environment and Human Health

Environmental health profoundly influences human health through an intricate relationship and various pathways that shape the well-being of individuals and communities. Industrialized society irresponsibly releases vast amounts of pollutants and toxic waste into the biosphere, alters landscapes, and disrupts global climate, resulting in serious degradation of the Earth's ecosystems. The consequences of such actions eventually impact human populations' health and well-being. Air quality, for example, directly affects respiratory health, with exposure to pollutants such as ozone aggravating respiratory illnesses like asthma and COPD. Similarly, water quality is of paramount importance; contaminated water elevates the risk of ingesting harmful chemicals such as lead or the transmission of waterborne diseases. Food production and nutrition depend on the health of soil, water, and air. Food safety is also dependent on environmental health, as contamination during production, processing, and distribution can lead to outbreaks of foodborne illnesses such as salmonellosis. Waste management and sanitation systems are critical to protecting the environment and our health from contamination and diseases such as cholera (CDC, 2022d). Inequities compound the issue, with vulnerable populations disproportionately bearing the burden of

environmental hazards due to factors such as proximity to industrial sites.

Climate change, discussed in detail in Environmental Exposure and Health Outcomes, introduces another layer of complexity into the relationship between the environment and human health. More frequent extreme weather events amplify risks to both the environment and human health. For instance, extreme heat events exacerbate respiratory and cardiovascular disorders and can lead to wildfires, which further degrade air quality. Warmer temperatures expand the range of disease-carrying vectors, thereby increasing the prevalence of vector-borne diseases such as Lyme disease, caused by Lyme borreliosis carried by ticks and transmitted directly to humans. Environmental disasters can impact our mental health, leading to disorders such as anxiety, PTSD, and depression.

Addressing environmental health requires collaboration among health providers, scientists, engineers, urban planners, public health professionals, organizations and businesses, and agencies across all levels of government. Improving air quality and air quality standards, ensuring the safety and quality of water sources, providing sufficient waste management and sanitation, promoting green spaces, and adopting sustainable practices are required to safeguard both the environment and the health of populations.

NATIONAL CENTER FOR ENVIRONMENTAL HEALTH

Access multimedia content (http://openstax.org/books/population-health/pages/14-1-understanding-environmental-health)
This video from the Centers for Disease Control and Prevention (CDC) discusses the role the environment plays in maintaining an individual's overall health and well-being.

Watch the video, and then respond to the following questions.

1. What are some of the ways that the National Center for Environmental Health is working to improve public health safety?
2. What are some of the potential health risks associated with environmental exposures?
3. How can nurses address population health challenges associated with environmental factors such as monitoring chemical exposures and preventing childhood lead poisoning?

Frameworks and Principles of Environmental Health

Environmental health aims to prevent illness, death, and disability by reducing exposure to harmful environmental conditions and promoting behavior change. Human behaviors and interactions with the environment have a significant impact on health, including air and water quality, food safety, management of hazardous waste, and efforts to address climate change. Nurses must be equipped to recognize and manage environmental risks that impact their clients and communities, as these risks can significantly affect health outcomes. The section below discusses frameworks and principles to provide guidelines and strategies for addressing environmental health in clients and populations.

HOW DOES ENVIRONMENT AFFECT OUR HEALTH?

Access multimedia content (http://openstax.org/books/population-health/pages/14-1-understanding-environmental-health)
In this video, Mighty Fine of the American Public Health Association explores how the environment affects our health.

Watch the video, and then respond to the following questions.

1. How did environmental health initiatives in the early 20th century contribute to reducing infectious diseases in the United States? What were some of the key strategies used?
2. The video highlights the concept of environmental justice. How do environmental hazards disproportionately affect BIPOC populations, low-income areas, and underserved groups?
3. How does the involvement of local governments differ from national efforts in promoting environmental health? What challenges might local governments face when implementing initiatives to improve

environmental health within their communities?

Nightingale's Environmental Theory

Florence Nightingale was an early advocate for public health and hygiene, her environmental strategy aimed to improve living conditions and prevent the spread of diseases. Nightingale's **Environmental Theory** viewed nursing as the process of using the client's environment to assist them in their recovery (Gilbert, 2020). Observing that many wounded soldiers were dying from preventable diseases during the Crimean War (1853–1856), Nightingale realized that the unsanitary conditions in military hospitals contributed to the high mortality rate. To address this issue, she developed an environmental strategy that focused on fresh air, clean water, sanitation, hygiene, and light (Gilbert, 2020).

Although less well known as a statistician today, Nightingale was the first woman inducted into the renowned Royal Statistical Society. During the Crimean War, she painstakingly collected and analyzed data on the causes of death and mortality rates of soldiers. To effectively communicate her findings, Nightingale developed innovative visualization methods, including the coxcomb, a graphic representation similar to a pie chart, to demonstrate that a substantial proportion of soldier deaths were due to disease, exposure, and infection rather than injuries from battle and were therefore preventable (Figure 14.2).

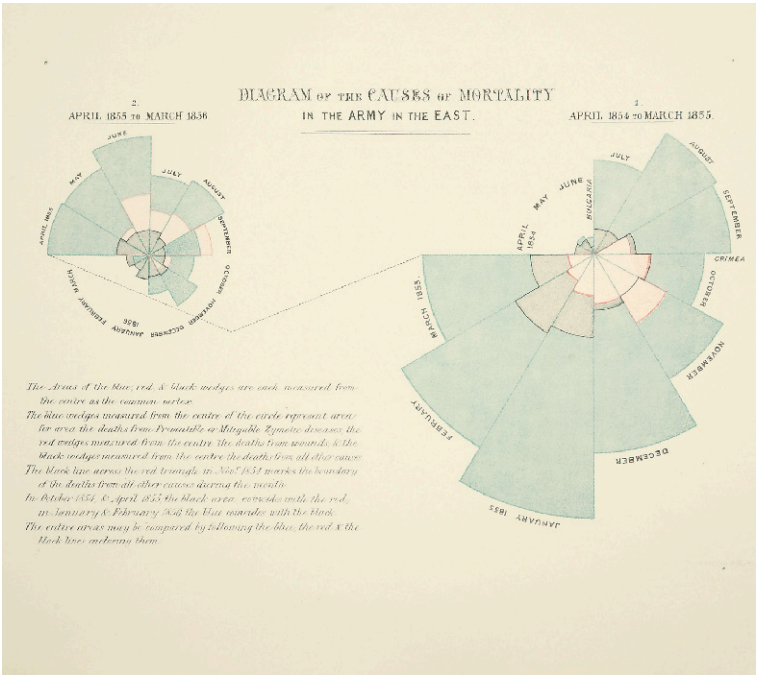


FIGURE 14.2 Florence Nightingale created infographics like this coxcomb to easily communicate complex data. (credit: "Diagram of the causes of mortality in the Army in the East" by National Library of Medicine, Public Domain)

THEORY IN ACTION

What Would Florence Nightingale Make of Big Data?

Access multimedia content (http://openstax.org/books/population-health/pages/14-1-understanding-environmental-health)

This animation discusses the significance of Nightingale's work on statistics and its lasting impact.

Watch the video, and then respond to the following questions.

1. How did Nightingale's background in statistics and her meticulous, data-driven approach impact health care during the Crimean War and after?
2. Nightingale's work laid the foundation for modern practices like maintaining cleanliness in health care facilities. In what other ways do you think her principles and methodologies continue to influence modern

health care?

3. Nightingale's ability to transform data into easily understandable infographics played a significant role in conveying her message to policymakers and the public. How important do you think data visualization is in communicating complex health care information today? How might effective data visualization lead to better health care outcomes?

One Health

The One Health approach (CDC, 2022f) emphasizes the interconnectedness of human health, animal health, and the environment. With growing populations and expanded habitats, closer contact between humans and animals increases disease transmission, while environmental changes and global movements amplify disease spread. These shifts have led to the rise of both known and emerging zoonotic diseases, impacting millions of humans and animals each year. Common One Health issues include emerging zoonotic diseases, antimicrobial resistance, vector-borne diseases, food safety, environmental contamination, and the impacts of climate change. For example, vector-borne diseases such as Lyme, transmitted from ticks to humans, now occur in a wider area as ticks adapt to environmental change. As a result, populations that were previously not at risk of Lyme disease now face increased likelihood of exposure. The CDC uses One Health to monitor and manage public health threats and plan effective public health interventions in collaboration with partners. Ultimately, One Health aims to prevent zoonotic outbreaks, enhance food and water safety and security, mitigate antimicrobial resistance, safeguard global health, and promote biodiversity and conservation. Learn more about One Health in action here (https://openstax.org/r/cdgovon).

Upstream vs. Downstream

As introduced in What Is Population Health?, upstream and downstream approaches to health and health care represent different points in the chain of events leading to particular positive or negative health outcomes. Upstream approaches focus on the beginning of the causal pathway by addressing underlying factors, such as the social, economic, and environmental determinants that contribute to health outcomes. Upstream factors are often difficult to see or measure, but they can have a profound impact on human health. For example, programs to reduce poverty or promote sustainable agriculture, campaigns to raise awareness or educate the public on a particular topic, and environmental regulations to reduce pollution are upstream interventions aimed at improving overall health outcomes.

Conversely, downstream factors occur later in the chain of events. These factors are more specific and often relate to individual behaviors and health care delivery systems. Downstream factors are more visible and easier to measure, but they are often the result of upstream factors. Examples of downstream factors in environmental health include individual lifestyle choices and access to medical and preventive care. Interventions using a downstream approach focus on mitigating the immediate effects of health problems, such as screenings, medications, procedures, and individual behavior change programs. While downstream interventions are necessary for treating existing health problems, they often fail to address their root causes and may not lead to long-term improvements in population health. For example, one upstream factor that contributes to air pollution is the burning of fossil fuels, which releases harmful pollutants into the air that cause respiratory problems, heart disease, and cancer. A recent study found that nitrogen oxide, particulate matter, and ozone from U.S. oil and gas production alone resulted in 7,500 additional deaths, 410,000 incidents of asthma attacks, and 2,200 fresh cases of childhood asthma throughout the United States in the year 2016 (Buonocore et al., 2023). An upstream approach would be to control air pollution and reduce exposure. On the other hand, downstream consequences of air pollution include asthma attacks, heart attacks, and premature deaths. Downstream interventions would focus on mitigating the impact of the air pollution by providing treatment for respiratory issues or distributing masks for outdoor use during times when air quality is poor. Addressing upstream factors helps to prevent environmental problems from occurring; addressing downstream factors mitigates the impact of environmental problems.

Environmental Justice

Environmental justice refers to the fair and equitable treatment and meaningful engagement of every individual, irrespective of race, color, national origin, or socioeconomic status, in the development, execution, and enforcement of environmental laws and policies (U.S. Department of Energy, 2023). The goals of environmental justice are to offer equal protection from hazards and to ensure equal involvement of communities in making decisions about policies and regulations that impact them. Advocates of environmental justice aim to ameliorate the

disproportionate burden of environmental hazards encountered by certain marginalized and vulnerable populations (Environmental Protection Agency [EPA], 2023j). Environmental justice connects environmental issues with broader social justice concerns, recognizing that environmental degradation often intersects with issues related to health inequities, housing, education, and economic opportunity. As such, advocates seek to foster sustainable and inclusive communities that prioritize the well-being and health of all residents. They work to raise awareness about these issues, mobilize affected communities, and promote policies and practices that prioritize environmental equity and fairness.

The concept of environmental justice emerged in the 1970s in response to environmental issues often faced by low-income communities, BIPOC communities, and other marginalized groups (Lynch et al., 2021). These communities carry a greater burden, with increased exposure to pollution, toxic substances, hazardous waste, and other environmental hazards due to structural factors such as discriminatory land-use policies, socioeconomic disparities, and lack of political power. Examples of environmental justice issues include siting of polluting industries in low-income neighborhoods, lack of access to clean and safe drinking water in certain communities, and unequal enforcement of environmental regulations. For more on these issues, see Structural Racism and Systemic Inequities.

The movement gained momentum in the 1990s, with the term officially recognized in the Presidential Executive Order 12898 in 1994, directing federal agencies to address environmental justice issues in their programs and policies (EPA, 2023a). In 2021, President Biden issued an executive order to initiate Justice40 (https://openstax.org/r/whitehouse), an environmental justice initiative aiming to address environmental and climate issues while prioritizing equity and justice for disadvantaged communities. The initiative, based on the principle that communities that have been disproportionately harmed by pollution and climate change should be first in line to benefit from the transition to a clean energy economy, commits to investing 40 percent of the overall benefits from federal climate and clean energy programs into these communities (EPA, 2023m). Justice40 represents a significant step toward integrating environmental justice principles into federal climate and environmental policies, with a focus on rectifying historical and systemic disparities in environmental protection and climate action (Exec. Order No. 14008, 2021).

Environmental Health Sciences

Exposure assessment, toxicology, epidemiology, and risk assessment are interconnected approaches that play a vital role in the field of public health and environmental health:

Exposure assessment is a subfield that measures, characterizes, and models the frequency, magnitude, and contact duration of agents with an exposed population. Exposure assessments also evaluate the effectiveness of interventions and provide health professionals with information about the source, routes, and areas of uncertainty to help determine a course of action (CDC, 2022b).

Toxicology examines how harmful natural substances (toxins) or harmful artificial substances (toxicants) affect living organisms. The primary goal of toxicology is to assess the potential risks associated with exposure to various chemicals, including drugs, industrial products and by-products, environmental pollutants, pesticides, minerals, and metals. Toxicologists examine how these substances enter the body; how they are distributed, metabolized, and eliminated; and how they affect both organs and systems. The Agency for Toxic Substances and Disease Registry (ATSDR) develops toxicological profiles for hazardous materials, ranked by frequency, toxicity, and likelihood of human exposure. These "Tox Profiles" are extensively researched and peer reviewed. Nurses can access the current list of 275 substances at the ATSDR's Substance Priority List (https://openstax.org/r/atsdr).

Environmental epidemiology focuses on the links between environmental exposures and human health outcomes. Environmental epidemiologists identify potential environmental health hazards, quantify risk, and explore how different environmental factors, such as air and water pollution, chemicals, radiation, and climate change, impact health. The findings are used to inform public health policy, protect communities from risk, and develop interventions aimed at reducing exposures and improving population health.

Biomonitoring is a scientific methodology used to assess the presence and concentration of specific substances, such as chemicals and pollutants, in living organisms. Samples of blood, urine, saliva, hair, nails, and more may be utilized. Biomonitoring examines the extent of an individual's or population's exposure to environmental agents and uses this data to monitor the accumulation and impact of substances over time, identify potential health risks,

inform regulations, and develop targeted interventions. The CDC runs a national biomonitoring program that measures the presence of over 400 chemicals at over 500 laboratories, and the agency has made numerous significant advances in improving population health, including the reduction of exposure to secondhand smoke and lead (CDC, 2022a).

Environmental burden is how public health professionals quantify and compare the impact of environmental risks on a population's health. Climate change, air, noise, and water pollution are examples of environmental burdens because they have detrimental effects on the ecosystem and human health. This burden can manifest in a variety of ways, including increased rates of illness, disability, and premature death as well as decreased quality of life and productivity. Health indicators such as mortality rates, morbidity rates, and disability-adjusted life years (DALYs) are used to measure the impact of environmental hazards on human health and help identify vulnerable populations at risk. Environmental burden considers the **cumulative impacts**, or the total harm to humans resulting from the combination and interaction of multiple factors such as pollution, socioeconomics, and preexisting conditions. For example, the impact of respiratory illness on an individual living in a community with elevated air pollution will be greater than that on an individual living in a community with clean air.

Bioaccumulation refers to the gradual accumulation of contaminants, such as heavy metals like mercury and lead, within the tissues of living organisms. This process occurs as organisms consume contaminants from their surrounding environment more rapidly than they are able to eliminate or metabolize them. Instead of being excreted, the substances become stored in the organism's body, leading to increased concentrations as the toxins accumulate. Over time, organisms higher up the food chain, such as humans, may consume food that contains these accumulated pollutants (EPA, 2021b).

A comprehensive approach is necessary to reduce environmental burden; approaches include addressing the underlying causes of environmental hazards, providing education to the public about hazards, and implementing policies to reduce exposure to environmental pollutants. The C/PHN assesses the reports and then works with regulatory agencies and industries to reduce emissions and waste, advocating for clean energy and transportation and supporting policies that protect vulnerable populations from environmental risks.

CASE REFLECTION

A Home Visit with a Client Who Has COPD

Read the scenario, and then respond to the questions that follow. This case scenario about Mr. Harper will evolve throughout the chapter.

Mr. Harper, a 68-year-old retired miner, has been experiencing increasing difficulty breathing. His health has deteriorated over the past year with two hospitalizations for chronic obstructive pulmonary disease (COPD) exacerbation and recurrent pneumonia. In addition to working in the mines for 44 years, Mr. Harper has a 20-pack/year history of tobacco use and lives alone in an old, damp, poorly ventilated house. His nurse, Regis, is visiting his home for the first time today.

Vital Signs		Physical Examination
Temperature:	99.1	• HEENT: Within normal limits. • Cardiovascular: Tachycardic, S1, S2 noted; Regular rhythm; No murmurs or rubs; No jugular vein distention; No edema, 2+ pulses in extremities. Capillary refill > 2 seconds. • Respiratory: Bilateral rhonchi and wheezing. Productive cough; thick yellow sputum. • GI: Abdomen soft, non-tender, non-distended; bowel sounds normal. • GU: Clear urine. • Neurological: Presents with occasional confusion. • Integumentary: Clean, intact, dry. Complaint of itchiness. Digital clubbing. Cyanosis noted in nail beds.
Blood pressure:	150/95	
Heart rate:	104	
Respiratory rate:	26	
Oxygen saturation:	92% on room air	

TABLE 14.1

TABLE 14.1

1. What signs and symptoms of COPD exacerbation and pneumonia does Mr. Harper present with?
2. Identify upstream and downstream factors that could be contributing to Mr. Harper's deteriorating health.
3. What immediate actions should Nurse Regis take while in Mr. Harper's home?

14.2 Environmental Exposure and Health Outcomes

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 14.2.1 Assess environmental hazards and threats to individuals, families, and populations.
- 14.2.2 Examine sources and types of environmental agents and how they affect health.
- 14.2.3 Discuss strategies to reduce environmental risks, exposures, and injury.
- 14.2.4 Explain why individuals, communities, and populations have a right to know about actual or potential environmental risks.

Exposure to hazards in the environment is a growing concern for individuals, families, and populations. **Environmental agents** are specific substances that can directly interact with, and potentially impact, the health of the environment and humans. Environmental agents can be categorized into biological, chemical, and physical. The sources of environmental agents are diverse, ranging from human activities to natural disasters and biological events. Environmental agents can create **environmental health hazards**, or conditions that have the potential to cause harm to the environment and humans. The impact of environmental hazards on health can be significant, with potential health outcomes ranging from minor symptoms to severe illnesses and even death. Therefore, it is essential to identify strategies to reduce environmental risks and exposure to injury. Communities and individuals can protect themselves by managing environmental hazards and maintaining safe food and water. Moreover, the right to know about actual or potential environmental risks is crucial for individuals, communities, and populations. This knowledge empowers them to take appropriate actions to protect themselves and their communities.

Environmental Hazards and Impact on Health

Environmental agents have the potential to create hazards by polluting the air we breathe, the water we drink, and the food we eat, affecting our quality of life and overall health. While some of these hazards, such as smoke emanating from stacks, are clearly visible, most are not. For example, small plastic fragments such as microplastics (MPs) and nanoplastics (NPs) are ubiquitous pollutants in water, air, and soil. NPs are more hazardous due to their extremely small size (<1000 nm), which allows them to escape water treatment processes and float long distances in both air and water, contaminating fresh water, oceans, air, and food (Yee et al., 2021). Furthermore, their size enables them to penetrate living tissues and cells more easily. These particles are generated for use in consumer products such as cosmetics, cleansers, and detergents (major sources) and through the degradation of plastics such as tires (Lai et al., 2022). Small plastic contaminants can transport pollutants, microorganisms, and pathogens on their surfaces, which can amplify their physiological and environmental effects (Trevisan et al., 2020). While understanding of the impact of small plastics on human health is only just beginning to emerge, toxicological studies indicate that NPs can cross the blood-brain, intestinal, and placental barriers (Lai et al., 2022).

Human activities are the primary drivers of environmental agents, and societal and lifestyle choices including urbanization, economic activity, recreational pursuits, and food habits play a role. The presence of these agents, or toxins, in the air, water, and land can have deleterious effects on human health across the lifespan. **Teratogens** such as secondhand smoke and alcohol consumption during pregnancy can cause defects in a developing embryo. Alcohol, tobacco, asbestos, and radon are **carcinogens**, or cancer-causing toxins. **Mutagens** such as radioactive substances found in nuclear waste and radon alter a person's DNA. The ingestion or handling of **neurotoxins** such as lead or mercury can lead to adverse effects on the nervous system. Finally, endocrine disruptors such as phthalates and bisphenol A (BPA) are found in many modern consumer products and can have a wide range of effects on the endocrine system, impacting human development and reproduction.

Physical agents include noise, temperature, vibrations, radiation, and lighting, which originate from different sources, including the **built environment** (human-made structures and surroundings) and industry. **Chemical agents** including heavy metals, pesticides, polychlorinated biphenyls (PCBs), chlorofluorocarbons (CFCs), endocrine-disrupting chemicals (EDCs), and sulfur dioxide (SO_2) are used in agriculture, industry, and the burning of

fossil fuels for transportation and electricity. **Biological agents** were the most significant environmental health hazard through much of human history and include molds, dust mites, cockroaches, pollen, bacteria, viruses, protozoa, parasitic worms, and pet dander, saliva, and waste.

Air Pollution

Air pollution is a serious environmental and public health issue that affects people of all ages and backgrounds but most especially the vulnerable, children, older adults, and those with respiratory disorders. Air pollution is caused by the release of harmful substances into the air, such as particulate matter, ozone, and nitrogen dioxide (Figure 14.3). These substances originate from a variety of sources such as factories, vehicles, and industrial plants. When these harmful substances are released, they mix with the air we breathe, potentially causing a range of health problems if inhaled. For example, particulate matter (PM), a mixture of solid particles and liquid droplets, can penetrate the respiratory system, irritating the lungs and exacerbating health conditions such as asthma and bronchitis. Long-term exposure to particulate matter has been associated with an increased risk of cardiovascular diseases, respiratory illnesses, and even premature death. Ozone, a common pollutant formed when volatile organic compounds (VOC) and nitrogen oxides (NOx) react to sunlight, can inflame and damage the lining of the lungs, exacerbating respiratory symptoms. Studies have linked ozone exposure to lower birth weights and decreased lung function in newborns, an increased risk of metabolic and cardiovascular disorders, and potentially lung cancer. Nitrogen dioxide (NO_2), produced during fossil fuel combustion, can enter the bloodstream, leading to an inflammatory response such as neuroinflammation; research has linked exposure to NO_2 to an increased risk for neurodegenerative diseases such as Parkinson's (Jo et al., 2021).

The Air Quality Index (AQI) is a system used to communicate information to the public about air pollution levels and any associated health impacts in a specific location. The EPA sets an AQI for five primary air pollutants including ground-level ozone, particulate matter, carbon monoxide (CO), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). The AQI is divided into six categories, each of which corresponds to a different level of health concern. These categories are color-coded for easy understanding, ranging from Good (Green) for air quality that is satisfactory and poses little or no risk to health to Hazardous (Maroon), which indicates a health warning where the entire population may be affected (Air Now, 2023).



FIGURE 14.3 Factories and industrial plants are one source of air pollution because they release particulate matter, ozone, nitrogen dioxide, and other harmful substances into the air, which mix with the air people breathe and potentially cause a range of health problems if inhaled. (credit: "Cloud factory" by Libelul/Flickr, CC BY 2.0)

Water Pollution

Water, like air, is necessary for life and essential for human health. Water pollution is a serious issue that impacts the health and safety of water bodies, putting both human well-being and the environment at risk. Industrial waste,

agricultural runoff, urbanization, sewage, and oil spills are some of the major contributors to water pollution. Factories release wastewater containing harmful chemicals and heavy metal into our waterways. Farms contribute to water pollution when fertilizers and pesticides wash into waterways, referred to as runoff. Agricultural runoff can have a devastating impact on water quality and the creatures that live in our waterways. Excess nutrients from fertilizers can lead to algal blooms, which choke the life out of aquatic ecosystems and create dead zones. Pesticides and herbicides used to protect crops can harm aquatic life. Prolonged exposure to pollutants like lead, arsenic, and mercury can have severe health implications, especially when they build up in the human body.

Lead, a toxic metal, poses a significant threat, even at low levels. Its persistence in the environment allows it to linger for extended periods. Rain from urban areas runs into storm drains, bringing pollutants from streets, parking lots, and roads into nearby streams and rivers. Oil spills can travel a significant distance, polluting a large area and devastating marine life. Drinking water can be a particular concern if contaminated with lead from sources such as lead pipes or plumbing fixtures; additionally, soil and groundwater contamination can also contribute to lead in drinking water. Lead exposure may lead to severe health problems, including developmental disabilities, learning disabilities, neurological damage, premature birth, low birth weight, seizures, and hearing loss (CDC, 2022d). Children are particularly vulnerable to the effects of lead poisoning; even at low levels, lead exposure can have far-reaching consequences to their health. Recognizing the dangers posed by lead, the Environmental Protection Agency (EPA) established a maximum contaminant level goal (MCLG) of zero for lead in drinking water (EPA, 2023a), meaning that the EPA considers any level of lead in drinking water to be unsafe.

Perfluoroalkyl and polyfluoroalkyl substances (PFAS), also known as "forever chemicals," are synthetic compounds characterized by a strong carbon-fluorine bond. This unique bond gives PFAS the ability to withstand heat and repel water and fats, leading to their extensive use in various manufacturing industries and consumer goods for more than 70 years (Wylie & Malits, 2022). PFAS are found in nonstick cookware, stain-resistant fabrics, fast-food packaging, personal care products, and more. Due to their resistance to breakdown, PFAS persist in the environment, contaminating water, air, and soil. Furthermore, PFAS are not easily metabolized and can remain in the body for years or even decades (Wylie & Malits, 2022). Due to the persistent nature of PFAS in the environment and their common routes of exposure through drinking and eating, nearly everyone has measurable levels of PFAS in their blood. Individuals working in occupations related to PFAS manufacturing and firefighters might experience higher exposure levels. Infants can also be exposed through transplacental transmission during pregnancy or through breast milk. PFAS exposure has been associated with various health effects, including obesity, elevated cholesterol, cancers, thyroid problems, colitis, learning difficulties, delayed puberty, and adverse pregnancy outcomes (Wylie & Malits, 2022). For example, a study of more than 10,000 individuals showed that those with higher PFAS exposure had a 40 percent greater likelihood of developing preeclampsia than those with lower exposures (Braun, 2023). The EPA proposed national standards in March 2023 to address concerns about PFAS in public drinking water supplies. The proposed standards aim to limit concentrations of six PFAS compounds in drinking water (Braun, 2023).

Finally, water pollution also affects human health indirectly by degrading the ecosystem. Polluted water harms aquatic life, disrupts food chains, and causes declines in fish populations that communities depend on for sustenance and livelihoods. The impact of water pollution is wide-ranging and can profoundly affect human health as well as that of the environment.

THE ROOTS OF HEALTH INEQUITIES

PFAS Contamination in Disadvantaged Communities

A recent report from the Government Accountability Office (GAO) examined the presence of PFAS in the drinking water systems of several states, including Illinois, Massachusetts, New Hampshire, New Jersey, Ohio, and Vermont. The overall findings indicated that out of the 5,300 water systems analyzed, approximately 29 percent of the population served by these systems had drinking water with PFAS levels that exceeded the safety standards set by the EPA (U. S. Government Accountability Office, 2022).

The authorities then investigated potential disparities related to PFAS contamination, focusing on large community water systems. The results showed that disadvantaged communities in New Jersey were more likely to have PFAS-contaminated drinking water compared to other communities (Suran, 2022).

CLIENT TEACHING GUIDELINES

Reducing PFAS Exposure

Nurses can educate clients on the following measures to reduce PFAS exposure:

- Replace old, chipped, or damaged nonstick cookware. When using nonstick cookware, use a low to medium heat setting.
- Limit intake of fast food, which often comes in PFAS-coated packaging.
- When possible, use filters that remove PFAS from drinking water.
- Vacuum frequently, especially for older carpeting.
- Limit intake of microwave food such as popcorn and foods in microwavable packaging.

Land Pollution

Soil pollution is a serious problem with potentially devastating consequences for both the environment and human health. It occurs when harmful substances contaminate soil through industrial processes, agricultural practices, improper waste disposal, and the use of hazardous chemicals. Common soil pollutants include heavy metals such as lead, mercury, cadmium, and arsenic as well as pesticides, herbicides, industrial chemicals, and petroleum products. These substances can persist in the soil for an extended period, making the problem long-lasting and challenging to remediate. For instance, improper waste disposal is a significant contributor to land pollution. When non-biodegradable waste materials like plastics are deposited in landfills or open areas without proper management, they can release toxic chemicals and contaminants into the soil. Industrial activities are another major cause of land pollution. Factories and manufacturing plants often release hazardous substances directly into the soil or air. Agricultural practices, while essential for food production, can also contribute to soil pollution. Chemical fertilizers, pesticides, and herbicides can accumulate in the soil, negatively impacting soil fertility and potentially seeping into water sources. Urbanization and construction projects further exacerbate land pollution. The clearing of land for buildings, roads, and infrastructure can cause soil erosion, deforestation, and habitat loss, disrupting the ecosystem's equilibrium. The consequences of land pollution are extensive. Contaminated soil can negatively affect plant growth, reduce agricultural yields, and harm wildlife, leading to a decline in biodiversity. For humans, polluted soil poses significant health risks in several ways. Crops grown in polluted soil can absorb toxins, contaminating food and potentially impacting health. Contaminated soil may release harmful substances such as particulate matter into the air or nearby water bodies, further spreading pollution and significantly impacting air quality and water safety.

Due to the dangers posed by contamination, the EPA administers programs to identify, evaluate, and potentially redevelop polluted sites. The Superfund program is a federal government initiative overseen and managed by the EPA. Superfund sites are locations where substantial hazardous substances have been released into the environment, posing risks to human health and the ecosystem. These sites are regulated by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund (EPA, 2023n), which provides the legal framework for the cleanup and remediation. The program aims to identify, prioritize, and assess sites as well as facilitate decontamination, often a multiphase process involving federal and state agencies, responsible parties, and the affected community. You can search for superfund sites in your community and elsewhere here (https://openstax.org/r/epagov). The EPA also administers a Brownfields program (EPA, 2023l). Brownfields are properties that are, or are suspected to be, contaminated by industrial or commercial activity. Caused by pollution from former businesses such as factories, gas stations, dry cleaners, landfills, and manufacturing facilities, brownfields may have hazardous agents in the soil, groundwater, or structures, posing a risk to both environmental and human health. Unlike Superfund sites, brownfields may not contain severe levels of contamination requiring immediate federal intervention but instead have potential for redevelopment or revitalization. The EPA estimates that there are approximately 450,000 brownfields sites in the United States.

Strategies to Reduce Risk

The Right to Know principle supports access to information held by public organizations and is based on the idea that transparency, openness, and accountability are critical to a healthy society and the protection of human rights. In 1986, the Emergency Planning and Community Right-to-Know Act (EPCRA) was passed to address concerns

about the safety and environmental hazards associated with the storage and handling of toxic chemicals. Concerns were sparked by the 1984 Bhopal disaster, in which an extremely toxic pesticide, methylisocyanate, leaked in the middle of the night into the city of Bhopal, India, killing and severely injuring thousands (Chatterjee, 2023). To reduce the likelihood of such a disaster in the United States, Congress imposed certain requirements for emergency planning and reporting of hazards and toxins. The provisions of the Community Right-to-Know initiative serve to enhance the public's awareness of, and access to, information on the presence, application, and release of chemicals at certain facilities. In 2018, the reporting requirements of EPCRA were revised by the America's Water Infrastructure Act (AWIA) to provide for notification of state agencies with data on reportable releases of chemicals into water sources (EPA, 2023a).

Reducing the risk of land, air, and water pollution begins with reducing hazardous agents and requires serious commitment on the part of individuals, businesses, communities, regulatory agencies, and governing bodies. Some general strategies include the following:

- Regulation and monitoring to ensure safety and compliance
- Legislation and enforcement to hold polluters accountable
- Incentives for businesses, communities, and individuals to adopt environmentally friendly practices
- Conversion to renewable sources of energy
- Investment in research and development of innovative technologies
- Raising awareness about the effects of the environmental hazards on health
- Reduce, reuse, recycle!

Table 14.2 presents community-level strategies to reduce the risk of land, air, and water pollution.

Type of Pollution	Strategies to Reduce Risk
Soil and land	• Proper waste management, including the safe disposal of hazardous materials • Contaminated site remediation and brownfield redevelopment, which may include chemical treatment and soil excavation • Sustainable agriculture and land use, including the adoption of farming practices that reduce reliance on harmful pesticides and fertilizers • Promoting green technologies such as bioremediation, which uses living organisms such as bacteria and fungi to naturally break down pollutants, or the use of green roofs
Air	• Policies that promote cleaner and renewable sources of energy, such as solar power • Regulation and reduction of emissions by industries, vehicles, and power plants • Updated, reliable systems of public transportation • Improved infrastructure for walking and cycling to reduce vehicle use • Air quality monitoring and alerts for unhealthy air • Reforestation and the development of urban green spaces to absorb pollutants and improve air quality
Water	• Protection of water sources from contamination through appropriate land use and water quality monitoring • Wastewater treatment and management, including upgraded facilities to ensure effective removal of hazardous agents • Stormwater management through retention ponds, rain gardens, and permeable pavement • Educate the community about proper disposal of hazardous materials that can enter the waterways, such as chemicals and medications

TABLE 14.2 Community-Level Strategies to Mitigate Soil, Air, and Water Pollution

CLIENT TEACHING GUIDELINES

Strategies for Reducing Risk and Improving Environmental Health

While the strategies in Table 14.2 are effective at the community level, individuals also play an important role in protecting the environment and their health. However, they are often unsure of what they can do to reduce their footprint and live more healthfully in the environment. Nurses can provide clients with the following individual strategies to reduce risk and improve environmental health:

- Compost organic matter to reduce improve soil quality and health
- Dispose of waste, including hazardous materials, medications, and electronics, according to local regulations
- Minimize the use of pesticides, herbicides, and fertilizers
- Purchase food from reputable sources and consider, if possible, organic options
- Support local cleanup and outreach efforts
- Limit use of plastics, especially those that are single use
- Ensure drinking water is from a safe and reliable source
- Avoid swimming or using water that appears polluted or is known to be polluted
- Avoid outdoor activities when air quality is poor

- Use rainwater harvesting, the collection of rainwater to reuse for non-drinking purposes
- Use public transportation, walk, or bicycle
- Reduce contaminants in the home through regular cleaning and maintenance
- Ensure the home is properly ventilated and reduce indoor pollutants such as tobacco smoke
- Use energy-efficient appliances when available
- Maintain personal vehicles to regulatory standards
- Advocate for policies that invest in, develop, and support green practices

14.3 Environmental Health Assessment

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 14.3.1 Discuss the methods of measuring pollutants in the environment.
- 14.3.2 Explain the steps in the risk assessment and risk-management processes.
- 14.3.3 Assess the environmental health of individuals, homes, and communities.

Environmental assessment is the process of identifying, evaluating, and mitigating environmental risks to human health. It involves measuring pollutants, determining and managing risks, and conducting individual, home, and community assessments.

Measuring Pollutants

Measuring pollutants is essential for assessing and managing environmental and public health risks (Figure 14.4) (Manisalidis et al., 2020). Accurate measurement helps identify sources of pollution, monitor trends, and guide regulatory action. While environmental scientists are responsible for measuring pollutants, the C/PHN's role is to ensure that measurements are taken, the results are communicated to the public, and any issues of concern are followed up on. The first step in measuring pollutants involves collecting samples. Different collection methods are used depending on the type of pollutant and the medium in which it is present (air, water, soil, etc.). Sampling may involve placing sensors, samplers, or collection devices in the target environment. Once samples are collected, various analytical techniques such as spectroscopy are deployed to determine the concentration of specific pollutants. For air pollutants, monitoring stations are set up in various locations to measure the concentration of gases and particulate matter. Instruments like gas analyzers, particle counters, and meteorological sensors help assess the levels of pollutants such as carbon monoxide, sulfur dioxide, nitrogen oxides, ozone, and particulate matter. Water pollutants are measured with optical sensors, ion-selective electrodes, and spectroscopy to determine the presence and concentration of contaminants like heavy metals and chemicals. Soil is assessed using chemical and spectral analysis, with samples collected from different depths to understand the distribution of pollutants in the land.



FIGURE 14.4 A team takes stream water samples in Los Padres National Forest in California. (credit: "Habitat Assessment" by Hazel Rodriguez/USFWS/Flickr, Public Domain)

Pollutants may also be measured indirectly through remote sensing techniques such as satellite imagery and aerial photography, which can be used to monitor larger areas and track pollution trends over time. These methods are also very useful for gauging changes in land use, deforestation, erosion, climate change, and other environmental factors that can contribute to pollution. Finally, climate modeling is used to predict and assess the impact of climate change, such as an increase in extreme weather that may lead to an increase in heat-related mortality.

In addition to providing data to assess and monitor the health of a population, measurements of hazardous agents play a significant role in protecting the community by supplying evidence for developing and enforcing environmental regulations.

Determining Risk and Risk Management

The EPA uses a four-step risk assessment to evaluate potential pollution and hazards, evaluate the likelihood of exposure-related health threats, and develop standards (EPA, 2023k). The first step, Hazard Identification, aims to identify potential negative outcomes that may result due to exposure to a specific agent. While multiple data points are involved in this analysis, the emphasis is on **toxicokinetics**, or the study of how chemicals are absorbed, metabolized, and eliminated, and **toxicodynamics**, which examines the impact of chemicals on the body and health.

The second step, Dose Response, aims to identify the ways that the amount of exposure (dose) relates to the probability and severity of negative health effects (response). The third step, Exposure Assessment, involves quantifying the extent, frequency, and length of human contact to an environmental agent or predicting the potential impact of future contact. Finally, Risk Characterization, the fourth step, aims to synthesize information from the first three steps to provide an overall understanding of the characteristics and occurrence of risks as well as indicate where uncertainties remain.

When the available evidence is uncertain or incomplete, a guiding concept is the **precautionary principle**, which directs decision makers to be proactive in safeguarding the environment and public health rather than waiting for conclusive evidence of harm. This principle shifts the burden of proof, or responsibility, to those advocating for a particular action, such as building a new power plant, to demonstrate that it will not cause harm to the environment or community. The principle can also lead to taking action to prevent harm, such as the decisions made by various governments at the start of the COVID-19 pandemic to institute public health measures such as mask wearing, lockdowns, and travel restrictions, among others. Since little was known about this novel coronavirus, early action without scientific certainty was deemed necessary to protect the health of the public. This is an example of the

precautionary principle in action.

Environmental Health Assessments

The link between human health and the environment underscores the need for systematic evaluations, which play a critical role in understanding population health. This section examines how environmental assessments inform nurses about the impact of the environment on the health of communities as well as individuals.

Individual Assessment

Individual environmental health assessments are essential tools for identifying, preventing, and educating individuals about environmental health concerns. These assessments aim to identify hazards, understand health implications, and mitigate risks. Individual environmental health assessments encompass a broad range of potential environmental exposures, including indoor agents, outdoor air pollution, water sources, exposure to pesticides or industrial waste, and the presence of radiation sources like radon. Factors such as the home and school or work environments, recreational activities, lifestyle, and personal health history are all considered. These assessments empower individuals to make informed decisions and assist nurses with individualizing care, creating action plans, and providing education, referrals, advocacy and follow-up.

In 2005, a team of nurses devised a framework, termed I PREPARE, as a tool for conducting individual environmental health assessments and developing a plan of action. I PREPARE is a mnemonic; each letter stands for a specific step in the assessment (Paranzino et al., 2005) as shown in Table 14.3. The Case Reflection that follows walks through an example of a nurse using I PREPARE to perform an individual environmental health assessment.

Explanation		Examples of Nursing Actions
I	Investigate potential exposures: This step involves asking questions to uncover potential sources of exposure to environmental hazards.	Ask if a client has ever felt sick after handling chemicals or toxic substances.
P	Present work: Inquire about the person's current occupation and any potential workplace hazards.	Ask the client to describe their current job, the industry they work in, and any hazardous substances that they handle.
R	Residence: Assess potential residential exposures.	Ask about the age and type of dwelling, their water source, and indoor hazards such as mold or mildew.
E	Environmental concerns: Encourage clients to discuss environmental concerns in their neighborhood.	Ask if they live near landfills, farms, or factories.
P	Past work: Inquire about past occupations or exposures that may have exposed the client to hazardous materials in the past.	Ask if they have ever worked on a farm or in a factory or used solvents or other chemicals.
A	Activities: Assess the client's activities that may have exposed them to environmental hazards.	Ask about hobbies, outdoor recreation, smoking, and diet.
R	Referrals and Resources: Provide information about relevant resources, referrals, or organizations that can help the individual address their environmental health concerns.	Provide information on government sites, such as the CDC, Agency for Toxic Substances & Disease Registry, or the Occupational Safety & Health Administration.
E	Educate: Share information about the client's potential environmental health risks and provide guidance on how to prevent or reduce exposure to protect their health.	If they may have been exposed to lead in their drinking water, provide information about testing and mitigation from local, state, and federal resources.

TABLE 14.3 The I PREPARE Mnemonic

TABLE 14.3 The I PREPARE Mnemonic

CASE REFLECTION

Performing an Individual Environmental Health Assessment

Read the scenario, and then respond to the questions that follow.

Kyra, a 35-year-old client, presents to the county clinic after experiencing persistent symptoms, including coughing, sneezing, and hoarseness, for several months. She's concerned that her symptoms might be related to the apartment she recently moved into. After reviewing her health history, Nurse Kyle uses the I PREPARE framework to perform an individual environmental health assessment.

I—Investigate Potential Exposures: Kyle asks Kyra if she has had any known exposure to pollutants at home, at work, or in the community. He asks if her symptoms improve or worsen when she is at home, at work, or outside. Kyra notes while she isn't sure what she's being exposed to, she usually feels worse in the morning.

P—Present Work: Kyle asks about Kyra's work environment. Kyra is a graphic designer who works 3 days a week in a well-ventilated office building downtown and works from home the remaining 2 days.

R—Residence: Kyle investigates potential exposures by asking about the age and upkeep of the apartment building, such as whether it's properly ventilated, if there have been any water leaks or mold issues, and if there are any pets or smokers in the home. She lives with her cat Mittens in an interior apartment on the first floor of an older building without air conditioning, but she does have a window in her kitchen. Kyra notes that the basement is used for utilities, such as laundry, and is poorly lit, unventilated, and damp.

E—Environmental Concerns: Kyle asks about industries, farms, and waste sites near Kyra's home or workplace. She states that there has been ongoing construction adjacent to her building that often creates a layer of dust and construction debris in the immediate surroundings.

P—Past Work: As a junior designer, Kyra worked for a small business in an old industrial warehouse. She doesn't know much about the history but states that they were not allowed to drink from the building's faucets and were directed to use the water cooler.

A—Activities: Kyra enjoys gardening on her small balcony but finds it increasingly challenging due to her symptoms, which she says worsen when the nearby construction is underway.

R—Referrals and Resources: As a nurse working in a community clinic, Kyle is well prepared to offer referrals and local resources. After confirming Kyra's insurance, he provides contact information for an allergy center covered by her plan and refers her for allergy testing.

E—Educate: Kyle works with Kyra to educate her about indoor and outdoor air quality, potential allergens, and actions she can take to make her environment and lifestyle healthier for now and the future.

1. If you were Nurse Kyle, what additional questions would you ask Kyra to further investigate her symptoms and potential sources of exposure?
2. From an environmental health perspective, what are some possible indoor environmental hazards that could be linked to Kyra's health issues? What about outdoors? How can these be mitigated?
3. Given Kyra's past work history in the warehouse and the directive to avoid tap water, what are some potential concerns in the warehouse space?
4. How might Kyra's gardening activity on her patio interact with the nearby construction? How might Kyra's activities be adapted to minimize her exposure to allergens and irritants?
5. What education should Nurse Kyle provide? What role does education play in preventing environmental health concerns such as Kyra's? How might this knowledge empower her to take proactive steps to improve her environment and overall health?

Home Assessment

What constitutes an environmentally healthy home? According to the National Center for Health Housing, a healthy

home is dry, clean, safe, ventilated, pest and contaminant free, regularly maintained, and has a comfortable temperature (National Center for Healthy Housing, 2023). Home health assessments are critical for promoting health equity by addressing disparities in housing quality. For example, programs to improve home indoor air quality are proven to reduce the incidence of asthma among BIPOC children and children residing in substandard housing (Martin et al., 2021). Furthermore, this intervention can improve the health of older adults with respiratory diseases.

Some individuals are more vulnerable to the effects of an environmentally unhealthy or unsafe home. Children, whose bodies and systems are still developing, are particularly prone to negative impacts from exposure to contaminants. Older adults, who may have preexisting health conditions, may have weaker immune systems, and may spend more time indoors, can be more susceptible to respiratory and other disorders. Pregnant people can be exposed to indoor pollutants that affect fetal development, such as secondhand smoke. Individuals with chronic conditions, such as immune or respiratory disorders, are at a higher risk of exacerbations. Individuals with limited mobility due to disability, age, or aging may spend more time indoors and have difficulty relocating to a safer environment. Table 14.4 presents some examples of possible hazards inside the home.

Type of Hazard	Potential Negative Health Effects
Biological Hazards	
Mold and fungi	• Produce compounds such as aldehydes • Can cause a stuffy nose, sore throat, coughing or wheezing, burning eyes, or skin rash • Can exacerbate asthma or cause severe allergic reactions • May cause lung infections in those who are immunocompromised or have chronic lung disease
Rodents (rats, mice)	• May cause and contribute to respiratory illnesses • Carry many diseases that can spread to people directly through contact with feces through handling or inhaling • Carry ticks, mites, or fleas that can act as vectors to spread diseases between rodents and people
Dust mites and cockroaches	• May cause runny nose, watery eyes, sneezing, cough, congestion, and facial pressure • Increased risk of asthma attacks in those who have asthma
Toxic Gases	
Radon	• Linked to increased cancer risk, poses a significant health threat in some areas where it is commonly found in basements
Carbon monoxide	• Binds to hemoglobin when inhaled, reduces the carrying capacity of oxygen, and can rapidly lead to severe outcomes including mental confusion, loss of consciousness, hypoxia, and death
Tobacco smoke	• May damage the heart and blood vessels and cause coronary heart disease, stroke, and lung cancer • Pregnant persons exposed to secondhand smoke during pregnancy are more likely to have newborns with lower birth weight. • Newborns exposed to secondhand tobacco smoke are more likely to die from sudden infant death syndrome (SIDS) than infants who are not exposed. • Causes increased risk for acute respiratory infections, middle ear disease, more frequent and severe asthma, respiratory symptoms, and slowed lung growth and can trigger asthma attacks in children

TABLE 14.4 Examples of Possible In-Home Health Hazards (See American Lung Association, 2023a, 2023b; CDC, 2022e; CDC, 2023; EPA, 2022a; U.S. Consumer Product Safety Commission, n.d.)

Type of Hazard	Potential Negative Health Effects
Toxic Substances	
Asbestos	• When inhaled, asbestos fibers cause increased risk of lung cancer, mesothelioma, and asbestosis.
Lead	• When ingested through water or peeling paint in older homes, lead exposure can lead to developmental delays and intellectual disabilities, behavioral problems, and stunted growth.
Pesticides	• Exposure may cause eye, nose, and throat irritation; damage to central nervous system and kidneys; and an increased risk of cancer. • Chronic exposure may damage the liver, kidneys, and endocrine and nervous systems.

TABLE 14.4 Examples of Possible In-Home Health Hazards (See American Lung Association, 2023a, 2023b; CDC, 2022e; CDC, 2023; EPA, 2022a; U.S. Consumer Product Safety Commission, n.d.)

Due to the disproportionate impact of the home environment on children, it's especially important for nurses to incorporate home environmental assessments when caring for the pediatric population. The Pediatric Environmental Home Assessment (https://openstax.org/r/hudgov) is an excellent tool for assessing the pediatric home environment, with a section for nursing observations. The National Center for Healthy Housing (https://openstax.org/r/nchhorg) provides numerous interventions and resources focused on safe and healthy housing for all, especially the millions of Americans living in substandard housing. The passage of the Inflation Reduction Act in 2023 included substantial funding to improve efficiency and resilience in affordable housing and significant funding for research, development, and implementation (Goodwin & Jacobs, 2022).

Community Assessment

Community health assessments provide information about the potential, and real, environmental risks faced by individuals living, working, or recreating in a particular community. The assessment should include environmental health risks using online tools to identify potential exposures and types and levels of pollution using Envirofacts (https://openstax.org/r/enviroepa). While this data is critical, it is only part of the community assessment. Nurses can conduct a windshield survey to visually identify potential environmental risks, such as the location of industries, hazardous waste, dumps, major thoroughfares, pests, the use of pesticides, air quality, and housing conditions (see Creating a Healthy Community and Appendix A). In addition to observing environmental risks, a windshield survey should note areas that promote health in the community, such as parks, open spaces, gardens, and outdoor recreational areas. The University of Maryland School of Nursing and Environmental Health Center has developed the following Environmental Health Community Assessment tool (https://openstax.org/r/envirnorg) focused on environmental health.

CASE REFLECTION

Performing Home and Community Health Assessments

This scenario continues to follow Mr. Harper from earlier in this chapter. Read the scenario, and then respond to the questions that follow.

While assessing Mr. Harper's home environment, Nurse Regis discovers that the house is adjacent to a mound of mining waste, raising concerns about the possible inhalation of particulate matter. Moreover, after hearing rumors that the community's water supply might be contaminated, Mr. Harper now uses water hauled by his neighbor from a nearby stream. Mr. Harper points out the stream to Nurse Regis, who notes that rocks are tinged with red, a sign of acid mine drainage. Upon further assessment, Nurse Regis finds that Mr. Harper's skin is reddened, dry, and itchy. When asked about the rash, Mr. Harper becomes irritable, stating he isn't sure when the rash began and is more upset that he's recently been having difficulty remembering things and easily becomes confused.

The nurse collaborates with a social worker from the county's department of aging to arrange for an aide to assist Mr. Harper twice weekly, helping to keep his home dry and free of dust and bringing him a supply of bottled water to use until the community's water is verified as safe.

1. What further assessments should the nurse conduct given the suspicion of hazardous exposures?
2. How should the nurse address Mr. Harper's exposure to heavy metals in his daily life?
3. As a public health nurse, what immediate actions would you take for Mr. Harper and his community? What resources would you use?

14.4 Climate Change and Population Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 14.4.1 Examine the impact of climate change on environmental and human health.
- 14.4.2 Identify strategies that aid in reducing the threats of climate change.
- 14.4.3 Define green and sustainable development and its implications for improving health outcomes.

On July 27, 2023, UN Secretary-General Antonio Guterras warned that "the era of global warming has ended, the era of global boiling has arrived. The air is unbreathable. The heat is unbearable. And the level of fossil fuel profits and climate inaction is unacceptable" (Guterras, 2023). July 2023 was likely the hottest month ever recorded in Earth's history (National Oceanic and Atmospheric Administration [NOAA], 2023a).

As noted at the beginning of the chapter, our planet is rapidly warming. Data indicate that since the pre-industrial era (1880–1900), the earth's average temperature has risen at least 1.1°Celsius (2.3°Fahrenheit), an extremely rapid rate of warming not previously seen during the entire existence of humanity (National Aeronautics and Space Administration, 2023). Most of this warming has occurred since 1975 (National Aeronautics and Space Administration, 2020). **Climate change** refers to profound and lasting shifts in Earth's climate patterns and conditions. It is an urgent issue with significant implications for both the environment and human health. The severity of climate change and associated extreme weather events have a substantial impact on the environment, including changes in weather patterns, rising sea levels, and loss of biodiversity. These changes also affect human health, morbidity, and mortality.

The warming of the Earth over the past century is undeniable. Extensive observations of air and ocean temperatures, sea levels, and snow and ice patterns confirm these shifts as unparalleled. Human activity is known to be the primary cause of this warming. While natural processes have historically shaped the planet's climate, the term *climate change* refers to the significant and rapid alterations occurring since the mid-20th century and largely attributed to human activities. The main driver of climate change is the escalating concentration of greenhouse gases in the atmosphere from human industrialization. Greenhouse gases, including carbon dioxide (CO_2) released through the burning of fossil fuels, methane (CH_4) released from livestock and landfills, nitrous oxide (N_2O) released from agriculture and industry, and chlorofluorocarbons (CFCs) used in industrial applications, contribute to the greenhouse effect by trapping heat in Earth's atmosphere, preventing it from escaping into space and causing temperatures to rise. The increase is attributed to human actions (EPA, 2023e). Data indicate that present global atmospheric carbon dioxide levels are unparalleled in the context of the past 800,000 years, even when accounting for natural fluctuations. Methane concentrations have more than doubled since pre-industrial times, and levels of N_2O reached an all-time high in 2021 (EPA, 2023c).

Between 1990 and 2019, the cumulative warming impact of human-generated greenhouse gases in Earth's atmosphere surged by 45 percent (Romanello et al., 2022). Notably, warming attributed just to CO_2 increased by 36 percent during this period (Figure 14.5). The largest source of emissions worldwide is transportation, followed by generation of electricity (EPA, 2023e). Pervasive and rapid shifts in the atmosphere, oceans, and biosphere will continue and likely worsen. Yet global greenhouse gas emissions continue to climb, reaching record levels (World Meteorological Organization, 2023) from unsustainable energy consumption, land use changes, lifestyles, and consumption patterns across regions, nations, and individuals. At the same time, oil and gas companies make record profits while their production strategies continue to harm the environment. A recent analysis of the production strategies of national oil and gas companies indicated that they would exceed their emissions allotment by 37 percent in 2030 and 111 percent in 2040 (Romanello et al., 2022), undermining efforts to create a

sustainable future that prioritizes planetary and human health. The health care sector is the second largest polluter of greenhouse gas emissions in the United States, accounting for 8.5 percent of all emissions and 7 percent of CO_2 emissions. The U.S. health care system generates approximately 25 percent of all global emissions (Wade, 2023).

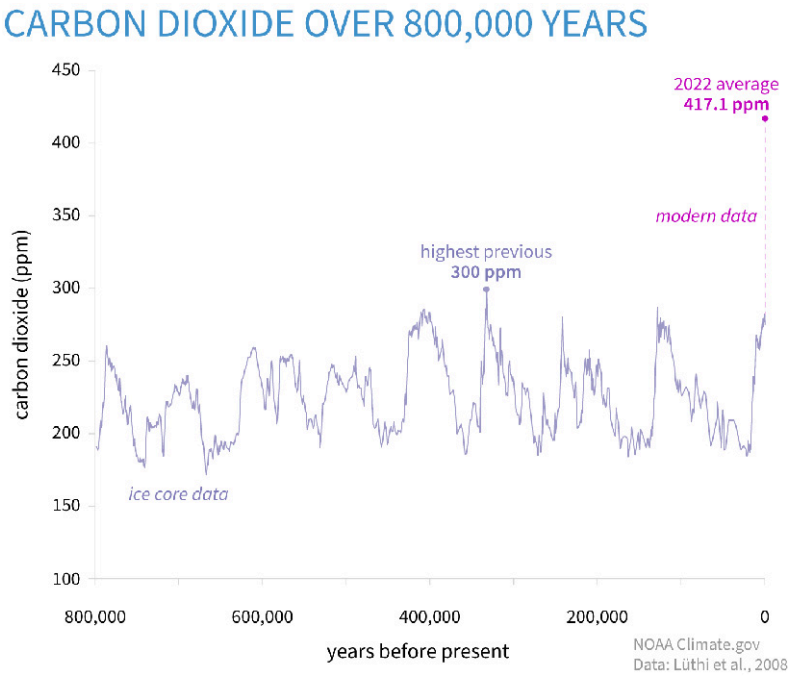


FIGURE 14.5 Atmospheric carbon dioxide has spiked over the last 800,000 years. (credit: "Carbon Dioxide Over 800,000 Years" by NOAA National Centers for Environmental Information, Public Domain)

Due to the extent of human-generated, irreversible change, our current geological time period is now referred to as the **Anthropocene**. The Anthropocene is already influencing weather and climate patterns and extremes worldwide.

The Impact of Climate Change

The impact of climate change has far-reaching consequences, many of which are not yet fully understood or known. Climate change is a global concern that affects multiple aspects of the environment, including air and water quality, land use and the food system, biodiversity, the health of ecosystems, alterations in the distribution and behaviors of plant and animal species, and the spread of infectious diseases. Urgent action is needed to mitigate the effects of climate change, as failure to respond will be costly in terms of disease, health care expenditure, and lost productivity (WHO, 2023b). Climate and ecological change impacts represent the greatest global health challenge, and society must be prepared to face the associated risks and challenges.

Oceanic Impact

Encompassing approximately 70 percent of the Earth's surface, oceans are vital to planetary health. Oceans absorb both carbon dioxide (CO_2) and heat, slowing the progression of atmospheric global warming. However, this absorption transforms the ocean's chemistry and temperature, leading to ocean acidification and sea level rise, shifting currents, and impacting marine life and biodiversity (EPA, 2023h). The oceans have absorbed about 28 percent of annual anthropogenic CO_2 emissions and captured approximately 90 percent of the planet's heat generated by greenhouse gases (EPA, 2023i). As a buffer, the oceans have offset climate impacts. However, as the ocean's acidity and temperatures rise, its capacity to absorb CO_2 from the atmosphere diminishes, potentially hampering its ability to moderate climate change. Furthermore, the increased absorption of heat leads to higher sea surface temperatures and sea levels (EPA, 2023i). Climate change–induced shifts in ocean temperatures and currents are altering global climate patterns. For instance, warmer waters fuel stronger tropical storms, resulting in flooding, property damage, environmental devastation, and loss of life. Coastal communities are particularly susceptible to the impacts of rising sea levels and intensified storm surges (EPA, 2023d).

Increasing carbon levels are making the oceans more acidic, posing challenges for corals and shellfish, hindering their ability to construct skeletons and shells, and potentially reshaping the oceanic ecosystems' biodiversity and

productivity (EPA, 2023h). However, the impacts of climate change on ocean ecosystems are most severe in tropical and polar regions. In the tropics, ocean warming is leading to widespread coral bleaching, outbreaks of coral diseases, and the destruction of coral reefs, which provide food and shelter for numerous marine organisms and support coastal communities (NOAA, 2023b). In the Arctic, sea ice is melting, reducing habitats for marine mammals (EPA, 2023b). In Antarctica, warming has led to the collapse and shrinkage of ice shelves, changing patterns of wildlife behavior and threatening the ecosystem (EPA, 2023g). Melting ice and altered ocean currents raise sea levels, impact ocean circulation, and influence global weather patterns (EPA, 2023i).

Climate change has caused significant damage and progressively irreversible losses in terrestrial, freshwater, coastal, and marine ecosystems. The scope and intensity of these impacts surpass previous estimates. Climate change has deteriorated ecosystem structure and function, seasonal timing, resilience, and adaptive capacity. Globally, around half of assessed species have shifted toward the poles or higher elevations (Dawson, 2022). Local species losses have been driven by intensified heat, mass mortality on land and in oceans, and the disappearance of kelp forests (Rogers-Bennett & Catton, 2019). Although more gradual, processes like ocean acidification and rising sea levels are linked to climate change (EPA, 2023i). Some losses, like species extinctions, are irreversible. Other impacts, such as retreating glaciers and changes in mountain and Arctic ecosystems due to thaw, are nearing irreversibility (Intergovernmental Panel on Climate Change, 2019). The impact of climate change through time can be visualized using this time machine (https://openstax.org/r/climate) developed by NASA.

HOW CLIMATE AFFECTS COMMUNITY HEALTH

Access multimedia content (http://openstax.org/books/population-health/pages/14-4-climate-change-and-population-health)

This video discusses some of the ways that climate and climate change impact the health of our communities and presents strategies for addressing these challenges.

Watch the video, and then respond to the following questions.

1. How do changing climate patterns impact vulnerable populations, and what specific health risks do these groups face in relation to extreme heat, storms and flooding, air quality, and pest-borne diseases?
2. In what ways can communities effectively prepare for the health risks associated with a changing climate?
3. The mental health toll of climate-related disasters often goes unnoticed. How can health care systems and communities address the psychological impact during and after extreme weather events?
4. How does the BRACE framework guide health departments in planning and executing coordinated responses to these challenges?

Extreme Weather

The impact of climate change is increasingly evident in the escalating intensity of tropical storms. The incidence of highly destructive U.S. hurricanes has tripled over the last century (Grinsted et al., 2019), with the prevalence of major hurricanes (Category 3 or above) in the Atlantic Ocean doubling since 1980 (Pfleiderer et al., 2022). The warming of ocean surfaces fuels hurricanes, intensifying evaporation and transferring heat from the oceans to the atmosphere. As a result, storms and hurricanes have stronger winds, heavier rainfall, and increased surges and flooding. Sea level rise amplifies this threat in coastal areas. Simultaneously, these hurricanes move more slowly, increasing the potential for damage. In 2018, Category 5 Hurricane Michael made landfall in Florida, causing catastrophic loss, with some communities completely destroyed (National Weather Service, 2019). Hurricane Maria, also Category 5, devastated the island of Puerto Rico in 2017 with widespread power outages, flooding, and landslides. The death toll was estimated at almost 3,000,000 (NOAA, 2017).

The frequency of heat waves has steadily risen, from an average of two per year in the 1960s to six per year in the 2020s, with the waves becoming more intense and lasting longer (EPA, 2023f). In July 2023, Phoenix, Arizona, endured a record of 31 days over 110 degrees (The Associated Press, 2023a). Extreme heat jeopardizes human health and labor efficiency in sectors with outdoor work such as agriculture and construction. Heat waves also impact environmental health, affecting animal and plant life and water availability and creating diminished capacity to support agricultural crops.

Extreme heat events are not limited to land. Marine heat waves (MHW), prolonged episodes of intense warming in

seas and oceans, are becoming increasingly common and more severe. MHWs are closely monitored as they intensify extreme weather, expedite polar ice melting, and affect the health of marine life. As noted earlier, Earth's oceans play a pivotal role in storing excess heat, absorbing approximately 90 percent of the planet's retained heat from greenhouse gases emitted since 1970 (National Aeronautics and Space Administration, 2023). MHWs can have significant consequences for marine ecosystems and fishing industries; higher temperatures stimulate the proliferation of harmful algal blooms, which are toxic to humans, birds, aquatic life, shellfish, and marine mammals and disrupt the migratory routes of marine life. In addition to MHWs, the surface of the ocean is warming; global surface temperatures reached and sustained record levels in July 2023, setting the record for the highest monthly increase above average in sea surface temperature (NOAA National Centers for Environmental Information, 2023c). On July 25, 2023, a heat record was likely broken when the water surface near Miami registered 38.4°C (101.1°Fahrenheit) (Kuta, 2023).

Prolonged elevated temperatures and drought are favorable conditions for the spread of wildfires, and the risks will likely amplify (Figure 14.6) (National Integrated Drought Information System, 2023). The summer of 2023 brought a record wildfire season to Canada; by August 22, even before the end of the season, over 37.8 million acres, more than double the previous record, had burned (Aljabs, 2023). Compare this to the one million acres that burned in the devastating 2018 California wildfires. As climate change progresses, wildfires are becoming more powerful, producing thick walls of smoke that are difficult to penetrate by tanker planes, with heat so intense that water drops can evaporate before reaching the ground. On August 8, 2023, a wildfire rapidly spread across Maui, Hawaii, destroying 2,170 acres including the historic town of Lahaina and thousands of residences and buildings (Hassan & Betts, 2023). The Lahaina fire killed 97 people, making it the fifth deadliest fire in U.S. history (Western Fire Chiefs Association, 2023).



FIGURE 14.6 Wildfire devastated the community of Lahaina in Maui, Hawaii, during August 2023. (credit: "Maui community of Lahaina burned by wildfire" by State Farm/Flickr, CC BY 2.0

Infectious Diseases

Alterations in the climate impact the prevalence, distribution, and transmission of diseases and the spread of infectious diseases. This relationship underscores the complex interaction between the environment, vectors, pathogens, and human health. Climate change can alter the distribution, seasonality, abundance, and life cycles of vectors that carry diseases such as Lyme, West Nile, Rocky Mountain spotted fever, malaria, plague, chikungunya, dengue, and Zika. Rising temperatures and heavier precipitation create favorable conditions for vectors, enabling them to spread and thrive in previously unaffected regions. Warmer temperatures expedite pathogen development within vectors, shortening their incubation periods and potentially escalating outbreaks. Higher water temperatures, shifting water salinity, and algal blooms cause waterborne diseases from *Vibrio* species such as cholera to become

more prevalent. Modeling of *Vibrio* along with sea surface temperatures indicates a 51–108 percent increase in cholera cases in the United States by the year 2090 (relative to 1995) (Sheahan et al., 2022). The number of days conducive to *Vibrio* transmission has more than doubled from 53 to 107 (Aizenman, 2019).

Food System

Climate change threatens the production, quality, stability, supply chains, pricing, and distribution of food. Global agricultural productivity has slowed over the past 50 years due to climate change. Shifts in rainfall amounts, intensified weather events, and increased heat predictably drive down crop yields. For example, compared to 1981, the 2021 growing season for corn was shorter by an average of 9.3 days and for rice, 1.7 days (Romanello et al., 2022). As farmers struggle to adapt to changing conditions, they utilize more herbicides and pesticides, driving up the costs both of fertilizers and of the final food product. Furthermore, elevated atmospheric CO_2 levels reduce the concentration of nitrogen in plants, resulting in lower protein content in crops such as barley and soy. Ocean warming and acidification have adversely affected shellfish and fisheries in some regions, threatening the marine food supply. Rising sea levels and water intrusion increase soil salinity, damaging crops and increasing dietary salt. Extreme weather events such as droughts and heat waves have left millions vulnerable to food insecurity, especially in Africa and Asia, with an estimated 720 million to 811 million people suffering from hunger globally (Romanello et al., 2022). The supply of land and marine animals is also expected to continue declining, further reducing food output and escalating food prices. These factors tend to trigger food insecurity and steer consumers away from nutritious food to more calorically dense but nutrient-poor food, leading to outcomes ranging from nutrient deficiencies to obesity.

ONE EARTH—ENVIRONMENTAL SHORT FILM

Access multimedia content (http://openstax.org/books/population-health/pages/14-4-climate-change-and-population-health)

This video tells a story about the impact of profit-driven behavior and its impact on the environment.

Watch the video, and then respond to the following questions.

1. Why do you think the video doesn't have dialogue or narration? What message is it conveying?
2. In the face of these challenges, how can societies balance the economic needs of the present with the long-term well-being of the planet and its ecosystems?
3. What strategies can be implemented to encourage positive behavioral change and mitigate the adverse effects depicted in the film?

Impact on Physical Health

In 2021, the editors of more than 200 medical journals published a statement urging world leaders to rapidly reduce greenhouse gas emissions to avoid irreversible catastrophic harm, referring to climate change as the "greatest threat" to public health (Atwoli et al., 2021). The authors note that the evidence is unquestionable that continued increases in temperature may lead to unstoppable environmental change and global instability.

Climate change and related extreme events will significantly amplify health issues and premature deaths around the world. Increasingly frequent and intensifying extreme events will adversely impact population health by affecting air, water, and food availability, quality, and safety; exacerbating existing medical conditions; straining critical public health infrastructure and health care systems; and disrupting food chains and supply.

Health consequences include both the exacerbation of existing health issues such as respiratory and cardiovascular diseases and new challenges such as emerging zoonoses and water- and foodborne illnesses (Figure 14.7). Furthermore, the climate crisis may multiply threats, creating an acute situation for treatable conditions. For example, a power outage caused by an extreme weather event may lead a stable client with COPD to have an exacerbation.

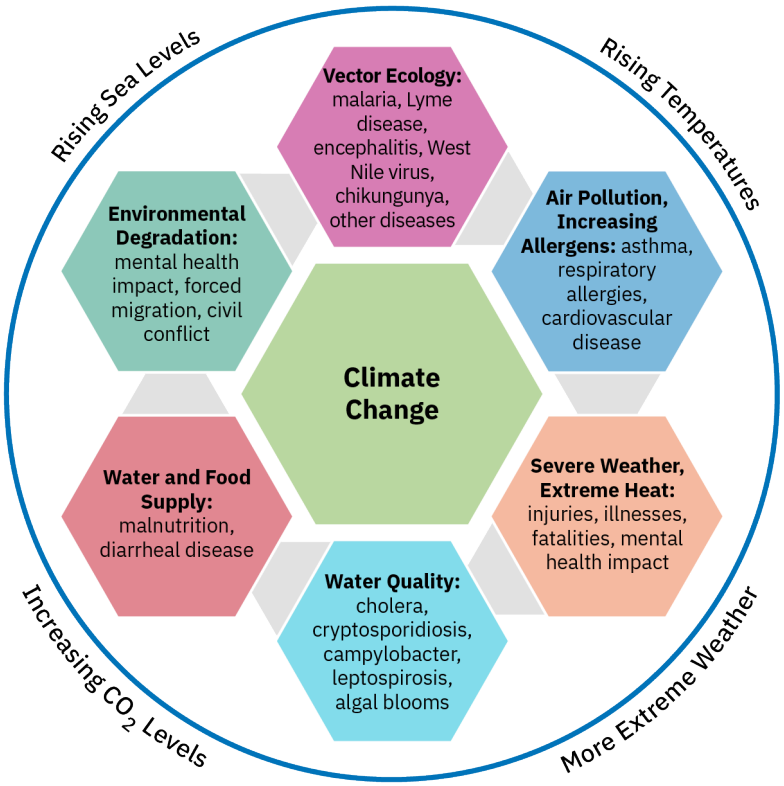


FIGURE 14.7 Climate change has a negative impact on health. (See CDC, 2022b; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Heat-related mortality among those over the age of 65 has increased by more than 50 percent over the last 20 years (Atwoli et al., 2021). Data reveals a clear connection between hot days and higher instances of heat-related illnesses like cardiovascular and respiratory issues (U.S. Global Change Research Program, 2018), renal failure, electrolyte imbalances, kidney problems, fetal health complications, and preterm births. In Phoenix, hospitalizations doubled for heat-related illnesses as well as injury, including burns sustained when falling onto pavement reaching a scorching 180 degrees.

Simultaneously, climate change worsens air pollution by elevating ground-level ozone and particulate matter, leading to worsened respiratory health, particularly for those with asthma and other respiratory diseases. Air quality is also impacted by wildfires; smoke is extremely hazardous to human health as it contains particulate matter, carbon monoxide, nitrogen oxides, and volatile organic compounds. Exposure to wildfire smoke leads to increased cases of respiratory and cardiovascular hospitalizations, emergency department visits, and chronic obstructive pulmonary disease. Communities thousands of miles from wildfires can experience unhealthy air quality from wildfire smoke, as notably occurred during the summer of 2023 when wildfire smoke from Canada spread deep into the United States, resulting in a 17 percent nationwide increase in visits to emergency rooms for asthma symptoms and a 46 percent increase in New York and New Jersey, jumping to 82 percent in New York State on the worst day of air quality, June 7 (The Associated Press, 2023b).

Diseases linked to food, water, animals, and insects, such as malaria, are projected to surge. Food supplies are shifting, with a decline in marine life and diminished agricultural output contributing to worldwide hunger. Even the food we eat is at risk for becoming less healthy, potentially leading to nutrient deficiencies.

Impact on Mental Health

Climate change has profound effects on mental health and psychological well-being. Temperature spikes, heat waves, and high humidity are linked to a decline in mental health outcomes and increased homicide and suicide rates (Romanello et al., 2022). Exposures to climate-related events can lead to a spectrum of mental health consequences, from minor stress to clinical disorders like anxiety, depression, post-traumatic stress, and even suicidal ideation. More indirectly, events like droughts disrupt agriculture, livelihoods, and resource availability.

Extreme weather events can lead to the loss of property, community, and life. Flooding or the threat of floods can trigger heightened levels of depression and anxiety, with these effects persisting for multiple years. Disasters disproportionately affect children, leading to mental health disorders due to forced displacement or the loss of family and community stability. After disasters and droughts, increased use of alcohol and tobacco becomes common. Climate change can intensify conflict and violence, further impacting mental health.

Individuals and communities may face multiple climate change effects. Exposure to multiple climate events can compound and accumulate over time, depleting both resilience and health (EPA, 2023k). Climate change amplifies existing health burdens; communities with degraded ecosystems and weak or outdated infrastructure face higher health risks. Vulnerable groups, including Indigenous communities, older adults, women, BIPOC populations, and individuals who identify as LGBTQIA+, disproportionately bear the consequences of climate change and are particularly susceptible to adverse mental health outcomes. Young people face heightened anxiety and depression and increased substance use. The impact of the climate crisis generated new concepts like **climate anxiety** (anxiety associated with climate change and its effects), **solastalgia** (nostalgia for ways of life lost due to climate change), **climate despair** (a sense of hopelessness and resignation regarding climate change), and **ecological grief** (an emotional response to the loss of parts of the ecosystem due to climate change) (Ostrander, 2022).

Impact on Vulnerable Populations

Globally, vulnerable populations bear a greater burden due to numerous potential factors such as insufficient community resources, suboptimal health care, and compromised infrastructure, including transportation, water, sanitation, and energy. Vulnerability to climate change depends on exposure to climate stressors, sensitivity to potential harm from the stressors, and adaptive capacity, or the ability to adjust, cope, and respond. Poverty heightens exposure and sensitivity, making those experiencing poverty more susceptible to harm while subsequently limiting adaptive capacity (U.S. Global Change Research Program, 2016).

Groups that experience more exposure to stressors may include those who are of lower socioeconomic status and unable to afford air conditioning or protective equipment such as masks, occupational groups such as outdoor workers who are exposed to extreme heat and insect-borne diseases, and those living in locations more prone to extreme climate change threats, such as droughts or hurricanes. Sensitivity is found among those who have preexisting health conditions such as asthma, pregnant people, and children, who are more sensitive to respiratory hazards. Adaptive ability may be limited in older adults, people with disabilities, and Indigenous peoples who rely on traditional ways for their lifestyles.

Strategies to Reduce Threats of Climate Change

Enormous investment is needed to reduce the threat and mitigate the impact of climate change (Atwoli et al., 2021). Since the environment and human health are inextricably linked, such investments will positively impact human health as well as planetary health. The CDC's agency-wide Climate and Health Task Force, established in 2021, aims to develop an integrative approach to climate and health in order to reduce the health impacts of climate change (CDC, 2022c). Health equity, environmental justice, and sustainability are central to the agency's mission and serve as a guiding strategy for addressing climate change. This section briefly describes strategies to reduce threats of climate change, including mitigation, adaptation, green infrastructure, and climate justice.

Mitigation and Adaptation

Efforts to address the impact of climate change can be divided into two categories: mitigation and adaptation. **Mitigation**, or the reduction of greenhouse gas emissions and pollutants to slow the rate of change, aims to prevent the planet from warming beyond critical thresholds. Mitigation strategies include investing in renewable and clean energy sources, improving energy efficiency, protecting forests and wetlands, supporting sustainable agricultural practices, improving public transportation, and implementing policies to reduce emissions, such as the Paris Agreement, a global treaty adopted in 2015 to restrict the increase in global temperatures to less than 2°C above pre-industrial levels (United Nations, 2015), a target deemed essential to prevent the most serious consequences of climate change. C-Roads (https://openstax.org/r/climateinteractive), an online virtual simulator, is a great tool to visualize the impact of potential climate change strategies such as the reduction of carbon emissions.

Adaptation, which refers to preparing for the projected impacts of climate change, focuses on minimizing the negative consequences of climate change while enhancing the ability of communities, populations, and systems to cope with its effects. Adaptation strategies include building more resilient infrastructure to withstand extreme

weather events, developing early warning systems for extreme events, implementing water management practices to address changing precipitation patterns, and creating plans for managing risks to public health. Adaptation focuses on minimizing negative consequences of climate change and enhancing the ability of communities, populations, and systems to cope with its effects. Both approaches are essential to address the multifaceted challenges of a changing climate and to ensure a sustainable future.

Green Infrastructure

Green infrastructure uses natural and seminatural elements to create sustainable spaces, especially in urban areas (Figure 14.8). Unlike traditional "gray" infrastructure of concrete and steel, green infrastructure utilizes nature, adding features like parks, community gardens, green roofs, rain gardens, permeable pavement, wetlands, and urban forests. There are several advantages to green infrastructure, including stormwater management, enhanced water and air quality, biodiversity preservation, temperature regulation, and the reduction of greenhouse gas emissions. Green spaces also counter the urban heat island effect, where cities become hotter due to human activity and surfaces absorbing heat. In addition to environmental benefits, green infrastructure boosts community health and cohesion, encouraging physical activity and social interaction. Mental health benefits include better sleep quality, increased social interaction, and exposure to nature.



FIGURE 14.8 Singapore's Supertrees mimic the function of natural trees, providing a vertical garden home, harnessing solar energy, and even collecting rainwater. (credit: "Supertrees" by Ray in Manila/Flickr, CC BY 2.0)

Climate Justice

Climate justice, an outgrowth of the environmental justice movement, focuses on addressing the unequal and disproportionate consequences arising from climate change. Vulnerable groups experience stark disparities on the impact of climate change, with older adults, children, economically disadvantaged communities, BIPOC individuals, and those with underlying health conditions carry a disproportionate burden. Living in communities that are more hazard prone, already polluted, or reliant on aging infrastructure increases the burden (Atwoli et al., 2021). For example, Indigenous populations in the United States face numerous health threats due to climate change. In Hawai'i and the Pacific Islands, saltwater contamination affects the water supply as sea levels rise. For those living in Alaska, thawing permafrost releases stored organic matter as well as hazardous agents once trapped in the frozen soil, destabilizing infrastructure and potentially contaminating water. Black, Hispanic, and Latino people comprise the majority of the outdoor workforce and are more likely to be impacted by air quality, extreme heat, and high humidity (EPA, 2021a). Older adults are a population of significant concern as their vulnerabilities are amplified by preexisting conditions, limited economic resources, and diminished social networks. The intersection of these multiple vulnerabilities further increases the susceptibility of older adults to climate-related impacts. The risk of injury and death during extreme weather events is pronounced among older adults as they may fear for their safety,

experience heat-related illnesses during power outages, experience disruptions to medical care, and have limited transportation options (EPA, 2022b).

Evaluating and addressing vulnerability must encompass an understanding of how these at-risk populations encounter disproportionate, multifaceted, and intricate health risks in response to the changing climate. Furthermore, all strategies, policies, and interventions to address climate change must put climate justice front and center to achieve environmental health equity.

COUNTDOWN ON HEALTH AND CLIMATE CHANGE

Access multimedia content (http://openstax.org/books/population-health/pages/14-4-climate-change-and-population-health)

The Lancet Countdown is considered one of the most comprehensive research studies on climate health. This video explains how the Lancet Countdown is tracking the health impacts of climate change.

Watch the video, and then respond to the following questions.

1. What specific health impacts does the Lancet Countdown report document?
2. What are the policy implications of the Lancet Countdown report? What actions can governments take to mitigate the health impacts of climate change?
3. What are the ethical implications of climate change? Do we have a moral obligation to protect future generations from the harms of climate change?

14.5 Nursing Practice and Responsibilities in Environmental Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 14.5.1 Describe strategies to integrate environmental health into nursing practice.
- 14.5.2 Identify strategies for nurses to address climate change.
- 14.5.3 Explain the role of the nurse as an advocate for environmental health and environmental justice.

Environmental health is an essential component of nursing practice as it has a significant impact on client and population health and outcomes. The integration of environmental health into nursing practice requires a series of strategic steps, including the use of a hierarchy of controls to prevent exposure to environmental contaminants. Let's look at the strategies for integrating environmental health into nursing practice, the importance of environmental justice, and the role of nurses as environmental advocates.

Nurses have a unique opportunity to be environmental advocates and leaders (Butterfield, 2021). Occupying an accepted role as educators and global citizens, nurses can leverage their public image and platform to promote environmental health through partnerships with colleagues in public health, medicine, behavioral health, schools, public offices, and the community (Butterfield, 2021).

Integrating Environmental Health into Nursing Practice

Nurses have a responsibility to address the impact of environmental burdens, discuss the effects of climate change, protect the rights of future generations, and advocate for vulnerable populations and communities (Lilienfeld et al., 2018). All nurses should strive to incorporate environmental science and translation into their research and practice (McCauley & Hayes, 2021). Nurses working with individuals should conduct environmental assessments along with collecting other client-specific information, considering the potential long-term impact of environmental exposures, including effects on physical health, mental health, and development.

Core Functions

Public health nurses perform the core functions of assessment, policy development, and assurance to serve as a framework for addressing environmental health issues and promoting healthier communities.

Assessment: Conduct comprehensive assessments to identify environmental health hazards and concerns in the community. Perform data collection and analysis to identify sources of pollution, assess exposure risks, and

evaluate the impact of the environment on health. Examples include performing environmental health assessments for individuals and communities.

Policy Development: Develop and advocate for policies and plans that promote a healthy environment. Collaborate with community partners and local governments to drive policies that positively impact the environment. Examples include advocating for clean water and policies that consider climate change.

Assurance: Monitor and evaluate the implementation and effectiveness of environmental policies and programs. Ensure action when hazards are identified or regulations violated. Examples include educating the community about contaminated water, ensuring that a safe alternative is provided, and advocating for infrastructure updates.

Prevention

Nurses have a pivotal role in safeguarding environmental health by implementing prevention interventions across the continuum of health care. It is critical to consider the upstream approach mentioned earlier in the chapter when developing interventions. For example, consider the community's potential hazards at each level of prevention. At the primary prevention level, nurses focus on promoting awareness, education, and advocacy to prevent environmental health risks before they occur. Secondary prevention encompasses early detection and intervention to mitigate risk and impact. Tertiary prevention focuses on minimizing the impact of already existing environmental health concerns by enhancing patient outcomes and facilitating recovery.

Primary Interventions:

- Provide education about the importance of environmental health and strategies for reducing risk and improving outcomes.
- Engage and empower communities to adopt healthy practices and policies that contribute to a cleaner environment, such as proper waste management and updating infrastructure.
- Advocate for policies to reduce air pollution and hazardous waste in the community.
- Advocate for policies to promote environmental protection, such as green building practices.

Secondary Interventions:

- Conduct regular environmental health assessments to identify individuals, groups, and communities at risk.
- Establish surveillance systems based on the community's potential hazards to monitor environmental health indicators, detect signs of issues, and intervene promptly.
- Screen for home hazards such as lead and mold.

Tertiary Interventions:

- Provide care and interventions to individuals affected by severe health consequences of environmental hazards.
- Develop emergency response plans specific to the community's hazards and needs to manage environmental disasters and extreme weather events.
- Engage in research to better understand the health impacts of various environmental hazards among clients.

Climate Change, Justice, and Advocacy

Nurses have distinctive strengths for addressing climate change. As the most trusted professionals in the United States, nurses are positioned to be powerful messengers for climate-related information. Nurses are trained communicators and often serve as the first point of contact for health and health care, providing an opportunity to incorporate environmental health assessments, climate change education, and interventions. Nurses working in the community are closely connected to vulnerable populations and can address issues of climate equity and justice (Figure 14.9) (Butterfield et al., 2021). Becoming involved in a professional nursing organization promoting climate justice provides nurses with resources and a platform from which to make transformative changes (Alliance of Nurses for Healthy Environments, 2023).



FIGURE 14.9 Young people mobilize for climate justice. (credit: "Kids Want Climate Justice, Minnesota March For Science, St Paul" by Lorie Shaull/Flickr, CC BY 2.0)

Primary Interventions:

- Educate the community about the health risks of climate change (Lokmic-Tomkins et al., 2023).
- Encourage community engagement with climate change mitigation efforts, such as community gardens, recycling programs, and energy-efficient practices (Salvador Costa et al., 2023).
- Provide information on adaptive behaviors to increase resilience, such as staying hydrated during heat waves.
- Collaborate with local authorities to advocate for climate-resilient infrastructure such as renewable energy initiatives and developing clean, efficient, and adequate public transportation (Salvador Costa et al., 2023).
- Ensure that communities are prepared for extreme weather events by promoting the development of cooling centers, evacuation routes, and emergency shelters.
- Facilitate connections between community members and community partners to increase social cohesion and resilience.
- Integrate climate-focused education and patient-centered conversations into nursing practice (Lokmic-Tomkins et al., 2023).

Secondary Interventions:

- Conduct screenings to identify vulnerable populations within the community and develop strategies to protect their health during climate-related events.
- Ensure that community members receive timely information and advice on staying safe, such as staying indoors during extreme heat or using masks during poor air quality periods.
- Establish or ensure surveillance systems to monitor health outcomes associated with climate change (Lokmic-Tomkins et al., 2023).

Tertiary Interventions:

- Establish plans for providing health care services in the aftermath of climate-related events.
- Ensure that health care facilities are equipped to manage crises triggered by extreme weather events and climate-related disasters (Salvador Costa et al., 2023).
- Train health care professionals to recognize and address health issues related to or exacerbated by climate change.
- Evaluate the effectiveness of interventions and policies aimed at mitigating and adapting to climate change health risks and recommend improvements based on findings.
- Work with communities to adapt to identified climate change risks and needs (Dion et al., 2022).

- Provide mental health support and referrals for those affected by the psychological stressors of climate-related events.

CASE REFLECTION

The Nurse's Role in Advocating for a Healthy Envirionment

Let's continue following Nurse Regis, who has been caring for Mr. Harper. Read the scenario, and then respond to the questions that follow.

Having established a link between Mr. Harper's deteriorating health and his environmental conditions, Nurse Regis decides to advocate for the wider community, arranging for the county to conduct a risk assessment, pollutant measurement, and environmental monitoring. Nurse Regis also initiates an educational intervention to inform community members about the potential health hazards in their environment and strategies to mitigate them. During the session, several neighbors express concern about the increasing amount of rain and runoff in the area, especially since the damp conditions have led to mold in several homes.

1. What is the nurse's role in advocating for a community facing environmental health issues? What specific steps and actions should be taken?
2. How might the precautionary principle impact decisions for this community?
3. What interprofessional collaborations can the nurse initiate to address the environmental health concerns in this community?
4. How might climate change continue to impact the health of Mr. Harper and his neighbors? What actions might be taken to mitigate the risks they face due to climate change?

Chapter Summary

14.1 Understanding Environmental Health

Environmental health aims to prevent illness, death, and disability by reducing exposure to harmful environmental conditions and promoting behavior change. Environmental health addresses primary and secondary causes of illnesses and injuries, encompassing topics such as air quality, water quality, food safety, hazardous waste management, and occupational health. Hazardous waste is dangerous or potentially harmful to human health or the environment and originates from sources including industry, health care facilities, and households. Environmental health professionals monitor air quality and work to reduce pollutants to protect human health. Vulnerable populations, such as children, older adults, and low-income communities, are at higher risk from environmental burdens, and creating healthier environments can prevent a significant portion of the worldwide burden of disease.

14.2 Environmental Exposure and Health Outcomes

Environmental hazards and exposure are a growing concern, with factors like temperature and pollution impacting health in individuals and populations. Accurate information and risk management models are crucial for understanding and addressing environmental risks and empowering individuals and communities to take action. Environmental hazards originate from various sources, including industrial emissions and human activities, and can have adverse effects on human and animal health.

14.3 Environmental Health Assessment

The health of our environment is a crucial aspect of our overall well-being. With the increasing awareness of environmental pollution, it is essential to identify ways to measure pollutants in our environment.

14.4 Climate Change and Population Health

Green and sustainable development aims to balance environmental sustainability with social and economic growth, addressing climate change impacts on the environment and human health. Ecosystem management and restoration play a crucial role in reducing greenhouse gas emissions, mitigating deforestation, and decreasing carbon dioxide levels in the atmosphere. Implementing green infrastructure and investing in energy-efficient cooling infrastructure and green spaces can help cities adapt to climate change, mitigate heat effects, and promote climate change adaptation.

14.5 Nursing Practice and Responsibilities in Environmental Health

Nurses play a crucial role in promoting and protecting public health. They need knowledge of environmental health to recognize and manage environmental risks that could impact their clients. Environmental health impacts client outcomes and health care workers' well-being, and integration requires strategic steps and a hierarchy of controls to prevent exposure to contaminants. Nurses promote environmental justice as advocates, leveraging their platform to address climate change's effects on public health and discussing the rights of future generations and vulnerable groups.

Key Terms

adaptation the process of adjusting or changing practices, infrastructure, and behaviors to minimize the negative effects of climate change by reducing vulnerabilities and enhancing resilience strategies to prepare for and cope with the projected impacts of climate change

Anthropocene current geological period representing the profound impact of human activities on Earth's ecosystems, driven by factors like industrialization, urbanization, deforestation, and fossil fuel consumption

bioaccumulation the gradual accumulation of contaminants, such as heavy metals like mercury and lead, within the tissues of living organisms.

biological agents significant environmental health hazards that include molds, dust mites, cockroaches, pollen, bacteria, viruses, protozoa, parasitic worms, and pet dander, saliva, and waste

biomonitoring process of measuring and assessing the concentration of specific biological markers, such as chemicals, toxins, or pollutants, in biological samples like blood, urine, or tissue to evaluate the extent of exposure to these substances

built environment the human-made surroundings where people live, work, and engage in recreation, including buildings, infrastructure, transportation systems, parks, and all other physical elements created by human design and construction

carcinogens cancer-causing agents

chemical agents chemicals like heavy metals,

pesticides, polychlorinated biphenyls (PCBs), chlorofluorocarbons (CFCs), endocrine-disrupting chemicals (EDCs), and sulfur dioxide (SO_2) used in agriculture, industry, and the burning of fossil fuels for transportation and electricity

climate anxiety anxiety associated with climate change and its effects on the planet's health, the ecosystem, and human life

climate change profound and lasting shifts in Earth's climate patterns and conditions; while natural processes have historically shaped the planet's climate, the term climate change refers to the significant and rapid alterations occurring since the mid-20th century and largely attributed to human activities

climate despair a response to the overwhelming and seemingly insurmountable challenges posed by climate change manifested by a deep sense of hopelessness and resignation

climate justice the fair and equitable treatment of all individuals and communities, particularly those disproportionately affected by the consequences of climate change and environmental degradation; involves addressing climate-related issues with a focus on ensuring that the burdens and benefits of climate action are distributed equitably

cumulative impacts the total harm to humans resulting from the combination and interaction of multiple factors such as pollution, socioeconomics, and preexisting conditions

ecological grief the emotions of loss experienced by individuals or communities due to profound changes in the ecosystem caused by climate change

environmental agents substances or elements present in the environment that can impact human health; can include infectious organisms, chemicals, radiation, noise, and diet

environmental burden the harm caused by environmental factors on human health and well-being, which includes damage, destruction, or impairment of natural resources

environmental epidemiology focuses on the links between environmental exposures and human health outcomes; environmental epidemiologists identify potential environmental health hazards, quantify risk, and explore how different environmental factors, such as air and water pollution, chemicals, radiation, and climate change, impact health

environmental health the branch of public health that aims to prevent illness, death, and disability by reducing exposure to harmful environmental conditions and promoting behavior change

environmental health hazards conditions or factors in the environment that pose a risk to human health; can be categorized into biological, chemical, and physical agents

environmental justice the fair and equitable treatment and meaningful engagement of every individual, irrespective of race, color, national origin, or socioeconomic status, in the development, execution, and enforcement of environmental laws and policies

Environmental Theory a theory developed by Florence Nightingale that focuses on the impact of the environment on nursing care; involves utilizing the client's environment to facilitate their recovery and recognizing the influence of external factors on health and well-being

exposure assessment the process of estimating, measuring, characterizing, and modeling the frequency, magnitude, and duration of contact between individuals or populations and potentially harmful agents or substances in the environment

mitigation strategies to reduce greenhouse gas emissions and pollutants to slow the rate of change; aims to prevent the planet from warming beyond critical thresholds

mutagens radioactive substances found in nuclear waste and radon that alter a person's DNA

neurotoxins substances that can lead to adverse effects on the nervous system

particulate matter a mixture of solid particles and liquid droplets; can penetrate the respiratory system, irritating the lungs and exacerbating health conditions such as asthma and bronchitis; long-term exposure to particulate matter has been associated with an increased risk of cardiovascular diseases, respiratory illnesses, and even premature death

physical agents environmental conditions such as noise, temperature, vibrations, and lighting that can have an adverse impact on the quality of the environment and affect work performance

precautionary principle directs decision makers to be proactive in safeguarding the environment and public health rather than waiting for conclusive evidence of harm; shifts the burden of proof, or responsibility, to those advocating for a particular action, such as building a new power plant, to demonstrate that it will not cause harm to the environment or community

solastalgia psychological distress and sadness experienced by individuals when they witness the negative transformation of their home environment due to environmental changes such as climate

change, deforestation, or industrial development; a nostalgia for the loss of traditional lifeways or those of one's childhood

teratogens substances that can cause defects in a developing embryo

toxicodynamics examines the impact of chemicals on the body and health

toxicokinetics the study of how chemicals are absorbed, metabolized, and eliminated

toxicology a scientific discipline that examines how artificial or natural hazards can cause undesirable effects in living organisms

Review Questions

1. What is the primary goal of integrating environmental health into nursing practice?
   a. Improving health care infrastructure
   b. Enhancing patient satisfaction
   c. Promoting environmental justice
   d. Reducing health care costs

2. Which action will the public health team take during the Exposure Assessment stage of the EPA's four-step risk assessment following a train derailment resulting in a toxic chemical spill?
   a. Identifying potential negative outcomes due to exposure to the toxic chemicals
   b. Identifying how the amount of exposure relates to the severity of negative health outcomes
   c. Quantifying the extent, frequency, and length of contact of the community with the toxic chemicals
   d. Determining how the toxic chemicals are absorbed, metabolized, and eliminated from the body

3. Which statement describes the actions of a nurse who follows Nightingale's Environmental Theory?
   a. Identifying strategies to reduce climate change
   b. Encouraging the use of public transportation
   c. Promoting environmental justice for all people
   d. Using the client's environment to assist in recovery

4. Which action by the nurse is an example of engaging in environmental justice?
   a. Using the environment to assist in client recovery
   b. Encouraging communities to engage in composting
   c. Eliminating lead-based paint in public housing
   d. Educating the community on proper disposal of hazardous materials

5. Which data is the nurse examining when assessing the presence of certain chemicals in the blood and urine samples from a community?
   a. Toxicology data
   b. Biomonitoring data
   c. Exposure assessments
   d. Environmental burden

6. The nurse is performing an environmental assessment in an apartment building where many people have reported burning eyes, skin rash, stuffy nose, and sore throat. Which type of hazard does the nurse anticipate is present in the apartment building?
   a. Radon
   b. Mice
   c. Mold
   d. Lead

7. Which strategy should the nurse include in a community education program about improving environmental health?
   a. Composting organic matter
   b. Disposing of electronics with household trash
   c. Using rainwater harvesting for drinking water

d. Keeping windows tightly shut

8. A community nurse is educating the community about mitigation strategies to address climate change. Which strategy would the nurse teach to the community?
   a. Implementing early warning systems for extreme temperatures
   b. Improving public transportation
   c. Changing building codes to withstand hurricanes
   d. Distributing masks for high-pollution days

9. Which environmental health activity would the nurse perform while engaged in the core public health function of assurance?
   a. Educating the community about the need to boil contaminated drinking water
   b. Collecting data about health issues related to contaminated drinking water
   c. Developing polices to regulate the discharge of pollutants into the waterways
   d. Assessing measures to reduce exposure to contaminated water

10. Which intervention by the nurse is an example of a tertiary prevention strategy to improve environmental health?
   a. Conducting risk assessments for environmental contaminants
   b. Developing emergency response plans for environmental hazards
   c. Performing regular community environmental health assessments
   d. Implementing pollution prevention strategies

CHAPTER 15

Health Promotion and Disease Prevention Strategies



FIGURE 15.1 Immunizations, such as the influenza vaccine, seen here, are one way public health nurses contribute to health promotion and disease prevention. (credit: modification of work by Brandon Clifton/CDC, Public Domain)

CHAPTER OUTLINE

15.1 Defining Health Promotion and Disease Prevention
15.2 Health Promotion and Disease Prevention Interventions
15.3 Theories and Models
15.4 Barriers and Opportunities for Health Promotion and Disease Prevention

INTRODUCTION A county health department provides community health screenings in a pharmacy parking lot. A nurse asks 25-year-old Deanna if her 148/88 mm Hg blood pressure reading is usual for her. Deanna doesn't know, but she says that her grandparents and parents all have high blood pressure. The nurse questions Deanna about any recent headaches, weight gain, swelling in her hands or feet, or visual changes. Deanna denies experiencing any of these. The nurse describes the genetic and behavioral risk factors for high blood pressure as well as potential complications with high blood pressure, such as strokes. The nurse also explains to Deanna that high blood pressure can be reduced with certain healthy behaviors, such as limiting sodium intake and engaging in regular physical activity, and the two discuss an infographic illustrating these and other healthy behaviors. The nurse also provides Deanna with a dated card that indicates Deanna's blood pressure measurement and encourages Deanna to make an appointment with her primary health care provider. Deanna says she'll do so, as she doesn't want to have a chronic illness at such a young age.

If not for the community health screening, Deanna may not have discovered that she has a health problem that she needs to address. Unidentified, and therefore untreated, health conditions can lead to bigger issues. According to

the U.S. Department of Health and Human Services (USDHHS) (2022), about 11 million Americans do not know their blood pressure is elevated and, therefore, are not receiving any treatment to control it. This chapter will discuss ways that health promotion and disease prevention can positively impact individual and population health outcomes. It will describe the role of the nurse in performing health promotion and disease prevention.

15.1 Defining Health Promotion and Disease Prevention

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 15.1.1 Define health promotion.
- 15.1.2 Define disease prevention.
- 15.1.3 Differentiate between health promotion and disease prevention.

The terms *health promotion* and *disease prevention* are often used together to describe a mechanism for improving health outcomes. Although the U.S. Department of Health and Human Services (n.d.-a) Healthy People 2030 initiative states that "promoting health and well-being and preventing disease are linked efforts that encompass physical, mental, and social health dimensions" (para. 6), health promotion and disease prevention are two individual processes. Though their functions overlap, they are separate and distinct entities.

A Closer Look at Health Promotion

Organizations define health promotion in different ways. The Ottawa Charter for Health Promotion, described in detail later in this chapter, offers the most widely accepted description of health promotion:

Health promotion is the process of empowering people to increase control over, and to improve, their health (World Health Organization [WHO], 1986). This must involve addressing physical, mental, and social well-being. In order to accomplish health promotion, an individual or group must be able to identify and realize goals related to health, satisfy needs, and change or cope with the environment. Health, according to the WHO (1986), should be seen not as the objective of living but instead as a resource for everyday life. Clearly, health promotion is a responsibility of the health sector. Sectors are critical, distinct parts of society. We must view health promotion as not just the responsibility of the health sector but as an obligation of multiple sectors, such as the environmental, educational, and technological sectors as well as others (WHO, 1986, para. 1).

The process of health promotion includes activities for individuals, the community at large, and populations at increased risk of negative health outcomes. Health promotion is empowering for individuals and communities, and it can be used in both active and passive ways. For instance, adding fluoride to public drinking water is a passive form of health promotion at the community level. Brushing teeth and getting regular dental assessments are active forms of health promotion at the individual level.

Health Promotion Behaviors

Health promotion behaviors aim to improve the well-being, mental health, and quality of life of individuals and communities (Walker et al., 1995; see Table 15.1). There are six dimensions of health promotion behaviors that describe certain behaviors by which a person engages with their health. These dimensions empower (or not) a person's control over and improvement of their health.

Dimensions	Definition	Individual-Level Example	Community-Level Example
Responsibility	An active sense of accountability for one's well-being; incorporates attention to one's health, educating oneself about health, and using informed consumerism when seeking professional assistance	A client asks their provider for information about a prescribed medication, including side effects and interactions	North Carolina's Community Health Coalition (2023) connects leaders and practitioners in medicine, education, mental health, faith organizations, law, finance, the military, and social advocacy to achieve the goal of health equity for all.
Physical Activity	Regular participation in light, moderate, and/or vigorous activity, either specifically for the purpose of fitness and health or incidentally as part of daily life	A person chooses to take the stairs rather than the elevator	LIFE: Living well through Intergenerational Fitness and Exercise (Rural Health Information Hub, 2022) combines exercise and video games to encourage fun and safe physical fitness among older adults in rural areas.
Nutrition	The informed selection and consumption of foods essential for sustenance, health, and well-being, including a healthy diet as recommended by the U.S. Department of Agriculture (USDA)	A shopper examines a nutrition label on a pre-packaged meal prior to making a purchase	Meals on Wheels America (2021) visits seniors to deliver nutritious meals and perform safety checks, supporting seniors' independence and dignity.
Interpersonal Relations	Communicating to achieve a sense of intimacy and closeness within meaningful relationships with others; includes the sharing of thoughts and feelings via verbal and nonverbal messages	Two friends meet to share experiences they had throughout the previous week, including the highs and lows of everyday life	The National Health Education Standards in the United States specifically include interpersonal communication as an essential element of effective health education in grades K–12 (Centers for Disease Control and Prevention [CDC], 2019b).

TABLE 15.1 Six Dimensions of Health Promotion Behaviors (See Walker et al., 1995.)

Dimensions	Definition	Individual-Level Example	Community-Level Example
Spiritual Growth	Creating inner resources through the following: *Transcending*: Opens one to the possibility of creation and change, connecting with their most balanced self and feeling inner peace *Connecting*: A feeling of harmony and wholeness within the universe *Developing*: One maximizes their potential for wellness; can occur through searches for meaning, finding a sense of purpose, or working toward life goals	A college student practices daily meditation	Austin Public Health (2023) offers Walking with Faith, in which members of all ages increase their physical activity, spiritual growth, and cultural awareness as they take virtual tours through various countries.
Stress Management	Identification and mobilization of both psychological and physiological resources to control or reduce tension	The CEO of a large company takes 15 minutes each morning to practice mindfulness meditation	Thrive! is a comprehensive University of Michigan (2023) stress management and prevention program that aims to foster employees' psychological well-being by energizing the work climate, enhancing relationships, and maximizing personal strengths.

TABLE 15.1 Six Dimensions of Health Promotion Behaviors (See Walker et al., 1995.)

Nurses' Role in Health Promotion

As mentioned earlier, health promotion is often an **intersectoral** endeavor (WHO, 2023a)—that is, one that involves several sectors of society and that can occur within or outside the health care sector. Actions taken by health, education, housing, and local government sectors collaborating to enhance population health use an intersectoral approach (Oxford Reference, 2023). Because nurses can serve in a variety of roles in interprofessional practice, including care provider, educator, consultant, and advocate, they are in a unique position to contribute to intersectoral collaboration. Health promotion can involve the following:

- Assisting a client in developing personal health promotion behavior skills (individual)
- Assisting the community in strengthening actions to achieve better health (community)
- Creating supportive environments within society (population or public as a whole)
- Advocating for the adoption of public health policies (population or public as a whole)

Throughout the health promotion process, as nurses assist clients in developing personal health promotion behavior skills, they serve as care providers and educators. Assessment data may indicate the need to develop a client's personal health promotion behaviors. The nurse assumes the role of educator during the implementation stage. Effective education for change requires the nurse to have a good grasp of evidence-based practice and other scientific knowledge as well as educational theory, the teaching-learning process, and models specifically related to health behavior change (see Theories and Models). The nurse must support individual, and therefore social,

development by educating, informing, and improving clients' life skills (WHO, 2023a). When a client is informed and knowledgeable, they have the ability to make choices that can positively influence their health and their environment (WHO, 2023a). The nurse educates the client about their current situation and provides anticipatory guidance to help them meet and cope with health challenges as they move through the stages of the lifespan (WHO, 2023a). The role of the nurse as an educator is one of the most critical roles in health promotion. The nurse may also need to serve as educator in order to create supportive environments for health.

The nurse serves as consultant and advocate by performing community health promotion activities. Such activities strengthen clients' actions to achieve better health, resulting in environments that support better health (Iriarte-Roteta et al., 2020). A community is complex, frequently changing, and made up of interconnecting parts from which health cannot be separated. Planners can seek input from a public health nurse to understand the health and illness experiences of the community and implement beneficial changes for community health (American Public Health Association [APHA], 2022). For instance, a city council may request input from a public health nurse prior to installing a new splash park for children.

Nurses have a responsibility to advocate for access to health care, health promotion, disease prevention, and any other health-related issues. A variety of professional groups, including the American Nurses Association (ANA, 2015), the American Association of Colleges of Nursing (2021), and the International Council of Nurses (2021), support the nurse's role as policy advocate. According to the ANA (n.d.), "Advocacy is a pillar of nursing."

A Closer Look at Disease Prevention

Disease prevention involves undertaking specific population- and individual-based interventions geared toward decreasing the burden of both communicable and noncommunicable diseases and their associated risk factors (WHO Regional Office for the Eastern Mediterranean, 2023). The hallmark of communicable diseases is that they spread from one person to another, from an animal to a person, or from a surface or a food to a person (CDC, 2022). They may include pandemics and infectious disease outbreaks, vaccine-preventable diseases, human immunodeficiency virus (HIV), viral hepatitis, sexually transmitted infections (STIs), tuberculosis (TB), and others (see Pandemics and Infectious Disease Outbreaks). The CDC (2022) broadly defines noncommunicable diseases as chronic conditions that do not result from an acute or infectious process. Chronic diseases meet one or both of the following criteria: a disease that lasts 1 year or longer and requires ongoing medical attention or a disease that limits the activities of daily living. Noncommunicable diseases include chronic diseases such as heart disease, cancer, diabetes, and others, as discussed in The Health of the Population.

Preventive Care

Another term for disease prevention is *preventive care*. According to the U.S. Centers for Medicare and Medicaid Services (CMS, n.d.), **preventive care** involves routine health care screenings, check-ups, immunizations, and counseling to prevent illness, disease, or health-related problems. Healthy People 2030: Preventive Care gives examples and connects preventive care to the Healthy People 2030 Objectives, as described in detail in Planning Health Promotion and Disease Prevention Interventions.

HEALTHY PEOPLE 2030

Preventive Care

Healthy People 2030 Preventive Care Objectives focus on a broad range of goals, such as increasing the number of community health organizations that offer prevention services (https://openstax.org/r/healthypeople); increasing screening for various forms of cancer, depression, newborn hearing, and osteoporosis; promoting vaccinations; and increasing health care access and quality. Other topics include heart disease and stroke, oral health, pregnancy and childbirth, sensory or communication disorders, and sexually transmitted infections.

Nurses' Role in Disease Prevention

Nurses play an enormous role in disease prevention. The nurse's role as educator is especially important to prevention, as nurses are qualified to provide information, training, and education about a range of health-related, preventive topics. When people are educated about health behaviors, they experience better health outcomes (Zajacova & Lawrence, 2018).

The National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP, 2023), a branch of the CDC, indicates that 6 in 10 Americans live with at least one chronic disease. These largely preventable diseases are the leading causes of death and disability in the United States. For instance, tobacco use can lead to several forms of cancer. Diets high in sodium can lead to hypertension. Preventive care such as smoking cessation and dietary education can help prevent these chronic diseases from occurring. Nurses can educate their clients about these and other disease-preventing behavior changes. Recall Deanna from the case scenario. The nurse at the community health screening helped to identify a potential chronic health problem for Deanna and then provided Deanna with information she could use to help prevent the development or progression of hypertension.

Nurses apply evidence-based practice to prevent disease (see Evidence-Based Decision-Making). Using evidence from correlational or causal studies to examine the relationships between diseases and behaviors or risks for these diseases, the U.S. Preventive Services Task Force (https://openstax.org/r/uspreventiv) (USPSTF, 2021) makes recommendations about the effectiveness of clinical primary and secondary preventive services based on available evidence. These recommendations inform effective nursing practice. For example, nurses may inform clients of USPSTF recommendations for colorectal cancer screenings in adults and older adults, tobacco smoking cessation in adults, and folic acid intake by pregnant persons to prevent neural tube defects.

The Distinction Between Health Promotion and Disease Prevention

While the functions of health promotion and disease prevention overlap and they share many goals, they have differences. Disease prevention focuses on specific efforts at reducing the development and severity of chronic diseases and other morbidities. While health promotion efforts can lead to such a reduction, health promotion can also occur unlinked to disease and simply be used to promote overall well-being. Some examples of health promotion that is unlinked to prevention of a specific disease may include the following:

- Physical activity campaigns to encourage regular exercise
- Nutrition education regarding balanced diets and portion control
- Stress management workshops to enhance mental well-being
- Workplace wellness programs to support employees' physical and mental health
- Smoking cessation programs to promote a smoke-free environment
- Mental health awareness campaigns to reduce stigma
- Environmental health initiatives to promote clean air, clean water, and safe living

Another distinction between health promotion and disease prevention relates to the strategies used for each. Health promotion interventions often involve education, awareness campaigns, behavior change programs, and community engagement to encourage healthy behaviors and create supportive environments for health. Disease prevention strategies more specifically target known risk factors or disease processes.

Another distinction often occurs at the conceptual level. In this case, health promotion is primarily concerned with the social determinants of health (SDOH) (WHO, 2023a). SDOH, as described in Social Determinants Affecting Health Outcomes, are "the conditions in the environments where people are born, live, learn, work, play, worship and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks" (USDHHS, n.d.-b). Therefore, various sectors typically collaborate with the health care sector to contribute to addressing SDOH. For example, the WHO Regional Office for the Eastern Mediterranean (2023) describes the collaboration of the governmental sector (policy development), the tobacco manufacturing sector, the education sector, and the health care sector in combating tobacco use. Disease prevention, in contrast, has primarily been concentrated within the health care sector (WHO Regional Office for the Eastern Mediterranean, 2023).

15.2 Health Promotion and Disease Prevention Interventions

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 15.2.1 Describe the five key action areas of health promotion as defined in the Ottawa Charter.
- 15.2.2 Describe the natural history of a disease to identify opportunities for prevention and control.
- 15.2.3 Apply the four levels of prevention (primordial, primary, secondary, and tertiary) to plan health promotion and disease prevention interventions.

Health promotion and disease prevention interventions can improve health throughout the lifespan. A nurse in most

care environments can perform health promotion and disease prevention interventions at the individual, community, and population levels.

Ottawa Charter for Health Promotion, 1986

The first International Conference on Health Promotion in Ottawa, Canada, in 1986 produced the **Ottawa Charter for Health Promotion** with the aim of achieving (or establishing) more effective health education strategies (WHO, 2023a). The Charter provided a common definition of health promotion, three core values, a framework of three strategies, and five areas of action. The nurse plays an important role in each.

HEALTH PROMOTION AND THE OTTAWA CHARTER

Access multimedia content (http://openstax.org/books/population-health/pages/15-2-health-promotion-and-disease-prevention-interventions)
This video describes the Ottawa Charter, a landmark document that was influential in providing guidance to the goals and concepts of health promotion for public and population health programs worldwide.

Watch the video, and then respond to the following questions:

1. Which action area in the Ottawa Charter links most closely to the SDOH we address today?
2. How can the nurse participate in each of the three strategies for health promotion identified by the Ottawa Charter?

The Natural History of Disease

To identify opportunities for prevention and control, it is first necessary to recognize the **natural history of disease**—that is, the progression of a disease process in an individual over time in the absence of treatment (Kisling et al., 2023). The five stages in the natural history of disease are underlying, susceptible, subclinical, clinical, and recovery/disability/death (see Table 15.2).

Stage	Definition	Example
Underlying	Risk factors may lead to the development of a disease. These can include social and environmental factors.	A client who is sedentary for over 8 hours daily is at risk for developing obesity. Therefore, the client is in the underlying stage of disease.
Susceptible	The state of being predisposed to, or sensitive to, developing a certain disease. Genetic, environmental, or a combination of both factors may contribute to this.	A client who lives in a region with very poor air quality is more susceptible to developing lung disease due to their environment.
Subclinical	An illness that stays below the surface of clinical detection and has no recognizable clinical findings. In infectious diseases, this is the incubation period, or the time from exposure to onset of disease symptoms. The clinical latency period is the period for which an infection is subclinical.	The results of routine bloodwork indicate a client has hypothyroidism. They have difficulty believing they have a thyroid problem because a relative with hypothyroidism gained weight, lost their hair, and experienced constipation. The client has none of these symptoms because they are in the subclinical stage of disease.
Clinical	A disease with recognizable clinical signs and symptoms.	The client's relative in the above (subclinical) example is in the clinical stage of hypothyroidism.
Recovery/ Disability/Death	Ultimately, a disease process ends in either recovery, disability, or death.	A client has an untreated HIV infection. This terminates with AIDS and death over a 10-year period.

TABLE 15.2 Five Stages in the Natural History of Disease (See Kisling et al., 2023.)

Recognition of each disease stage allows the nurse to identify the corresponding levels of prevention, which can then be applied to plan health promotion and disease prevention interventions.

Levels of Prevention

The five levels of prevention—primordial, primary, secondary, **tertiary**, and quaternary—described in Foundations of Public/Community Health correspond to the five stages of disease described in Table 15.2. Combined use of prevention strategies in a community at the macro-level (or upstream) can lead to the prevention of individual (micro-level, or downstream) complications of an exhibited disease (Kisling & Das, 2022). Table 15.3 identifies the levels of prevention as they correspond to the disease stages.

Levels of Prevention	Targeted Stage of Disease	Characteristics of Level of Prevention	Example of Level of Prevention
Primordial Prevention	Underlying	• Risk-factor reduction targeted to an entire population through focus on social and environmental conditions • Prevention of the development of risk factors for disease • Typically promoted through laws and policy (multi-sectoral) • Often aimed at children to decrease as much risk exposure as possible • Targets the underlying social conditions that promote disease onset	Improving an urban neighborhood's access to safe sidewalks to promote physical activity, which in turn will decrease risk factors for obesity, cardiovascular disease, and diabetes
Primary Prevention	Susceptible	• To prevent a disease from occurring • Target population is healthy individuals • Modifies existing risk factors to prevent the development of disease • Commonly involves activities to limit risk exposure or increase immunity of those at risk to prevent a disease from progressing in a susceptible individual to subclinical disease	Conducting an immunization campaign targeting school-aged children, with the goal of preventing the occurrence of vaccine-preventable diseases and promoting overall community health

TABLE 15.3 Five Levels of Prevention

Levels of Prevention	Targeted Stage of Disease	Characteristics of Level of Prevention	Example of Level of Prevention
Secondary Prevention	Subclinical	• Emphasizes early disease detection • Targets healthy-appearing individuals with subclinical forms of disease	Organizing a breast cancer screening program in collaboration with local community organizations, such as women's groups and senior centers, to raise awareness about the importance of screenings and encourage women to participate
Tertiary Prevention	• Clinical • Recovery, Disability, Death	• Targets both the clinical and outcomes stages of disease • Implemented in symptomatic individuals • Aims to reduce the severity of disease and any associated sequelae	Referring community members who live with chronic joint pain and limited mobility to a local rehabilitation center, which serves as a community hub for rehabilitation service activities that encourage community members to engage with one another, share experiences, and provide mutual support throughout their rehabilitation journey
Quaternary Prevention	N/A	• Targets clients with illness but without disease • Action taken to protect persons from medical interventions that are likely to cause more harm than good	Cautioning a population of clients who are complete post-hysterectomy against the continuing need for Pap smears

TABLE 15.3 Five Levels of Prevention



HEALTHY PEOPLE 2030

Vaccination

Healthy People 2030 vaccination objectives focus on increasing the proportion of children and adults who receive recommended vaccinations (https://openstax.org/r/healthypeoplevaccina) and maintain vaccination coverage. This objective category includes recommendations for reducing the number of children who do not get recommended vaccines by age 2 in order to reduce outbreaks of vaccine-preventable diseases like measles, pertussis, and mumps.

While primordial and primary prevention appear similar, the actual existence of risk factors is key to differentiating them. **Primordial prevention** prevents the development of risk factors for disease. **Primary prevention** modifies existing risk factors to prevent the development of disease (Weintraub et al., 2011). In addition, primordial prevention generally is intersectoral rather than limited to those within the health sector. The other levels of prevention, as noted previously, are mainly limited to the health sector. This information can be useful to the nurse in planning health promotion and disease prevention interventions.

Another important factor the nurse should consider when planning involves the approach to prevention. The **high-risk approach** targets prevention only to those who are identified to be at high risk for disease. This could be an individual or a group who is likely to have an increased incidence of a disease based on the presence of known risk factors for the disease or characteristics that are associated with a higher incidence of disease. Even when a group is involved, the high-risk approach focuses on the individual and their risk behaviors (Wilson et al., 2017). An

example of this approach would be a smoking cessation intervention for a client.

In contrast, a **population approach** implements prevention strategies across an entire population, many of whom are not necessarily at high risk (Rose, 1992). An example of a population approach to prevention would be a citywide anti-smoking law inside public buildings. In most cases, a population approach requires intersectoral involvement, while the high-risk approach is usually limited to the health sector. Both approaches can be used at the primary and **secondary prevention** levels (Platt et al., 2017). Sometimes a combination of both approaches is used to prevent disease.

AN OVERVIEW OF THE LEVELS OF DISEASE PREVENTION

Access multimedia content (http://openstax.org/books/population-health/pages/15-2-health-promotion-and-disease-prevention-interventions)

To address disease prevention as a whole, it is necessary to look at different levels of prevention as they apply to population health. The video "Levels of Disease Prevention and Approaches" reviews the definition of prevention, the process of prevention, the four levels of prevention, and two approaches to prevention.

Watch the video, and then respond to the following questions.

1. A client at risk for diabetes has their blood glucose and HgA1C levels tested periodically. Which level of prevention does this describe?
2. A public health nurse provides a presentation on healthy eating habits to first-grade children. Which level of prevention does this describe?

UNFOLDING CASE STUDY

Part A: Health Screening Follow-Up

Read the scenario, and then answer the questions that follow.

After receiving education from the nurse at the community health screening, Deanna decides to call and make an appointment with her primary provider to follow up on the high blood pressure reading. The receptionist at the provider's office provides Deanna with an appointment in a week, noting Deanna's reason for the visit is "BP 148/88 at community screening, denies other symptoms." The nurse in the provider's office reviews Deanna's file in preparation for the office visit. The nurse notes that Deanna has not seen the provider for a few years, has no high blood pressure readings documented in the past, and has a family history of hypertension.

1. Which stage of the natural history of disease should the nurse most likely suspect for Deanna?
   a. Susceptible
   b. Clinical
   c. Recovery
   d. Subclinical

2. If the provider diagnoses Deanna with hypertension and prescribes medication to treat the disease, which form of prevention will Deanna receive?
   a. Primary prevention
   b. Secondary prevention
   c. Tertiary prevention
   d. Primordial prevention

15.3 Theories and Models

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 15.3.1 Describe health promotion models at the systems level that can guide the identification, development, and implementation of interventions.
- 15.3.2 Describe health promotion models and theories at the intrapersonal level that can guide the identification, development, and implementation of interventions.
- 15.3.3 Describe health promotion models and theories at the interpersonal level that can guide the identification, development, and implementation of interventions.
- 15.3.4 Utilize a theory or model to guide the identification, development, and implementation of interventions.

Various theories and models support the practice of health promotion and disease prevention. These theoretical bases guide the identification, development, and implementation of interventions. In many cases, they explain how health behaviors are influenced or how to influence health behaviors (Rejeski & Fanning, 2019). As such, they are commonly called *behavior change theories* and are geared toward individual health behaviors. However, it is also necessary to look at health promotion from a systems level to encompass the holistic nature of health and all the factors that impact health, or the SDOH, as discussed previously.

Applying a Systems Perspective to Health Promotion

There are different levels of influence that can affect health behavior. Recall Deanna in the case scenario. After receiving the blood pressure reading at the community health screening, Deanna may delay going to her provider for an annual exam. At the intrapersonal (individual) level, Deanna may have been stressed about the blood pressure reading, which she knows may increase her blood pressure even more, so this inaction may be due to fears of what the exam will reveal. At the interpersonal level, Deanna's friends like to engage in regular exercise. This would be a positive factor, encouraging Deanna to participate in healthy activities. At the institutional level, scheduling an appointment may be difficult due to limited office hours. At the public policy level, Deanna may lack insurance coverage and have difficulty affording the appointment's cost. The outcome of the individual avoiding an annual exam and potentially negatively affecting their health may result from every level of influence.

Theories and Models at the Intrapersonal, Interpersonal, and Community Levels

This section examines theories and their applications at the individual (intrapersonal), interpersonal, and community levels of the socio-ecological perspective (see Socio-Ecological Perspectives and Health). At the intrapersonal and interpersonal levels, these theories can be broadly categorized as **cognitive-behavioral theories**, which have three common concepts (National Cancer Institute, 2005, p. 12):

- Behavior is mediated by cognition. In other words, what people know and think affects how they act.
- Knowledge is necessary for but not sufficient to produce most behavior changes.
- Perceptions, motivations, skills, and the social environment are key influences on behavior.

Community-level models "offer frameworks for implementing multi-dimensional approaches to promote healthy behaviors" (National Cancer Institute, 2005, p. 12) and complement education by providing efforts to change the social and physical environment in hopes of supporting positive behavior changes.

Individual or Intrapersonal Level

The individual level is the most basic level of health promotion and disease prevention. Individual behavior is the most fundamental unit of group behavior; therefore, individual-level (intrapersonal-level) influence is necessary to promote behavior change at the larger levels. **Intrapersonal-level** theories focus on intrapersonal factors, which exist or occur within the individual self or mind. These factors include knowledge, attitudes, beliefs, motivation, self-concept, developmental history, past experiences, and skills.

The health belief model (HBM) focuses on an individual's perceptions of the threat that a health problem poses, the benefits of avoiding the threat, and the factors that influence the decision to act. The threat could relate to susceptibility or severity, and factors influencing the decision to act could involve barriers, cues to action, or self-efficacy. One of the first theories of health behavior, the HBM was developed in the 1950s through the U.S. Public

Health Service to explain why so few people were participating in free, government-supported programs to prevent and detect disease. The HBM (National Cancer Institute, 2005, p. 13) indicates that an individual is ready to act regarding their health if six constructs are in place (see Table 15.4).

The six constructs provide a beneficial framework for designing short-term and long-term behavior change strategies in individuals. They can also be used to design or adapt health promotion or disease prevention programs for groups. The HBM may be used alone or in combination with other theories or models.

Construct	Definition	Potential Change Strategies
Perceived susceptibility	Beliefs about the chances of getting a condition	• Define the population(s) at risk and their levels of risk • Tailor risk information based on an individual's characteristics or behaviors • Help the individual develop an accurate perception of their own risk
Perceived severity	Beliefs about the seriousness of a condition and its consequences	• Specify the consequences of a condition and recommend action
Perceived benefits	Beliefs about the effectiveness of taking action to reduce risk or seriousness	• Explain how, where, and when to take action and the potential positive results of doing so
Perceived barriers	Beliefs about the material and psychological costs of taking action	• Offer reassurance, incentives, and assistance • Correct any misinformation
Cues to action	Factors that activate "readiness to change"	• Provide "how to" information, promote awareness, and employ reminder systems
Self-efficacy	Confidence in one's ability to take action	• Provide training and guidance in performing actions • Use progressive goal setting • Give verbal reinforcement • Demonstrate desired behaviors

TABLE 15.4 The Health Belief Model (HBM) (See National Cancer Institute, 2005.)

Another theory that can be used at the intrapersonal level for health promotion and prevention is the stages of change, or transtheoretical, model. This model is based on the premise that behavior change is a process, not an event, and as a person attempts to change a behavior, they move through five stages: precontemplation, contemplation, preparation, action, and maintenance. For more on these stages, see Socio-Ecological Perspectives and Health. An example of how this model may be applied is the CDC (2017) fact sheet "Talking about Fall Prevention with Your Patients (https://openstax.org/r/cdcgovsteadi)" that describes strategies for matching fall prevention advice to a client's stage of readiness.

THEORY IN ACTION

The Transtheoretical Model

Access multimedia content (http://openstax.org/books/population-health/pages/15-3-theories-and-models)
The podcast "Lifestyle and Behavior Change" provides a discussion of how to use the Transtheoretical Model when performing health coaching for lifestyle and behavior change.

Listen to the podcast or read the transcript (https://openstax.org/r/pcnanet), and then respond to the following questions.

1. Which stage of the transtheoretical model is the focus of the podcast?
2. What are some specific examples of health coaching in public health?

Interpersonal Level

At the interpersonal level, "theories of health behavior assume individuals exist within, and are influenced by, a social environment" (National Cancer Institute, 2005, p. 19). The social environment can include anyone with whom an individual interacts, such as family, friends, coworkers, health professionals, and others. The opinions, thoughts, behaviors, advice, and support of these people influence the individual's feelings and behavior, and the individual has an equal effect on these people.

Social cognitive theory (SCT) is the most frequently used example of an interpersonal model. SCT describes the influence of experiences, actions of others, and environmental factors on an individual's health behaviors. Three main factors that affect the likelihood that a person will change a health behavior, according to the SCT, are self-efficacy, goals, and outcome expectancies. SCT includes six constructs, described in Table 15.5.

Construct	Definition	Potential Change Strategies
Reciprocal determinism	The dynamic interaction of the person, behavior, and environment in which the behavior is performed	Consider multiple ways to promote behavior change, including making adjustments to the environment or influencing personal attitudes
Behavioral capacity	Knowledge and skill to perform a given behavior	Promote mastery learning through skills training
Expectations	Anticipated outcomes of a behavior	Model positive outcomes of healthful behavior
Self-efficacy	Confidence in one's ability to take action and overcome barriers	Approach behavior change in small steps to ensure success and be specific about the desired change
Observational learning (modeling)	Behavioral acquisition that occurs by watching the actions and outcomes of others' behavior	Offer credible role models who perform the targeted behavior
Reinforcements	Responses to a person's behavior that increase or decrease the likelihood of recurrence	Promote self-initiated rewards and incentives

TABLE 15.5 Social Cognitive Theory (SCT) (See National Cancer Institute, 2005.)

CONVERSATIONS ABOUT CULTURE

HoMBReS

HoMBReS is a community-based intervention designed to reduce the risk of HIV and other sexually transmitted infections among Latino men living in rural areas of the United States. The program is based on the SCT and trains "navegantes" (navigators) who provide information and risk reduction materials to the target population.

Read about HoMBReS (https://openstax.org/r/ruralhealthinfo), and then respond to the following questions:

1. What is the environment in which HoMBReS is delivered?
2. Which construct of SCT does HoMBReS seem to primarily focus on?

Community Level

Communities are at the heart of public health promotion and disease prevention. Community-level models explore how social systems function and change and how to activate community members and organizations. Models using community-level strategies can be used in numerous settings, including health care institutions, schools, workplaces, community groups, and government agencies. These models use the ecological perspective, as

described in Socio-Ecological Perspectives and Health, addressing individual, group, institutional, and community issues (National Cancer Institute, 2005).

One of the most frequently used community-level models is the **diffusion of innovations theory**. It addresses how new ideas, products, and social practices spread within an organization, community, or society or from one society to another (National Cancer Institute, 2005). Diffusion of innovations is "the process by which an *innovation* is communicated through certain *channels* over *time* among the members of a *social system*" (National Cancer Institute, 2005, p. 27). These four central concepts are defined in Table 15.6.

Concept	Definition
Innovation	An idea, object, or practice that is thought to be new by an individual, organization, or community
Communication channels	The means of transmitting the new idea from one person to another
Social system	A group of individuals who together adopt the innovation
Time	How long it takes to adopt the innovation

TABLE 15.6 Concepts in Diffusion of Innovations (See National Cancer Institute, 2005.)

Diffusion of innovations as it relates to health promotion and disease prevention requires a multilevel change process. At the individual or intrapersonal level, adopting a health behavior innovation usually involves lifestyle change. At the organizational or interpersonal level, it may involve starting programs, changing regulations, or altering roles. At the community level, the media, policies, or beginning initiatives may be involved. Considering the attributes that determine how quickly and to what extent an innovation will be adopted and diffused (see Table 15.7) can help health care professionals position it most effectively.

Attribute	Key Question
Relative advantage	Is the innovation better than what it will replace?
Compatibility	Does the innovation fit with the intended audience?
Complexity	Is the innovation easy to use?
Trialability	Can the innovation be tried before making a decision to adopt?
Observability	Are the results of the innovation observable and easily measurable?

TABLE 15.7 Key Attributes Affecting an Innovation's Diffusion (See National Cancer Institute, 2005.)

The diffusion of innovations theory also involves categories of adopters, seen in Table 15.8. By identifying the characteristics of people in each adopter category, health care professionals can more effectively plan and implement strategies customized to their needs (National Cancer Institute, 2005).

Category of Adopter	Characteristics
Innovators	• They want to be the first to try the innovation. • They are interested in new ideas and challenges and are willing to take risks.
Early Adopters	• They tend to be opinion leaders in a social system and have influence over the decisions of others. • They are already aware of the need for change, so they are comfortable adopting new ideas.
Early Majority	• They are rarely leaders, but they adopt new ideas before the average person. • They typically need to see evidence that the innovation works before they are willing to adopt it.

TABLE 15.8 Adopter Categories in Diffusion of Innovations Theory (See Ohkubo et al., 2015.)

Category of Adopter	Characteristics
Late Majority	• They are skeptical of change. • They will adopt an innovation only after the majority has tried it.
Laggards	• They are very skeptical of change. • They are the hardest group to persuade to adopt an innovation.

TABLE 15.8 Adopter Categories in Diffusion of Innovations Theory (See Ohkubo et al., 2015.)

The diffusion of innovations theory combines all of these elements to guide the health care professional in providing health promotion and disease prevention efforts. For example, a local university designs a program for the county public school system to decrease obesity in elementary school students. In the classroom, students learn about healthy foods, nutrition, and reading nutrition labels. The school cafeteria provides sample lunch menus with nutrition information. In physical education classes, students learn how different physical activities contribute to healthy living. After a few years, the program is considered a success. Program participants continued to have healthier habits than children who graduated before the program began.

The program's success, however, is not enough. To broaden its impact, diffusion is necessary. The program's *relative advantage* could be demonstrated to other school district leaders. The program's *compatibility* could be demonstrated by illustrating how it meets national and state standards for health and physical education. *Complexity* could be addressed with teaching toolkits that make content easily accessible to educators. Interested educators could access free sample teaching materials via a website for *trialability*. Finally, *observability* could be provided via a video on the same website for demonstration purposes. Once adopted by another school district, leadership at the district could use the categories of adopters to roll out the program to educators.

15.4 Barriers and Opportunities for Health Promotion and Disease Prevention

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 15.4.1 Describe barriers that negatively impact health outcomes.
- 15.4.2 Examine factors that influence participation in health promotion activities.
- 15.4.3 Recognize opportunities for health promotion and disease prevention across health care settings.
- 15.4.4 Explain how systems can serve as barriers to effective disease prevention and health promotion.

Many factors influence the health of individuals and communities. A barrier is a circumstance or obstacle that keeps people from progressing toward achieving a positive health outcome. Barriers to health promotion and disease prevention exist at various levels, including the individual level, family level, system level, and community or population level. The health care setting may even present barriers. On the other hand, communities provide many opportunities for health promotion and disease prevention, particularly within health care. Nurses who understand barriers can capitalize on available opportunities.

Barriers to Health Promotion and Disease Prevention

Nurses should be aware of barriers, including barriers to economic stability and those that block access to high-quality education and health care, so they can plan to overcome them for clients or populations. Other barriers relate to neighborhood and built environment and to social and community contexts. These barriers can also contribute to health disparities, as described in Health Disparities. As discussed, the SDOH are barriers that can prevent an individual from obtaining the resources they need to achieve better health outcomes and improved quality of life (Healthcare Information and Management Systems Society, 2020; see Social Determinants Affecting Health Outcomes.) Table 15.9 provides individual and system-level examples of barriers to health promotion and disease prevention that may occur within each area of the SDOH.

Social Determinants of Health (SDOH)	Example of an Individual-Level Barrier	Example of a System-Level Barrier
Economic Stability	A client's primary provider instructs them to follow a low-sodium diet. The client will not receive a paycheck until Friday and only has $30 for the next 2 days. Rather than choose a salad from the grocery, the client chooses a fast-food meal to make the money they have last longer.	A client who has recently experienced respiratory difficulties lives in a rental apartment in a community with little stable housing. A neighbor reported mold in the building due to frequent water leaks. The client's primary provider is concerned that the apartment may be contributing to the client's respiratory condition. The client can barely afford the apartment and cannot afford to move.
Education Access and Quality	An individual with limited English proficiency has chest pain. Because they are not sure they can describe their symptoms, they choose to rest at home rather than seek health care.	A child is enrolled in a low-quality school with limited health resources, multiple safety concerns, and low teacher support. The child is diagnosed with type 1 diabetes and requires insulin injections twice during the school day. There is no school nurse.
Health Care Access and Quality	A client who does not drive lives in a rural area. She has arranged for her grandchild to drive her to an appointment for a mammogram 2 hours away, but the grandchild's vehicle is unreliable and is not drivable on the day of the appointment.	An urban clinic has experienced a shortage of providers following the COVID-19 pandemic. This has resulted in clients experiencing longer wait times and delayed care.
Neighborhood and Built Environment	A client is diagnosed with obesity and instructed by their primary provider to walk 30 minutes daily. The client lives in an urban area with a high crime rate. The only available walking locations are the city streets and a dimly lit park known for drug dealing and use. The client works 12-hour daytime shifts, so the only time they can walk is after dark.	An older adult client relies on a neighbor to perform weekly grocery shopping. The neighbor does not have a car and walks to the closest nearby store, approximately 1 mile away. The store has no fresh produce and is not a chain supermarket. A convenience store within a gas station is the only other store within walking distance. The client would like fresh fruits and vegetables, but these are unavailable.
Social and Community Context	A transgender teenager is bullied and experiences depression. They experience social rejection and isolation, decreased social support, and verbal abuse daily.	A family of color lives in a neighborhood that has historically been ignored for social improvements. The family's children were all considered small-for-gestational-age births.

TABLE 15.9 SDOH as Barriers to Health Promotion and Disease Prevention

The experience of structural racism results in chronic discrimination, stress, and depression, which has a further negative impact on the ability of those within historically marginalized populations and can create a further barrier to health promotion and disease prevention (Churchwell et al., 2020). One particular form of a barrier to health outcomes has already been discussed in Structural Racism and Systemic Inequities. The COVID-19 pandemic illustrated this point:

- Black, Hispanic, and Latino people; American Indians/Alaska Natives; and Pacific Islanders had a higher COVID-19 morbidity and mortality rate than White people.
- Counties that had over 45 percent of residents belonging to a historically oppressed group recorded higher rates of COVID-19 infection and mortality compared to counties with mostly White residents regardless of the county's poverty level.

- During the pandemic, there was a rise in anxiety and depression. Studies show that Hispanic and Latino adults (22 percent) and Black adults (18 percent) experienced a higher rate of substance use initiation or increase than White adults (11 percent) during this time (Churchwell et al., 2020).

As individuals and populations encounter these many barriers to health promotion and disease prevention, health outcomes begin to decline. Overcoming these barriers is the only way to successfully achieve positive health outcomes, as an individual or a population.

Barriers to Health Promotion and Disease Prevention Within a Health Care Delivery System

The structure of health care delivery systems is made up of internal and external factors that can influence health promotion and disease prevention, therefore impacting health outcomes. Internal factors include everything within the environment in which health care services are provided as well as the resources required for providing those services. These include, but are not limited to, leadership styles, organizational culture, policies and procedures, and information sharing. External factors include government's role in health care, community expectations and influences, ownership of the health care system, and the extent of services the system provides.

A nurse serving in a role related to health promotion and disease prevention may encounter internal or external barriers from the health care system. The system may lack financial or political support for health promotion implementation. There may be a lack of time for effective health promotion and disease prevention activities, particularly in competition with the day-to-day demands. Poor communication may exist between the various entities within and outside the health care system. Finally, others within the system may lack interest in health promotion and disease prevention (Rogers et al., 2021).

UNFOLDING CASE STUDY

Part B: Health Screening Follow-Up

Read the scenario, and then answer the questions that follow based on all the case information provided in the chapter thus far. This case study is a follow-up to Case Study Part A.

During Deanna's appointment, a nurse working in the primary care provider's office is teaching Deanna about lifestyle modifications to lower her high blood pressure level, such as a low-sodium diet and regular exercise. As the nurse is discussing lifestyle changes with Deanna and answering her questions, the office manager calls the nurse out of the room and asks why they are spending longer than the allotted 15 minutes with the client. The nurse explains that Deanna has many questions about the recommended dietary changes. The manager indicates that the client should be dismissed and instruction can be continued at her follow-up appointment in 2 months.

3. Which of the following is likely correct regarding the office manager?
   a. They are fostering a culture that values teamwork and collaboration with other departments.
   b. They are providing equity in time to all clients to decrease the potential for health disparities.
   c. They do not perceive health promotion and disease prevention as a valuable part of health care.
   d. They do not have a focus on managing client demand as it relates to the health care system.

4. Which level of prevention is the nurse using when providing dietary instruction to Deanna?
   a. Primordial prevention
   b. Primary prevention
   c. Secondary prevention
   d. Tertiary prevention

Factors That Influence Participation in Health Promotion Activities

How individuals and populations define health and health problems, and their perception of health's importance, influence any attempts to improve their health through health promotion activities. Three factors either support or form barriers to participation in health promotion activities:

- A **predisposing factor** includes any characteristics of the individual or population that affect personal

motivation to bring a change in behavior, including their knowledge, beliefs, values, attitudes, and norms. An example of a predisposing factor leading to a positive health outcome would be the belief that smoking is harmful to health.

- **Reinforcing factors** occur in the form of positive or negative feedback, such as rewards or punishments, and the influence of a peer, teacher, family, or other person or group perceived as important (Figure 15.2). Continued receipt of feedback can motivate repetition of behavior. Using the smoking example, a reinforcing factor leading to a negative health outcome would be peer pressure to smoke.
- **Enabling factors** are social and environmental factors that facilitate or motivate attainment of specific behaviors, such as ease of access, availability, health-related laws, resources, and skills. An example of an enabling factor that leads to a negative health outcome would be the easy availability of cigarettes when other members of the family smoke. Table 15.10 provides additional descriptions and examples of these factors.



FIGURE 15.2 Family members attending a graduation ceremony wear masks to prevent the spread of disease during a crowded event, illustrating the reinforcing factors related to following health guidance. (credit: "More Caps & Gowns & Mask" by Phil Roeder/Flickr, CC BY 2.0).

Factors	Description	Examples	
Predisposing factors	Intellectual and emotional "givens" that tend to make individuals or populations more or less likely to adopt a healthy or risky behavior or lifestyle or to approve of or accept particular environmental conditions	Knowledge	A person is more likely to avoid using smokeless tobacco if they know it can lead to cancer.
		Attitudes	People who have participated in athletics as youths tend to see regular exercise as a normal part of life.
		Beliefs	A client may believe that if a food's label says "low fat," it is healthy to eat or that premarital sex is a sin, so teenagers should not be provided with condoms.

TABLE 15.10 Factors Influencing Participation in Health Promotion

Factors	Description	Examples	
		Values	A person who values cleanliness is more likely to follow hand hygiene guidelines.
		Confidence	A client may not attempt to follow a weight loss regimen simply because they do not feel they are capable of doing so.
Enabling factors	Internal and external conditions directly related to the issue that help individuals or populations adopt and maintain healthy or unhealthy behaviors or lifestyles, or to embrace or reject particular environmental conditions	Availability of Resources	A person who abuses drugs is more likely to get help if recovery assistance is readily available to them.
		Accessibility of Services	If a specialist has a waiting list over a year long and is located 10 hours away, a client is less likely to agree to their care.
		Community and/or Government Laws/ Policies	A person is less likely to drink alcohol if they live in a community that does not sell or serve alcoholic beverages.
		Issue-Related Skills	A person who is very organized and manages their time well will be more likely to stick to a prescribed health regimen.
Reinforcing factors	The people and community attitudes that support or make difficult adopting healthy behaviors or fostering healthy environmental conditions	Largely the attitudes of influential people or groups	A child from a family who supported the use of masks during the COVID-19 pandemic was more likely to wear a mask in public.

TABLE 15.10 Factors Influencing Participation in Health Promotion

Educational interventions can influence some of these factors, while some are not as easily influenced. In the case of reinforcing factors, it may be useful to aim interventions at these influential people and groups to effectively impact an actual target individual or group (The University of Kansas, 2023).

When providing educational interventions, the nurse must also consider the health literacy of individuals. Health literacy involves each person's ability to find, understand, and use health information and services (HHS, 2021). Health literacy will be discussed in more detail in Assessment, Analysis, and Diagnosis.

Opportunities for Health Promotion and Disease Prevention Across Health Care Settings

The Ottawa Charter first introduced the term **health promotion setting**, a place or social context where daily activities and various factors interact to influence health and well-being. Health promotion settings are actively used and shaped to address health-related issues rather than used solely for delivering specific services or programs. Typically, settings have physical boundaries, defined roles for people, and an organizational structure (WHO, 2021b, p. 30). Health promotion settings exist in cities, hospitals, schools, universities and colleges, and workplaces (Kokko & Baybutt, 2022). These are described more in Table 15.11.

Setting	Description	Examples
Health Promotion Cities	Global networks of cities that have come together to engage in health promotion and disease prevention	South-East Asia Healthy Cities Network (https://openstax.org/r/whointsouth) The Partnership for Healthy Cities (https://openstax.org/r/cities4health)
Health Promotion Hospitals	First identified in the 1990s as a way to support hospitals that were beginning to put the Ottawa Charter into practice; now range from implementing one health promotion project, to assigning a specific role or department to health promotion, to playing a large part in promoting the health of the community	The Wellness Institute at Seven Oaks General Hospital in Canada (https://openstax.org/r/wellnessinstitute)
Health Promotion Schools	Established to enhance health through education and promotion for students, school staff, families, and the community	CDC's Virtual Healthy School that uses the Whole School, Whole Community, Whole Child (WSCC) model (https://openstax.org/r/healthyschools)
Health Promotion Universities and Colleges	Guided by the 2015 Okanagan Charter, *An International Charter for Health Promoting Universities and Colleges*, which calls on institutes of higher education to embed health into all aspects of campus culture and to lead health promotion actions and collaboration locally and globally	The University of Alabama at Birmingham Health Promoting University (https://openstax.org/r/healthpromoting)
Health Promotion Workplaces	Provide programs and policies to reduce health risks and improve the quality of life for workers	CDC's Workplace Health Promotion focused on hospital employees' health (https://openstax.org/r/workplacehealth)

TABLE 15.11 Health Promotion Settings (See CDC 2019a, 2019c; The University of Alabama at Birmingham, 2023.)

THE ROOTS OF HEALTH INEQUITIES

Urban Health Inequities

Data on urban health inequities, or disparities in health outcomes among and within cities, has been extensively documented worldwide, spanning countries and regions, irrespective of their economic development and health care infrastructure. These disparities reflect the overarching disparities in the SDOH including economic conditions, education, the physical and built environment, and the quality and accessibility of health care. To promote health equity, nurses must tailor their health promotion and disease prevention efforts to the specific location and the population being served.

(See Freitas et al., 2020.)

Prisons, the digital environment (including social media), and more recently airports, places of worship, and specific coastal communities in the United Kingdom are other identified health promoting settings (Kokko & Baybutt, 2022). Global initiatives to address the health of those who work and live in prisons, particularly in the United Kingdom, have provided benefits from the development of a "whole-prison approach" to health promotion. This approach involves peer support for both workers and incarcerated people, behavior modification initiatives, disease

prevention and screening, easily accessible information about health services and current health campaigns, and a focus on continuity of care (Woodall & Freeman, 2019). This approach has not been adopted in the United States. However, the CDC (2022) does offer recommendations and guidance for correctional settings, including information on infectious disease, COVID-19 management, traumatic brain injury, and other medical problems and conditions.

The WHO (2021a) issued its *Global Strategy on Digital Health 2020–2025 (https://openstax.org/r/whointdocs)*, which provided guiding principles, strategic objectives, a framework for action, and implementation principles for the strategy and action plan related to using digital technologies to shape the future of global health. This strategy incorporates the use of a variety of technologies to create a continuum of care (WHO, 2021a, p. 8). The WHO (2023b) has also convened a panel of experts to address infodemic management and social listening. An **infodemic** is an overabundance of information, including misinformation, that surges during a health emergency. The WHO recognizes that during a health emergency, people seek, receive, process, and act on information differently than in other times, making it even more important to use evidence-based strategies to address health issues. **Social listening** is the process of gathering information about people's questions and concerns and the circulating narratives and misinformation about health from online and offline data sources. This includes data from social media platforms. The WHO (2023b) hopes to provide an ethical framework and tools that can be used for social listening and infodemic management.

HOW TO PROTECT YOURSELF IN THE INFODEMIC

Access multimedia content (http://openstax.org/books/population-health/pages/15-4-barriers-and-opportunities-for-health-promotion-and-disease-prevention)
Watch this video to learn more about the misinformation that spread during the COVID-19 pandemic, and then respond to the following questions.

1. What are some negative consequences of an infodemic?
2. Do you see any positive aspects of an infodemic? Explain your answer.
3. Name three ways you can protect yourself from an infodemic during a pandemic.

Over 400 airports of various sizes prioritized health and safety during the peak of the COVID-19 pandemic by becoming accredited or participating in the Airports Council International (ACI, 2023) Airport Health Accreditation (AHA) program. These airports, including several in the United States, implemented airport industry best practices to ensure an airport-centric approach to health requirements. Moving forward, the program has moved to the Public Health and Safety Readiness (PHSR) accreditation, which considers a wider range of health emergencies that may lead to air travel concerns (ACI, 2023). A variety of research has also been performed investigating the benefits of health promotion in places of worship (Kwon et al., 2017; Tomalin et al., 2019; Woodard et al., 2020) and determined that faith-based organizations and places of worship can play a vital role in health promotion, particularly for Black, Asian, and minority ethnic communities.

Finally, a setting for health promotion can be even larger than a city. The United Kingdom House of Commons (2022) identified, through a 2021 Chief Medical Officer's report, that English coastal communities have a higher disease burden across physical and mental health conditions as well as lower health outcomes including life expectancy, healthy life expectancy, and disability-free life expectancy. In particular, there are worrying trends in public-health-related outcomes for children and young people. As a result, the Royal College of Physicians and others are encouraging a national strategy to improve the health of these coastal communities.

No consensus exists on a single setting that is best for health promotion. Instead, there are a variety of settings around which individuals and groups live, grow, work, and age that are appropriate for health promotion and disease prevention activities. Settings can be as small as an office and as large as a country, but collaboration and coordination of all entities involved can lead to improvement of health outcomes.

Chapter Summary

15.1 Defining Health Promotion and Disease Prevention

Health promotion and disease prevention are overlapping yet distinct processes that guide the Healthy People 2030 initiative. Best defined by the Ottawa Charter, health promotion is the process of enabling people to increase control over, and to improve, their health. The six dimensions of health promotion behaviors include responsibility, physical activity, nutrition, interpersonal relations, spiritual growth, and stress management. Disease prevention involves undertaking specific interventions geared toward decreasing the burden of disease and its associated risk factors. Preventive care, including screenings, immunizations, check-ups, and counseling, are a large portion of prevention. Nurses play an important role in both health promotion and disease prevention.

15.2 Health Promotion and Disease Prevention Interventions

Nurses select and perform health promotion and disease prevention interventions at the individual and community levels. The nurse can use the five key action areas of the Ottawa Charter for Health Promotion to guide interventions. To appropriately apply interventions, nurses must understand the stages of disease and their corresponding levels of prevention, which can lead to disease risk reduction and prevention of complications of a current disease.

15.3 Theories and Models

Nurses and other health care professionals use theoretical models and frameworks to provide appropriate support for health promotion and disease prevention practices at different levels. A variety of theories and models exist at the individual (intrapersonal), interpersonal, and community levels. Prominent models include the socio-ecological perspective, the health belief model (HBM), the stages of change (transtheoretical) model, social cognitive theory (SCT), and diffusion of innovations theory.

15.4 Barriers and Opportunities for Health Promotion and Disease Prevention

Individual- and system-level barriers, described as the social determinants of health (SDOH), influence the health of individuals and communities. The health care delivery system itself poses barriers to health promotion and disease prevention. Predisposing, enabling, and reinforcing factors can be supportive or produce obstacles, and the health care professional must consider these in their efforts to promote health and prevent disease. Health promotion settings include cities, hospitals, schools, universities and colleges, workplaces, and others. Many successful health promotion and disease prevention programs encourage collaboration and coordination across multiple settings.

Key Terms

cognitive-behavioral theories theories at the intrapersonal and interpersonal level that share three common concepts: behavior is mediated by cognition, knowledge is necessary for behavior change, and perceptions, motivations, skill, and the social environment influence behavior

Diffusion of Innovations Theory a model for behavior change that addresses how new ideas, products, and social practices spread within an organization, community, or society or from one society to another

disease prevention specific interventions geared toward decreasing the burden of both communicable and noncommunicable diseases and their associated risk factors

enabling factors internal and external conditions that help individuals or populations adopt and maintain healthy or unhealthy behaviors or lifestyle, or embrace or reject particular environmental conditions

health promotion the process of enabling people to increase control over and to improve their health

health promotion setting the place or social context in which people engage in daily activities, in which environmental, organizational, and personal factors interact to affect health and well-being

high-risk approach an approach to prevention that targets prevention only to those who are identified to be at high risk for disease

infodemic an overabundance of information, including misinformation, that surges during a health emergency

intersectoral involving several sectors of society, such as health, education, housing, any level of government, and nongovernmental organizations

intrapersonal-level individual-level

natural history of disease the progression of a disease process in an individual over time

Ottawa Charter for Health Promotion provided a common, socio-ecologic definition of health promotion in 1986

population approach an approach to prevention that implements strategies across an entire population, regardless of individuals' risk levels

predisposing factor intellectual and emotional "givens" that tend to make individuals or populations more or less likely to adopt a healthy or risky behavior or lifestyle or to approve of or accept particular environmental conditions

preventive care routine health care including screenings, check-ups, and counseling to prevent illness, disease, or health-related problems

primary prevention actions aimed at avoiding the effects of disease

primordial prevention actions aimed at preventing the development of risk factors for disease

reinforcing factors the people and community attitudes that support adopting healthy behaviors or fostering healthy environmental conditions

secondary prevention actions that emphasize early disease detection and target healthy-appearing individuals with subclinical forms of disease

social cognitive theory an interpersonal model for behavior change that describes the influence of experiences, actions of others, and environmental factors on the health behaviors of an individual

social listening the process of gathering information about people's questions and concerns and circulating narratives and misinformation about health from online and offline data sources

tertiary prevention targets both the clinical and outcomes stages of disease; actions are implemented in symptomatic individuals with the aim to reduce the severity of disease and any associated sequelae

Review Questions

1. A home health nurse has several clients who live in the same apartment building. In the last week, the nurse has noticed that both elevators in the four-story building are out of order. Two of the clients live on the second floor and use a wheelchair. The nurse leaves a message for the building manager describing their concern for the clients. This action describes the role of the nurse as

a. advocate
b. care provider
c. consultant
d. educator

2. Routine bloodwork results indicate that a client has type 2 diabetes. The client does not have any of the symptoms the nurse describes that are common with diabetes. The nurse assesses that this client is in which stage of disease?

a. Clinical
b. Susceptible
c. Subclinical
d. Underlying

3. An older individual attends an exercise class in the community's parks and recreation facility at the recommendation of their primary provider. At a follow-up appointment, the client tells the nurse in the primary care office that they are unable to perform several of the exercises due to problems with vertigo and have stopped attending the classes. The nurse determines that the client is experiencing which type of negative enabling factor?

a. Accessibility of services
b. Availability of resources
c. Community and/or government laws/policies
d. Issue-related skills

4. An individual who is trying to lose weight is dining out with friends. While looking at the menu, they notice that the restaurant includes calorie content with all menu items. How is this information likely to impact the individual's menu choices?

a. It is a barrier.
b. It is a cue to action.

c. It is an innovation.
d. It is perceived susceptibility.

5. An elementary school nurse has proposed the delivery of a healthy message through the school's audio system every day. The principal thinks this is a new idea that hasn't been tried before, the intercom system is easy to use and readily available, and students tend to listen to the announcements provided. The principal is likely applying which theory or model in making their decision?
a. The socio-ecological model
b. The health belief model
c. The transtheoretical model
d. The diffusion of innovations theory

6. A public health nurse is working with community members to develop a walking trail to encourage residents to be outdoors and engage in exercise. Which level of prevention is this nurse practicing?
a. Primordial
b. Primary
c. Secondary
d. Tertiary

7. A community health nurse is developing a community-wide health promotion program to reduce high blood pressure in community members. Which sectors will the nurse need to work with to develop this program?
a. The health sector only
b. The combined roles of multiple sectors
c. The health sector and the food and agriculture sector
d. Different sectors for each individual

8. A public health nurse is working in a rural community. Community members have expressed concerns about the distance necessary to travel and the time it takes to receive medical care. The nurse collaborates with a hospital in the closest city to establish a mobile clinic that visits the community once a week. What enabling factor did the nurse target to improve population health?
a. Availability of health care services
b. Individual behaviors and lifestyle choices
c. Genetic predisposition to disease
d. Social and cultural norms

9. A densely populated urban area has a high prevalence of obesity among the residents. The local government is partnering with the health department to build parks and recreation centers to promote physical activity. Which of the following is the most likely system-related barrier the program faces?
a. Genetic predisposition to obesity
b. Lack of community engagement
c. Individual client attitudes and beliefs
d. Limited financial resources

10. During the COVID-19 pandemic, a public health department wanted to introduce a smartphone application (app) that could track and notify individuals who came into close contact with a confirmed case. However, the department encountered challenges in gaining widespread acceptance and adoption of the new technology. Which concept from the diffusion of innovations theory likely influenced the implementation of the app?
a. Trialability
b. Observability
c. Relative advantage
d. Compatibility

CHAPTER 16

Creating a Healthy Community



FIGURE 16.1 Each community has unique characteristics that affect the way people live, work, and relax, all of which affect their health. (credit: modification of work "Students on the beach. It is bright but chilly" by Loren Kerns/Flickr, CC BY 2.0)

CHAPTER OUTLINE

16.1 The Community as the Client
16.2 What Is a Healthy Community?
16.3 The Nursing Process as a Framework

INTRODUCTION Elsa is a 17-year-old high school student with type 1 diabetes mellitus. They play soccer for the school team, babysit for children in the neighborhood most weekend evenings, have worked at an ice cream stand for the past three summers, and see friends from school often. Elsa's town is on the Atlantic Ocean and is a popular summer destination for people from the surrounding region. The town has plenty of green space and places to jog, bike, and enjoy the outdoors. The community members take pride in keeping the beach clean and wildlife protected. Elsa avoids summer traffic by getting around town on a bike.

The town has many part-time (summer) residents, creating some challenges for the year-round community. The population shrinks from 25,000 summer residents to 1,500 permanent residents each September. From September to May, many stores and restaurants close, especially the smaller, family-owned restaurants with healthier options that rely on tourist traffic to sustain business. Elsa knows plenty of people who feel isolated during the offseason and thinks that substance use is especially problematic during this time. Even some health clinics, dental offices, and pharmacies close, creating problems for residents who need ongoing care. Elsa's mother has a full-time, year-round job at the grocery store, but some parents do not have consistent work. A special challenge for Elsa is the lack of an endocrinologist or clinic in the area to provide diabetes care, requiring them to travel 90 minutes each way every 3 months for appointments at the nearest hospital with a diabetes clinic. Elsa wishes telehealth visits were an option, but lab testing is required at each visit. A school nurse is helpful with challenges between clinic visits, but

the nurse is only at Elsa's school 2 days a week because the elementary, middle, and high schools all share the nurse.

In community-oriented nursing, nurses may care for groups of people instead of one client at a time. This chapter discusses addressing health in communities, assessing communities, supporting a culture of health, and applying the nursing process to professional practice activities in the community setting. The chapter also provides opportunities to reflect on Elsa's community and the different health opportunities and barriers that community members experience.

16.1 The Community as the Client

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 16.1.1 Explain how the community can serve as the focus of care.
- 16.1.2 Describe a community by location, population, and social systems.
- 16.1.3 Develop a community profile.

Broadly, a **community** is defined as a group of people with at least one characteristic in common. The characteristic may be a place, a personal attribute, or a common goal. In each community, there are individuals with health problems and health risks, some of which may be individual, meaning the rest of the community does not face similar circumstances. For example, a person who smokes or lives in a home with smokers faces increased respiratory health risks compared to a person who does not smoke or live with smokers. A person who does not wear sunscreen has an increased risk of skin cancer compared to a person who applies sunscreen daily. However, every community may house a common health condition or shared health risk. For example, a community situated near a factory that disposes of its toxic chemicals in the water supply shares the risks of consuming contaminated drinking water. Similarly, residents of a city that provides automated external defibrillators (AEDs) in high-traffic public places may have a better chance of surviving a cardiac event than those with no accessible AEDs.

In population- or community-based nursing, nurses work to address a community's collective health instead of individual health needs. Recall the chapter's opening scenario. Try to list five communities that Elsa belongs to.

Community Attributes

Formal and informal communities exist within and across towns and cities. A community may comprise people who celebrate the same cultural holidays or people who are at risk for the same health condition.

Consider the many communities that may be present in a classroom of nursing students: a community of students, a clinical team, a study group, students with children, and perhaps students studying nursing as a new career. Elsa, from the chapter's opening scenario, is a member of numerous communities, including residents of the town, people with type 1 diabetes mellitus, high school students who are gender nonconforming, the soccer team, and residents who get around on bikes, among others. Communities of nursing clients may consist of those who inhabit a specific geographic location, share specific characteristics, or access the same social systems. Communities may also form when groups cannot access select health services and social systems.

Individuals do not have to live within mapped boundaries to be part of a geographic community. People who work, worship, or play in an area where they do not live can be interested in that community's health.

A key activity for geographic communities is civic engagement—involvement in issues of public concern through political and nonpolitical processes that increase community vitality, challenge injustices, and address social problems (Figure 16.2) (American Psychological Association, 2009; Wray-Lake & Abrams, 2020). Other geographically based communities include members of community centers, such as a Council on Aging or a Boys and Girls Club, and populations of school students, home caregivers, and teachers in a geographic community.



FIGURE 16.2 Protest is a form of civic engagement. Protests can inform members of the public of issues, mobilize voters and community members to act for change, and influence the policy process. Here, people are voicing their opinion on the need to address climate change during a climate strike rally in 2019. (credit: "#ClimateStrike Rally" by MN Senate DFL/Flickr, Public Domain)

HEALTHY PEOPLE 2030

Civic Participation

Social determinants of health and civic engagement (https://openstax.org/r/healthsoc) are closely linked. Healthy People 2030 identifies voting, volunteering, participating in group activities and activities such as community gardening, and participating in a recreational sports team as methods of civic participation. Such activities can benefit the health of individuals and populations. Healthy People 2030 aims to increase the proportion of voting-age citizens who vote and increase knowledge of civic activities or interventions that may ameliorate health disparities.

People who share personal characteristics such as race, ethnicity, gender, age, or occupation may create a formal community for mutual support or to advance equitable practices across health care and other fields. Others who share such characteristics may not participate in a formal community but may informally associate with members of the community, remain knowledgeable of the shared successes and challenges the community faces, and advocate for change. Populations of individuals who share health risks may also constitute a community.

Social Media and Other Social Systems

Social media and other social systems provide avenues for the formation and definition of communities. Social and political networks may serve as a basis for uniting as a community for health change. Technology has dramatically enhanced opportunities to join a community, as many people use social networks to participate in civic engagement, learn about health, effect change through sharing stories and knowledge, and organize to advocate for policies and societal changes that advance health. Social media has increased the visibility of community health issues, as community members and advocates can quickly share information with people around the globe.

Advocacy in the context of community health refers to support for a specific health cause or recommendations for community and policy change. Advocacy is a significant health promotion strategy to inform voters and policymakers of pressing community health issues and the consequences of harmful policies or inaction (Jackson et al., 2021). Community members who share their own health experiences encourage the forming of community, as other members who identify with the experiences or want to support health change can join the conversation and become involved. Social media has provided a platform for community members, clinicians, organizations, charities,

and others to connect and work together to improve the **dimensions of community health** in many areas. Health advocates have used social media to call attention to, and impact change for, many issues across the globe, such as alcohol use in the Netherlands, tobacco control in Australia, sexual harassment in Egypt, traffic accidents in Ireland, maternal mortality in the United States, and housing in New Zealand (Albalawi & Sixsmith, 2015; Behm et al., 2022; Bekkers et al., 2011; Chisholm & O'Sullivan, 2017; Hefler et al., 2013; Peuchaud, 2014). Advocating for Population Health covers nurse advocacy in more detail.

SOCIAL MEDIA AND COMMUNITY HEALTH CHANGE

Communities have worked to generate health change through social media messaging and campaigns. Over the last few years, many social media movements have raised awareness of select health issues, changed public perception of health problems, and even successfully advocated for policy change in companies and organizations or for greater society through changes to public law. For example, the #MeToo movement that went viral in 2017 contributed to the U.S. Congress passing of the Sexual Assault Survivors' Bill of Rights.

Using the social media platform of your choice, explore one of the hashtags below, and then respond to the questions that follow.

- #BlackBreastfeedingWeek
- #TransHealthMatters
- #ReclaimingMySize
- #NativeHealthMatters
- #NothingAboutUsWithoutUs
- #MentalHealthAwareness
- #NotJustSkinDeep
- #WomensHealthMatters
- #EveryBodyHasAStory
- #MedicareForAll
- #BlackLivesMatter
- #ThisIsEndometriosis
- #GirlsCount
- #HIVNotRetro
- #FarmworkersFeedUs
- #TransLivesMatter
- #HealthEquityNow
- #QueerAndDisabled
- #HealthForAll
- #BreakTheStigma
- #BlackHealthMatters
- #SaludLatinx

1. What is the health message or health change that users of the hashtag hope to make?
2. What are the characteristics of community members amplifying the health message? Are any voices being amplified that would be silenced without social media?
3. Since the implementation of the hashtag, has any health change occurred? Think about health change locally, statewide, and nationally.

Community Assessments and Profiles

Assessment is the first and most important step of the nursing process. Nurses cannot address a problem if they do not know it exists, and they cannot support a health behavior or community effort if they do not realize it is occurring. Assessment begins with gathering data. Nurses may take several approaches to gathering data. First, they may conduct a **windshield survey**. In a windshield survey, nurses explore a community or neighborhood and observe on foot, from a bench or street corner, or through the windows of a vehicle (Centers for Disease Control and Prevention, 2010). Observations made using this type of survey can alert nurses to urgent or potential health risks in

the community, as observers may notice the condition of sidewalks and public spaces, community noise levels, street access and activity, and the presence or absence of businesses and places of employment. See Appendix A for an example of a windshield survey template that nurses may use to conduct one of these assessments. Per the University of Kansas Center for Community Health and Development Community Tool Box (https://openstax.org/r/ctbku) (2023), during such a survey, nurses should observe:

- Housing: age and condition of homes in the neighborhood
- Other buildings: occupancy and accessibility of buildings
- Public spaces: availability of places to gather and their amenities, upkeep, and utilization
- Parks: utilization, times of use, activities facilitated
- Culture and entertainment: presence of museums, libraries, theaters, and sports venues and their accessibility and use by members representative of the full community
- Streetscape: condition of building facades and storefronts, presence of trees and sidewalks, cleanliness
- Street use: presence of people during various times of the day
- Commercial activity: types of businesses, storefront vacancies, stores that provide necessities like groceries
- Signs: languages, level of information
- Industry: types of industry, pollution
- Land use: open space compared to used land; distribution of residential, commercial, and industrial areas
- Infrastructure: condition of roads, bridges, and sidewalks; differences in condition across the community
- Public transportation: presence and use of system
- Traffic: level of traffic, vehicles in traffic
- Environmental quality: green space presence and distribution, air quality, water sources
- Race/ethnicity: characteristics of community, separation or cohesion of groups
- Faith communities: religious institution types and presence
- Health services: hospital and clinic presence and accessibility
- Community and public services: presence of mental health centers, food banks, and housing support and their distribution and accessibility by public transit
- Community safety: police and fire stations
- Public schools: presence of schools and their level of maintenance or upkeep
- Higher education: two- and four-year colleges, location, integration with community versus isolation
- Political activity: political signs (e.g., yard signs during elections), protests, demonstrations
- Community organizations: service clubs and other groups centered on community issues
- Media: local outlets, sponsorship/influence
- Differences among neighborhoods: states of maintenance, presence of community amenities across neighborhoods or sections
- The “feel” of the community: the observer’s overall impression of the community

Regardless of the method they use to conduct a windshield survey, nurses should conduct the survey in pairs or groups. First, it is unsafe to attempt to drive and note observations at the same time. Additionally, each nurse may have different observations, which can add to the richness of data collected. Nurses may also collect data from open sources in the community, such as publicly available reports, census data, and other public documents (Quinn et al., 2019). For example, department of health reports regarding the rates of communicable illnesses and chronic conditions can help elucidate a community’s health needs, and the posted minutes of a local select board meeting can illuminate health topics on the minds of local community partners and residents. See Assessment, Analysis, and Diagnosis for more information regarding community data sources. Finally, nurses should consult key community partners, policymakers, community leaders, and community members during a community assessment.

THEORY IN ACTION

Windshield Surveys

Access multimedia content (http://openstax.org/books/population-health/pages/16-1-the-community-as-the-client)

These two videos were created by nursing students as they conducted their own windshield surveys. The first video displays a windshield survey of a community in Ohio with the students’ interpretation of their observations.

The second video facilitates a virtual windshield survey of communities in Virginia.

Watch both videos, and then respond to the following questions.

1. How do you interpret the windshield survey of communities in Virginia?
2. What other observations would you make of the Virginia communities to prepare a community assessment like the one displayed for the Ohio community?
3. What conclusions might you draw about health and well-being in the Virginia communities based on the windshield survey?

Including community members in community-based nursing work is essential and should start from the earliest stages of a community initiative. Involving community members' perspectives and participation supports not only thorough assessments and meaningful change but also ethical practice. Meaningful partnerships with community members show respect for the community, build trust and relationships, minimize risk and burden, build legitimacy, and positively impact health (Adhikari et al., 2020; Haldane et al., 2019).

Community inclusion also helps nurses work against both the narrative and the reality that clinicians often tell people what to do without considering personal, contextual, social, or other factors. Such actions may be perceived as patronizing and marginalizing the community, or treating them as insignificant and making them feel powerless or unimportant. In nursing, **decolonization** refers to processes that systematically dismantle "western colonial ideologies of superiority, thought, approaches, and privilege" (Fontenot & McMurray, 2020, p. 272). Partnering with members of a community is in alignment with decolonization and can contribute to community interventions that are robust, respectful, culturally responsive, and inclusive (Lin et al., 2020; McCreedy et al., 2018).

THE ROOTS OF HEALTH INEQUITIES

Colonialism in Nursing

Colonialism is an ideology with a strong foundation of control and influence. Nursing students may remember learning about colonists in the contexts of history, war, and geography during primary and secondary school. Depending on the country in which a nursing student attended primary and secondary school, colonists and colonialism may have been depicted as a positive story of starting a new life. However, colonists invade, conquer, occupy, dominate, and exploit the lands of other people. Colonialism and racism, the unfair treatment of individuals based on race, share these harmful foundations. Colonialism and racism are both present in nursing; power dynamics, forced dependency, lack of self-determination, and othering shape nursing education, research, and practice as well as health policy. In community health, nurses must ensure meaningful community participation in community assessments and population health program planning in order to confront racism and colonialism in the discipline.

(See Fontenot & McMurray, 2020; Kimani, 2023.)

Gordon's functional health patterns provide a method of structuring a community assessment and organizing the resulting data (Gordon, 1982). Nurse theorist Marjory Gordon developed the functional health patterns to guide nurses through a thorough assessment of individual clients and families (Gordon, 1982). However, the functional health patterns can also be applied to a community assessment. Ten years after Gordon published her work, nurse scholars Nancy Kriegler and Marilyn Harton used it to develop the community health assessment tool (Kriegler & Harton, 1992). See Table 16.1 for descriptions of the 11 functional health patterns for use in community assessments and the items nurses may assess in each pattern.

Pattern	Community Application	Assessment Items
Health perception–health management	Community provision of health and safety	• Public safety, police, fire • Disaster control plan • Safety hazards • Reportable diseases • Death rate—community, for 10 leading causes of death, infant and maternal • Health promotion • Care centers—ambulatory, emergency, inpatient, long-term
Nutritional-metabolic	Community provision of nutritional needs, including education	• Public assistance programs • Grocery stores, markets, restaurants
Elimination	Community handling of waste	• Water supply • Sewage, trash, garbage, hazardous waste disposal • Recycling programs • Rodent/vermin control • Air and noise pollution
Activity-exercise	Community provision of transportation and recreational opportunities	• Work, recreation, and health care transportation • Leisure-time activities across age groups
Cognitive-perceptual	Community decision-making	• Government structure and community participation • Key community leaders • Public and private schools, preschools, adult education, higher education • Health education programs • Publications, radio, TV, and information networks
Sleep-rest	Community experience and expression of rhythms and cycles	• Types of businesses and industries, hours of operation
Self-perception–self-concept	Community view of itself	• Impact of community history on present-day community • Topography, boundaries, area, urban/rural distribution • Population demographics • Occupations, income level, poverty level, unemployment rate, housing types and costs, owner- versus renter-occupied homes

TABLE 16.1 Functional Health Patterns in the Community (See Kriegler & Harton, 1992.)

Pattern	Community Application	Assessment Items
Role-relationship	Community definition of its own role through internal informal and formal relationships and interactions with other communities	• Relationships within the community and with nearby communities • Community-sponsored events, e.g., festivals and parades
Sexuality-reproductive	Community provision of resources and education for reproductive health and family structures	• Family types and sizes • Rates of birth, teen pregnancy • Prenatal care • Reproductive health care facilities, including abortion providers • Reproductive education in schools, parenting classes, childbirth classes
Coping–stress tolerance	Community provision of support services	• Federal and state assistance programs and use in the community • Community-based assistance programs, e.g., support groups
Value-belief	Community addressment of spiritual, cultural, and ethical needs	• Religious group types, outreach to community, potential impact on community health • Social action groups and activities, e.g., programs for unhoused, fundraising for causes, senior citizen programs

TABLE 16.1 Functional Health Patterns in the Community (See Kriegler & Harton, 1992.)

A functional health pattern assessment can help the nurse to develop a community profile that includes identifying health problems, describing health risks, and determining health promotion activities. Recall the chapter's opening scenario. What patterns does the description of Elsa's community address? What questions would the community health nurse have for Elsa and other community members to develop a comprehensive community assessment?

The functional health pattern assessment applies to nursing assessment and practice and can be used during interprofessional community health endeavors. Other tools that may be used include the American Hospital Association's Community Health Assessment Toolkit (https://openstax.org/r/healthycommunities), the CDC's action model, and the CDC's Community Health Assessment and Group Evaluation (CHANGE) tool (https://openstax.org/r/nccdphpdnpao). Assessment, Analysis, and Diagnosis provides more information on community health assessment tools, models, and frameworks.

CASE REFLECTION

Conducting a Health Pattern Assessment

Read the scenario, and then respond to the questions that follow.

Think back to the chapter's opening scenario. As you get to know Elsa, they share more about the community and their friends with you. You learn that their active schedule does not leave much time for rest, and the same is true for their friends, who also balance jobs, sports, and schoolwork. Elsa sometimes has difficulty fitting it all in each week while getting enough sleep. They also talk about having trouble sleeping during the summer, as seasonal residents and vacationers can be noisy. Elsa feels that they have a manageable workload this week; their only major homework is a health class assignment on sexually transmitted infections. They share that the high school students have a health class meeting every other week, where they discuss health topics such as contraception, exercise, substance use, and relationship safety. Elsa appreciates the school community, which is inclusive and fosters a sense of belonging for the most part, although some students say they don't believe people can have diverse sexual orientation or gender identities, and Elsa wonders if some classmates purposefully misgender them. But the classmates who may be doing this are few, and Elsa's friend group spans all grades, genders, sports, interests, and other characteristics. Elsa thinks your community assessment is interesting, but they are running late to meet up with their friends at the town square for the annual Green Living Festival, which they describe as a giant yard sale of secondhand clothing and household items. The goal of the festival is for these used goods to be repurposed and stay out of the county landfill.

1. With all the information you have gathered from Elsa about the community, which functional health patterns can you describe?
2. What other questions would you like to ask Elsa or their friends about the community so that you could work toward developing a comprehensive community assessment?
3. In your opinion, which functional health pattern is most essential for the public/community health nurse to work to address first?

16.2 What Is a Healthy Community?

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 16.2.1 Identify characteristics of healthy communities.
- 16.2.2 Explain the Robert Wood Johnson Foundation (RWJF) Culture of Health initiative.
- 16.2.3 Describe the Robert Wood Johnson Foundation (RWJF) Culture of Health Action Framework.

A healthy community can support members in achieving their full potential in terms of health, education, community access, employment, and other aspects. The members of a healthy community work collectively to ensure that all can benefit from the offerings and supports present in the community, such as health care, housing resources, nutritionally dense foods, social support, green space, social opportunities, and other factors or attributes of communities that can either contribute to or hinder health and well-being.

The Work of the Robert Wood Johnson Foundation (RWJF)

Robert Wood Johnson II (1893–1968), an American philanthropist, was inspired to support improvements to the American health care system. Having identified shortcomings in the system during his own lifetime care, he felt a strong desire to "help local people down on their luck" (Robert Wood Johnson Foundation, n.d.-a). Johnson recognized the critical role of nurses in quality care. Two of his original goals were to give nurses a greater say in patient care and to professionalize nursing (Robert Wood Johnson Foundation, n.d.-a). These goals continue to guide much of the work supported by the Robert Wood Johnson Foundation (RWJF) in promoting health equity, eliminating health disparities, and supporting the development of communities where all members have an equal opportunity to achieve the highest level of health.

The RWJF Culture of Health Initiative

Since 2013, the RWJF has focused on a Culture of Health initiative to improve population health, well-being, and equity in America (Chandra et al., 2017). To work toward national health equity, the RWJF identified 10 principles key to facilitating a culture of health.

THE ROBERT WOOD JOHNSON FOUNDATION'S 10 PRINCIPLES OF A CULTURE OF HEALTH

- Every individual, family, and community is seen as deserving of health and well-being.
- Health is considered a shared responsibility within our society.
- America's national narrative acknowledges that health and well-being are impacted by injustice, systemic racism, and inequities in social and economic conditions.
- Everyone, no matter their background, has access to the resources they need to create conditions that support good health and well-being.
- All families—no matter who they are, where they live, or how much money they make—should have the resources they need to help their children grow up healthy.
- Health care, public health, and social services work together to fully address the goals and needs of the people they serve.
- Public policy and decision-making in the private industry are guided by the goal of ensuring everyone has a fair and just opportunity for health and well-being
- Communities, regardless of income or geography, have the power, agency, and resources to create and implement their own solutions to the unique health issues facing them.
- Health data, research, and measures prioritize collecting information by race, age, ethnicity, sex, geographic region, and other relevant factors to advance health equity for all.
- No one is excluded.

(See RWJF, n.d.-b)

The RWJF also operates under the knowledge that health is not just the result of individual choices and behaviors and that social, economic, environmental, and other factors interact in complex ways to shape the health of individuals and communities. To that end, the RWJF Culture of Health initiative focuses on community-based determinants of health such as care access, economic stability, housing, and food, as opposed to health interventions for specific disorders and conditions.

The RWJF Culture of Health Action Framework

Community involvement and mobilization play a large role in advancing the RWJF Culture of Health initiative. The organization has built an action framework so that efforts addressing the varied and complex factors that affect health in America may be evaluated efficiently to allow program revision or change in support of meaningful improvement (Li & Pagán, 2016). The Culture of Health Action Framework is used to identify and organize priorities under four distinct action areas (RWJF, 2018):

- Making health a shared value
- Fostering cross-sector collaboration to improve well-being
- Creating healthier, more equitable communities
- Strengthening integration of health services and systems

Making health a shared value means that society must commit to implementing social systems and power structures that allow all individuals and groups to access good health care (Chandra et al., 2016). Mindset and expectations, sense of community, and civic engagement are noted as three drivers of change toward making health a shared value, which can be measured by aspects such as internet searches for health-promoting information and volunteer participation and voter turnout in specific communities (RWJF, 2018).

Fostering cross-sector collaboration to improve well-being means encouraging or incentivizing organizations outside of those traditionally or directly associated with health care (e.g., transportation and housing) to work together to support better health across communities. Because societal barriers to health are beyond the control of individuals and disproportionately impact some groups more than others, health is the responsibility of communities, care systems, businesses, and other organizations across sectors and classes (Tan et al., 2019). Effective collaborations can have lasting impact on health equity and community well-being, and involvement of sectors outside of health care is central to comprehensive health promotion (Towe et al., 2016). Measurements and exemplars of hospital partnerships, business leadership in health, support for working families, and collaboration among communities and

law enforcement agencies can indicate progress in this action area (RWJF, 2018).

Creating healthier, more equitable communities can occur through sustained changes to health policy that support healthful physical spaces, increased access to resources, and changes in cultural norms related to health (Dubowitz et al., 2016). The built and physical environments, social and economic environments, and policy and governance models of communities can support health and equity across communities. The RWJF (2018) identifies community walkability, public libraries, youth safety, housing affordability, residential segregation, early childhood education enrollment, climate adaptation and mitigation, and air quality as measures for determining positive change toward healthier and more equitable communities (Figure 16.3).



FIGURE 16.3 Public libraries are a community structure offering many health supports to all members of a community. This photo shows a children's library room, where kids and families can spend time reading, playing, and learning for free. Public libraries host community events, many of which are health-focused. (credit: "Children's Room Visitors" by NPL Newburyport Public Library/Flickr, CC BY 2.0)

Finally, *strengthening integration of health services and systems* refers to creating a revised system of health care in the United States that involves interaction among medical care, public health, and social services. Such interactions help maximize health and well-being, ensure equal access and opportunity to achieve health, and increase client engagement, shared decision-making, and transparency in the health setting (Martin et al., 2016). With the effective implementation of Culture of Health initiatives, communities should see increased access to comprehensive public health services, health insurance coverage, and routine dental care (RWJF, 2018).

THE ROOTS OF HEALTH INEQUITIES

Full Scope of Practice

"Full scope of practice for nurse practitioners" is noted by the RWJF as one measure of strengthening integration of health services and systems (RWJF, 2018). Full-scope-of-practice policies permit nurse practitioners to prescribe, diagnose, and treat clients without physician oversight. Nurse practitioners who can work independently at their full scope of practice can establish clinics without needing a physician partner.

Rural populations do not have equity in primary care access. While clinician presence in rural communities is increasing, it is not keeping pace with that of urban communities or meeting the needs of rural populations (Zhang et al., 2020). Full scope of practice for nurse practitioners can advance health equity through offering health care services to areas with shortages of primary care services.

(See RWJF, 2018; Xue et al., 2018; Zhang et al., 2020.)

Table 16.2 lists examples of how different organizations can contribute to the four Culture of Health Action Framework areas RWJF promotes. View the table and consider how nurses could work with community members and agencies to promote a culture of health.

Action Framework Area	Sector/Community Partner	Sample Actions
Making health a shared value	Community organization	Equip members to share messages about the importance of health care with others in the community.
	Hospital	Support messaging for health and well-being, not just health care.
	Mayor's office	Make speeches and deliver other communications that highlight health issues in traditionally "non-health" areas such as transportation and housing.
	Business	Communicate corporate values and describe how they align with well-being in the United States.
Fostering cross-sector collaboration to improve well-being	Community organization	Build relationships with other organizations in the community to prioritize health.
	Local/state public health department	Strengthen connections with businesses to expand health, safety, and well-being.
	Business	Donate to programs that are working to improve health and well-being.
Creating healthier, more equitable communities	Community organization	Strengthen community services that promote well-being, such as libraries and green spaces.
	Local/state public health department	Develop policies and plans that support health efforts.
	Hospital	Ensure the health and well-being of staff.
	Mayor's office	Collaborate with economically depressed neighborhoods to revitalize without gentrifying.
	Business	Provide volunteer opportunities for employees to serve the community in which the company is located.
Strengthening integration of health services and systems	Community organization	Work with health care systems to connect services provided by area nonprofits.

TABLE 16.2 Culture of Health Contributions (See RWJF, 2018.)

Action Framework Area	Sector/Community Partner	Sample Actions
	Hospital	Improve the client experience through inclusive language and literacy. Promote access to all types of care for everyone.
	Business	Provide employees access to quality health, dental, mental health, and substance use disorder treatment.

TABLE 16.2 Culture of Health Contributions (See RWJF, 2018.)

16.3 The Nursing Process as a Framework

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 16.3.1 Explain how the nursing process serves as a framework to gain a holistic perspective of the community and population.
- 16.3.2 Describe how the nursing process can serve as a framework to plan evidence-based nursing interventions.

Nurses use the **nursing process** to deliver care in a systematic and personalized way to individuals and communities through scientific reasoning, problem-solving, and critical thinking (Lotfi et al., 2020; Wagoro & Rakuom, 2015).

The nursing process has five stages:

- Assessment
- Diagnosis
- Planning
- Implementation
- Evaluation

These stages may appear familiar from foundational nursing courses where they would have been applied to physical assessment or care planning across client populations. Defining each stage and applying it to Elsa's community provides a practical framework for understanding how nurses might organize community care in each stage.

Through an *assessment*, the nurse collects data about the community. As discussed, the nurse may collect data through a windshield survey, informant interviews, or publicly available data. Specific evidence collected could include community characteristics, health behaviors, and social determinants of health.

- The population of Elsa's community significantly decreases when the summer residents leave. The closure of stores, restaurants, health clinics, dental offices, and pharmacies during the offseason makes it difficult for year-round community members to access essential items and health services. Some community members feel isolated during the offseason, contributing to mental health concerns and increased substance use. The lack of an endocrinologist or clinic that can address Elsa's diabetes requires them to travel long distances for appointments, and Elsa and their classmates do not have all-day, everyday access to a school nurse.

Through *diagnosis*, the nurse analyzes the data collected to identify areas of opportunity in the community in the context of health. The nurse identifies patterns, trends, or key problems in the data that point to a need for intervention in order to improve health.

- The community health nurse determines that there is limited access to health care across the continuum for community members. There is also an increased risk of social isolation and mental health concerns, which peaks during the offseason but can impact health and well-being year-round. There is a specific lack of diabetes care. School students may not have access to chronic disease management and treatment of

episodic concerns during the school day.

The *planning* stage involves determining goals or desired outcomes of community interventions and developing a plan to progress toward those goals. Community-based interventions could be as local as day-long health fairs or as broad as policy work that changes a population's health care.

- The community health nurse may plan to increase the availability of telehealth services to address the lack of health care access during the offseason. The nurse would collaborate with area physicians, nurse practitioners, and other clinicians to determine the feasibility of offering telehealth services. The community health nurse may also plan to explore possibilities for increased funding for school nurse positions so that the community's students can access a qualified health care professional during the school day. The nurse would discuss the challenges of limited school nurse staffing with current nurses, teachers, students, and families and share the information with the local school board. The nurse may also plan to develop support networks and engaging events for community members facing isolation during the offseason. They would work with community members to identify events likely to draw a crowd and find space to host engaging events.

In the *implementation* phase, the nurse carries out a health program.

- The community health nurse establishes a telehealth clinic at the community center, where every day of the week during the offseason, at least one of the summertime health care providers provides telehealth services to community members. The community health nurse advocates for school nurse support with local community decision-makers and the school committee and can secure funding to double the number of school nurse positions for the public schools. The nurse also organizes community events for different age groups throughout the month, including events for families with infants and young children, meetings for teens, and breakfast groups for seniors.

Finally, the nurse collects additional data to determine progress toward the identified goals and outcomes following a community program or intervention. This *evaluation* helps the nurse make evidence-based decisions regarding whether the program is meeting the community's health needs or requires modification.

- Tracking the number of residents who engage in a telehealth visit may be one method of evaluation. Additionally, due to the availability of primary and chronic care services via telemedicine, the community health nurse may determine whether visit volumes were any lower at urgent care centers and emergency departments. The community health nurse can track these same measures in relation to student health and the presence of a school nurse. The nurse could also track attendance at the new community events and survey attendees on their feelings of isolation and whether they are feeling down, depressed, or anxious.

THEORY IN ACTION

HI-5 Initiative

The nursing process steps and activities that support the health of the community and broader population health goals align with the CDC's Health Impact in 5 Years (HI-5 (https://openstax.org/r/cdcpolicy)) initiative. This initiative aims to support community health interventions that have positive health impacts, demonstrate results within 5 years, are cost-effective, and offer cost savings. Interventions of this program have contributed to ameliorating a variety of pressing community health concerns.

Visit the website to review this initiative, select an HI-5 intervention that interests you most, and then respond to the following questions.

School-Based Programs to Increase Physical Activity (https://openstax.org/r/cdcphy)

School-Based Violence Prevention (https://openstax.org/r/cdchi5)

Safe Routes to School (https://openstax.org/r/cdcsaferoutes)

Motorcycle Injury Prevention (https://openstax.org/r/cdcmotorcy)

Tobacco Control Interventions (https://openstax.org/r/cdctobacco)

Access to Clean Syringes (https://openstax.org/r/cleansyringes)

Pricing Strategies for Alcohol Products (https://openstax.org/r/cdcalcoholpricing)

Multi-Component Worksite Obesity Prevention (https://openstax.org/r/cdcworksite)

Early Childhood Education (https://openstax.org/r/cdcchildhoodeducation)

Cleaner and Alternative Fuel Bus Fleets (https://openstax.org/r/cdccleandiesel)

Public Transportation System: Introduction or Expansion (https://openstax.org/r/cdcpublictransportation)

Home Improvement Loans and Grants (https://openstax.org/r/cdchomeimprovement)

Earned Income Tax Credits (https://openstax.org/r/cdctaxcredits)

Water Fluoridation (https://openstax.org/r/cdcwaterfluoridation)

1. How does the intervention you selected support the HI-5 initiative?
2. How could a public/community health nurse carry out this program in another community or population? Would the intervention need modification to be successful in a different type of community, such as a rural area, a city with a large population of older adults, or a community with a large refugee population?
3. Ideally, the programs will be sustainable beyond 5 years. What do you think is needed to sustain the program you read about?

Nursing practices that have the goal of healing the whole person are consistent with holistic nursing (Thornton, 2019). Holism is the concept that all parts of a whole are interconnected and do not exist or function without each other. This concept is easily applicable to community-based nursing, as a thorough understanding of the many barriers and facilitators of health in each community is needed to plan effective and appropriate interventions. Nurses can best address the needs of the community and partner with the community when a thorough assessment of the following has been performed:

- Health services
- Community priorities
- Health risks
- Local policies and practices
- Other aspects of the dimensions of community health

In addition to guiding clinical care and use of evidence-based practices, the nursing process guides the work of nurses in the community. Using the nursing process to guide community practice supports a systematic approach to completing work in a holistic manner. Assessment of community needs, development of care plans specific to the community, and implementation of health-promoting interventions that address the community's unique health resources, concerns, and needs are possible through the holistic approach that the nursing process facilitates.

Chapter Summary

16.1 The Community as the Client

When the community is the client, nurses address the community's collective health instead of the acute and chronic health needs of individual clients. Community health nurses focus on promoting health, reducing risk, ameliorating disparities, and increasing equity. Communities may consist of groups of residents in a geographic area or groups of people sharing common characteristics. Nurses use many approaches, such as windshield surveys, to identify community health risks. Nurses should also consult public reports and other open information sources and interview community partners, decision-makers, and community members to ensure accurate assessments and meaningful data and to facilitate ethical practice. Partnerships with community members build trust, convey respect, minimize risk, and contribute to positive health outcomes. Inclusive practices in community-based work align with the concept of decolonization in nursing.

16.2 What Is a Healthy Community?

Communities can work together to support acheivement of full health potential in terms of physical health, mental health, education, community access, employment, and other aspects essential to wellness. The Robert Wood Johnson Foundation (RWJF) supports community health, health equity, and eliminating disparities. The RWJF Culture of Health initiative focuses on community-based health determinants such as access to care, housing, food, and economic stability. While clinical interventions and condition-specific nursing care are important, this kind of care is insufficient to achieve health equity. Focusing on social, economic, and environmental factors is imperative to creating healthy communities.

16.3 The Nursing Process as a Framework

The stages of the nursing process as a framework are assessment, diagnosis, planning, implementation, and evaluation. Nurses can use this framework in community health to guide scientific reasoning, problem-solving, and critical thinking when determining the need for community-level interventions. Holistic approaches to community health practices are based on recognizing that the dimensions of community health are interconnected and interact in complex ways.

Key Terms

advocacy support for a specific health cause or recommendations for community or policy change

community a group of people with at least one characteristic in common

decolonization processes that systematically dismantle colonial ideologies of superiority, thought, approaches, and privilege

dimensions of community health the people (also known as status), structures, and processes that may be assessed and measured to determine the care delivery and health outcomes of a community

nursing process a guiding framework for nurses to deliver care in a systematic and personalized way to individuals and communities through scientific reasoning, problem-solving, and critical thinking; involves five stages: assessment, diagnosis, planning, implementation, and evaluation

windshield survey a method of direct observation in which the nurse views the community or neighborhood while driving around and looking through the windows of the vehicle

Review Questions

1. Which action is an example of the community health nurse engaged in nursing the community as the client?
   a. Providing individualized care for multiple patients with a specific chronic illness
   b. Conducting health screenings for individuals in a specific town or city
   c. Administering vaccines to individuals at high risk of disease complications
   d. Treating a client's acute illness in a hospital setting

2. Which activity would the nurse recognize as meeting the Healthy People 2030 goal of civic participation?
   a. Voting in local, state, and federal elections
   b. Planting a home garden
   c. Running in a 5-mile road race
   d. Keeping vaccinations current

3. Which of the following explains why community health nurses should involve community members in assessment processes?
   a. To allow the community to make improvements prior to a windshield survey
   b. To share the workload of change with the community members
   c. To increase the likelihood of community participation in interventions and programs
   d. To exert control over the community members

4. When developing a community profile guided by Gordon's functional health patterns, which of the following patterns would the nurse identify as focusing on the community's view of itself?
   a. Cognitive-perceptual
   b. Health perception–health management
   c. Nutritional-metabolic
   d. Self-perception–self-concept

5. Which phase of the nursing process is the community health nurse performing when they identify patterns and trends in data?
   a. Assessment
   b. Diagnosis
   c. Planning
   d. Evaluation

6. Using the Robert Wood Johnson Foundation's Culture of Health Action Framework, which action would the nurse take when engaged in cross-sector collaboration to reduce overdose deaths in adolescents?
   a. Encouraging community members to vote on a referendum for substance misuse education
   b. Working with schools and law enforcement to reduce drug overdoses
   c. Supporting research for substance misuse prevention programs
   d. Creating community-based substance misuse treatment programs

7. According to the Robert Wood Johnson Foundation's Culture of Health Action Framework, which action is a driver of change in making health a shared value?
   a. Increasing partnerships between hospitals
   b. Supporting working parents
   c. Providing access to routine dental and vision care
   d. Changing the mindset and expectations of a community

8. How does the first step of the nursing process inform community health interventions?
   a. Assessment provides the nurse with data to identify patterns, trends, or key health problems.
   b. Planning determines the goals or outcomes of possible community interventions.
   c. Implementation allows for the use of evidence-based practices.
   d. Evaluation informs the nurse of needed changes to community health programs.

9. Which of the following best describes the concept of holism in community-based nursing?
   a. Focuses on the physical health of individuals living in the community
   b. Treats hospitals and clinics, transportation, food stores, and green space as separate entities
   c. Recognizes the interconnectedness of community policies, health risks, and medical services
   d. Implements evidence-based practices for the needs and wants of specific communities

10. Which of Gordon's functional health patterns is the nurse assessing by looking at community disaster plans and public safety?
   a. Coping–stress tolerance
   b. Health perception–health management
   c. Value-belief
   d. Role-relationship

CHAPTER 17

Assessment, Analysis, and Diagnosis

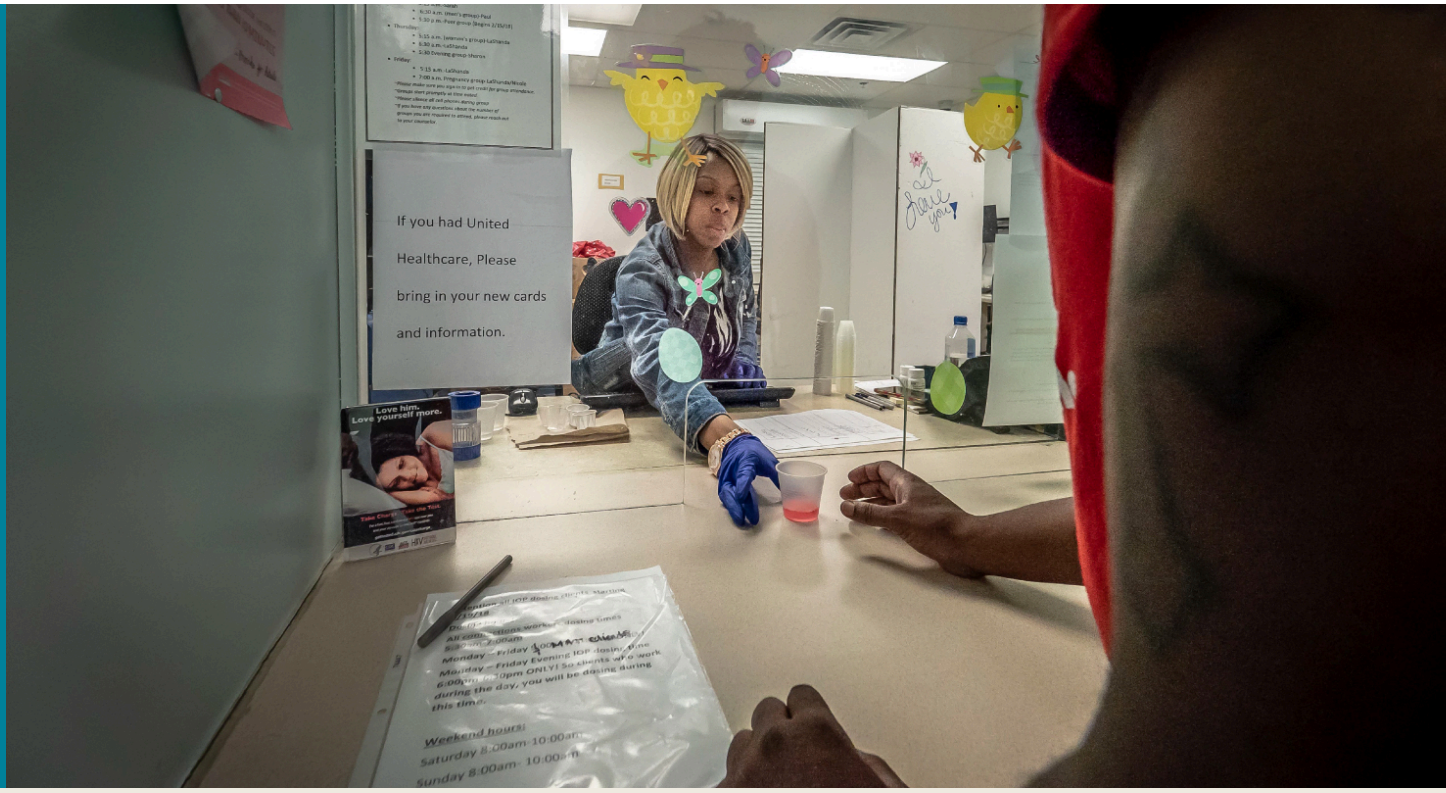


FIGURE 17.1 Community health nurses work directly with individuals, families, and communities to provide health promotion and disease prevention programs. (credit: modification of work by Preston Keres/USDA/Flickr, Public Domain)

CHAPTER OUTLINE

17.1 Assessment Tools and Application to Practice
17.2 Assessment of Individual and Community Needs for Health Education
17.3 Analyzing Population Health Data and Identifying Patterns
17.4 Formulating a Nursing Community Diagnosis and Plan of Care

INTRODUCTION For the seventh year in a row, the U.S. Department of Health and Human Services (USDHHS) (2023) has declared the opioid crisis a national public health emergency. Tia, a community health nurse who has just relocated to work at a community health clinic, wonders how this national crisis affects the local community. Tia has several informal conversations with local community organizations. The county emergency medical services (EMS) coordinator tells Tia that drug overdoses from opioids, especially heroin, have increased over the past few months. The director of the withdrawal center explains that they have seen an increased need in individuals seeking daily methadone doses. Tia realizes she must gain a broader understanding of the opioid problem to determine if and which resources are needed to combat the opioid crisis within her community.

Community health nurses like Tia may be charged with leading community health assessment and developing a community health care plan. Assessment, analysis, and diagnosis/planning follow the same principles for communities as in the nursing process for individuals. Collaboration with community partners is a key element of the community nursing process to ensure a community-centered approach. The process identifies a community's health needs to ultimately create a plan to empower communities to focus on health promotion and disease prevention.

17.1 Assessment Tools and Application to Practice

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 17.1.1 Differentiate among assessment tools and data sources (primary and secondary) used to evaluate the health status of populations, communities, and systems.
- 17.1.2 Use a wide variety of sources and methods to access public health information.
- 17.1.3 Conduct a community needs assessment considering self-resilient capabilities of a target population to identify and prioritize problems and health concerns.

Nurses gain a broad understanding of health issues during assessment and analysis. During assessment of an individual, the nurse gathers information about a client's health condition and includes data from primary sources (head-to-toe assessment, client interview) and secondary sources (previous medical records, health professionals, family, or friends). Comparably, assessment of populations is termed **community health assessment** (CHA), or community health needs assessment (CHNA). In this instance, the *client* is the defined population or community. Nurses and other health care professionals use a comprehensive, systematic approach to gather community health data with the primary goal of implementing programs to benefit people in an area as a whole.

A CHA provides a comprehensive picture of a community's current health status, identifying factors contributing to higher health risks or poorer health outcomes and available community resources to improve health (Public Health Accreditation Board [PHAB], 2022). The purpose of community health assessment and a subsequent community health improvement plan is to identify a community's key health needs and address them through strategic intervention. Systematic processes are utilized to collect data, identify and analyze community health needs and assets, prioritize those needs, and provide a foundation for decision-making to implement a plan to address unmet needs (Centers for Disease Control and Prevention [CDC], 2023).

A CHA's timing varies depending on the community's needs. For example, public health departments seeking or maintaining PHAB accreditation must complete a community health assessment every 5 years. Some communities choose to conduct a CHA more often due to policy mandates. For example, the Affordable Care Act (ACA) requires nonprofit hospitals to conduct a CHA every 3 years. Communities may also conduct a partial or full CHA as needed. As noted in the chapter introduction, Tia wonders how the opioid crisis impacts the local community. To understand this issue clearly, Tia can conduct a partial CHA focusing on the opioid crisis. If a larger CHA is in process or was completed recently, such as within the past year, Tia can extract the data regarding drug use and overdose.

Community Health Assessment Models, Frameworks, and Tools

CHA models, frameworks, and tools guide community assessment and community health improvement. They provide a systematic, evidence-based process for organizing the assessment team; collecting and analyzing data; and planning, implementing, and evaluating community health improvement strategies. Most assessment and planning frameworks contain common actions. According to the CDC (2023), common elements of assessment and planning frameworks include the following:

- Organize and plan
- Engage the community
- Develop a goal or vision
- Conduct community health assessment(s)
- Prioritize health issues
- Develop a community health improvement plan
- Implement and monitor the community health improvement plan
- Evaluation process and outcomes

These common actions are evident within the frequently used CHA models, frameworks, and tools described in this chapter. This section reviews the Community Health Assessment toolkit, the Mobilizing for Action through Planning and Partnerships (MAPP) framework, the Community Health Assessment aNd Group Evaluation (CHANGE) tool, the PRECEDE-PROCEED model, and the Agency for Toxic Substances and Disease Registry (ATSDR) action model.

Community Health Assessment Toolkit

The American Hospital Association (AHA) developed the Association for Community Health Improvement Community Health Assessment toolkit to help nonprofit hospitals comply with Internal Revenue Service regulations for CHAs. The toolkit consists of nine steps for conducting a CHA and developing intervention strategies (AHA, 2017).

The Community Health Assessment Toolkit (https://openstax.org/r/healthycommunitieso) identifies community engagement as a central component of the CHA process. **Community engagement** is the process of working collaboratively with and through groups of people to identify the health needs of community residents and strategies to address them. To engage the community, the nurse must invite community partners to participate. **Community partners**, also called stakeholders, are all persons, agencies, and organizations that have an investment in the community's health and in the local public health system (National Association of County and City Health Officials [NACCHO], 2016). This includes community members who benefit from health services and those that provide health services, such as informal or formal leaders from schools, faith-based organizations, businesses, social clubs, health care, transportation, and government. Community members may decide to establish a **partnership**, a relationship characterized by mutual cooperation and responsibilities among individuals and groups (Figure 17.2) (NACCHO, 2016). Partnerships may expand into **coalition** building. A coalition is a group of people and organizations that work to address community needs and solve community problems (PHAB, 2022). Planning Health Promotion and Disease Prevention Interventions further describes partnerships and coalitions.



FIGURE 17.2 Community partnerships include community members who benefit from health services and those that provide health services, such as seen in this town meeting at a health center in Maryland. (credit: "Zeta Center for Health and Active Aging Town Meeting" by James W. Brown/Flickr, CC BY 2.0)

Community engagement strengthens the CHA by including diverse perspectives; increasing collaboration and stronger partnerships; sharing a sense of ownership and resources; and improving communication among individuals from the community, community partner organizations, and hospitals. The Community Health Assessment toolkit enhances community engagement by establishing committees that collaborate at each step. Users of this toolkit sequentially follow the nine steps described in Table 17.1.

Community Health Assessment Toolkit Steps	Actions
Step 1: Reflect and Strategize	• Review the previous CHA. • Identify leadership. • Create the assessment team. • Identify and procure resources, including budget planning.
Step 2: Identify and Engage Community Partners	• Connect with community partners from various sectors to ensure diverse perspectives. • Identify community members from populations that have increased risk for health disparities.
Step 3: Define the Community	• Describe the geographic community. • Identify community groups, including populations of interest, such as underserved populations.
Step 4: Collect and Analyze Data	• Collect quantitative and qualitative data to comprehensively describe community indicators and factors that impact health. • Attain an overall picture of community health status and highlight the needs of populations within the community, such as populations that experience health inequities. • Analyze data.
Step 5: Prioritize Community Health Issues	• Prioritize community health needs based on severity and magnitude, the community's capacity to act, the availability of resources, and the needs of vulnerable populations.
Step 6: Document and Communicate Results	• Communicate results of the CHA and convey priorities to community members and identified partners.
Step 7: Plan Implementation Strategies	• Develop evidence-based, far-reaching strategies that utilize strategic partnerships and available resources to target identified health priorities and populations. • Set goals and objectives of the community health improvement plan.

TABLE 17.1 Steps in the Community Health Assessment Toolkit

Community Health Assessment Toolkit Steps	Actions
Step 8: Implement Strategies	• Develop an action plan that details specific activities, accountability, and timelines to guide implementation. • Put planned strategies into action. • Modify programs and activities, if needed, to address logistical, community partner, and budgetary concerns.
Step 9: Evaluate Progress	• Evaluate goals, objectives, and strategies. • Begin the CHA process again. • Compare current data to previous data and determine whether the implemented strategies worked to improve community health outcomes.

TABLE 17.1 Steps in the Community Health Assessment Toolkit

THEORY IN ACTION

Community Health Needs Assessment

Access multimedia content (http://openstax.org/books/population-health/pages/17-1-assessment-tools-and-application-to-practice)

Conducting community health assessment through collaborative partnerships can positively impact the overall process. This video features key team members from two competing health systems and Penn State Hershey, an academic medical center, who participated in a Community Health Needs Assessment in Pennsylvania.

Watch the video, and then respond to the following questions.

1. Why is it important to conduct a CHNA?
2. What are the benefits of establishing collaborative partnerships to conduct a CHNA?
3. What are the goals of a CHNA according to the speakers in the video?

Mobilizing for Action through Planning and Partnerships

Public health leaders can use the Mobilizing for Action through Planning and Partnerships (MAPP) framework (https://openstax.org/r/nacchoorguploads) for local-level community health improvement planning. The MAPP framework is community-driven and facilitates prioritizing public health issues and identifying resources to address them (NACCHO, 2023). MAPP emphasizes community engagement and collaboration for system-level planning. Originally consisting of six steps, the framework is undergoing redesign (NACCHO, 2020). The redesign includes the foundational principles of equity, inclusion, trusted relationships, community power, strategic collaborations, data-informed action, flexibility, and continuous improvement. The revised MAPP, shown in Table 17.2, provides a streamlined approach to community health assessment and community improvement and directs the nurse and program team through three phases consisting of multiple activities (NACCHO, 2023).

	Phases	Activities Completed
1	Build the Community Health Improvement (CHI) Infrastructure	• Establish CHI leadership and administrative structures. • Strengthen community and partnership engagement. • Assess and improve CHI infrastructure, processes, and outcomes.
2	Tell the Community Story	• Perform Community Status Assessment. • Perform Community Context Assessment. • Perform Community Partners Assessment.
3	Continuously Improve the Community	• Identify CHIP priorities, strategies, and actions. • Complete power analyses and partner profiles. • Conduct joint implementation of CHIP. • Engage in continuous quality improvement.

TABLE 17.2 The Revised MAPP Phases

Community Health Assessment aNd Group Evaluation

The CDC developed the Community Health Assessment and Group Evaluation (CHANGE) tool for community members who desire to improve their community's health (CDC, 2010). CHANGE focuses on gathering and organizing data on community assets and potential areas for improvement to prioritize needs for multilevel changes in policies, systems, and the environment. An Action Guide (https://openstax.org/r/cdcgovnccdphp) with worksheets and templates assists community members through the eight action steps within the CHANGE tool (see Table 17.3).

The CHANGE tool divides the community into five sectors: community-at-large, community institution/organization, health care, school, and work site. The community-at-large sector includes the social and built community environments, such as safety, food access, and policies that affect health. The community institution/organization sector includes human services and facility access, such as the YMCA, senior centers, faith-based organizations, childcare, and colleges and universities. The health care sector includes emergency services, clinics, hospitals, and provider offices. The school sector includes primary and secondary learning institutions. The work site sector includes places of employment.

CHANGE Tool Action Step	Actions Taken
1: Assemble the Community Team	• Recruit team members from diverse sectors of the community. • Include key community decision makers. • Ideally, have no more than 10 to 12 total members.
2: Develop Team Strategy	• Determine how the team will collect data and complete the CHANGE tool; for example, the team may decide to divide into subgroups. • Determine decision-making strategies, such as by majority vote or unanimous vote.
3: Review All Five Change Sectors	• Develop an understanding of the big picture. • Review the five sectors (by subgroups if that was decided in Action Step 2).

TABLE 17.3 CHANGE Tool Action Steps

CHANGE Tool Action Step	Actions Taken
4: Gather Data	• Gather data from each sector using multiple data collection methods (the CHANGE tool describes suggested methods). • Gather data from multiple sites (ideally 13 or more) within each sector.
5: Review Data Gathered	• Review data collected as a team. • Rate data following the CHANGE tool parameters, which includes the team coming to a consensus rating that will be used to evaluate improvement.
6: Enter Data	• Designate one team member to input data, including data collected, ratings, and team member comments.
7: Review Consolidated Data	• Summarize findings. • Determine areas for improvement. • Develop a Community Action Plan.
8: Build the Community Action Plan	• Create project and annual objectives. • Plan for activities to meet those objectives. • Evaluate the Community Action Plan annually and upon project completion.

TABLE 17.3 CHANGE Tool Action Steps

PRECEDE-PROCEED Model

The Green and Kreuter PRECEDE-PROCEED model uses a social-ecological, population-level approach to guide health promotion strategies. This model considers the impact of the social determinants of health (SDOH) and the community environment on the target population's quality of life and needs (Porter, 2016). Members of the target population participate throughout each phase of the model.

PRECEDE stands for Predisposing, Reinforcing, Enabling Constructs in Educational/Environmental Diagnoses and Evaluations. The PRECEDE process occurs before implementation of an intervention and includes the following four phases:

1. Define the outcome: Social and situational assessment of what the community wants and needs. Includes data collection and assessment.
2. Identify the issue: Select the most important issue that can be influenced by an intervention. Includes analysis and prioritization.
3. Examine factors that influence behavior, lifestyle, and responses to environment: This includes analysis of predisposing, enabling, and reinforcing factors that influence health promotion. See Health Promotion and Disease Prevention Strategies for further explanation of each factor.
4. Identify best practices for intervention and organizational issues that could have an impact: Design an action plan.

PROCEED stands for Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development. The four phases of PROCEED guide the implementation of the intervention itself. PROCEED is discussed further in Planning Health Promotion and Disease Prevention Interventions as a model used for programming planning, implementation, and evaluation.

Agency for Toxic Substances and Disease Registry Action Model

The Agency for Toxic Substances and Disease Registry (ATSDR) (2023) developed an Action Model (https://openstax.org/r/atsdr.cdc) for community members to identify community problems and create a plan to improve the community through redevelopment (see Figure 17.3). Redevelopment consists of making changes to an

area to impact health outcomes, such as repairing sidewalks and buildings, removing harmful environmental exposures, or building a playground. For example, a community with increased adolescent obesity rates decides to redevelop a park to provide areas for exercise. They add basketball and tennis courts, walking trails, and outdoor exercise equipment to the park.

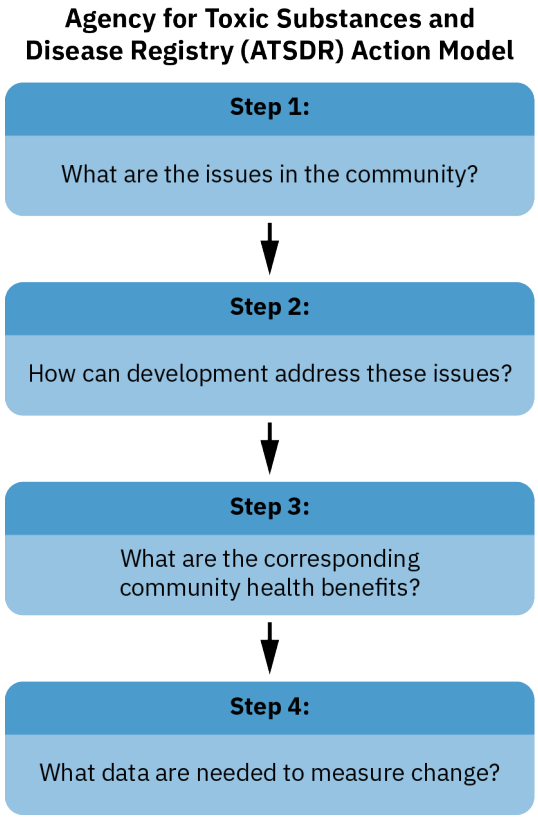


FIGURE 17.3 Community members can work through the four steps of the ATSDR Action Model to identify community problems and create a plan to improve the community through redevelopment. (credit: modification of work "The Action Model is built around four steps or questions" by Agency for Toxic Substances and Disease Registry/U.S. Department of Health and Human Services, Public Domain; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Before working through the Action Model, a team of community members who are interested in the identified issue or are impacted by the issue will play a role in redevelopment plans. A toolkit is available (https://openstax.org/r/atsdrcdcg) to walk community members through building a team and Action Model steps.

Primary and Secondary Data Sources

A CHA consists of data and information from multiple sources. Required data includes information about the community's demographics, health status, morbidity and mortality rates, socioeconomic characteristics, quality of life, community resources, behavioral factors, environment, and other social and structural determinants of health (PHAB, 2022). A comprehensive CHA needs a variety of primary and secondary data sources to gather information. In fact, PHAB requires public health departments to use primary and secondary data sources and include both quantitative and qualitative measures. **Quantitative data** are expressed by amounts in numerical terms. **Qualitative data** are expressed in word form, cannot be quantified, and describe perspectives of individuals and populations. CHA data and indicators should be valid, reliable, feasible, meaningful, and collected over time.

An assessor collects **primary data** directly from community members. PHAB considers primary data to be data for which collection is conducted, contracted, or overseen by the health department (PHAB, 2022). Collecting primary data can be time- and resource-intensive. Table 17.4 describes common primary data sources.

Primary Data Source	Description
Participant observation	• Purposeful sharing of life in a community, noting details about the people and environment • Includes attendance at local events • This type of data is qualitative.
Interview key informants	• Interview people viewed as local leaders in the community. • Leaders may not have a formal title or position and may include individuals from businesses, organizations, social clubs, religious congregations, civic clubs, or government. • This type of data is qualitative.
Forum or town hall meeting	• Community members congregate to discuss a particular issue or proposal that influences all community members. • This may include discussions regarding health policy or infrastructure. • This type of data is qualitative.
Focus group	• Small groups of individuals (8 to 10 per group) are interviewed using mostly open-ended questions. • Interactions between participants may prompt discussion or generate ideas. • This is most often used to reach community members who may not be heard from in other ways. • This type of data is qualitative.
Photovoice	• Community members take photos to represent a topic or theme about the community. The photos convey visual messages about community strengths and concerns, adding depth to the CHA. • This is useful when working with groups that may be marginalized or have little power. • This type of data is qualitative.
Survey	• Standardized questionnaire via mail, telephone, face-to-face, or electronic • Usually developed through collaboration among multiple community partners • This type of data is quantitative and qualitative depending upon survey questions.
Windshield survey	• Simple observation while driving or walking through a community • Notes common characteristics of people, housing quality, services, and geographic boundaries • This type of data is qualitative.

TABLE 17.4 Primary Data Sources Used in Community Health Assessment

Secondary data are obtained through an existing report on the community originally collected by another entity or for a purpose other than CHA. Secondary data are usually readily available and may be inexpensive for the assessor. Secondary sources include census data, vital statistics, health indicators, health profiles, and spatial data. **Vital statistics** are population data about births, deaths, marriages, and divorces. **Health indicators** are numerical measures of health outcomes, such as morbidity and mortality, that have been analyzed and are used to compare rates or trends of priority community health outcomes and determinants of health. They are usually attained

through secondary data sources. Health indicators provide a snapshot of community health outcomes and allow for benchmarking. A **benchmark** is a standard or point of reference against which measurements can be compared.

Sources and Methods to Access Public Health Information

A comprehensive CHA contains public health data from various sources displayed in ways to identify trends and patterns. Public health information is also used to compare local data to state and national data, which can be used for benchmarking and to trend data to evaluate progress.

Spatial Data

One method to identify trends and patterns is using **spatial data**, which identifies the geographic location of phenomena. Spatial data provide an overview of the whole community in map form and facilitate comparing one part of the community to another. This is an important tool to use when conducting a CHA because geographic location can affect access to resources and exposure to health threats. Major differences in health outcomes, especially in mortality rates, have been found even between locations within 5 to 10 miles of each other (Couillard et al., 2021; Hollar, 2016; Pedigo et al., 2011).

THE ROOTS OF HEALTH INEQUITIES

Where You Live Matters!

Access multimedia content (http://openstax.org/books/population-health/pages/17-1-assessment-tools-and-application-to-practice)

A person's geographical location influences their access to healthy foods, education, jobs, safe housing and neighborhoods, facilities that promote health, and health care resources. Individuals living in neighborhoods with greater economic resources have healthier lifestyles. By identifying locations where health disparities exist, even in the same community, nurses can recognize populations at risk for negative health outcomes. Additionally, spatial data helps identify the SDOH within a location that contribute to negative health outcomes. For example, a nurse finds that higher rates of tuberculosis occur in one community area. The nurse uses spatial data to locate the geographical area of tuberculosis diagnoses and assesses potential environmental factors that influence TB's spread, such as housing and living conditions. The nurse prioritizes interventions by focusing on improving living conditions in the area.

This American Heart Association video explains why a person's zip code may be more important than their genetic code.

Watch the video, and then respond to the following questions.

1. Consider your community. What areas or locations might you compare using spatial data to clarify whether inequities exist?
2. How does location relate to social determinants of health and other environmental factors that impact health?

Geographic information systems (GIS) are software and technology that can store, visualize, analyze, and interpret spatial data (CDC, 2019a). The software creates maps electronically using primary or secondary data to determine how location impacts disease and disability. Any data that can be mapped can be used and compared by location. This helps locate areas of communities where high rates of health problems occur.

Nurses and other health care professionals can use GIS maps to identify areas within a community—such as those with higher rates of opioid overdoses, for example—to target them for intervention. Additionally, it is possible to analyze the environment in that location for potential determinants of health that lead to increased opioid use and overdose. GIS tools and examples can be found on the CDC's website (https://openstax.org/r/cdc.gov/gis).

USING GIS TO PREDICT OUTBREAKS

Access multimedia content (http://openstax.org/books/population-health/pages/17-1-assessment-tools-and-application-to-practice)

This Queens University video describes how researchers are using GIS to create interactive maps to track information about a range of topics, such as population movement and infection rates of emerging diseases.

Watch the video, and then respond to the following questions.

1. How can maps be used in community health assessment to determine health patterns?
2. How were GIS and other assessment data used to predict the spread of COVID-19?
3. How can GIS data be used to plan for intervention within a community?

Secondary Data Sources

Public health information sources provide data on local, state, and federal health indicators. During the CHA, the team can use these secondary sources to compare local health data to other municipalities, state, and federal health data for benchmarking. All are quantitative data sources. Table 17.5 describes frequently used secondary data sources and methods to access public health information.

Secondary Data Source	Description
Behavioral Risk Factor Surveillance Survey (BRFSS) https://www.cdc.gov/brfss/data_tools.htm (https://openstax.org/r/cdcgovbrfss)	• Survey data are collected by telephone in 50 states, the District of Columbia, and three U.S. territories. • Data include demographic characteristics, health conditions, and current health behaviors. • Tools on the site allow users to attain state or national prevalence and trend data by health topic and compare two or more geographic areas by health indicator.
Population-Level Analysis and Community Estimates (PLACES) https://www.cdc.gov/places/ (https://openstax.org/r/cdcgovplaces)	• This site reports U.S. data at multiple local area levels (county, place, census tract, and zip code) on health risk behaviors, health outcomes, health status, and prevention practices. • Tools on the site allow users to attain data by location and health measures and compare up to three geographic areas by health measures. Interactive maps are also available.
CDC Wide-Ranging Online Data for Epidemiologic Research (WONDER) https://wonder.cdc.gov/ (https://openstax.org/r/wondercdcgov)	• This site integrates public health information data sets and any statistical research data published by the CDC. • Tools on the site allow users to retrieve information on mortality, common disease and disability, communicable disease, vaccinations, births, environmental and occupational health, injury prevention, and health practices. Information can be viewed at national, state, and sometimes county levels.

TABLE 17.5 Secondary Data Sources to Enhance a Community Health Assessment

Secondary Data Source	Description
National Center for Health Statistics: FastStats https://www.cdc.gov/nchs/fastats/default.htm (https://openstax.org/r/cdcgovnchsfastats)	• This site provides national statistics on multiple health topics in the United States. • Topics include several diseases and conditions, infectious disease, family life, health care and insurance, disability and risk factors, injuries, life stages and populations, and reproductive health.
U.S. Census https://www.census.gov/ (https://openstax.org/r/census) https://data.census.gov/ (https://openstax.org/r/datacensusgov)	• These sites report U.S. data by different geographies (national, states, counties, places, tribal areas, zip codes, and congressional districts) on topics such as population, education, housing, employment, health, business and economy, families and living arrangements, poverty, and emergency management. • Data can be produced in table or map format. Detailed instructions are available to assist with data retrieval.
Healthy People 2030 https://health.gov/healthypeople (https://openstax.org/r/govhealthypeople)	• Provides national data on 359 national objectives to improve health and well-being • Can be used to compare local data to national data and objectives
County Health Rankings https://www.countyhealthrankings.org/ (https://openstax.org/r/countyhealthrankingsorg)	• Ranks (using the County Health Rankings Model) are provided at the county level using health outcomes and health factors attained from other entities. State and national values are provided for comparison. • Length of life, quality of life, health behaviors, clinical care, social and economic factors, and physical environment data are available.
State Cancer Profile https://statecancerprofiles.cancer.gov/ (https://openstax.org/r/cancerprofiles)	• This site reports cancer data at the state level. Data include demographics, screening and risk factors, incidence, and mortality on 20+ cancer sites. • National data are provided for comparison. • Data are provided in statistic, chart, and map formats.
State Health Access Data Assistance Center https://www.shadac.org/ (https://openstax.org/r/shadac)	• Provides state-level data on health insurance, cost of care, health care access and utilization, health behaviors and outcomes, and affordability of care • Includes national data for comparison

TABLE 17.5 Secondary Data Sources to Enhance a Community Health Assessment

Secondary Data Source	Description
State Health Assessment See state public health department websites for state health assessments.	• Provides CHA data gathered at the state level • Can be used to compare local data to state data or to compare state to state
Tribal Health Assessment See tribal health department websites for tribal health assessments.	• Provides CHA data gathered at the tribal level • Can be used to compare local tribal data to previous local data, other tribal health data, or state or national data
Local Health Assessment See local health department websites for local community health assessments.	• Provides CHA data gathered at the local level • Can be used to compare local data to previous local data, similar counties/communities, state, or national data

TABLE 17.5 Secondary Data Sources to Enhance a Community Health Assessment



HEALTHY PEOPLE 2030

Reduce Drug Overdose Deaths

Drug overdose deaths are one common health indicator measured within a CHA and are considered a national emergency. As such, a leading health indicator of Healthy People 2030 within Drug and Alcohol Use objectives is reducing drug overdose deaths (https://openstax.org/r/peopleobjectives). The target goal for this health indicator is 20.7 drug overdose deaths per 100,000 people, which was the baseline measure in 2018. In 2020, 28.3 drug overdose deaths per 100,000 individuals occurred; in 2021, 32.4 drug overdose deaths per 100,000 individuals occurred.

At this time, the 2020 and 2021 data signify that drug overdose deaths have increased in the United States. This aligns with the public health emergency declaration for the opioid crisis.

Conducting a Community Health Needs Assessment

The first steps of conducting a CHA, no matter the framework, model, or tool chosen as a guide, are planning, engaging the community, and recruiting the assistance of key community partners. After creating the team and determining team roles, the next step is defining the community and the data collection process.

A community may be defined by geography or place of residence, shared characteristics or demographics, or common interests. PHAB (2022) defines a community as a group of people with common characteristics; this can be defined by location, race, ethnicity, age, occupation, interest in particular problems or outcomes, or other common bonds. The definition of the community may change depending upon the context. For a CHA, the community should be defined by people, place or environment, and community systems. Table 17.6 clarifies data that fall under each category.

Category	Data Included
People: Who are the people within the community?	• Demographics and vital statistics (size and density of population, age, gender, race, ethnicity, income, education level, household makeup) • Health indicators and health behaviors • Morbidity and mortality patterns (leading causes of death and disability) • Values and beliefs
Place: Where is the community? What is the physical environment?	• Geographical boundaries • Distance and relation to other communities • Community size • Historical information • Physical environment (water quality, indoor and outdoor air quality, climate, pollution)
Community systems: What services and resources are available?	• Safety (crime, police, fire, EMS, sanitation, laws) • Transportation • Politics and government (government buy-in and focus on health) • Educational opportunities (all levels) • Recreation (safe indoor and outdoor areas) • Economics (existing jobs, unemployment, types of industry) • Businesses and services • Communication (phone, radio, internet, TV, media) • Religious or spiritual organizations • Social clubs (civic clubs, neighborhood associations) • Availability of healthy foods • Built environment (housing, sidewalks, roads) • Emergency disaster planning • Aesthetics (art, music, culture) • Health and social services (health care providers, hospitals, hospice, emergency care, mental health care, specialty services)

TABLE 17.6 People, Place, and Community Systems Used to Define Community Within a CHA

Data gathering is required to assist with defining the community. A rich CHA and definition of the community contain both quantitative and qualitative data, and PHAB requires a CHA to show evidence of both (PHAB, 2022). To provide a comprehensive picture of the community, the CHA should include several primary and secondary data collection methods to define the community. Refer to Table 17.4 for potential primary data sources and Table 17.5 for potential secondary data sources. Primary data sources may include qualitative data, quantitative data, or both. Secondary data sources are quantitative in nature.

The community health nurse focuses on data regarding areas of need. This includes mortality, morbidity, and other health outcome data, such as SDOH. A comprehensive review of access to education, healthy nutrition, transportation, healthy spaces, resources for exercise, health care services, economic opportunities, a healthy environment, and employment provides perspective on potential causes of negative health outcomes and areas for improvement.

The community health nurse should not focus only on data regarding areas of need, but on areas of strength and potential resources as well. The values and beliefs of the community, available resources, and current and potential funding are considered. Community values and beliefs are important to ensure community buy-in when programs are implemented to target an identified area of concern. Although statistical health data may indicate poor outcomes in one area, other health-related areas may be of greater concern and importance to community members. Evaluation of the adequacy of community systems should also occur. One method to assess the extent to

which community agencies successfully provide support is the seven As (Truglio-Londrigan & Gallager, 2003):

- Awareness: Community members are aware that a service is needed and know where to attain that service.
- Access: Community members can contact the agency, can navigate the agency's technology, and have no limitations in getting to the service.
- Availability: Service is offered at a time, location, and place that is convenient for community members.
- Affordability: Community members are able to pay for the service.
- Acceptability: Community members perceive that the service is meeting their needs.
- Appropriateness: Community members believe the service is suitable.
- Adequacy: Service is provided in sufficient quantity or degree.

Assigned individuals or groups within the CHA team carry out the work of data collection. Most often, the local public health department or health care system provides team leadership. Some CHA teams may decide to hire outside professionals to conduct the work of data collection and subsequent work writing in collaboration with the CHA team.

Most CHAs include surveys mailed to randomly selected community members. The team creates surveys in collaboration with various community partners and organizations that provide care to community members. Most often, these individuals and organizations have information that they need to determine if the care and programs they provide are still needed and effective. For example, a representative from the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) may be a part of the CHA team and ask that data regarding breastfeeding is collected. This ensures that the data collected is not only useful to the public health department, but to community partners as well.

Key interviews or focus groups add important qualitative information regarding the values and beliefs of the community. Examples of questions that may be asked to determine the values, beliefs, and concerns of community members include the following:

- What do you consider to be the major health concerns of the community?
- What do you consider to be the least important health issues of the community?
- What are some of the current efforts to address health concerns of the community?
- What do you consider to be strengths of the community?
- What do you consider to be challenges of the community?
- What do you consider to be needs of community members that are not being addressed?
- In your opinion, why are those needs not being addressed?

Youth data may be difficult to collect. School-age children complete multiple required assessments per year, which takes away from instruction. Additionally, parents must provide permission for assessment, which is not always granted. Often youth data are derived from either data collected by other agencies or organizations or by surveys completed by school-age youth enrolled in local schools. For example, the Ohio Healthy Youth Environment Survey (OHYES!) (https://openstax.org/r/ohyes) is a free survey schools can use to collect data from students in grades 7 to 12 (Ohio Department of Health, 2023). It includes questions about health, safety, and behavior health factors.

Data collection ends when all planned assessment tasks are conducted and the data represent a comprehensive view of the community. The data are collated into a final written report and presented by topic. Most often, the CHA report contains topic areas such as health care access, adult health behaviors, chronic disease, social conditions, youth health, and demographics. The data are presented in written format, tables, graphs, and images to highlight areas of strength and concern. Examples of current CHA reports can be found on most public health department or health care system websites.

UNFOLDING CASE STUDY

Part A: Conducting a CHA

Read the scenario, and then answer the questions that follow.

After contacting community members, Tia joined an assessment team with the goal of implementing interventions

to combat the opioid crisis. The team chose the PRECEDE-PROCEED model to guide its assessment and planning for intervention. During the first phase, social assessment, data regarding community needs and desires are collected. The team found that community members are concerned about the current opioid crisis and would like to reduce substance misuse and overdose death rates. During the second phase, epidemiological assessment, the team gathers data from primary and secondary sources and considers behavioral and environmental factors contributing to the opioid crisis. During the third phase, educational and ecological diagnosis, the team identifies predisposing, enabling, and reinforcing factors of the opioid crisis.

1. The team plans to gather qualitative information from key community partners regarding the opioid crisis during the first step. Which of the following data collection strategies would be appropriate?
    a. Collecting survey responses from community members
    b. Using GIS to map incidences of opioid overdose deaths
    c. Gathering local overdose statistics to compare to national data
    d. Conducting a focus group with local emergency responders

2. Which of the following would be categorized as an enabling factor for addressing opioid misuse?
    a. A drug rehabilitation center is located within the community.
    b. Local media promotes community naloxone training.
    c. High school students gain knowledge of the consequences of opioid misuse.
    d. A cycle of drug misuse is linked to specific families in the community.

17.2 Assessment of Individual and Community Needs for Health Education

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 17.2.1 Define health literacy.
- 17.2.2 Assess the health literacy of a population to guide health promotion and disease prevention activities.
- 17.2.3 Examine one or more health literacy assessment tools.
- 17.2.4 Examine how people learn and the factors that influence learning and knowledge acquisition.

Nurses working in the community regularly use health education to help clients promote, maintain, and restore health. Effective educators assess the individual or community for learning needs and health literacy, understand how people learn, utilize one or more learning theory models, promote factors that influence learning, and attempt to decrease factors that hinder learning and knowledge acquisition. Assessment of individual and community needs for health education may occur during the CHA process, but a more in-depth assessment is often needed. Identifying community health education needs, including personal and organizational health literacy, is a necessary part of assessment. Limited health literacy is associated with greater emergency care use, increased hospitalizations, reduced preventative screening, lower vaccination rates, poorer ability to interpret health-related messages and labels, and poorer ability to take medications appropriately (Berkman et al., 2011).

Health Literacy

Only 12 percent of U.S. adults have the health literacy skills to manage the complex U.S. health care system (Agency for Healthcare Research and Quality, 2020). This leads to mismanagement of client conditions, increased risk for disease and disability, reduced health promotion and disease prevention behaviors, and negative client outcomes. One overarching goal of Healthy People 2030 is to “eliminate health disparities, achieve health equity, and attain health literacy to improve the health and well-being of all” (Office of Disease Prevention and Health Promotion, 2021, para 1). Healthy People 2023 defines two types of health literacy, personal and organizational. **Personal health literacy** is the degree to which individuals have the ability to find, understand, and use information and services to inform health-related decisions and actions for themselves and others. **Organizational health literacy** is the degree to which organizations equitably enable individuals to find, understand, and use information and services to inform health-related decisions and actions for themselves and others.

These definitions emphasize an individual’s ability to understand and use health information to make well-informed decisions. Health literacy also involves acting on the understanding of health information in all situations, such as

making decisions regarding voting on health-related policy, choosing a health care provider, or even choosing where to live (Santana et al., 2021). The organizational definition acknowledges that organizations are responsible for addressing health literacy and ensuring equity of health literacy.

CONVERSATIONS ABOUT CULTURE

Five Things to Know About Health Literacy

Access multimedia content (http://openstax.org/books/population-health/pages/17-2-assessment-of-individual-and-community-needs-for-health-education)

Health care is a culture with its own language and systems that are unfamiliar to many clients. This includes clients who speak English, those with limited English proficiency, and those who have difficulty reading and using numbers. Health information and health care services may be challenging to find, understand, and use, yet health literacy is key in understanding and applying health information. This video describes populations at greatest risk for health literacy challenges and strategies nurses, other health care professionals, and organizations can use to improve health literacy.

Watch the video, and then respond to the following questions.

1. What populations are at greatest risk for literacy challenges?
2. What can organizations and health professionals do to improve health literacy?
3. What are strategies nurses may use to check that clients understand information?

Population Health Literacy Assessment to Guide Health Promotion and Disease Prevention Activities

Including health literacy assessment as a component of the CHA helps the nurse understand the health education needs of individuals and communities. The health literacy level of individuals, **aggregates**, and community guides health promotion and disease prevention activities. An aggregate is a specific subgroup of a community or population. Individual, aggregate, and community health literacy skill levels impact health-related decisions and behaviors. Three levels of health literacy include functional, interactive, and critical (Table 17.7) (Nutbeam & Muscat, 2020). Understanding health literacy levels guides the nurse in choosing appropriate health promotion and disease prevention activities that align with the client's current health literacy level and enhance health literacy by utilizing activities associated with the next level. Health literacy assessment should be ongoing to evaluate the effectiveness of health promotion and disease promotion activities.

Health Literacy Level	Skills Present	Activities to Enhance Health Literacy	Examples of Activities
Functional health literacy	• Basic skills • Able to obtain relevant information and apply it to prescribed activities	• Direct education and communication with defined goals and in specific contexts • Make information available	• Teach clients how to read a new prescription label • Provide a link to a website that contains evidence-based information about a new diagnosis
Interactive health literacy	• More advanced skills • Able to extract health information and derive meaning from different forms of communication • Can apply information in varying circumstances • Interacts with others to assist in decision-making • Able to discriminate between different sources of information • Able to use interactive websites and mobile apps	• Education and communication to develop personal skills • Empowerment to act independently • Make information available	• Suggest a mobile app to monitor blood glucose trends and dietary patterns • Discuss the credibility of sources the client has used to gather information regarding treatments for cancer diagnosis

TABLE 17.7 Health Literacy Levels Guide Health Promotion and Disease Prevention Activities

Health Literacy Level	Skills Present	Activities to Enhance Health Literacy	Examples of Activities
Critical health literacy	• Most advanced skills • Able to critically assess information from an array of sources relating to a greater range of the determinants of health • Integrates personal health risks as well as social, economic, and environmental determinants of health • Uses information for greater control over life events and situations	• Education to develop transferable skills that allow interactive and critical thinking • Communication that provides support • Make information available	• Provide education regarding the SDOH • Provide resources on how to decrease environmental risks in the home (lead, radon, etc.)

TABLE 17.7 Health Literacy Levels Guide Health Promotion and Disease Prevention Activities

Health Literacy Assessment Tools

Including health literacy assessment as a component of the CHA helps the nurse understand the health education needs of individuals and communities. CHA teams can include health literacy assessment questions in CHA surveys, interviews with key community partners, and focus groups. Individual assessment of health literacy of targeted, high-risk populations can occur using a personal health literacy assessment tool. Organization health literacy assessment tools are available to assess community health systems. Including the results of this information in the final CHA report will highlight a community's educational health literacy needs and changes needed within community health systems to enhance the health literacy of consumers. Health literacy assessment tools are available to assess health literacy skills at the personal and organizational levels.

Personal Health Literacy Assessment Tools

Personal health literacy assessment tools measure an individual's ability to find, understand, and use health-related information and services and help the nurse determine a client's health literacy level. The client's health literacy level will guide interventions, including educational tools the nurse uses to provide health information and to improve health literacy.

Multiple tools are available that measure different aspects of health literacy. For example, The Health Literacy Tool Shed (https://openstax.org/r/healthliteracy) (Boston University, 2023) is an online database that contains information about health literacy assessment tools. Over 200 free and paid tools are available to measure terminology comprehension, application, information seeking and eHealth, and media comprehension of medicine, dentistry, genetic, and general health literacy. Tools are available for adults and youth in a variety of languages and for specific diagnoses such as cancer, diabetes, high blood pressure, HIV, infectious disease, intellectual disability, kidney transplant, mental health, oral health, and vascular surgery.

Organizational Health Literacy Assessment Tools

Organizational health literacy assessment guides health promotion and disease prevention activities at the organizational and systems level. Organizational health literacy assessment tools identify areas of strength and areas for improvement. These findings guide the organization in health literacy improvement efforts at the systems

level. Assessment findings should be reported to the organization's committee that deals with health literacy and key organization administrators. For example, the Health Literacy Environment of Hospitals and Health Centers (HLE2) tool (https://openstax.org/r/hsphharvardedu) measures organizational policies, institutional practices (resources, staff orientation and development, and expectations), navigation within the organization (signage and staff assistance), culture and language (respect for diversity, language serves, and staff training), and communication (print materials, forms, websites, and patient portals). The HLE2 suggests focusing on percentage scores for each section of the assessment tool as a way to identify strengths and weaknesses, select priority areas, and generate ideas for action (Rudd et al., 2019).

The Agency for Healthcare Research and Quality (2020) created the AHRQ Health Literacy Universal Precautions Toolkit (https://openstax.org/r/ahrq) to help organizations take steps to simplify communication and confirm client comprehension, improve navigation of the environment and health care system, and support efforts to improve health. The CDC (2019b) provides additional resources (https://openstax.org/r/cdc) to assess organizational health literacy and tools to train staff, develop client materials, meet the needs of consumers with a range of health literacy skills, improve access to health information and services, and communicate clearly during crises.

Learning Process for Knowledge Acquisition

Disease prevention and health promotion begin with education of the individual and communities. **Education** is the establishment and arrangement of events to facilitate learning and skill development. **Learning** is the process of gaining knowledge and skills that lead to behavioral changes. Effective evidence-based community education programs are needed to increase health literacy, decrease health disparities, promote disease prevention, and promote health. Learning theories, health promotion models, and educational principles explain behavior and assist nurses in guiding community health strategies and choosing which intervention will be more likely to increase learning. Nurses should consider the identified health problem, population, and context of the planned program when choosing a learning theory or model. Often disease prevention and health promotion programs utilize one or more theories or models.

Selected Learning Theories

To provide effective health education to individuals and communities, nurses must understand the three domains of learning—cognitive, affective, and psychomotor. The cognitive domain is related to knowledge and includes thinking, memory, recognition, understanding, and application, moving from simple to complex. An example is the learner stating three signs of diabetes. The affective domain is related to perceptions and feelings, including changes in attitudes and development values. An example is a client with diabetes stating they feel as if they can manage their symptoms. The psychomotor domain is the performance of skills that require neuromuscular coordination. Learning in this domain depends on ability, a sensory image of how to carry out the skill, and practice. An example is self-administration of insulin.

Learning theories frequently used in community health education programs include behaviorism, social cognitive learning theory, constructivism, and adult learning theory. Planning Community Health Education discusses learning theories in more detail.

Factors That Influence Learning and Knowledge Acquisition

Nurses must consider factors that influence learning and knowledge acquisition when planning disease prevention and health promotion community educational programs. Age, culture, language, reading and comprehension skills, technology, and learner characteristics and experiences influence learning and knowledge acquisition, as do educator characteristics, experiences, and preparation. Learner characteristics include health literacy, self-efficacy, and motivation. Educator characteristics and preparation are public speaking, teaching or classroom/group management, choice of learning theory and teaching strategy, and planning.

Educator preparation and planning significantly impact the factors that influence learning and knowledge acquisition. Following the steps in the development of community education programs and choosing effective, evidence-based theories and strategies decrease both learner-related and educator-related barriers to learning. The educational method chosen should meet the learning needs of the population and have the greatest impact.

STEPS IN DEVELOPING A COMMUNITY-BASED EDUCATION PROGRAM

1. Identify population learning need.
2. Establish goals and objectives.
3. Select appropriate educational methods.
    a. Select learning theories to use.
    b. Consider educational principles that are most appropriate.
    c. Examine educational issues/barriers.
4. Design and implement the educational program.
5. Evaluate the educational process and effects of the program.

Identifying a population's learning needs occurs with community health assessment; these needs are then prioritized in the analysis phase. Assessment also identifies a population's age, culture and language, educational level, and potential barriers to learning. Individual learner assessment can be used to clarify those learning needs and identify learner characteristics, including learning style, health literacy, and readiness to learn.

Educational methods should align with the age and developmental level of the target population. Pedagogy, where the teacher holds full responsibility for the teaching-learning process, is appropriate for children. Additionally, younger children require concrete examples, interactive activities, and repetition for knowledge acquisition. In contrast, adults learn best using andragogy, where learners share the responsibility of developing learning goals. This corresponds with the principles of adult learning theory.

When choosing educational methods, nurses should consider the target population's cultural beliefs, language barriers, educational level, health literacy, and motivation. Content and materials should align with cultural beliefs. Multilingual materials (presentation and written) may be needed. Additionally, because more than half the U.S. population ages 16 to 74 reads below a sixth-grade reading level (Schmidt, 2022), written educational materials should use plain language and be no higher than a fourth- to sixth-grade reading level (CDC, 2022). Content and materials should also align with health literacy levels. Refer to Table 17.7 for examples of teaching strategies for functional, interactive, or critical health literacy levels. Finally, aligning a learner's motivation with the chosen teaching strategy facilitates learning.

Because individuals process information differently, nurses should consider the target population's learning styles when choosing educational methods. Visual learners think in pictures or images and learn best through seeing and visualization. Appropriate educational methods for visual learners include taking notes and viewing videos, presentations, and pictures or images. Auditory learners process information and learn best through listening; appropriate educational methods are verbal lecture, discussion, music, podcasts, and reading aloud. Tactile-kinesthetic learners process information and learn best through doing and exploration. Appropriate educational methods are learning by trial and error, hands-on or interactive activities, and return demonstration.

Theory should be a foundation for community program planning and development and is consistent with the current emphasis on using evidence-based interventions in public health (Lhachimi et al., 2016) The chosen theory's assumptions about a behavior, health problem, target population, or environment should be a good fit, logical, consistent with observations, similar to those used in previous successful programs, and supported by research (National Cancer Institute, 2005).

Finally, the educator considers the learning environment. To stimulate learning and reduce barriers, nurses should create a comfortable, distraction-free environment that encourages interaction. The educator needs experience managing a learning environment and the skills to minimize distractions, present content to enhance learner comprehension, evaluate teaching methods throughout the learning process, modify plans as needed to meet learner needs, and manage technology.

17.3 Analyzing Population Health Data and Identifying Patterns

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 17.3.1 Identify health patterns across populations by comparing data at the local, regional, tribal, and national levels to benchmarks.
- 17.3.2 Analyze behavioral, environmental, and other factors influencing health.
- 17.3.3 Synthesize assessment findings to prioritize education/health promotion/disease prevention needs, resources, and capacity.

The second stage of the nursing process for individual clients, diagnosis, is similar to community diagnosis. Members of the CHA team organize, explore, and synthesize data gathered in the assessment phase. They compare CHA data to previous health assessments and to data from adjacent counties and communities as well as state and national data to determine if benchmarks have been met or if efforts have fallen short. The CHA team reviews the data for specific community health problems and other factors influencing health, areas where the community is doing well, and identified resources. The steps of data analysis of community health data are as follows:

1. Gather collected data into one place.
2. Assess collected data for completeness.
3. Identify and generate missing data.
4. Synthesize data and identify themes.
5. Identify community needs and problems.
6. Identify community strengths and resources.

Steps 1 to 3 involve organization and analysis of data to identify health patterns and factors that influence health. The team compares local data to benchmarks at local, regional, tribal, and national levels. Steps 4 to 6 synthesize assessment findings to prioritize education, health promotion, and disease prevention needs, resources, and capacity.

Analyze Data to Identify Health Patterns and Factors That Influence Health

First, the CHA team completes a statistical analysis of survey data and other quantitative information. Most often, the data are presented in frequencies, percentages, and/or central tendencies. Primary and secondary data are organized by topic or health pattern to assess completeness and determine if data are missing. If data appear to be missing, the team collects additional information. For example, if input from an at-risk population is missing, the team may hold a focus group to gather the missing data.

Morbidity and mortality data collected in the current assessment are presented along with previous assessment, state, and U.S. data, usually in table format. The team may also include other local municipality or county data. If data are available, the specific population at risk is noted. Specific populations at risk may be designated according to age, income level, gender, race/ethnicity, and/or geographical location. These data are used to benchmark state and federal data and evidence-based health standards. CHA teams may use the State Health Assessment/State Health Improvement Plan (refer to Table 17.5) to benchmark against the state. Healthy People 2030 also contains evidence-based federal standards that can be used for benchmarking.

Next, the team reports on factors influencing health in written or table format. Factors include health care access, health behaviors, and environmental and social conditions such as economic stability, education, neighborhood and built environment, and social and community context. The report may also include data from other localities, the state, and the United States for benchmarking purposes. Including the County Health Rankings Model (https://openstax.org/r/county) described in Social Determinants Affecting Health Outcomes ensures SDOH and other factors that influence health outcomes are part of the CHA and analysis.

By this point, the CHA team should have a comprehensive picture of the occurrence and distribution of health patterns and health factors and be able to answer the following questions:

- What is the health concern (or health factor), and to what extent is it occurring?
- Who is impacted by the health concern (or health factor)? Is one aggregate affected more than others?
- Where is the health concern (or health factor) most prevalent?

- When, if applicable, is the health concern (or health factor) occurring?

Synthesize Assessment Findings to Prioritize Needs

Synthesis aims to critically analyze each health concern to identify why and how the problem is occurring. This step moves past identifying and organizing the data and links factors influencing health to each health concern. The MAPP framework discussed previously offers tools to assist synthesis (NACCHO, 2023). The MAPP strategic issues identification worksheet guides the time to identify an issue and provides a rationale on why it is an issue and the consequences of not addressing it. The strategic issues relationship diagram illustrates how information from different assessments relates to the identified issue.

Common health needs and themes emerge, and the team creates a problem list of no more than 12 issues based on a synthesis of primary and secondary community assessment data (NACCHO, 2023). This can be managed by merging similar topics into one theme. Each problem should include the aggregate most impacted, community needs or gaps, available community resources, and capacity for change. The problem list is prioritized as part of the next phase of the community nursing process.

17.4 Formulating a Nursing Community Diagnosis and Plan of Care

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 17.4.1 Utilize various approaches and assessment findings to identify and prioritize individual, family, community, system, and population health concerns.
- 17.4.2 Appraise the level of nursing intervention to make the most impact.
- 17.4.3 Integrate individual, family, community, system, and population experiences and perspectives in designing plans of care.
- 17.4.4 Develop a nursing community diagnosis and plan of care tailored to community culture.

Formulating a nursing community diagnosis and plan of care is similar to individual nursing community diagnosis and care planning. First, the CHA team identifies and prioritizes community health concerns. Next, the team develops community nursing diagnoses. Finally, the team tailors a community health improvement plan to community culture.

Prioritize Health Concerns

The CHA team uses the identified problem list created during analysis to prioritize community problems based on:

- Extent of the problem (percent of the population affected by the problem and perception of health needs)
- Relevance of the problem (degree of risk and economic loss)
- Estimated effect of the intervention (impact, improvement of health outcomes, and potential adverse effects)

Health priorities should be those for which intervention would make the most impact on the community as a whole or for a specific at-risk population. Health priorities are those that have the

- highest community perception of need,
- largest reach,
- highest degree of risk if unaddressed,
- greatest economic impact,
- greatest opportunity for improvement in health outcomes,
- opportunity to promote health equity and reduce health disparities, and
- least adverse effect on the population.

The team should base priorities on community strengths and available resources to increase the possibility of successful implementation of programs targeting those priorities. Resources include current and potential partnerships and collaborations, human resources or capacity, and funding. Health concerns may also be prioritized because they align with state and federal priorities, allowing for benchmarking and comparison to state and local data. Additionally, monies are usually available to fund programs that align with state or federal priorities.

The method the CHA uses to prioritize health concerns is determined by the CHA model, framework, or tool it chose

at the beginning of the process. For example, a CHA team using the MAPP framework will first rank identified problems individually and then use a consensus to choose priorities or strategic issues. MAPP offers several tools to guide this process (NACCHO, 2023). In contrast, a CHA team using the Community Health Assessment toolkit would first identify specific criteria for prioritization and then choose an approach, such as group vote with majority deciding, averaging individual rankings, or using a matrix to weigh and rank criteria according to several factors (baseline data, feasibility, availability of resources, etc.) (AHA, 2017).

PHAB (2022) requires at least two health priorities, but most community care plans or community health improvement plans include at least three priority topics. Choosing health priorities also includes picking at least one health outcome indicator to measure health problem changes and identify the priority population of focus. For example, a team may choose mental health and addiction as a health priority. The priority outcome of this focus should then align with data collected during the CHA. Examples of mental health and addiction topic priority outcomes are "decrease the percentage of the community with depression," "decrease suicide deaths," and "decrease drug overdose deaths."

Develop the Community Nursing Diagnosis

The community nursing diagnosis includes only one identified priority and the aggregate (population) affected, and it provides a rationale. A community nursing diagnosis should be written for each selected priority and include these three parts:

1. *Risk of:* Identifies a specific problem or health risk faced by the community
2. *Among:* Identifies the specific community aggregate with whom the nurse will be working in relation to the identified problem or risk
3. *Related to:* Describes characteristics of the community

The community problem must be observable and measurable at the aggregate level. It considers which aggregate the risk affects most and which intervention will have the biggest impact. The community's characteristics may contribute to the identified problem and/or be strengths of the community that can be built upon.

Examples of appropriately written community nursing diagnoses are as follows:

- Risk of drug overdose among Hardin County adults related to increased opioid usage, presence of fentanyl, lack of available naloxone, ineffective drug misuse prevention programs, and decreased access to drug rehabilitation programs
- Risk of infant and child malnutrition among families in Richmond County related to lack of regular developmental screenings, knowledge deficit about infant-related and child-related nutrition, knowledge deficit about available community resources, and lack of access to healthy foods
- Risk for cardiovascular disease among Bailey County adults related to sedentary lifestyles, lack of walking trails, lack of safe sidewalks, and lack of affordable exercise facilities

UNFOLDING CASE STUDY

Part B: Conducting a CHA

Read the scenario, and then answer the questions that follow based on all the case information provided in the chapter thus far. This case study is a follow-up to Case Study Part A.

After selecting the PRECEDE-PROCEED model, Tia's CHA team completed phases 1–3. During the assessment, the team collected the following data:

- GIS data shows one neighborhood with a disproportionate number of drug overdoses. This area also has high poverty and unemployment rates and is located by an entrance/exit on the interstate.
- EMS calls for overdoses have tripled since the last CHA.
- Drug overdose deaths are higher than the national benchmark (Healthy People 2030).
- Provider opioid prescriptions have decreased in the area.
- Reported opioid use (attained by any method—legal or illegal) has increased. Heroin usage has increased by

10 percent.
- Availability of heroin mixed with fentanyl has increased over the past 6 months.
- Infection rates related to needle use have increased at the local hospital.
- Local schools continue to educate on drug abstinence using the Drug Abuse Resistance Education (DARE) program.
- Naloxone training is available from the public health department, but utilization goals have not been reached.
- Local EMS staff are volunteers, and the station is not regularly staffed.
- A drug rehabilitation center is located within the community but frequently has a waiting list for outpatient appointments and inpatient admission.

Although the PRECEDE-PROCEED model does not require a community nursing diagnosis, the team decided to create one in order to clearly identify the aggregate and characteristics of the community.

The team has started planning for program implementation and wants to begin by promoting and enhancing available community resources, such as education within the schools, community naloxone training, education for providers related to opioid prescriptions, and drug rehabilitation. According to the PRECEDE-PROCEED model, phase 4, administrative and policy diagnosis, the team focuses on administrative and organizational concerns that should be addressed prior to program implementation.

3. Which community nursing diagnosis is written appropriately, reflects the data gathered during assessment, and aligns with community perceptions and needs?
   a. Risk for overdose among opioid/heroin users related to increased availability of heroin mixed with fentanyl, inconsistent EMS staffing, lack of availability/access to drug rehabilitation resources, increased opioid usage in the community, lack of knowledge of consequences of opioid misuse, and lack of utilization of community naloxone training
   b. Opioid misuse among community members living next to the highway who are unemployed and lack financial resources
   c. Risk for infection related to heroin injection, lack of knowledge of aseptic technique for injection, and availability of clean needles
   d. Increased opioid use in the county related to availability of heroin

4. Using the data collected during assessment and tentative plans for the program, what administrative and organizational concerns must the team address before program implementation?
   a. Reduced rates of opioid prescriptions by providers in the area
   b. Availability of appointments at the local drug rehabilitation center
   c. Response times of local EMS to overdose calls
   d. Increased availability of heroin in the community

Develop the Community Health Improvement Plan

The CHA team uses the identified priorities and community nursing diagnoses to develop the **community health improvement plan** (CHIP), the care plan for the entire community. PHAB (2022) defines the CHIP as a long-term systematic plan to address issues identified in the CHA that describes how the health department and community will work together to improve population health. Frequently, the public health department holds a leadership role, collaborating with various diverse community organizations to create the CHIP. The members of the CHA team are also usually involved in the CHIP process. As stated previously, the team members are individuals who either work or live within the community, ensuring the CHIP represents the community culture and values. The plan outlines goals and strategies community organizations, coalitions, and members will use to address priority health problems.

The team considers potential interventions for each identified priority. First, the team discusses existing community programs that may meet the community health need. The team performs a **gap analysis** to determine where the community should expand its efforts to meet community health needs. A gap analysis identifies and addresses the disparity between what is desired and real-world conditions (Davis-Ajami et al., 2014). For example, access to primary health care is a desired community health outcome for all. In reality, all people do not have access to a primary health care provider. A gap analysis identifies the disparity and potential solutions to reduce it. The team brainstorms strategies to enhance current programming and identify potential new interventions to fill the gaps

noted to promote health and prevent disease. The team searches for new interventions that meet community needs and are innovative, evidence-based, most impactful, and sustainable. The team should also consider new partnerships to assist with planning or implementation. Finally, the team may complete a SWOT analysis to identify strengths, weaknesses, opportunities, and threats that may influence health outcomes or may promote or hinder possible interventions. The Minnesota Department of Health provides more information on completing a SWOT analysis (https://openstax.org/r/state). Overall, the team should select the best intervention after considering the various factors discussed.

The CHIP is designed to immediately follow the CHA and is updated with the CHA. So if the CHA process occurs every 3 years, the CHIP should be written as a three-year plan. CHIP interventions must align with chosen priorities and include measures for evaluation related to the rationale identified within the corresponding community nursing diagnosis. Current community resources and strengths are considered and integrated into interventions. The CHIP development also considers currently available and potential resources (such as grants) and partnerships. Community interventions are chosen when they are impactful, have the largest reach, are feasible, are innovative, are evidence-based, and can be completed within the CHIP time frame.

CHIP development continues by detailing goals and objectives, action steps, timetables, priority target populations, indicators to measure strategy impact, and accountability. Objectives should be SMART (specific, measurable, achievable, relevant, and time-bound). Action steps are specific and are listed by year of implementation. The time to complete each action step, target population, health indicator to measure the strategy, and responsible individual or organization is determined. Other details of the interventions are further detailed by the responsible individual or organization during program planning. See Planning Health Promotion and Disease Prevention Interventions for more information on writing SMART objectives.

The CHA and CHIP provide community organizations and health care systems with a common plan for addressing community health issues. The community is a partner in planning for health promotion and disease prevention efforts with community perspectives and community engagement at the center of the process. A comprehensive CHA provides evidence for community health priorities and social determinants of health impacting community health outcomes. The CHIP utilizes established community resources to combat identified priorities and reduce health disparities caused by determinants of health.

Chapter Summary

17.1 Assessment Tools and Application to Practice

CHA is the first step of the nursing process for populations and communities. It uses a systematic, collaborative approach to gather primary and secondary data to comprehensively describe the community. It uses frameworks, models, and tools to guide community assessment. The process defines people, place, and community systems using a variety of primary and secondary data sources that include quanatitative and qualitative data. Throughout the assessment process, collaboration with the community and multiple partners ensures that community needs for health promotion and disease prevention are met.

17.2 Assessment of Individual and Community Needs for Health Education

Analysis of community health assessment data is the second step of the community nursing process using a team approach to organize and synthesize collected data. The team compares local data to previous assessments and other local community, state, and national data. The team organizes the data to describe the problem, whom it effects, where it occurs, and when it occurs. The team creates a list of no more than 12 community health problems to consider for intervention. Further analysis of the identifed health problems includes answering why and how the problem is occuring. The team gathers information to help answer those questions and prioritize the problems. Information includes community strengths and resources, at-risk populations, health disparities and inequities, and the consequences of not intervening.

17.3 Analyzing Population Health Data and Identifying Patterns

Most community health programs use education as a strategy for health promotion and disease prevention. Health literacy and other factors that influence learning and knowledge acquisition should be assessed at the community level within the CHA and at the individual and aggregate levels when planning for interventions. Tools are available to assist in assessment of personal and organizational health literacy. Learning theories and health promotion models guide assessment and planning for education and learning. Factors that influence or hinder learning acquisition should also be considered during assessment of health education needs and when planning for education.

17.4 Formulating a Nursing Community Diagnosis and Plan of Care

The third step of the community nursing process is planning. At the beginning of this step, the team prioritizes identified health needs using methods described in the chosen CHA and community health improvement framework, model, or tool and determined by the team. The chosen health priorities are ones in which intervention would make the most impact, utlize community resources, and meet the community's needs. The community nursing diagnosis provides an explanation of the health need, aggregate, and factors that influence the health need. The CHIP is the nursing care plan for the community. It is developed in collaboration with community members and organizations to be used as a guide for community health intervention and programming.

Key Terms

aggregate a specific subgroup of a community or population

benchmark a point of reference or standard against which measurements can be compared

coalition a group of people and organizations who work to address community needs and solve community problems

community engagement the process of working collaboratively with and through groups of people to identify the health needs of community residents and strategies to address those needs

community health assessment (CHA) provides a comprehensive picture of a community's current health status, factors that contribute to higher health risks or poorer health outcomes, and available community resources to improve health; purpose of CHA and subsequent community health improvement plan is to identify key health needs of a community and to address those needs through strategic intervention

community health improvement plan (CHIP) a long-term systematic plan to address issues identified in the community health assessment that describes how the health department and the community will work together to improve population health

community partners all persons, agencies, and organizations who have an investment in the community's health and in the local public health system

education the establishment and arrangement of

events to facilitate learning and skill development

gap analysis analysis that is performed to identify and address the disparity between what is desired and real-world conditions

geographic information systems (GIS) software and technology that can store, visualize, analyze, and interpret spatial data

health indicators numerical measures of health outcomes, such as morbidity and mortality, that have been analyzed and are used to compare rates or trends of priority community health outcomes and determinants of health

learning the process of gaining knowledge and skills that lead to behavioral changes

organizational health literacy the degree to which organizations equitably enable individuals to find, understand, and use information and services to inform health-related decisions and actions for themselves and others

partnership relationship characterized by mutual cooperation and responsibilities among individuals and groups

personal health literacy the degree to which individuals have the ability to find, understand, and use information and services to inform health-related decisions and actions for themselves and others

primary data data collected by the assessor directly from community members; PHAB considers primary data to be data for which collection is conducted, contracted, or overseen by the health department

qualitative data data expressed in word form that cannot be quantified; describe perspectives of individuals and populations

quantitative data data expressed by amount in numerical terms

secondary data data obtained through existing reports on the community that were collected by another entity or for a purpose other than community health assessment

spatial data data that identify the geographic location of phenomena, provide an overview of the community in map form, and can be used to compare one part of the community to another

vital statistics population data about births, deaths, marriages, and divorces in the United States

Review Questions

1. A nurse assesses a client's health literacy prior to providing education. The client is able to use interactive websites, identify multiple resources to gather health information, and assist others in health decision-making. Which health literacy level describes the client's skills?
   a. Functional health literacy
   b. Interactive health literacy
   c. Critical health literacy
   d. Organizational health literacy

2. Which secondary data source would the public health nurse utilize to benchmark local health patterns to national (U.S.) patterns?
   a. Healthy People 2030
   b. Key informant interview
   c. U.S. Census data
   d. Focus group report

3. Which community nursing diagnosis has the nurse written appropriately?
   a. Ineffective coping related to multiple stressors as evidenced by the client crying and stating she has no support system
   b. Risk of ineffective health maintenance among individuals who do not have access to a primary care provider
   c. Risk of cardiovascular disease related to poor diet, sedentary lifestyle, and lack of access safe places to exercise
   d. Risk of obesity among school-age children related to lack of access to healthy food choices and opportunities for physical activity

4. Which of the following would the community health nurse include in an assessment of community systems?
   a. Age, gender, and race
   b. Water quality reports

c. Health care providers
d. Morbidity patterns

5. A team is using the American Hospital Association Community Health Assessment (CHA) toolkit to conduct a CHA. They have defined the community and gathered data from multiple sources. According to the toolkit, what is the next step?
a. Share results with the community
b. Prioritize community health problems
c. Evaluate progress
d. Plan implementation strategies

6. Which health literacy skill would the nurse anticipate in a client with functional health literacy skills?
a. Understanding a prescription label
b. Following blood glucose trends
c. Recognizing personal health risks for cardiovascular disease
d. Following directions to reduce radon levels in the home

7. The nurse is developing a teaching plan for a client newly diagnosed with diabetes. Which action by the nurse focuses on the psychomotor domain of learning?
a. Providing reinforcement for efforts toward self-care
b. Teaching about the relationship between insulin and blood glucose levels
c. Instructing the client on self-administration of insulin
d. Discussing the symptoms of hypoglycemia and hyperglycemia

8. Which action will the nurse take when utilizing constructivist theory to teach a community health education program about smoking cessation?
a. Reward positive behaviors toward smoking cessation
b. Encourage reflection about smoking cessation
c. Model desired behaviors needed for smoking cessation
d. Assess knowledge to build upon what is already known about smoking cessation

9. Which method will the nurse use when teaching a client who is an auditory learner?
a. Pictures and images
b. Videos
c. Interactive activities
d. Discussion

10. Which activity will the nurse perform during the continuously improve the community phase of the Mobilizing for Action through Planning and Partnership (MAPP) framework to improve the health of a community?
a. Complete partner profiles
b. Strengthen community engagement
c. Perform Community Partners Assessment
d. Establish Community Health Improvement (CHI) leadership

CHAPTER 18

Planning Health Promotion and Disease Prevention Interventions



FIGURE 18.1 Families learn bike maintenance and safety and practice biking skills during a community program designed to increase physical activity through biking. (credit: modification of work "Morro Bay Bike Ed" by Bike SLO County/Flickr, CC BY 2.0)

CHAPTER OUTLINE

18.1 Theories and Models to Guide Program Planning
18.2 Partnerships and Coalitions in Program Planning
18.3 Developing Program Goals and Measurable Objectives to Demonstrate Outcomes

INTRODUCTION Jamie, a public health nurse, has been charged with planning an innovative, evidence-based program targeting children and families to promote physical activity. The county health department received grant funding to plan, implement, and evaluate a new physical activity program. A community health assessment (CHA) conducted before receipt of the grant indicated that the county has high adult and child overweight and obesity rates, low physical activity levels, sedentary lifestyles, and a lack of free physical activity resources. The CHA and community health improvement team have identified chronic disease–obesity as a major priority in the county. Assessment, diagnosis, and community-level planning have been completed. Jamie must now plan a program to meet the physical activity needs of children and families.

Nurses like Jamie develop community health programs to promote health and prevent disease. Effective programs are grounded in community assessment and health determinant data, target identified populations at risk, reduce health disparities and inequities, promote collaboration between groups invested in the community's health, and incorporate evidence-based strategies. Theoretical frameworks and models support the program planning, implementation, and evaluation process.

18.1 Theories and Models to Guide Program Planning

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 18.1.1 Apply theoretical framework(s)/models to plan health promotion, disease prevention interventions, and illness management.
- 18.1.2 Combine knowledge of health determinants with data to plan health promotion and disease prevention interventions for communities and populations.
- 18.1.3 Assess learning needs across the continuum of care for self-care for health promotion, illness prevention, and illness management.
- 18.1.4 Examine different approaches to health promotion and disease prevention.

A **program** is an organized public health action or set of related activities undertaken to achieve an intended outcome (Centers for Disease Control and Prevention [CDC], 2023). The intended outcome meets the assessed needs of individuals, families, groups, populations, or communities to promote health and health equity, prevent illness, reduce health disparities, empower communities, and/or promote social justice. **Program planning** involves selecting and implementing activities to achieve desired health outcomes. It serves as a blueprint for coordinating resources to implement planned activities.

Program development follows an assessment of community health needs, identification of priority health problems, and diagnosis of specific community health problems. Community health programs should align with the health problems defined in the assessment phase, meet the community's perceived needs, target the at-risk aggregate identified during the analysis and diagnosis phases, and reduce characteristics of the community that contribute to risk factors listed within the community nursing diagnosis. Assessment, Analysis, and Diagnosis provides a guide to assessment, analysis, and diagnosis of population health programs.

Theoretical Frameworks and Models Used in Program Planning

In collaboration with the program planning team (those individuals and community partners who will provide resources, will implement or evaluate program activities, and will be impacted by the program), the nurse selects a theoretical framework or model to guide program planning. Theoretical frameworks and models provide a systematic method to develop, implement, and evaluate programs for health promotion, disease prevention, and illness management. CHA models, frameworks, and tools discussed in Assessment, Analysis, and Diagnosis include steps for planning programs. These models include comprehensive assessment guidance but do not include specific details to guide program planning. The Healthy Places by Design's community action model, PRECEDE-PROCEED model, PATCH model, and intervention mapping, described next, provide detailed guidance for program planning. A logic model is a tool used to visually represent a program.

Healthy Places by Design's Community Action Model

The Healthy Places by Design Community Action Model (https://openstax.org/r/healthyplacesbydesign) describes six essential practices for sustained change within communities and outlines an intentional Partner, Prepare, and Progress, or "3P," Action Cycle. The program planning team considers community context and the six essential practices during all stages of the community action model to enhance the sustainability of actions that promote community health. These include the following:

- Health equity focus
- Facilitative leadership
- Culture of learning
- Strategic communication
- Sustainable thinking
- Community engagement

The 3P Action Cycle includes Partner, Prepare, and Progress stages. Figure 18.2 describes tasks at each stage of the 3P Action Cycle and incorporates the six essential practices.

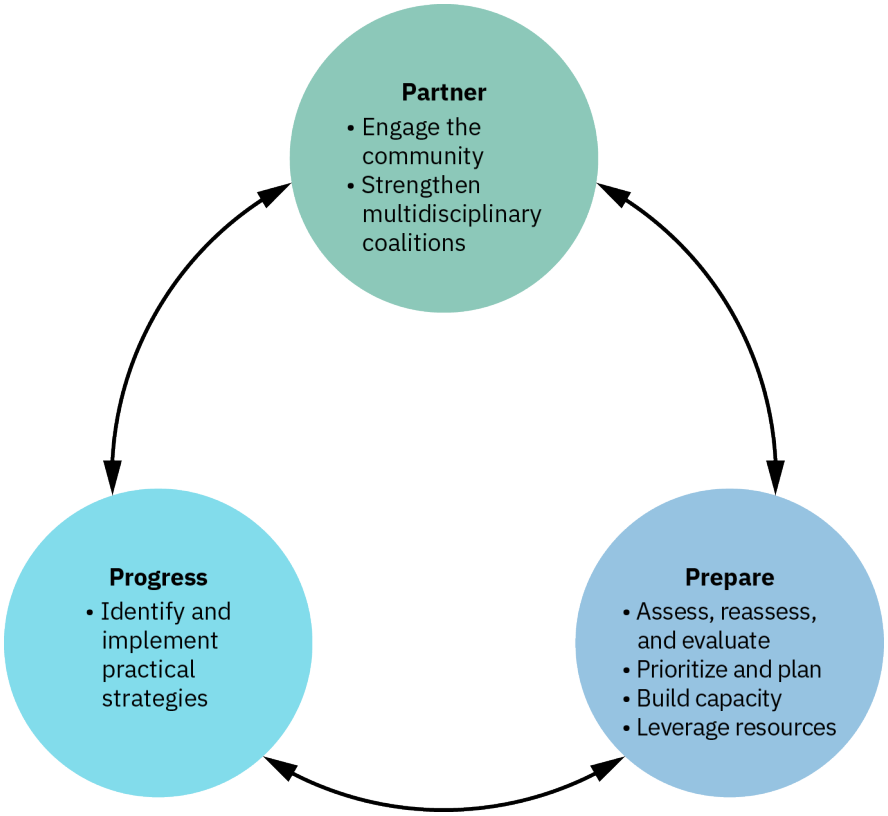


FIGURE 18.2 As part of the Healthy Places by Design's Community Action Model, the program planning team progresses through the 3P (Partner, Prepare, and Progress) Action Cycle to develop and implement community health programs. (See Healthy Places by Design, 2016; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

THEORY IN ACTION

Using the Community Action Model to Improve Infrastructure and Promote Physical Activity

The Tulane University Prevention Research Center established the KidsWalk Coalition to improve walking and bicycling infrastructure. The community program was developed, implemented, and evaluated using the community action model. The team used the 3Ps (Partner, Prepare, Progress) throughout the program.

Read the case study Communities in Action: New Orleans, LA (https://openstax.org/r/healthycommunitiesin), and then respond to the following questions.

1. How did the KidsWalk Coalition engage the community and strengthen multidisciplinary coalitions?
2. What policy and infrastructure progress did the KidsWalk Coalition make?

PRECEDE-PROCEED Model

The Green and Kreuter PRECEDE-PROCEED model considers social determinants of health and the community environment when planning programs for health promotion (Porter, 2016). PRECEDE stands for Predisposing, Reinforcing, Enabling Constructs in Educational/Environmental Diagnoses, and Evaluation. The four PRECEDE phases are discussed further in Assessment, Analysis, and Diagnosis. PROCEED stands for Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development. PROCEED follows the community assessment and identification of health issues, utilizing that information to guide program planning, implementation, and evaluation, and includes the following four phases:

1. Implementation: Design and implement the intervention.
2. Process evaluation: Evaluate the implementation procedure. Is what was planned actually being done?
3. Impact evaluation: Evaluate whether the intervention has the desired impact on the target population.
4. Outcome evaluation: Evaluate whether the intervention has produced the desired impact on the problem

identified in the PRECEDE phases.

The PROCEED model directs the user to choose an additional tool, such as the PATCH model, when designing interventions. The program team should select evidence-based interventions most likely to achieve program outcomes (Porter, 2016). Implementation and Evaluation Considerations further describes process, impact, and outcome evaluation.

Planned Approach to Community Health Model

The Planned Approach to Community Health (PATCH) model (https://openstax.org/r/sophe) builds on the PRECEDE model to provide a practical approach to community program planning (U.S. Department of Health and Human Services [HHS], 2001). PATCH includes a detailed guide and worksheets to use at each phase; these resources are especially helpful for communities that have little experience with assessment and program planning. PATCH describes five critical elements of community health promotion programming:

- Participation of community members
- Use of data to guide program development
- Development of a comprehensive health promotion strategy
- Evaluation to provide timely feedback and for program improvement
- Increase in community capacity for health promotion (HHS, 2001)

Capacity can be increased through relationships within the community, state health departments, universities, and other regional and national levels of organizations that can provide data, resources, and consultation. Capacity refers to the resources and relationships required to implement the program (Public Health Accreditation Board [PHAB], 2022). This chapter describes methods to develop these relationships.

PATCH can be used to plan, conduct, and evaluate health promotion and disease prevention programs and includes the following five phases:

1. Mobilizing the community
2. Collecting and organizing data
3. Choosing health priorities
4. Developing a comprehensive intervention plan
5. Evaluating PATCH

The first three phases relate to the CHA and community health improvement plan (CHIP) processes described in Assessment, Analysis, and Diagnosis. The last two phases include development, implementation, and evaluation of community intervention for health promotion. When developing a comprehensive intervention plan, the team considers contributing factors and community-based programs currently being used elsewhere. This includes surveying other agencies and organizations and searching the literature and internet resources regarding current programs related to the identified community problem. PATCH recommends working with systems, such as schools, work sites, and hospitals, starting simple and combining educational, policy, and environmental strategies to enhance the program and make an impact in several ways.

Intervention Mapping

The Intervention Mapping (IM) framework provides a systematic approach to plan community health interventions. The initial steps of IM are based on the PRECEDE model (Fernandez et al., 2019). Table 18.1 describes the six steps of IM and provides examples of tasks that Jamie, the nurse described in the chapter introduction, completed at each step with the program planning team in developing the Kenton Hardin County Family Bike Program (KHCFBP). Logic models, discussed in the next section, are typically used in IM.

IM Step	Tasks to Complete	Example of Tasks Completed by the KHCFPB Program Planning Team
Step 1: Logic Model of the Problem	• Establish a team consisting of the target population, individuals and groups impacted by the program outcome, and the planning and implementation team. • Conduct a CHA. • Perform analysis of health, quality of life, behaviors, and environmental conditions that influence health problems. • Create a logic model illustrating the problem. • Determine program goals. Goals are discussed in detail in Section 18.3.	• Reviewed CHA, which showed that 70% of county adults were overweight or obese as defined by BMI, only 29% of adults met national physical activity recommendations, 15% of county youth were obese, and only 29% of youth met national physical activity recommendations. • The established team included staff from the county health department (director of nursing [DON], fiscal officer), a nurse educator, a YMCA staff member, the county WIC director, and two local bike experts. The team also collaborated with an established county transportation committee that had been looking to add bike paths in the community. • Determined program goal—to increase physical activity of program participants through biking and to increase bike safety.

TABLE 18.1 IM Steps and Associated Tasks

IM Step	Tasks to Complete	Example of Tasks Completed by the KHCFPB Program Planning Team
Step 2: Logic Model of Change	• Identify determinants of the identified health problem by searching the literature, choosing theories, and conducting research, if needed. • Select determinants to target during the program. • Determine expected outcomes and objectives. • Create a logic model of change.	• Reviewed literature to locate evidence-based biking programs. • Identified determinants of biking: bike safety, biking skill, bike maintenance, and access to equipment. Also added nutrition to support physical activity. • Determined outcomes and objectives. Developing Program Goals and Measurable Objectives to Demonstrate Outcomes, Table 18.6 lists the objectives of the KHCFBP.
Step 3: Program Design	• Choose theory and evidence-based change methods. • Select or design program delivery methods.	• Investigated several physical activity programs targeting youth and adults. Finding no biking program targeting youth and adults, the team designed the program based on five evidence-based programs. • Created logic model of the program.
Step 4: Program Production	• Draft messages, materials, and protocols. • Pretest, refine, and produce materials.	• Created participant workbooks and facilitator guides with input from the nurse educator, DON, bike experts, and WIC director. • Added the county health department public relations staff to create advertisements. • Met with the team to review and refine the plan for implementation.

TABLE 18.1 IM Steps and Associated Tasks

IM Step	Tasks to Complete	Example of Tasks Completed by the KHCFPB Program Planning Team
Step 5: Program Implementation Plan	• Identify persons who are responsible for the delivery of the program. • State outcomes and performance objectives. • Implement the program.	• Identified responsible persons. Bike experts delivered curriculum; volunteers assisted with biking skills and maintenance; DON and nurse educator managed logistics (surveys, forms, snacks, and equipment/time management). • Recruited volunteers from a local university to assist with program delivery. • Program was implemented.
Step 6: Evaluation Plan	• Develop evaluation indicators, measures, and questions. • Complete evaluation.	• Used the CDC Framework for Program Evaluation in Public Health. • Created evaluations with input from the nurse educator, DON, bike experts, and WIC director. • Evaluated participant biking knowledge, helmet use, and amount of time riding prior to, immediately following, and 6 months after the program. • Conducted both process and outcome evaluations.

TABLE 18.1 IM Steps and Associated Tasks

Logic Models

Logic models are tools to visually present the relationships among resources that are used to implement a program, the activities planned, and the program's intended results (W. K. Kellogg Foundation, 2004). The logic model describes the sequence of events to connect the program's need with the desired results and shows how human and financial resources contribute to the program. The Logic Model Development Guide (https://openstax.org/r/naccho) provides a step-by-step method to create logic models. Common components of logic models include:

- Resources: human, financial, organizational, and community needed to operate the program
- Activities: processes, tools, events, technology, and actions for implementation
- Outputs: direct products of program activities, such as the number of participants
- Outcomes: specific changes in participant behavior, knowledge, or skill, usually designated by short-term and long-term
- Impact: fundamental change as a result of the program, usually within 7 to 10 years

Figure 18.3 provides an example of a logic model developed by Jamie, the community health nurse described in the chapter introduction, and the program development team to visually represent the Kenton Hardin County Family Bike Program.

KHCFBP Logic Model

Situation: Hardin County has high rates of obesity and low rates of physical activity. Biking provides an avenue to increase physical activity and decrease obesity. Barriers to biking include lack of equipment, skill, knowledge, and confidence. Research shows reducing these barriers leads to increased biking frequency.

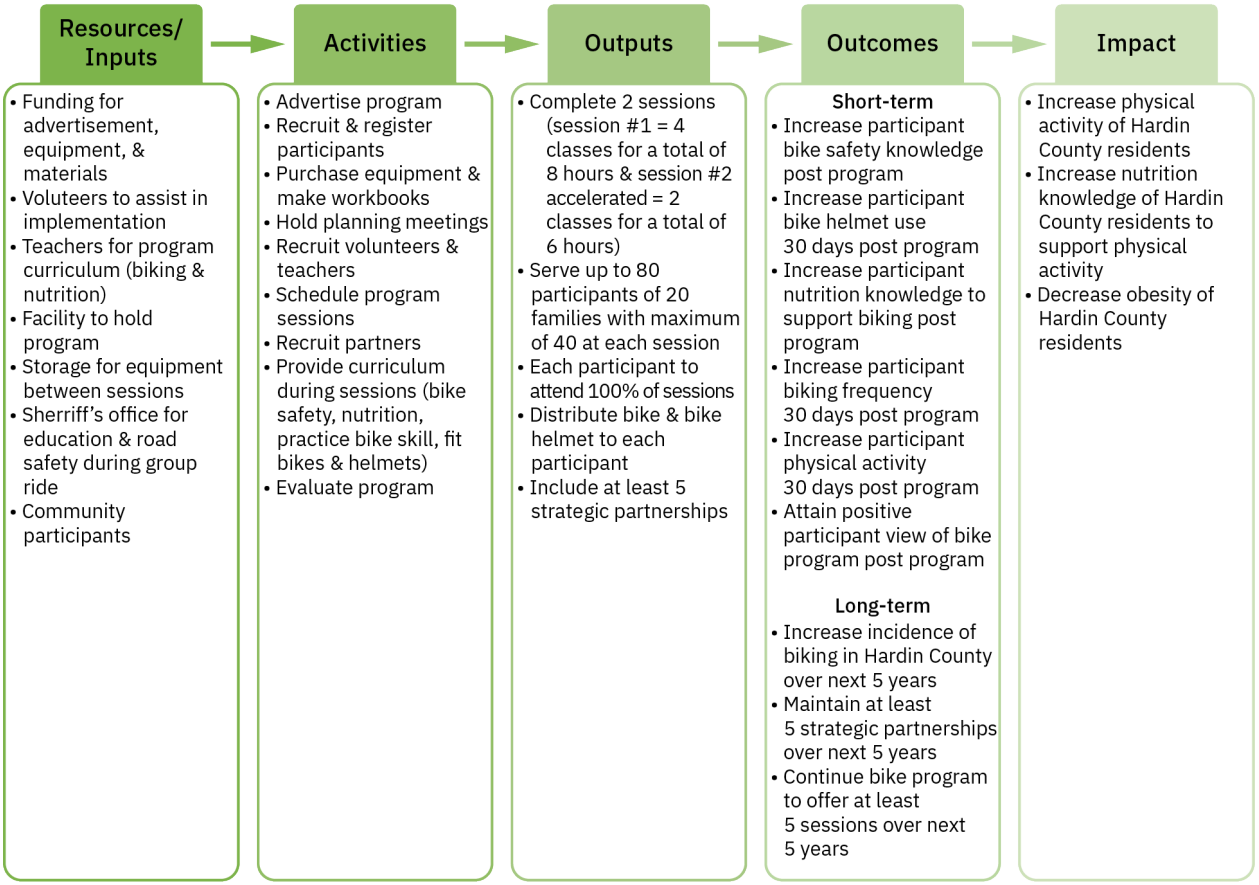


FIGURE 18.3 The community health nurse may assist in development of a logic model as a part of program planning. (source: reproduced with permission from Jamie Hunsicker, DNP, RN)

Use Health Determinants and Data to Plan Programs

Community assessment and health determinant data are the basis of effective programs. The first step of program planning, regardless of the framework or model selected, is to review community assessment data related to the identified problem that the program is targeting. This provides a rationale for implementing the program and establishes baseline data for measuring the health problem and evaluating the program.

The nurse also gathers data on determinants of health that contribute to the specific health problem. Determinants of health are combined factors that affect the health of individuals and communities, including individual characteristics and environmental conditions where people are born, live, learn, work, play, worship, and age (CDC, 2019; HHS, n.d.). As discussed throughout this text, those environmental conditions are called social determinants of health (SDOH). Individual determinants include age, sex, genetics, and behaviors, such as physical activity, nutrition, and substance use. SDOH include economic stability, education access and quality, health care access and quality, neighborhood and built environment, and social and community context (HHS, n.d.). Access to safe housing and transportation, employment opportunities, food security, income and socioeconomic status, level of education, air and water quality, and health literacy are all examples of SDOH. See Social Determinants Affecting Health Outcomes for more information.

THEORY IN ACTION

Addressing the Social Determinants of Health

Access multimedia content (http://openstax.org/books/population-health/pages/18-1-theories-and-models-to-guide-program-planning)
This animation describes the influence that SDOH have on health.

Watch the video, and then respond to the following questions.

1. How do social determinants of health impact health outcomes?
2. What are some community interventions the nurse could implement that would influence each determinant of health described in the video?

The nurse should incorporate health determinants into program planning for several reasons. First, SDOH account for 50 to 80 percent of health outcomes (Whitman et al., 2022; Zhang & Fornili, 2023). Health outcomes are strongly predicted by social and economic factors, followed by health behaviors, clinical care, and the physical environment (Hood et al., 2016). Poor social and economic conditions influence access to health care and an individual's ability to make healthy choices. For example, healthy food may be unaffordable or unavailable within the community. Additionally, individuals living in impoverished neighborhoods are more likely to experience an unsafe environment, low educational attainment, discrimination, and racism, all of which are associated with chronic stress. The constant release of stress hormones damages body systems and increases the risk of health problems. Second, federal health care programs and organizations have made addressing the SDOH a priority (De Lew & Sommers, 2022). The U.S. Department of Health and Human Services strategy to address the SDOH aims to improve

- data by increasing the collection of SDOH data and increasing data sharing among systems;
- connections between the health care systems, social services, and communities; and
- collaborations and partnerships among government organizations that impact health.

Finally, the nurse and program planning team direct program interventions toward reducing risk of disease. Because SDOH play a significant role in the development of disease, interventions should be directed at those SDOH impacting the community (Figure 18.4). Targeting several aspects of determinants of health enhances the likelihood that the program will achieve goals to reduce risk factors, promote health, and prevent illness.

In the KHCFBP example, the public health nurse, Jamie, and the bike program planning team identified determinants of physical activity via biking. Individual determinants of bike riding included motivation and confidence, knowledge of bike safety, and experience with biking and biking skill. Social determinants of bike riding included the ability to purchase bike equipment, the safety of sidewalks and streets, and social support (Hunsicker, 2020). In this instance, program planners decided to target all determinants except sidewalk and street infrastructure because the likelihood of influencing infrastructure changes was low during this program.

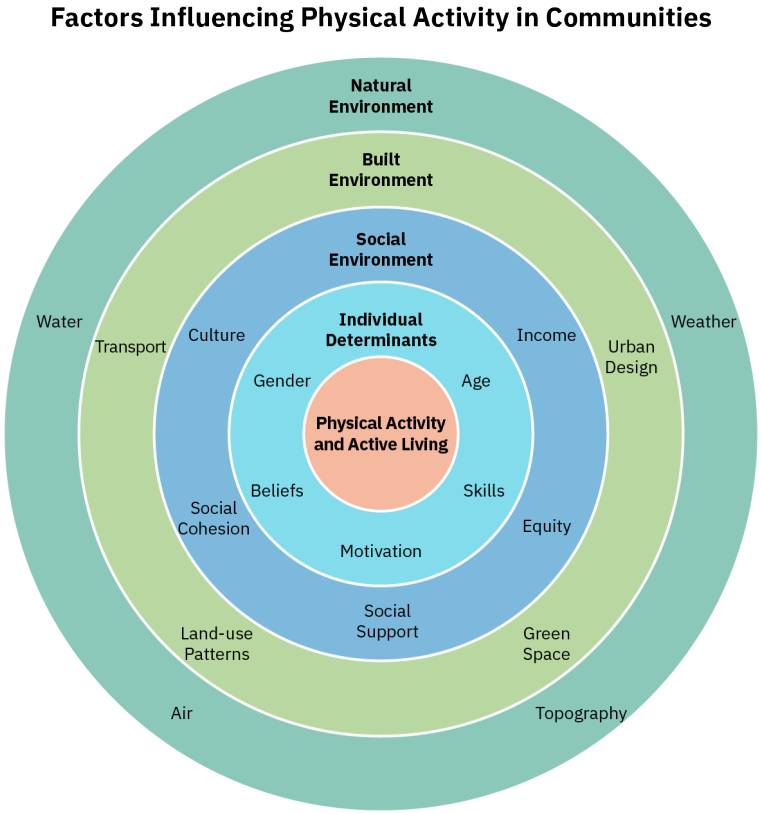


FIGURE 18.4 Determinants of physical activity include factors in the natural, built, and social environments such as weather, urban design, green space, and culture as well as individual determinants like motivation, beliefs, age, and skills. (See Dahlgren, 1995; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Assess Learning Needs Across the Continuum of Care

Effective and relevant community health programs aim to meet community needs by filling the gap between program participants' knowledge and what is known about a health problem. To understand learning needs, the nurse must assess the target population before the development of program activities. Learning assessments provide perspective regarding the community's educational needs and guide the choice of program activities to meet them. Therefore, assessment of learning needs and education is essential to community health programs.

THEORY IN ACTION

Using Health Education to Reduce Opioid Overdoses

Access multimedia content (http://openstax.org/books/population-health/pages/18-1-theories-and-models-to-guide-program-planning)

The Naloxone Education Empowerment Distribution (NEED) program was a successful program that has since been completed. It provided education to first responders, local pharmacies, and interested community members. The NEED program trained, certified, and provided community members with education and skills to successfully administer naloxone to prevent opioid overdose. Although it is not currently active, this evidence-based program can be revisited or used as an intervention to reduce opioid overdose deaths in the future.

Watch the video, and then respond to the following questions.

1. What learning needs do you think were identified before the implementation of the NEED program?
2. How do you think the assessment of learning needs led to the development of the program?

The nurse can use several methods to assess learning needs. The CHA provides an overview of community learning needs. A comprehensive CHA includes community perspectives via survey collection, focus groups or interviews, and statistical data on health outcomes. Analysis of this data gives the nurse a picture of the community's learning

needs. The nurse also assesses the target population's health literacy at both the community and participant level before program implementation, allowing the nurse to direct activities at the level of participant health literacy. Another method to assess the target population's learning needs is to include them in the program planning process. Members of the target population can provide their perspective, indicate what information is important to them, and clarify knowledge, skill, or attitude deficits. Assessment, Analysis, and Diagnosis discusses CHA and health literacy in more detail.

Approaches to Health Promotion and Disease Prevention

The nurse and program planning team consider health promotion and disease prevention theories during program development because these theories help explain health behavior and factors contributing to health problems. These theories direct the program planning team to choose interventions that support behavior change. The health belief model (HBM), transtheoretical model, and social cognitive theory (SCT) are common health promotion and disease prevention approaches used during program planning and implementation. Health Promotion and Disease Prevention Strategies provides a detailed overview of each theory. This chapter applies these theories to community nursing practice.

Application of the Health Belief Model

The nurse and program planning team use the health belief model (HBM) to design health promotion and disease prevention strategies. The HBM states that an individual is ready for health change if they

- believe they are susceptible to the health problem,
- believe the health problem has serious consequences,
- believe taking action will reduce their risk of the health problem,
- believe the benefits of change outweigh the costs,
- are exposed to factors that prompt change, and
- are confident in their ability to make a change.

The nurse and program planning team apply the HBM by first assessing the perceptions of the target population. This enables the team to develop activities that align with the population's needs. For example, if an individual or group does not believe they are susceptible to the health problem, the program would provide education on risks of the health problem. If an individual or group lacks confidence in their ability to make a change, the program would provide training to increase skill and confidence. For example, Jamie and the KHCFBP planning team aimed to increase participants' biking confidence and skill. They developed education on bike maintenance and safety and activities to practice biking skills to meet that aim.

THEORY IN ACTION

Applying the HBM in Community Programs

Access multimedia content (http://openstax.org/books/population-health/pages/18-1-theories-and-models-to-guide-program-planning)

Community health nurses used the HBM to plan and evaluate community health programs. The M-PACT, Men's Prostate Awareness Church Training, was a partnership between the local faith community, community members, and the Maryland School of Health. The project goal was to increase informed decision-making for prostate cancer screening among Black men who attend church.

Watch the video, and then respond to the following questions.

1. What were the needs and concerns of the Black men who participated in the program?
2. What specific activities did the M-PACT program use to meet participants' needs?
3. How did each activity correspond to the HBM?

Application of the Transtheoretical Model

The nurse and program planning team use the transtheoretical model to influence the change process. According to this model, individuals move through the following five stages when making health behavior changes:

- Precontemplation—no intention to make a change within the next 6 months
- Contemplation—intends to act within the next 6 months
- Preparation—intends to act within the next 30 days and has taken steps to plan for change
- Action—changes behavior for less than 6 months
- Maintenance—changes behavior for more than 6 months

The first step in applying the transtheoretical model to determine where participants fall within the five stages. The nurse and program planning team then develop activities that align with the stage of change. For example, if the program targets tobacco users in the precontemplation stage, activities would include personalized messages and education regarding the risks of tobacco use. If the program targets tobacco users in the preparation stage, activities would include assistance with setting attainable goals and education on resources to quit.

THEORY IN ACTION

Applying the Transtheoretical Model

Access multimedia content (http://openstax.org/books/population-health/pages/18-1-theories-and-models-to-guide-program-planning)

Community health providers use the transtheoretical model to determine individual readiness for change and interventions to match readiness for change. Most often this model has been used to assist individuals in quitting unhealthy behaviors, such as tobacco, alcohol, or other drug use, or to start healthy behaviors, such as exercise. The video applies the transtheoretical model to treatment of youth who use alcohol or other drugs (AOD).

Watch the video, review the Treatment Matching Tip Sheet (https://openstax.org/r/dovetail), and then respond to the following questions.

1. What program activities align with individuals who have AOD problems in the preparation stage?
2. How is motivational interviewing used in the contemplation stage?

Application of Social Cognitive Theory

The nurse and program planning committee using social cognitive theory (SCT) recognize that the social environment influences health behaviors. SCT concepts include the following:

- Reciprocal determinism—interaction among the individual, behavior, and environment
- Behavioral capacity—knowledge and skill of the individual to perform a health behavior
- Expectations—anticipated outcomes of a behavior
- Self-efficacy—confidence in changing behavior and overcoming barriers to behavior
- Observational learning/modeling—watching another's behavior and outcomes leading to behavioral change
- Reinforcements—response to a behavior that increases or decreases the likelihood of that behavior

The first step in applying SCT involves assessing individual or group knowledge, skills, expectations, and confidence and the social environmental factors influencing the health problem. The program planning team plans activities to enhance participants' likelihood of adopting a new health behavior based on the SCT concepts. For example, a nutrition education program may model creating a healthy shopping list based on a budget, enhance participant confidence by having them participate in cooking classes, and reinforce healthy choices through verbal praise.

THEORY IN ACTION

Applying SCT to Reduce Risk of Obesity

Access multimedia content (http://openstax.org/books/population-health/pages/18-1-theories-and-models-to-guide-program-planning)

Community health providers recognize that health behaviors are influenced by the social environment. Los Angeles Universal Preschool uses SCT to teach healthy habits with the aim of reducing childhood obesity in low-income minority preschool populations.

Watch the video, and then respond to the following questions.

1. What determinants of obesity did the preschool teacher influence through purposeful intervention?
2. What interventions highlight the concepts of SCT?

18.2 Partnerships and Coalitions in Program Planning

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 18.2.1 Differentiate between partnerships and coalitions.
- 18.2.2 Identify impacted individuals or groups and mobilize community partnerships to solve health problems within programs, communities, and populations.
- 18.2.3 Demonstrate the ability to engage with other health professionals and community partners through social networking.
- 18.2.4 Organize team and community partners with a shared vision, values, principles, and capacity for community action.
- 18.2.5 Discuss the ethical considerations associated with planning, implementing, and evaluating health programs.

The nurse uses a participatory approach during the development, implementation, and evaluation of effective and relevant community health promotion and disease prevention programs. A participatory approach enables and empowers community members to be actively involved in decisions throughout the program planning, implementation, and evaluation process. The nurse invites individuals or groups who are impacted by a health problem and/or are impacted by a community health program to become involved. The nurse engages community members, agencies, and organizations to enhance program planning by sharing ideas, resources, and work. The community health program is based upon mutual vision, values, principles, and capacity.

Community Partnerships and Coalitions

Community engagement is an essential component of program planning. Community engagement is the process of working collaboratively with and through groups of people to identify the health needs of community residents and strategies to address them. Any person, agency, or organization that is invested in the community's health and in the local public health system or is impacted by the outcomes of community health programs should be considered a potential partner. The nurse develops a list of potential partners during the first stages of program planning. Table 18.2 lists potential community partners to consider when planning community health programs (U.S. Department of Housing and Urban Development [HUD], 2012; World Health Organization [WHO] & UNICEF, 2022).

Individuals	Agencies and Organizations	Government
• Health care providers • Nurses • Experts in the problem • Community members • Populations of interest • Researchers • Community leaders • Elected officials • Donors	• Mental health agencies • Hospitals and health care systems • Social service agencies • First responders (fire, EMS, police) • Schools • Universities • Media • Preschools and childcare agencies • Medical clinics • Housing agencies • Philanthropic foundations • Faith-based organizations • Libraries	• County officials • Public health departments • Policymakers

TABLE 18.2 Potential Partners for Community Health Programs

A partnership is a relationship characterized by mutual cooperation and shared responsibilities among individuals

and groups with a common focus that combine resources to implement joint activities (PHAB, 2022). For example, the local public health department, WIC, the local health system, and the YMCA combine efforts to hold a mom-baby fair (Figure 18.5). The public health department provides car seat education and new car seats. WIC provides nutrition education and resources for healthy foods. The local health system provides education on immunizations and safe sleep. The YMCA offers education on mom-baby exercise classes. Each organization also contributes baby items for raffle.

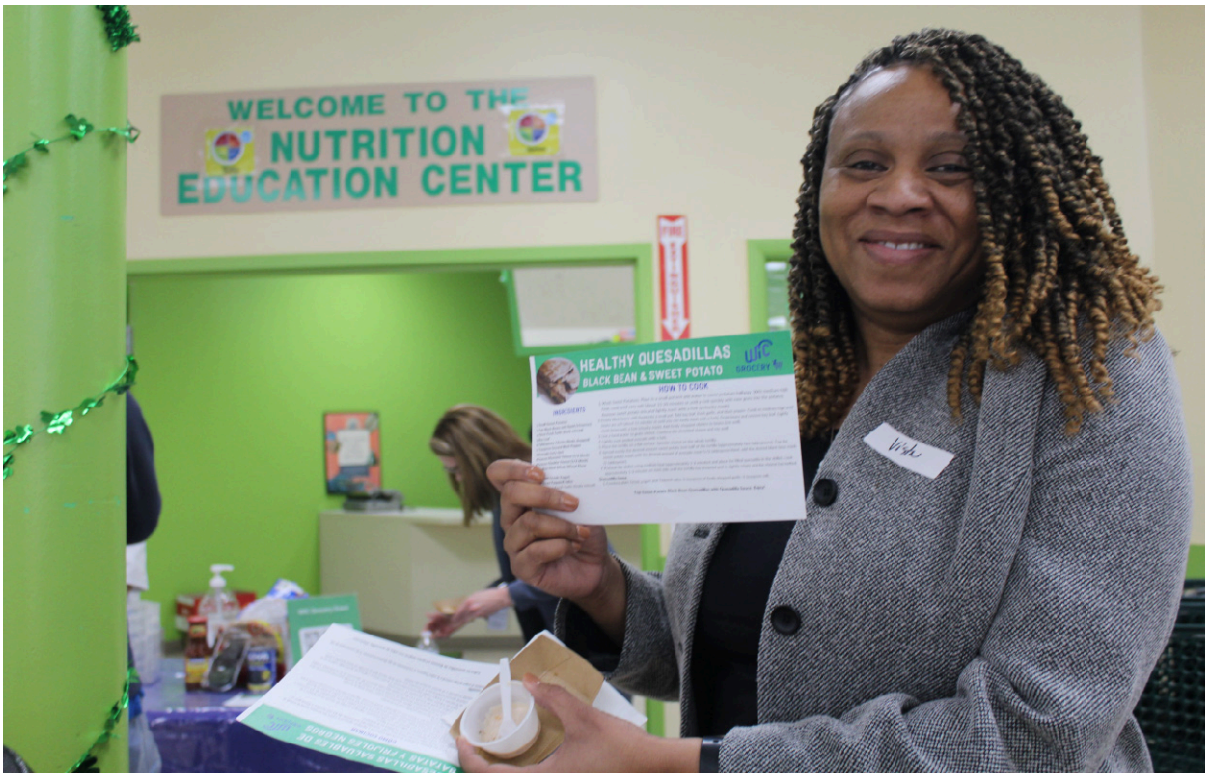


FIGURE 18.5 A community health nurse partners with local organizations, such as WIC, to provide education to expecting and new parents during a health fair. (credit: FNS Midwest/Flickr, Public Domain)

Partnerships may expand into a **coalition**. A coalition is a group of people and organizations that work to address community needs and solve community problems (PHAB, 2022). Coalitions connect multiple sectors within the community, such as schools, worksites, government, public health, hospital systems, community-based organizations, religious organizations, and the community at large (Society for Public Health Education [SOPHE], 2016). Coalitions help gain attention for the health problem; share knowledge, strategies, risks, and responsibilities; combine resources to address the health problem; assemble diverse talents and expertise; limit duplication of programs and services; and attain sustainability for health programs (Issel & Wells, 2018; SOPHE, 2016). Coalitions are strategic, formed in response to a specific health problem. For example, the program discussed in Theory in Action: Using the Community Action Model to Improve Infrastructure and Promote Physical Activity was accomplished by a coalition (Healthy Places by Design, 2016). The KidsWalk Coalition included members from schools, businesses, government agencies, youth organizations, community and faith-based organizations, and the New Orleans Department of Public Works. The specific health focus was to improve infrastructure and safety to make walking and biking an option for community members.

Engage and Mobilize Community Partnerships

The nurse identifies and engages potential community partners and develops community partnerships before developing strategies for community health promotion and disease prevention programs. Table 18.3 describes the eight action steps and related activities the nurse uses to engage potential partners, mobilize community partnerships, and create community health coalitions.

Action Steps	Activities
1. Identify potential partners.	• List potential individuals and organizations who may have an interest in or are impacted by the program or health issue. • Check the list to ensure diversity. • Conduct a partner analysis and community asset mapping.
2. Engage potential partners.	• Contact potential partners to clarify partner analysis and community asset mapping. • Clarify and determine the alignment of vision, values, capacity, goals, and objectives of each partner. • Establish mutually beneficial partnerships. • Build trust among partners and within the community.
3. Develop a partnership agreement.	• Determine the roles and responsibilities of each partner. • Establish a formal or informal agreement.
4. Determine program priorities.	• Establish a shared purpose, including vision, values, and principles. • Develop goals and objectives.
5. Develop an action plan.	• Develop strategies, resources, timeline, and budget. • Determine work groups, if needed, to implement strategies. • Develop evaluation strategies.
6. Implement strategies.	• Implement planned strategies. • Communicate progress to all partners. • Revise strategies as needed.
7. Evaluate the coalition and strategies.	• Conduct planned evaluation. • Revise coalition structure as needed. • Revise action plan as needed. • Build on successes and expand strategies as needed. • Disseminate results to all partners and the community.
8. Determine future as a partnership or coalition.	• Complete initial strategies. • Determine if the relationship will be permanent, will transfer to another leadership structure, or will dissolve. • Create new goals and objectives if the relationship continues.

TABLE 18.3 Steps to Engage Community Partners and Create Coalitions (See HUD, 2012; John Snow Inc. [JSI], 2014; SOPHE, 2016; WHO & UNICEF, 2020.)

Identifying and engaging potential partners, which occurs in Steps 1 and 2, can be daunting, especially when there are few established partnerships and coalitions within the community. The nurse uses **social networks** to effectively engage potential partners. Social networks are linkages among individuals, groups, and organizations that arise out of geographical location, work relationships, school relationships, or recreational activities (Dozier et al., 2015). The nurse utilizes personal social networks to understand the individual, group, and organization's health priorities, recruit those with similar priorities, and solicit suggestions for other potential partners interested in the program. Social media provides an additional method to identify and engage potential partners. Social media is an effective engagement method in that it can be used to do the following (Walsh et al., 2021):

- Search for individuals and community groups who post related content, such as health information and resources, policy advocacy, and discussions related to the targeted health problem
- Disseminate information and program needs related to the targeted health problem
- Expand reach to recruit community members from diverse groups and the target population
- Provide a method to enhance communication among partners and coalitions by forming social media groups

Strategies to identify and engage potential partners more effectively include considering a potential partner's activities, accomplishments, current and potential contributions to health, individual and organizational self-interests, and possible conflicts (SOPHE, 2016). Partnerships and coalitions are more likely to succeed if specific interests and goals align and they can realistically achieve activities with minimal expense (HUD, 2012; Issel & Wells, 2018). Additionally, each partner should have a return on investment, benefiting from the partnership (HUD, 2012). The time and resources spent engaging in partnerships and relevant activities should help each partner meet their organization's goals.

Community asset mapping and partner analysis assist the nurse in identifying potential partnerships. Community asset mapping includes all community sectors with resources that could be utilized. The nurse completes an inventory of assets and the type of activities that potential individuals, organizations, or associations are engaged in. Assets may include the following (HUD, 2012):

- Human resources, such as number, expertise, talent, and skills of staff
- Physical resources, such as location to target population, public spaces, and meeting rooms
- Information resources, such as educational materials and access to information resources
- Political resources, such as elected officials and advocacy for policy change
- Existing program resources, such as a program that has already been implemented

Partner analysis uses that information to describe an organization's experience with program planning and implementation, knowledge and expertise, available resources, influence on other partners, and potential roles and responsibilities for the program (WHO & UNICEF, 2020). JSI (2014) created a toolkit for partnership, collaboration, and action (https://openstax.org/r/publications) that provides tools to evaluate organizational readiness, identify barriers and challenges for partnerships, evaluate potential partners, and evaluate collaborative practices.

During Step 3, the nurse develops partnership agreements with established partners. The partnership agreement may be a formal written agreement, such as a legal contract or Memorandum of Agreement (MOA), or an informal verbal contract. The best approach is a written agreement, reviewed annually, that contains enough detail to evaluate whether each partner fulfilled their partnership commitment (JSI, 2014). This legally protects all partners' best interests. JSI (2014) developed the Partnership Agreement Development Tool (PAD) (https://openstax.org/r/publicationsjsi) to assist in developing a partnership agreement. The tool directs partners to address roles and responsibilities of each party in the relationship.

Strategies to assist the nurse during Step 4, determine program priorities, and Step 5, develop an action plan, are described in sections below.

Organize Teams with Shared Vision, Values, Principles, and Capacity for Community Action

The nurse is aware that **team dynamics** influence effective collaboration of partners during community program planning. Team dynamics refers to the relationships, interactions, attitudes, and behaviors that arise when a group of individuals work together. Positive team dynamics, such as open communication, conflict resolution, alignment of roles, commitment to the project, and optimism, improve both team and individual performance and enhance effectiveness to reach team goals (Sharma, 2023).

TEAM SCIENCE: THE EFFECTIVE TEAM

Access multimedia content (http://openstax.org/books/population-health/pages/18-2-partnerships-and-coalitions-in-program-planning)

Healthy team dynamics enhance a teams' ability to communicate effectively, make decisions, and accomplish shared goals.

Watch the video, and then respond to the following questions.

1. What are characteristics of a healthy team?
2. Why is setting team expectations important when working with a group?
3. What are factors that make a team successful?

The nurse, partners, and other interested parties meet to develop a shared vision, values, principles, and capacity to clarify the team's common interests and provide purpose, focus, and direction for program planning. A program **vision** is a statement that articulates the desired goals that the planning team aspires to achieve (HUD, 2012; PHAB, 2022). The vision should include diverse perspectives and be broad, inspiring, and easy to communicate (HUD, 2012). For example, the North Carolina Farmworker Health Program (NCFHP, 2023) vision statement (https://openstax.org/r/ncdhhs) directs collaboration with local agencies to meet farmworkers' health needs:

> We envision a comprehensive network of health care professionals that provides culturally appropriate and accessible health services, empowering farmworkers and their families to live healthy lives as valued members of informed and inclusive communities.

When writing the program vision, the team answers the following questions:

- What is the problem we are attempting to solve?
- What are we hoping to achieve?
- If we achieved all the goals, what would the community look like in the future?

A program's **values** flow from the vision. Values are the core principles and beliefs that direct the team (PHAB, 2022). When writing the program values, the team answers the following questions:

- What shared values are unique to our team?
- What behaviors do we value that are related to the problem, health promotion, and disease prevention?
- How will we implement our program activities to achieve our vision?

Although program documents may not explicitly note values, they are interwoven throughout activities and demonstrated in the program's practices. For example, values evident in the NCFHP are health equity, cultural and linguistic competency, collaboration, access, and empowerment.

Finally, the nurse, partners, and other interested parties define the program's capacity. When determining program capacity, the team answers the following questions:

- What resources can each partner and interested party contribute to the program?
- Are there other resources in the community that could be utilized?
- Is additional funding available, such as state or federal grant opportunities or community donors?
- Are there other community relationships that could be established to increase capacity?
- Are there barriers related to resources and relationships?

CONVERSATIONS ABOUT CULTURE

Cultivating Care

Access multimedia content (http://openstax.org/books/population-health/pages/18-2-partnerships-and-coalitions-in-program-planning)

A community health program is developed according to the vision, values, and capacity of partners and other interested parties planning and implementing the program. The NCFHP demonstrates the incorporation of vision, values, and capacity by assisting local agencies in increasing access to health and dental care for farmworkers and their families.

Watch the video, and then respond to the following questions.

1. What barriers to accessing health care did the migrant workers face? How did the NCFHP address them?
2. How has the NCFHP vision impacted program activities?
3. How are values incorporated into NCFHP activities?
4. How does the NCFHP build capacity?

Ethical Considerations Associated with Planning, Implementing, and Evaluating Community Programs

The program team must consider community health ethical principles and issues associated with program planning, implementation, and evaluation. Ethical and moral norms related to health care and community health are considered when planning program activities. The American Public Health Association (APHA, 2019) Public Health Code of Ethics (https://openstax.org/r/apha) provides an overview of ethical norms to consider. Accountability, participant protection, and incentive use are specific ethical topics that influence program planning decisions. Program planning, implementation, and evaluation teams are responsible for ensuring ethical and moral norms are upheld. Ethical analysis should occur in the beginning stages of program planning.

Ethical and Moral Norms

The nurse and program team follow the Public Health Code of Ethics during program planning, implementation, and evaluation. Table 18.4 provides a description and application of ethical and moral standards that should be incorporated into program development and implementation.

Ethical Standard	Examples of Application
Professionalism and trust	• Evidence from research and experience supports actions (APHA, 2019). • Program and activities have been shown to improve health practice and outcomes (APHA, 2019). • Program and program team are competent, honest, transparent, and accurate (APHA, 2019). • Secondary interests do not influence program choices (APHA, 2019).
Health and safety	• Program and activities promote health and well-being, minimize harm, prevent disease, and promote safety (Akrami et al., 2018; APHA, 2019).
Health justice and equity	• Program and activities equally distribute burdens, benefits, and opportunities for health (Akrami et al., 2018; APHA, 2019). • Program and activities do not exacerbate health inequity, including structural and institutional inequity (APHA, 2019). • Program and activities reduce social inequities (Akrami et al., 2018).
Interdependence and solidarity	• Program and activities foster positive relationships within the community (APHA, 2019).
Human rights and civil liberties	• Program participants have the right to personal autonomy, self-determination, and privacy (Akrami et al., 2018; APHA, 2019).
Inclusivity and engagement	• Program engages individuals and communities affected by decision-making (APHA, 2019). • Decision-makers represent diverse community individuals, partners, and organizations (APHA, 2019). • Program empowers the community to make informed decisions and health changes (Akrami et al., 2018).

TABLE 18.4 Ethical and Moral Norms to Consider During Program Planning, Implementation, and Evaluation

WHAT IS HEALTH EQUITY?

Access multimedia content (http://openstax.org/books/population-health/pages/18-2-partnerships-and-coalitions-in-program-planning)

Unequal access to resources leads to health disparities. Health disparities are health differences that negatively affect socially disadvantaged populations. Public health programs focus on eliminating health disparities by promoting health equity and health justice. Health equity gives individuals what they need to achieve equal health outcomes. Health justice is one method to achieve health equity and involves eliminating personal, community, political, and systematic barriers to equitable health outcomes. This video discusses causes of health inequity and provides recommendations to achieve health equity.

Watch the video, and then respond to the following questions.

1. What causes health inequity?
2. What does the American Public Health Association recommend to reduce disparities and promote health justice and equity?

Accountability

The nurse and program team consider professional and program accountability during partnership establishment, program planning, program intervention, and program evaluation. Professional accountability ensures that team members act within the scope of their professional license. Additionally, individuals within the team should have the appropriate training, skill, and supervision to ensure that the services and activities offered are the best available. For example, Jamie (the nurse) and the KHCFBP team asked a local bike expert and licensed educator to assist with activity planning and content delivery. This ensured that the right individual, with the needed knowledge, skill, and experience, was involved.

The nurse and program team consider program accountability when developing the program's vision, values, and activities. The program is accountable for upholding community health program standards, such as implementing activities that originate from health needs of the community, are delivered with efficient use of resources, reach the intended population, have been delivered as planned, are managed according to the planned budget, make the most impact, and follow local, state, and federal law (Issel & Wells, 2018). The program must be fiscally responsible, including efficient and appropriate use of funds. For example, funds that were donated to purchase bikes and bike helmets for a community health biking program must be used for that purpose. It would be unethical to use those funds in any other way. Finally, program accountability includes transparency, commitment, and sustainability of services (Akrami et al., 2018). The program should be implemented as promised and continue for as long as promised. For example, if a program offers free screening to community members, the program should have the resources to provide screening to all who qualify.

Participant Protection

Participants' privacy and autonomy should be protected throughout program implementation and evaluation. Community program participant information is only confidential by law under certain circumstances, such as the Health Insurance Portability and Accountability Act (HIPAA) for health care systems and the Family Educational Rights and Privacy Act (FERPA) for educational systems (Issel & Wells, 2018). Even if the community program does not fall within those categories, best practice is to only allow access to participants' personal information for those working directly with participants or within reports required for funding purposes. At the beginning of the program, the nurse communicates circumstances where the team may share personal information and may attain informed consent for sharing of information.

Participant autonomy is protected through disclosure and informed consent. The nurse discloses program conditions and activities, conflict of interest, policies regarding confidentiality, and if the program is a part of a research study. The participant also has the choice to participate in and withdraw from the program at any time. If the program is part of a research study, Institutional Review Board (IRB) approval must be gained, and participants must consent to participate in the study. The IRB reviews evaluation and research plans to ensure ethical standards are followed and participant rights are protected. Consent includes ensuring participant understanding of the purpose of the study. Autonomy and informed consent issues arise in community health programs because many

programs target vulnerable populations and children (Issel & Wells, 2018). Care must be taken in these situations to ensure that ethical standards are followed.

Incentive Use

Using **incentives** in community health programs has been a highly debated topic. Incentives are used to motivate program participants to do something. Community health programs may use incentives to increase program enrollment and retention or adoption of health promotion and disease prevention behaviors. Four types of incentives have been used in community health programs (CDC, 2021):

- Cash incentives: providing cash to a person or direct depositing funds into a bank account
- Noncash financial incentives: providing items that have cash value, such as gift cards, vouchers, or insurance premium discounts
- Nonfinancial incentives: providing items that have value, but not cash value, such as prizes, products, or memberships
- Mixed incentives: providing a combination of above

Incentives reward behavior in the short-term, which people most often prefer, and so increase the likelihood of behavior in the short-term (CDC, 2021). Incentives may also provide motivation to adopt a healthy behavior, but this depends upon the complexity of the behavior change (CDC, 2021). For example, an incentive for simple behaviors, such as attending a meeting for weight loss, may be more successful than an incentive for complex behaviors, such as losing 20 pounds. Complex behaviors take more time, effort, and consistent change than simple ones, so the incentive may not align with the complexity. Programs that use incentives have been found to have higher levels of attendance and increased adoption of health behaviors compared to those that do not, but these results have varied according to race (CDC, 2021). Because of this, it is important to include members of the target population in decision-making regarding incentive use.

Factors to consider before adoption of the use of incentives include the following (CDC, 2021):

- Program setting and participants—Types of incentives may work in some settings and populations but not in others.
- Maintenance of change—Behaviors may not continue when incentives have stopped, so strategies to maintain behavior change should be incorporated into the program.
- Incentive type, amount, and frequency—Determine whether to use financial or nonfinancial incentives and how much incentive is needed to motivate participants as well as how often incentives will be given.
- Measurement method—Decide whether to provide incentives only for behaviors that can be measured rather than those that require self-reporting.

Ethical Analysis of Community Programs

The nurse appraises community programs to ensure ethical norms are maintained. The APHA (2019) offers a list of questions that can be used to analyze the ethics of a community program. Table 18.5 lists ethical standards and associated questions.

Ethical Standard & Description	Example of Question for Assessment
Permissibility • Socially and culturally appropriate • Within the standard of the law	• Is the action (program or program activity) ethically wrong, even if the action's outcome is good?
Respect • Supports human dignity within transactions, exchanges, and relationships • Relates to values of justice, equity, interdependence, and solidarity	• Is the action (program or program activity) demeaning or disrespectful to individuals or communities, even if it benefits health?

TABLE 18.5 Assessment of Ethical Standards in Community Programs (See APHA, 2019.)

Ethical Standard & Description	Example of Question for Assessment
Reciprocity • Cooperation and mutual exchange • Reasonable burden	• Does the action (program or program activity) outweigh the potential harm and loss that is imposed on individuals and communities?
Effectiveness • Achievement of the intended public health goal	• Is it expected that the action (program or program activity) will achieve its stated goals based on evidence and experience?
Responsible use of resources • Resources such as human skill, expertise, and time; equipment and supplies; natural resources; infrastructure; and funds	• Does the action (program or program activity) show efficient and effective use of resources that could be used for other actions?
Proportionality • Equitable and fair • Does not benefit one group more than another • Decreases inequities and disparities	• Are the program planners, implementers, and evaluators using power and authority appropriately? • Does the action (program or program activity) distribute costs and benefits in an equitable, fair, and nondiscriminatory way? • Does the action (program or program activity) benefit few and cause harm to many?
Accountability and Transparency • Builds trust with individuals and communities • Demonstrates respect for affected communities and partners	• Do the program planners, implementers, and evaluators provide a rationale for the action (program or program activity)? • Has the action (program or program activity) been analyzed ethically and determined to be ethical?
Public participation • Meaningful involvement of members of the public • Ensures participants and decision-makers are mutually informed and engaged in dialogue and exchange	• Have partners and community members had the opportunity to participate in decision-making?

TABLE 18.5 Assessment of Ethical Standards in Community Programs (See APHA, 2019.)

18.3 Developing Program Goals and Measurable Objectives to Demonstrate Outcomes

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 18.3.1 Differentiate between goals, objectives, and outcomes.
- 18.3.2 Utilize Healthy People 2030 national goals and measurable objectives to guide evidence-based policies, programs, and other actions to improve health and well-being.
- 18.3.3 Create an action plan inclusive of mutual goals and measurable objectives, considering strategic plans and evaluation methods.

The final steps of program planning include creating goals, objectives, outcomes, and an action plan. The nurse and program planning team use Healthy People 2030 national goals and other measurable objectives to guide actions. The goals, objectives, outcomes, and action plan align with the program's vision, values, and capacity.

Goals, Objectives, and Outcomes in Program Planning

The nurse and program team create goals, objectives, and outcomes before developing the action plan. **Goals** are statements that explain the program's purpose and what the program plans to accomplish (Division for Heart Disease and Stroke Prevention [DHDSP], 2018; Substance Abuse and Mental Health Services Administration [SAMHSA], 2018). Goals align with the identified health problem, vision, and program values. Goals are achieved through program objectives and activities. For example, the overarching goal of the KHCFBP, mentioned throughout the chapter, was to increase physical activity of adults, adolescents, and children through biking.

Objectives are statements of specific actions or behaviors that lead to accomplishing program goals (DHDSP, 2018; SAMHSA, 2018). Objectives should be specific, measurable, achievable, relevant, and time-bound (SMART) in order to provide clarity, establish accountability, focus timing, communicate realistic expectations, and direct evaluation (DHDSP, 2018). SMART objectives can be short-term, intermediate, or long-term and can be related to process or outcomes. **Process objectives** direct activities to be completed in a specific time frame and describe participants, interactions, and activities (DHDSP, 2018). **Outcome objectives** state the intended results of activities or the program, focusing on changes in knowledge, skills, and attitudes of participants and community members or in policies, systems, or environments (DHDSP, 2018). For example, the KHCFBP team wrote objectives to provide clarity, accountability, and focus for the program activities. Table 18.6 provides examples of short-term, intermediate, and long-term objectives based on the KHCFBP goals.

KHCFBP Goal Increase physical activity of adults, adolescents, and children through biking. Increase adult, adolescent, and child knowledge, skill, confidence, and safety associated with biking.	
Process Objectives	By August 31, 2018, complete two sessions of the KHCFPB.
	By August 31, 2018, reach up to 80 parents/guardians, adolescents, and children participating in the KHCFPB.
	By August 31, 2018, 100 percent of participants will attend and complete all planned activities.
	By August 31, 2018, form at least five strategic partnerships in program planning, implementation, and/or evaluation.
	By August 31, 2018, distribute one bike and one bike helmet to each program participant.
Short-term Outcome Objectives*†	By the end of each session (July 14, 2018, or August 25, 2018), increase participant bike safety knowledge from pre-program to post-program.
	By the end of each session (July 14, 2018, or August 25, 2018), attain a positive participant view of the bike program.
Intermediate Outcome Objectives*	By 30 days post-program (August 13, 2018, or September 24, 2018), increase participant bike helmet use from pre-program.
	By 30 days post-program (August 13, 2018, or September 24, 2018), increase participant biking frequency from pre-program.
	By 30 days post-program (August 13, 2018, or September 24, 2018), increase participant physical activity from pre-program.
Long-term Outcome Objectives*	By August 31, 2023, increase physical activity of Hardin County youth from 29 percent meeting national physical activity goals of at least 60 minutes daily to at least 32 percent.

TABLE 18.6 Examples of the KHCFBP's Process Objectives and Short-Term, Intermediate, and Long-Term Outcome Objectives
*Use baseline data if possible. The KHCFBP was a new program, so no baseline data were available for short-term and intermediate objectives.
†Physical activity was chosen in this case because biking frequency is not measured in county community health assessment.

	By August 31, 2023, maintain at least five strategic partnerships gained with the KHCFBP.
	By August 31, 2023, offer at least five additional sessions of the KHCFBP.

TABLE 18.6 Examples of the KHCFBP's Process Objectives and Short-Term, Intermediate, and Long-Term Outcome Objectives
*Use baseline data if possible. The KHCFBP was a new program, so no baseline data were available for short-term and intermediate objectives.
†Physical activity was chosen in this case because biking frequency is not measured in county community health assessment.

Writing SMART Objectives

The SMART method is one approach to ensure that the objectives of community health programs are well-written. Well-written objectives answer "WHO is going to do WHAT, WHEN, and TO WHAT EXTENT?" (DHDSP, 2018, p. 2). The SMART method is used to determine whether the program has achieved what it intended (see Table 18.7).

S	Specific	Identifies the target population or setting and actions
M	Measurable	Identifies what will be measured and includes baseline data if available
A	Attainable/ Achievable	Evaluates the feasibility of achievement in relation to available resources, time frame, and support
R	Relevant/Realistic	Relates the relationship between the objective and overall goal
T	Time-bound	Identifies a reasonable and achievable time frame for accomplishment

TABLE 18.7 Objectives Using the SMART Approach

The nurse and program team use baseline data to determine change, so it is included within the objective. Baseline data can be local information, such as data gathered during community health assessment, or state or national information, such as data within state health assessment reports, national health data sites, or Healthy People 2030. Assessment, Analysis, and Diagnosis discusses methods for gathering baseline data. When baseline data is not available, it should be stated that baseline data will be gathered as a first activity of the program (DHDSP, 2018).

The nurse and program team determine relevancy and reasonableness by gathering evidence for program activities. Literature, best practice, and theory provide rationale that the objective, and activities stemming from the objective, directly lead to change (DHDSP, 2018). DHDSP (2018) has developed a guide for writing SMART objectives (https://openstax.org/r/cdcprograms) that can be used by the nurse and program team.

Healthy People 2030 in Program Planning

The nurse and program team can use Healthy People 2030 (https://openstax.org/r/healthyp) to establish a baseline for measurement, align objectives with national leading health indicators and priorities, address SDOH, and find evidence-based resources to address identified community health problems. Health People 2030 includes evidence by topic related to health conditions, health behavior, population, setting and system, and social determinants of health. It also includes Healthy People in Action posts to describe how communities are implementing evidence-based programs based on Healthy People 2030 goals and objectives. This evidence provides a rationale for the choice of community health program goals, objectives, outcomes, and activities.

HEALTHY PEOPLE 2030

Physical Activity: Evidence-Based Resources

Healthy People 2030 provides national goals and objectives and evidence-based resources for action. Review the Healthy People 2030 physical activity objectives (https://openstax.org/r/healthypeopleobjectives) and resources to see examples of current national goals and the 31 evidence-based resources related to physical activity. Most resources describe community health programs that have successfully changed physical activity health behaviors and health outcomes.

Create an Action Plan

The nurse and program team determine program goals and objectives and search for potential evidence-based strategies to meet objectives before creating the program **action plan**. An action plan provides concrete steps to achieve program goals and objectives. A written action plan improves efficiency and accountability, helps the team ensure all program details are considered, and provides credibility for program strategies. An action plan should be complete, communicating every step of the program implementation and plan for evaluation; clear; and current. The action plan is a work in progress and may be revised as resource availability and community needs change. The team may also modify the action plan if processes and activities are not working as planned.

The action plan includes health promotion and disease prevention interventions based on assessment data, health behavioral change and health promotion theories, relevant literature, and input from community members, partners, and the target population (Fernandez et al., 2019). The team writes action steps for each program objective, including information regarding what intervention will occur, who will carry it out, when the intervention will take place and for how long, what resources are needed to carry out interventions, and what communication should occur (CDC, 2013). According to Issel and Wells (2018), the nurse and program team should choose interventions that

- are evidence-based and have been proven to reduce the identified health problem;
- are tailored to the target population, including cultural and linguistic appropriateness, learning needs, and motivation level;
- lead to improved health outcomes;
- are flexible with the ability to adjust activities to the participants' needs;
- are technologically and logistically practical;
- are of reasonable cost;
- are acceptable to participants, partners, and policymakers; and
- address community priorities.

In addition to interventions, the nurse and program team consider potential barriers to the action plan, communication strategies, and plan for evaluation, all of which are discussed in detail in Implementation and Evaluation Considerations. The program team identifies potential barriers to address before implementation, such as resource availability, time involved to carry out actions, and community support (CDC, 2013). As part of the action plan, the program team plans strategies for communication. This includes what needs to be communicated and to whom, as well as accountability, method, and timing for communication (CDC, 2013). Examples of communication include program advertisement and recruitment, updates to the program team and partners, and dissemination of the program evaluation. The CDC offers a program planning workbook (https://openstax.org/r/healthprotection) to assist in an action plan and communication strategy development. Finally, the nurse and program team plan for the evaluation of the process and outcome objectives to determine the efficiency and effectiveness of program implementation and to improve and account for program decisions and actions.

The goal of any community health program is to motivate and empower the community to adopt healthy behaviors and reduce unhealthy ones. The nurse, throughout the process of program planning, engages the community through partnerships and coalitions to increase the efficiency and effectiveness of program interventions. Health promotion, disease prevention, and behavior change theories and models are also used to increase effectiveness in achieving program goals. The nurse and program team choose evidence-based, relevant, and current interventions to enhance opportunities for success. Finally, the process and outcomes of program planning and implementation are evaluated to determine if program revisions are needed to ensure the achievement of goals and objectives.

Chapter Summary

18.1 Theories and Models to Guide Program Planning

Theories and models of health promotion, disease prevention, and behavior change are used in the development of community health programs. Common theories include the community action model, PRECEDE-PROCEED model, PATCH model, and intervention mapping. Logic models are created as a visual representation of a community program. SDOH and population learning needs are also considered. Health promotion and disease prevention approaches, such as the HBM, transtheoretical model, and SCT, are applied to motivate and promote program participant behavior change.

18.2 Partnerships and Coalitions in Program Planning

A participatory approach plays a key role in the success of community health programs. The nurse engages members of the target population, organizations, and other interested parties by creating partnerships and coalitions. The nurse uses various strategies to identify and recruit partners, such as social networking, community mapping, and partner analysis. Established program partners develop a shared vision, values, and capacity for the community health program. The team also considers ethical standards and potential ethical issues throughout program planning, implementation, and evaluation.

18.3 Developing Program Goals and Measurable Objectives to Demonstrate Outcomes

The final steps of program planning involve the creation of program goals, objectives, outcomes, and an action plan. Goals explain the program's overarching purpose, and objectives describe specific actions that will lead to the achievement of program goals. Well-written objectives are SMART, include both process and outcomes, and have short-term, intermediate, and long-term time frames for achievement. The action plan is a step-by-step strategy for the implementation of evidence-based intervention. Healthy People 2030 can be used to search for relevant, current, and evidence-based interventions.

Key Terms

action plan provides concrete steps of strategy implementation to achieve program goals and objectives

capacity the resources and relationships required to implement the program

coalition a group of people and organizations that work to address community needs and solve community problems

community engagement the process of working collaboratively with and through groups of people to identify the health needs of community residents and strategies to address those needs

goals statements that explain the purpose of a program and what the program plans to accomplish

incentives rewards used to motivate program participants to do something

logic model a tool to visually present the relationships among resources that are used to implement a program, the activities planned, and the intended results of the program

objectives statements of specific actions or behaviors that lead to the accomplishment of program goals

outcome objectives the stated intended results of activities or a program, focusing on changes in knowledge, skills, and attitudes of participants and community members or changes in policies, systems, or environments

process objectives direct activities to be completed in a specific time frame and describe participants, interactions, and activities

program an organized public health action or set of related activities undertaken to achieve an intended outcome

program planning selecting and implementing a set of activities to achieve desired health outcomes; serves as a blueprint for the coordination of resources to carry out planned activities

social networks linkages among individuals, groups, and organizations that arise out of geographical location, work relationships, school relationships, or recreational activities

team dynamics relationships, interactions, attitudes, and behaviors that arise when a group of individuals work together

values core principles and beliefs that direct a team

vision a statement that articulates the desired goals that a planning team aspires to achieve

Review Questions

1. Which intervention would the nurse include in a plan of care for a client in the preparation stage of the transtheoretical model?
    a. Provide education on the benefits of weight loss
    b. Assist in development of realistic goals for weight loss
    c. Assist in identification of triggers for return to a sedentary lifestyle
    d. Provide positive reinforcement after starting an exercise program

2. A nurse using the intervention mapping framework to plan a community health program has selected activities to meet program goals. What is the next step in the framework?
    a. Draft program messages and materials
    b. Conduct a community assessment
    c. Establish community partnerships
    d. Develop evaluation methods

3. Which question might the nurse answer to determine if the ethical standard of proportionality will be upheld during a community health program?
    a. Do the program benefits outweigh the potential risks?
    b. Do the program planners provide rationale for program choices?
    c. Does the program decrease health inequities identified in the community?
    d. Has the target population been involved in the program planning process?

4. Which of the following is a physical resource that the nurse would identify during community asset mapping?
    a. Staff training and experience with program planning
    b. Educational resources in several languages
    c. A large conference room to hold meetings
    d. Advocacy for political change to advance health outcomes

5. Which of the following is an example of a program objective written using the SMART approach?
    a. Colon cancer screening will increase in the community.
    b. Reported alcohol use by county youth will decrease from five percent to four percent by December 31, 2025.
    c. By next year, more county residents will meet physical activity recommendations.
    d. County adult obesity rates will decrease from 60 percent to 30 percent within the next 2 months.

6. A nurse creating a coalition for healthy living completes which activity during step 3, develop partnership agreements, of the eight-step plan to engage potential partners and mobilize community partnerships?
    a. Identify potential partners
    b. Determine responsibilities of each partner
    c. Develop a shared purpose for the coalition
    d. Communicate evaluation results to partners

7. Which statement is an example of a process objective a nurse would develop for a nutrition program?
    a. By December 2024, participants will state a positive view of the nutrition program.
    b. By June 2025, participants will increase daily fruit and vegetable intake.
    c. In 6 months, 60 percent of county residents will meet daily fiber requirements.
    d. By January 2025, six “eating healthy on a budget” classes will be offered.

8. Which process will the nurse involved in a research study utilize to protect participant autonomy and informed consent?
    a. Obtaining Institutional Review Board approval
    b. Following Health Insurance Portability and Accountability Act (HIPAA) guidelines

c. Ensuring Family Educational Rights and Privacy Act (FERPA) protections
d. Adhering to Affordable Care Act (ACA) regulations

9. Which factor would the nurse assess to determine the social determinants of health in a community?
a. Age of community members
b. Physical activity
c. Nutrition
d. Level of education

10. Which belief by an individual indicates to the nurse that the individual is ready for a health change?
a. They believe they are susceptible to a health problem.
b. They believe the health problem is not serious.
c. They believe taking action will have no effect on the health problem.
d. They lack confidence in their ability to make a change.

CHAPTER 19

Planning Community Health Education



FIGURE 19.1 Nurses are integral to the public health team, educating clients at multiple levels. The nurse in this photo is teaching pregnant clients techniques for breastfeeding their infants. (credit: modification of work "Prenatal Breastfeeding" by Deidre Smith/U.S. Navy/Flickr, Public Domain)

CHAPTER OUTLINE

19.1 Principles of Planning in Health Education Practice

19.2 Developing a Health Education Plan

19.3 Steps Involved in Planning Health Education Activities

INTRODUCTION Becky, a public health nurse, identifies increasing rates of sudden infant death syndrome (SIDS) across the country within various populations. Upon review of local community assessment data, Becky notes that community SIDS rates match the national average, which both have increased over the past 5 years. Concerned, Becky begins planning for a SIDS prevention education program. She identifies interested partners and forms an interdisciplinary team to assist in planning. The team outlines available resources and decides on an education plan and interventions to implement within the community. Part of this plan is to partner with community advocacy groups to evaluate infant sleep conditions and provide community education using multiple methods. The program will initially run for 3 months, followed by an evaluation of the plan and its execution to determine its effectiveness.

Planning community health education effectively is a multifaceted process encompassing various health disciplines. Becky seeks the support of various community partners to help ensure the SIDS prevention education program's success. Public health nurses are crucial in this process as they have expertise in client care and advocating for clients. This chapter will discuss principles of planning in health education practice, developing a health education plan, and steps involved in planning health education activities.

19.1 Principles of Planning in Health Education Practice

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 19.1.1 Identify the importance of planning in health education.
- 19.1.2 Discuss the principles of planning in health education practice.
- 19.1.3 Describe the significance of conducting a needs assessment to the planning process.

Community health education is the process of providing information regarding optimal health and wellness at the community level (American Public Health Association [APHA], 2023). This process involves surveying a community to determine health issues and trends in order to find solutions. Community health educators may work with local schools, government agencies, health departments, and other community agencies to identify education needs. Health education programs inform individuals, families, groups, and communities on topics such as substance misuse, chronic disease prevention and treatment, nutrition, exercise, mental health, and maternal/fetal health. Community education provides accurate information to community members to equip them to make healthy lifestyle choices. Education also improves health literacy, making it easier for clients to navigate the health care system. While education may not be the only factor influencing knowledge, attitude, and behavior, it is instrumental in assisting the learner in making changes toward a healthier lifestyle. Health education may involve disseminating foundational information and/or helping clients implement it in specific circumstances. Behavior change is a multifactorial process for clients that begins with a desire or reason to change and education on what to change and how to change. This allows clients to develop and take actionable steps to meet their needs.

Health education programs may look different depending on the community as they should be adapted to meet the needs of each community's learners. The overall goals of these education programs should be to protect and promote clients' health at the individual, community, and population levels. Some examples of health education programs include:

- Tobacco control programs
  - Example: smokefree.gov (https://openstax.org/r/smokefree)
- Sudden infant death syndrome (SIDS) education
  - Example: Safe to Sleep (https://openstax.org/r/safetosleep)
- Obesity
  - Example: We Can! (https://openstax.org/r/nhlbi)
  - Example: Aim for a Healthy Weight (https://openstax.org/r/nhlbilose)
- Suicide prevention curriculum
  - Example: Comprehensive Suicide Prevention Program (https://openstax.org/r/suicide)

Importance of Community Health Education

Educational attainment can lead to better jobs, higher incomes, stress reduction, and improved social and psychological skills (Virginia Commonwealth University, 2022). The relationship between education and health is a symbiotic one; education has been shown to improve overall health, and poor health has been shown to have a negative impact on educational attainment. Figure 19.2 demonstrates the links between education, health, and contextual factors for overall well-being. Education increases awareness of health issues, provides methods to prevent health complications by identifying health concerns early, and enables clients to seek treatment as needed. Prevention of disease and disability leads to healthier lifestyles and reduces health care costs.

Community health education places power in the hands of the client to make informed decisions regarding their health and well-being, leading to longer, healthier lives. In the long run, educational interventions should improve health outcomes and minimize long-term disability. Education improves client autonomy by providing skills and knowledge clients can use to make better-informed health and lifestyle decisions. It allows clients to assume personal responsibility for their health. For example, metabolic screenings can help clients identify abnormal values in their lipids early. This early identification, coupled with lifestyle and dietary education in the community, can give these clients the necessary tools to enhance their diet and activity level to improve health outcomes and minimize long-term complications.

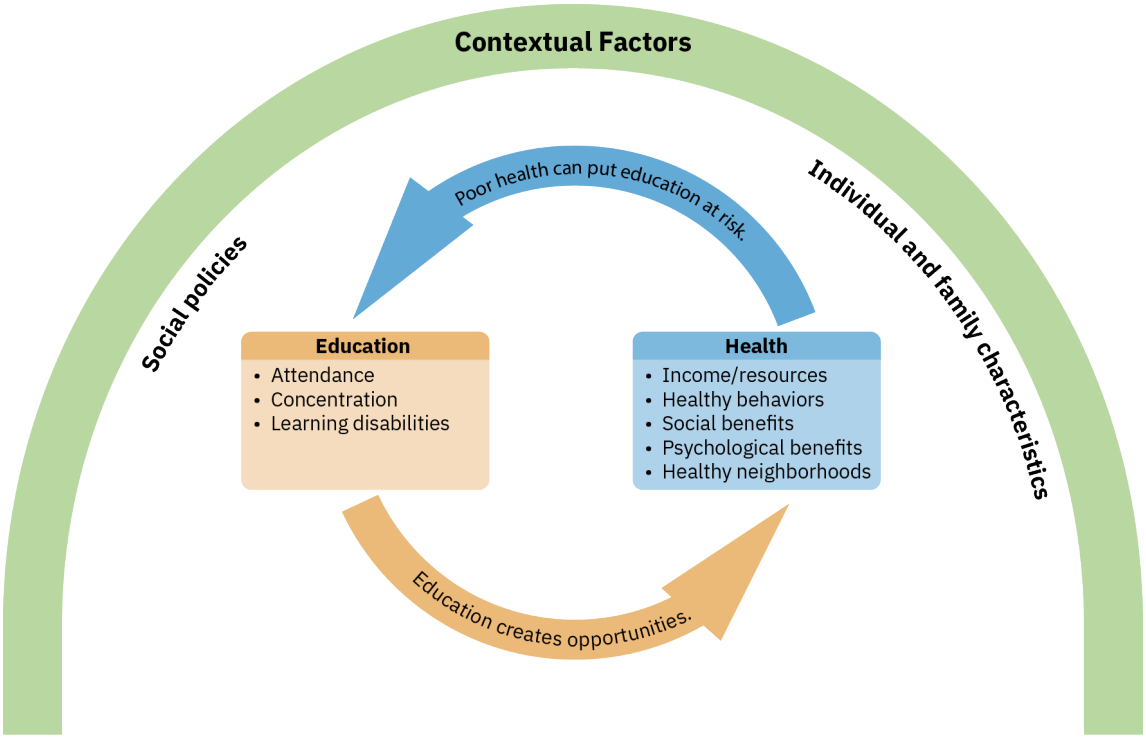


FIGURE 19.2 There is a direct link between education and health outcomes. Contextual factors must also be considered in both education and health. (See Virginia Commonwealth University, 2022; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

THEORY IN ACTION

Why Education Matters to Health

Access multimedia content (http://openstax.org/books/population-health/pages/19-1-principles-of-planning-in-health-education-practice)

This Robert Wood Johnson Foundation video discusses the importance of education to health care outcomes.

Watch the video, and then respond to the following questions.

1. How does socioeconomic status impact education levels and access to education?
2. Discuss the multiple factors involved in children feeling safe. How do these factors influence the ability to learn?

Community health nurses play a foundational role as educators. The 10 Essential Public Health Services (https://openstax.org/r/publichealthgateway) and Healthy People 2030 objectives clarify the community nurse's role as an educator. An essential role of public health nurses is to "communicate effectively to inform and educate people about health, factors that influence it, and how to improve it" (Centers for Disease Control and Prevention [CDC], 2023a, para 3). Therefore, the community health nurse provides education with every intervention and across all levels of prevention. For example, education at the primary level of prevention includes health promotion, such as vaccination, exercise, and diet. Education at the secondary level of prevention includes information on health screening results, early diagnosis, and early treatment of disease. Education at the tertiary level of prevention provides ways to prevent further disability and improve lifestyle following diagnosis of a disease or disability. Nurses educate clients about specific disease states and problems and provide information about available health care services. Community health nurses also teach about behaviors to promote overall wellness and prevent illness.

HEALTHY PEOPLE 2030

Health Education

Several objectives of Healthy People 2030 focus on increasing health education of individuals, groups, and

communities. Examples include the following:

- ECBP-01: Increase the proportion of adolescents who participate in daily school physical education (https://openstax.org/r/schools)
- FP-08: Increase the proportion of adolescents who get formal sex education before age 18 years (https://openstax.org/r/family)
- D-06: Increase the proportion of people with diabetes who get formal diabetes education (https://openstax.org/r/diabetes)
- EMC-DO3: Increase the proportion of children who participate in high-quality early childhood programs (https://openstax.org/r/children)
- AH-RO6: Increase the proportion of schools requiring students to take at least 2 health education courses from grades 6–12 (https://openstax.org/r/schoolsrequiring)

Due to the importance of health education, the planning and implementation of education should not be done haphazardly. The process requires significant forethought. The planning process both identifies and prioritizes health problems. During educational planning, nurses identify available resources and then allocate them efficiently. Ultimately, detailed planning can help health care providers develop the most successful methods to educate community members and prevent duplication of activities already being used.

Principles of Planning

Planning a community health education program requires significant preparation. First and foremost, it is crucial to understand the community's health care and educational needs. This can be achieved through a **community health needs assessment** (CHNA), which identifies a community's strengths, resources, and current needs. CHNAs establish a foundation for planning and are discussed in detail in Assessment, Analysis, and Diagnosis. Additionally, nurses must consider the potential learners' interests and motivations. Programs that do not appeal to these interests will have limited client participation. For example, if the community health nurse identifies increasing rates of sexually transmitted infections (STIs) and wishes to initiate a community health education plan to reduce these rates but the community members do not believe this is a pressing concern, the nurse will not receive support and the initiative will likely be unsuccessful. The initiative may fail if community members do not participate in the health education program or funders and government officials do not support the plan.

Additionally, creating health education activities with the people involved in their implementation will likely increase participation and acceptance. For example, if those teaching the content are involved in planning, the intervention will likely be more successful. Examples of health education activities may include classes, courses, workshops, seminars, conversations, media advertisements, and/or webinars. These activities may use multiple forms of information dissemination, such as websites, videos, books, pictures, and/or software programs (Rural Health Information Hub, 2023). While creating health education activities, nurses should consider available community resources. Examples of resources are time, personnel, training, and financial organization. The planned educational activity should be achievable using these resources.

The nurse and health care team must remember to be flexible. While they should complete essential planning before program implementation, modifying plans along the way may be necessary to better serve the community. These alterations could be due to a change in resources or a change in problems if a new, more urgent problem develops. Health care providers must be trained and supported to effectively deliver education programs and maintain program implementation consistency. A successful health education program should be holistic, intersectional, participative, and equitable (World Health Organization [WHO], 2023). Health education programs can be guided by theoretical frameworks or models. Theoretical frameworks and models that can be used in program planning are discussed in Planning Health Promotion and Disease Prevention Interventions.

19.2 Developing a Health Education Plan

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 19.2.1 Identify theories and/or models, methodologies, and health literacy to guide the development of an education plan.
- 19.2.2 Prioritize the experiences and perspectives of the individual, family, community, system, or population when planning health education interventions.
- 19.2.3 Explain the relevance of utilizing evidence-based teaching materials, considering health literacy, vision, hearing, and cultural sensitivity.

When planning education programs, the nurse considers learning theories, the intended learner's experiences and perspectives, and available evidence-based resources. To employ learner-centered education models, the educator should consider the range of learning theories and use strategies that best satisfy intended learners' different learning styles. Planning programs with the intended learners' experiences and perspectives in mind allows the nurse to provide education to the right people using the right methods at the right time. Using evidence-based resources ensures the most positive learning outcomes and may save resources and time during program development, eliminating the need to develop new content and materials. Nurses must consider Maslow's hierarchy of needs while assessing learner needs and making health education plans (Figure 19.3).

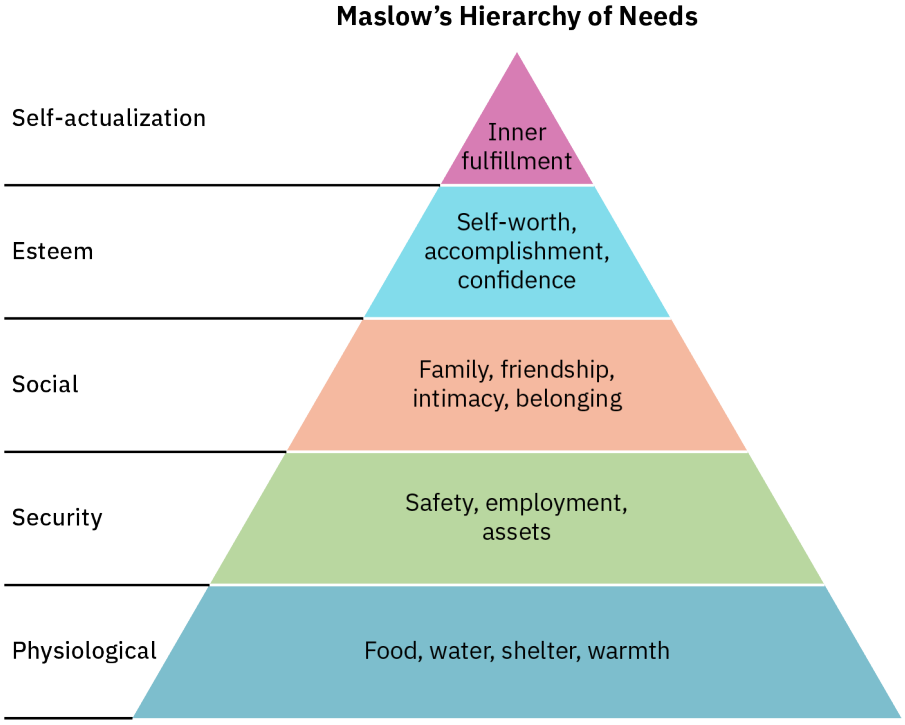


FIGURE 19.3 Maslow's hierarchy of needs begins with the foundation of the most basic human needs. It moves up to higher levels of achievement and self-actualization. While executing humanism in health care, these needs must be assessed and met to appropriately implement education to the community. (credit: modification of work from *Psychology*, 2e; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Learning Theories

Learning theories provide a foundation for education programs. They help nurses understand how people learn, and nurses can then apply this understanding when developing health education plans for the community. Table 19.1 presents widely accepted learning theories for developing a health education plan.

Learning Theory	Description	Application
Behaviorism	• Behavior is learned from the environment and can be conditioned. Conditioned behaviors occur more frequently with positive consequences or less frequently with negative consequences. • Behaviorism focuses on observable behavior. • Learning is new behavior, not new knowledge. All behaviors can be unlearned and replaced by new behaviors. • Positive consequences (rewards) promote behavior. Negative consequences (punishment) discourage behavior.	• Provide positive consequences for desired behaviors, such as offering praise or positive verbal reinforcement, when a client demonstrates the correct method of self-insulin administration. • Assist the learner in identifying possible positive self-reinforcement or negative consequences to lead to behavior change. • Develop a contract for behavior change.
Social Cognitive Learning Theory	• Learning occurs in social contexts with the interaction of the person, environment, and behavior. • Experienced or witnessed behavior can lead to cognitive, affective, and behavioral changes. • External and internal social reinforcement lead to learning. • Past experiences, reinforcement, expectations, ability, modeling, and self-efficacy influence learning and behavior.	• Assess past experiences and ability. • Reinforce desired behaviors. • Model desired behaviors. • Enhance personal (internal) factors, such as self-efficacy. • Use media to promote healthy behaviors and decrease unhealthy behaviors.
Constructivism	• Learners actively use experiences and reflection to build upon preexisting knowledge rather than passively taking in information. • Knowledge acquisition occurs through interactions with others and with information. • Educators facilitate learning but do not lead it; learners take ownership of learning.	• Assess for current knowledge and build on what is already known. • Engage learners through discussion and activities. • Provide experiences to construct knowledge. • Allow time for reflection.

TABLE 19.1 Learning Theories to Develop Community Health Education Programming

Learning Theory	Description	Application
Humanism	• The desire to learn is innate, with the goal of self-actualization. • Learners must have lower-level or basic needs met prior to learning. • The educator provides minimal structure; instead, the learner has the responsibility to learn as desired.	• Assess for educational needs/desires. • Provide resources for the learner to create personal education. • Ensure basic needs, such as food, water, shelter, warmth, and security, are met to support the learners' accomplishment of higher-level needs.
Adult Learning Theory	Adults are motivated to learn when they: • believe they need to know something, • can fit new information into previous and current life experiences, • value the person providing the information, and • believe that they can make changes implied by the information.	• Assess for educational needs/desires. • Assess for current knowledge to build upon what is already known. • Apply new information to past and current life experiences. • Ensure the educator is respected and knowledgeable. • Assess self-efficacy and motivation.
Connectivism	• Learning occurs when making connections between internal (previous knowledge and qualities) and external sources (technology, people, and other resources) with the aim of having accurate and current information. • Decision-making is a learning process because what we know changes. • Information from multiple sources may lead to a diverse view of problems and, thus, unique solutions (D'souza et al., 2021).	• Provide opportunities for learners to share perspectives and opinions. • Create activities that involve collaboration. • Use social media, the internet, blogs, and online forums to increase connectivity and conversation.

TABLE 19.1 Learning Theories to Develop Community Health Education Programming

One or more learning theories may guide the development of the health education program. The nurse should choose learning theories aligning with the health problem, targeted learner, and anticipated learner needs. For example, if the educational program will be provided in-person to a group of adult learners, the nurse may choose to follow adult learning theory and social cognitive theory. If the educational program is provided on a large scale to the entire community, the nurse may use connectivism as a guide.

THEORY IN ACTION

Connectivism

Access multimedia content (http://openstax.org/books/population-health/pages/19-2-developing-a-health-education-plan)
This video discusses connectivism and explores how to use this learning theory in multiple venues, including community health education programs.

Watch the video, and then respond to the following questions.

1. What are potential barriers to using this learning theory, and how can nurses help learners overcome them?
2. How can nurses use connectivism in community health education programs?

Factors to Consider When Planning for Education

Other factors to consider when planning for health education programs include learner needs, experiences, and perspectives; whether the client will be individuals, families, groups, or the community; the goals and objectives of the program; the availability of tests, evidence-based educational materials, and curriculum; and the availability of resources.

Learner Experiences, Perspectives, and Needs

While identifying the client, it is important for the nurse to examine the learning considerations for the intended target population. Nurses should consider many population characteristics when developing educational materials and deciding on delivery methods. Developmental level, for example, may dictate how the population should receive the information. Young children learn best when the information is delivered in small chunks with supporting visuals and audio. As children move into school age, they are often able to obtain and comprehend more information with increased complexity. At this time, the family is the largest influence on a child's behavior, so the family could be included in the educational program. As clients enter adolescence, they respond best when treated with respect and provided the information directly. Peer influence is much stronger at this stage as an adolescent's autonomy increases (National Institute of Mental Health, 2023). Education should move from generalized to more individualized components related to their specific stage of life, so nurses may incorporate peer activities into the learning process for this population.

The general adult population seeks learning that is convenient and specific to their needs. Depending on their age and background, some adults may prefer printed forms of education versus solely electronic, while some may prefer the speed and convenience of electronic information. In today's world, the use of and reliance on technology is ever increasing. While the increased use of technology has many advantages, specific populations may lack access, understanding, or a desire to use these learning methods. Additionally, adult learners appreciate pulling from their previous experiences and life circumstances. The more teaching can utilize adults' past experiences, the more effective it will be. Some older adults may require additional time to become comfortable using technology for communication and information sharing (Ahmad et al., 2022). It is essential to remember that age does not directly correlate to developmental level. Development is multifactorial, so nurses should base education on how clients obtain, comprehend, and use information instead of their biological age.

Health literacy is another crucial factor when creating community education plans and resources. As discussed in detail in Assessment, Analysis, and Diagnosis, personal health literacy is the degree to which individuals can find, understand, and use information and services to inform health-related decisions and actions for themselves and others. Assessing population health literacy begins with evaluating how well clients use everyday written materials to accomplish common tasks and progresses to assessing more conceptual ideas of mathematical and problem-solving concepts. This evaluation is often completed via a survey, and these surveys have been adapted over time to improve concepts and match the language of those being evaluated. Community health and public health nurses can view statistics within the United States to gain a broad view of national health literacy levels and can furthermore complete evaluations within a selected community or population to determine local literacy levels. According to the U.S. Department of Health and Human Services, in 2019, 12 percent of Americans measured proficient in health literacy from the National Assessment of Adult Literacy (NAAL). Survey data show a marked gap

between the portion of the population who are highly health literate and those who are well below average for health literacy levels. This gap creates additional complications when planning for health education that meets clients at their current health literacy level or fills gaps in literacy levels to improve understanding.

While developing educational materials, the nurse should consider the target population's general and health literacy and tailor the materials accordingly. Nurses must be able to adjust their education styles to match the health literacy of the populations in which they work. This often means creating educational materials at the lowest level of literacy identified within the community to ensure all clients can understand and apply the information. Additionally, nurses should present education in multiple forms to capture the audience and convey meaningful information they can utilize. Thus, not only should the materials used to evaluate health literacy be considered, but so should the rigor and skills of the educator who is providing the information. Nurses should consider sociocultural factors regarding access to information and how it is disseminated within a community. Furthermore, any practices and policies used within the population in question should be considered to produce effective communication. If the norm of a particular community is that clients do not read or use written information to gain knowledge, then providing only written material will not best serve this community. Finally, with the growing diversity of the general population, preferred language must be considered for all forms of education and educational materials. The nurse should consider the preferred language for each client and the extent to which the client is fluent in this language. For example, some clients may be able to speak English but may not be able to read in this language, and vice versa.

THE ROOTS OF HEALTH INEQUITIES

Health Literacy and Health Inequities Are Closely Connected

To act on health education information, clients must be able to access and understand it. Effective communication is integral to the overall health education process as it delivers information and can modify beliefs and attitudes, provide encouragement, and encourage thinking. In communication for health education, nurses should keep health equity concerns in mind. When equity principles guide communication, clients are more likely to act on what they learn as the information is more likely to meet the needs of the client(s), incorporating their linguistic, environmental, cultural, and historical needs. Due to the importance of these concepts, the CDC created "Health Equity Guiding Principles for Inclusive Communication."

These principles can be reviewed on the CDC's website here:

Inclusive Communication Principles (https://openstax.org/r/healthcommunication)

Review this information, and then respond to the following questions.

1. What are two key principles nurses can use in communication and health education programs?
2. Explain what it means to use a health equity lens and provide two examples of how nurses can utilize this strategy in health education.

(See Office of Disease Prevention and Health Promotion, 2021.)

The nurse should evaluate the client's abilities or limitations and health literacy levels. For example, if clients have any hearing or vision deficits, this must be considered in the creation and distribution of educational information.

Understanding the specific culture of the community and those within the community is imperative, as many cultures view health and illness differently. Thus, communities will have different ideas of what is important. Linking back to the recipe for a successful education plan, buy-in from interested parties and participants is crucial for overall program success.

Cultural sensitivity entails an awareness of similarities and differences between cultures while not placing value on or ranking these similarities and differences. Nurses can take steps to apply cultural sensitivity when planning health education practices. The nurse must begin with awareness of different cultures. Next, the nurse can learn about their own culture and the cultures of others. When nurses show openness to and interest in a client's background and culture, listening and allowing the client to express their views, they can build trust and rapport with clients from other cultures. This may require bridging language barriers to educate clients about medical practices and options. Nurses should demonstrate **active listening** to provide a safe and effective space. Active

listening involves preparing to hear what the other person is saying, receiving the sent message, and responding thoughtfully. These steps can help health care providers gain an appreciation for what education the community may need and the most effective ways to provide it. This may also help the nurse to determine which methods would impede learning. Unit 5, Culturally Congruent Care, discusses these topics in greater detail.

CONVERSATIONS ABOUT CULTURE

Effective Communication and Health Equity

Access multimedia content (http://openstax.org/books/population-health/pages/19-2-developing-a-health-education-plan)

This video from the Health Resources Services Administration (HRSA) describes how effective health care communication policies and practices, including the health literacy of providers such as nurses, help improve the quality of services for culturally and linguistically diverse populations.

Watch the video, and then respond to the following questions.

1. What are the three factors in health care communication, and how do these impact educational strategies nurses use?
2. Identify how a nurse can demonstrate culturally competent care by considering specific factors that impact health literacy while disseminating a health education plan.

Individual, Family, Group, and Community as Client

Client education occurs at individual, family, group, or community levels. The nurse must define at which client level education will occur because the level can alter the planning for and implementation of health education interventions. For example, nurses providing education for an individual client establish a more personal relationship with a single individual and cater only to their needs, wants, and learning styles. Individual health screenings and one-on-one education are examples of education at the individual level. Education at the individual level includes the person experiencing the problem or condition and can provide subjective information from their specific point of view. For example, the community health nurse may provide education to individuals on how to take blood pressure, healthy nutrition, and weight loss during a clinic visit for clients at risk for hypertension.

CLIENT TEACHING GUIDELINES

Individual-Level Health Education

The nurse teaches a client how to check their blood pressure at home in order to get a better long-term view of the client's blood pressure readings over time. The educational materials use evidence-based resources and instruct the individual client to do the following:

- Try to perform the blood pressure reading around the same time each day.
- Do not eat or drink anything 30 minutes before taking the blood pressure.
- Empty your bladder before obtaining the reading.
- Sit in a chair with your back supported and both feet flat on the ground for at least 5 minutes before obtaining your blood pressure.
- Make sure you have the right size blood pressure cuff. This cuff should fit snugly on your upper arm or wrist, but not too tight.
- Place the blood pressure cuff only on bare skin, not over clothing.
- Do not talk or move during the reading.
- Keep track of each reading in a journal, including day, time, and blood pressure reading.

(See CDC, 2023b.)

As noted, education may also occur at the family level. Everyone defines family differently. Some people define family as blood relatives, while others consider those closest to them, such as friends or neighbors, their family. Additionally, there are many ways in which a family is formed, all of which should be respected and acknowledged.

One example of respecting this idea is for nurses to clarify family roles before assuming what they are. Not all adults with a child are the child's parents, so clarifying these roles before engaging the family will build trust and respect. Generally, *caregiver* is a more encompassing term when addressing those helping provide care for a client. This concept is discussed further in Caring for Families.

As the nurse provides education to multiple people at a time, the scope of the intervention and teaching strategies can change dramatically. Education plans and strategies at the group and community levels are not personalized for individuals but rather for identified health problems of populations at risk and of the community as a whole. An example of a community program that includes family education is the Help Me Grow Program (https://openstax.org/r/odhohio). In this program, the nurse determines family concerns and needs during home visits and provides education and support to new parents and caregivers. Educational topics include healthy pregnancy, safe sleep practices, breastfeeding, newborn and child growth and development, nutrition, immunizations, and safety.

Education may occur at the group level to community members who share a common health need or problem. In this circumstance, the nurse provides education to a group of community members at the same time in the same place. For example, a nurse may provide a breastfeeding class to 10 pregnant clients, as shown in Figure 19.1. Teaching at the group level allows the nurse to educate several individuals simultaneously, increasing program impact and reducing needed resources. Additionally, group members share experiences and perspectives, leading to an enhanced learning environment. The nurse providing education at the group level must have knowledge and experience in group processes.

EDUCATING GROUPS

Steps to follow when educating groups of people include the following:

- Brainstorm educational topics and plan for the group
- Refine leadership skills and style
- Form the group
- Complete introductions as indicated
  - Educator
  - Members
  - Subgroups
- Create an environment of respect for group
  - Set group norms for communication
    - Do not interrupt one another
    - Respect different perspectives and learning styles
  - Support one another and help when possible
- Set expectations for the group and for education completion
  - Discuss learning wants and needs
  - Set expectations to meet outcomes
  - Solicit fears or concerns and discuss as needed
- Anticipate and mitigate possible challenges
  - Dominating or intimidating group members
  - Education not going as planned
  - Technology issues
  - Lack of participation
  - Conflict
- Assess group learning and reflect for changes next time

Finally, education can occur at the community level. In this instance, education is usually large-scale and includes the use of media, such as flyers, billboards, newspapers, television, radio, or social media platforms to disseminate educational materials. Often, this takes the form of **public service announcements** (PSA) or **national campaigns** to reach a wider audience. A PSA is a message, video, or broadcast authorized by a government agency or nonprofit

organization to provide information about an issue at the public level. A national campaign is a series of planned activities or marketing offerings to communicate information to the public on a national scale.

PUBLIC SERVICE ANNOUNCEMENT: ALLYSON FELIX

Access multimedia content (http://openstax.org/books/population-health/pages/19-2-developing-a-health-education-plan)

A PSA can disseminate information to multiple people simultaneously. This CDC video and web page (https://openstax.org/r/hearher) feature its HEAR HER™ campaign to educate individuals on the risks of pregnancy-related complications.

Watch the video and visit the website, and then respond to the following questions.

1. What population is this PSA targeting?
2. Do you think this PSA featuring Allyson Felix is effective? Why or why not?
3. When would a PSA be an effective tool in health education? When would it be less effective?
4. Brainstorm two topics that would best be disseminated via a PSA.

Goals and Objectives of the Educational Program

The nurse identifies the goal of the educational program during the first stages of planning following a needs assessment. Goals are broad, long-term statements about the educational program's purpose and what it will accomplish. For example, a goal for an educational program on breastfeeding is "mothers receiving education will breastfeed their infant for the first 6 months following birth." Goals stem from prioritizing needs identified during the community health needs assessment and learner assessment, if available, focusing on health promotion and illness prevention. The nurse considers learning needs, motivation for learning, and available resources to conduct the educational program.

Next, the nurse identifies the educational program's objectives. Objectives are specific, short-term statements demonstrating progress toward the goal. Written in SMART format, they signify a change in learners' knowledge, skill, or attitude. For example, an educational program on breastfeeding might use these SMART objectives:

- Knowledge: At the end of the class, mothers will state three benefits of breastfeeding.
- Skill: At the end of the class, mothers will demonstrate three methods to effectively position the infant for breastfeeding.
- Attitude: At the end of the class, mothers will state increased motivation to breastfeed their newborn.

Planning Health Promotion and Disease Prevention Interventions provides detailed information on writing goals and objectives.

Finally, the nurse uses the identified goals and objectives to plan curriculum, materials, and other resources to help learners accomplish them.

Available Evidence-Based Materials and Curriculum

The nurse searches for educational curricula, materials, and other resources that have been proven effective in achieving the identified educational program goals and objectives. This reduces the planning time and resources it would take to create new curriculum and materials, increases the likelihood that the program will succeed, and provides supporting evidence for curriculum and material decisions. Evidence-based practice and evidence-based decision-making are discussed in detail in Evidence-Based Decision-Making.

Evidence-based health education programs are found by searching published journals, national and state websites dedicated to public health, and local organizations, schools, and agencies providing health services. Additionally, the nurse may contact experts who work in public health or education and experts on the health topic. Healthy People 2030 is a good starting point because it includes evidence-based resources and programs for national health topics and objectives. The CDC is also a good resource. For example, it describes evidence-based community health programs (https://openstax.org/r/nccdphpdch) focusing on chronic diseases such as stroke, heart disease, and obesity. Finally, the National Institutes of Health (NIH (https://openstax.org/r/preventionnih)) provides an updated list of links to current, evidence-based programs and resources. Ultimately, education tactics should utilize the best

available research and noted experience from experts in that field.

19.3 Steps Involved in Planning Health Education Activities

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 19.3.1 Explain the six steps of planning health education interventions.
- 19.3.2 Develop a health education plan, taking into consideration the literacy level of the population served.
- 19.3.3 Describe strategies to enhance communication with the team while planning community interventions.

Planning and implementing health education activities is a team effort, relying on multiple members for ultimate success. A foundational aspect of teamwork is effective communication. Nurses leading a team must be aware of methods to facilitate communication, possible barriers to communication, and how to overcome these barriers.

From the foundation of the health education plan, the nurse and other team members can then formulate health education activities. Similar to developing the health education plan, developing health education activities requires an evaluation of the client's needs, available community resources, team composition, and skill set of each team member. The six integral steps of planning a health education intervention or program include:

- Identifying learning needs
- Establishing goals and objectives
- Selecting appropriate education methods
- Designing and implementing the educational program
- Evaluating the educational process and program's effects
- Determining if revisions to the plan are needed

Steps of Planning Health Education Interventions

Table 19.2 describes the steps the nurse and team take when planning health education interventions; steps 1–2, identifying learning needs and establishing goals and objectives, were discussed previously.

Step	Activities
1. Identify learning needs	• Complete a community health needs assessment and prioritize health problems and educational needs • Complete a learner assessment that includes motivation, abilities, health literacy, culture, and other learner needs
2. Establish goals and objectives	• Finalize the goals of the educational program • Finalize SMART objectives
3. Select appropriate education methods	• Select learning theory • Determine teaching strategies and learning format • Examine and reduce possible educational issues
3. Design and implement educational program	• Finalize curriculum, materials, and resources • Deliver as planned
5. Evaluate the educational process and effects of the program	• Determine the extent to which learners met program objectives • Evaluate educators' perceptions regarding the educational process
6. Determine if revisions to the plan are needed	• Revise educational methods to improve outcomes • Revise educational methods to improve delivery and process

TABLE 19.2 Steps of Planning Health Education Interventions

Once the team has completed step 2 by establishing goals and objectives, the team identifies a foundational

learning theory, which includes teaching strategies and overall learning format, or how the education will be delivered: in person, online, or through written materials. Additionally, the nurse and team should determine how the teaching will take place with this information. Examples of possible ways to disseminate educational information include typed documents, slide shows, audio recordings, hands-on learning, discussions, online forums, and videos. Examples of teaching strategies include simulations, demonstrations, group activities, peer-to-peer teaching, in-person or virtual lectures, or community health fairs. The team should brainstorm and prioritize ideas for multiple strategies before making any final decisions.

When assessing possible teaching methods, nurses should identify possible barriers to effective education and how to overcome them. Some barriers may be related to the educator, such as lack of knowledge or experience, limited preparation, limited teaching skills, unfamiliarity with technology, inappropriate teaching strategy, discomfort with material or format, and unremovable distractions. Barriers may also originate with the learner, such as lack of interest or motivation, learning preferences, basic needs, attention span, level of health, level of education, health literacy, age, and experience. These barriers affect teaching at all levels: individual, family, group, and community.

Moving from step 3 to step 4, after determining the learning format and teaching strategies, the nurse and team can finalize the curriculum for learning and determine the necessary resources. Choosing an inappropriate strategy or format can lead to ineffective teaching, alienation of participants, and waste of resources. This detailed step includes producing the materials and disseminating them accordingly to the necessary parties. To create culturally and linguistically appropriate learning materials, the nurse and team should refer to the previously completed assessment of the target population's learning needs.

In step 5, the team should evaluate the education plan, reviewing indicators developed earlier in the process to determine the extent to which outcomes and objectives were completed and can be completed via observation, verbal feedback, demonstration, survey, or post-implementation worksheet. This evaluation should also survey educators to determine the effectiveness of the education process. This leads to step 6, determining if the plan requires any changes and revising educational methods to improve outcomes, delivery, and the overall process.

EDUCATIONAL PRINCIPLES TO ENHANCE THE LEARNING PROCESS

An effective educator uses several strategies to engage learners and enhance learning. Use these strategies when teaching in a face-to-face format with individuals, families, and groups.

- Gain attention by reducing environmental distractions and ensuring learner comfort
- Present the learning objectives in a realistic, reachable, and applicable way
- Assess for prior learning and experiences
- Link new information to prior learning and experiences
- Present the material in a clear, organized manner from simple to complex while considering the needs and abilities of the learners
- Engage learners through activities and discussion
- Provide guidance and feedback
- Evaluate achievement of objectives

Team Communication

Due to the depth and importance of health education activities, team members must communicate effectively with one another. Interdisciplinary health care teams, or teams comprised of individuals from different disciplines, may vary in composition but often encompass nurses, physicians, pharmacists, community health workers, and other health professionals. This broad scope allows for comprehensive education, thus meeting the community's needs. At this time, medical errors are a leading cause of death in the United States (Rodziewicz et al., 2023). Many of these errors stem from poor communication, leading to limited or ineffective education. Just as team members must work together to provide care to clients, they must work together to provide education at the community level.

With communication as the foundation for a successful project and successful health care, the Agency for Healthcare Research and Quality (AHRQ) has created **TeamSTEPPS®**, "an evidence-based set of teamwork tools aimed at optimizing patient outcomes by improving communication and teamwork skills among health care

professionals" (2023, para 5). This comprehensive, evidence-based program aims to eliminate preventable medication errors related to unproductive team communication, thus improving client safety. TeamSTEPPS stands for **T**eam **S**trategies and **T**ools to **E**nhance **P**erformance and **P**atient **S**afety. This program has five key principles: team structure, communication, leadership, situation monitoring, and mutual support (Figure 19.4). These steps lay a foundation for enhanced communication and clear roles within an education plan. More effective communication leads to more effective education and better outcomes and preventative measures for the respective population.



FIGURE 19.4 The TeamSTEPPS® framework provides a guide for the components of an effective client care team. (See Agency for Healthcare Research and Quality, 2023; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

These five key principles are based on teachable–learnable skills and their interplay with the outcomes and skills of the team. According to AHRQ (2023), the key principles are:

- Team structure: the composition of the team, including multiple backgrounds and disciplines
- Communication: plan and format for how team members will share information within the group
- Leadership: structure identified and assigned according to the team structure, which clearly identifies roles and responsibilities of each team member
- Situation monitoring: actively reviewing elements of the team and project to identify team functioning and sustain awareness of any changes
- Mutual support: team members openly communicate needs and inquiries to ensure disseminated responsibility and workload

Community Partnerships

Successful community health education and health interventions rely heavily on partnerships for success. As mentioned, a successful implementation of a community health education program involves identifying community partners and obtaining their support. Members of the partnership may change based on the needs of the program. Still, no matter the project or program, population health nurses will need support of and connection to those in the community. First, nurses must form a partnership with community members. Health education plans should center around the needs and wants of those in the community. If a relationship is not formed with these members, it will be very difficult to get accurate information regarding needs and expectations for improvement. Additionally, nurses will need to link to community partners such as primary care providers, local schools, mental health care providers, childcare services, government officials, advocacy groups, and private agencies that may have a connection to the identified public health issue.

Community **coalitions** are formalized groups of various team members who actively work together toward a common goal. Within a coalition, the group serves as a catalyst for change while each member maintains their

identity and expertise as part of the team. Coalitions can raise awareness and serve entire communities as they address broad issues and utilize partners' expertise to capitalize on talent. This process pulls the power of multiple groups in order to rectify or support an issue or event. One example of using this partnership process is the formulation of drug-free community coalitions across the United States in collaboration with the CDC (CDC, 2022a). Advocating for Population Health discusses coalition building in more detail.

Communication may occur in multiple venues depending on the size and scope of community health partnerships. Nurses should make as many one-on-one connections as possible, especially when identifying community partners, to build meaningful relationships and a foundation for future correspondence. This interpersonal form of communication may not always be possible or make sense for a specific program, so the nurse may use additional forms of communication. Email is a professional and efficient way to convey a message to one or multiple individuals and track the correspondence accordingly. This can provide specific information to the group and disseminate information in a format that reviewers can evaluate and follow up on as needed. Closed-loop virtual presentations or open-loop virtual or phone meetings are another option for communication within small or large groups. Nurses should remember that many forms of communication may be needed for any given initiative. Flexibility is critical to ensuring all community partners and team members are informed.

Barriers to Communication

Just as many tools are available to facilitate communication, many communication barriers exist. **Communication barriers** are circumstances that may impede the overall outcome or block progression. One barrier may be a lack of or an ineffective leader on the health education planning and implementation team. Ineffective leadership can impede the comfort others feel in engaging and may also create a stagnant workspace. Additionally, the education plan may not succeed if leadership is inadequate along the way. Another possible barrier is goal confusion. It is difficult for a team to achieve a goal if they do not clearly understand what it is or what role they are expected to play in achieving it. Members may disengage if they do not feel they contribute to the goal or outcome. Lack of accountability and trust can be a major barrier to communication. With these factors, members do not feel ownership of the work and/or they do not feel they can trust group members. Without trust, the brainstorming and problem-solving process will be impeded because team members feel like they cannot have an open dialogue.

Additionally, physical or logistical barriers may cause communication challenges. If team members are in different physical locations and thus unable to attach body language to words spoken, this can lead to miscommunication. Also, if all communication is completed electronically, there is more room for miscommunication as tone and volume cannot be heard or understood. Other factors to consider may be time differences based on location, cultural differences, differences in backgrounds, and past experiences. Each team member will bring great value to the table, yet each will have their own preferences and philosophies for communication. There will always be potential barriers on any team, yet an effective team should work to identify these barriers or possible barriers early on so that they put measures in place to overcome them.

Barriers within the population can impede health education plans and implementation. As discussed, low health literacy can be a massive barrier to health interventions. To understand health education and thus act on it, community members must be able to learn and comprehend it. Low health literacy levels impede this significantly. Lack of interest or enthusiasm for the intervention by either the participants or education team will also pose a significant barrier to this process. Without buy-in from interested parties, there will not be emotional, financial, or political support for any change. A population's culture may also pose a barrier. For example, if there is historic mistrust of the health care profession or previous negative experiences with health care professionals, the team will need to gain the community's trust before completing any education or interventions. Factors such as socioeconomic status, transportation availability, lack of free time to engage in learning or health programs, or lack of knowledge can all impact care at an individual and population level.

Once identified, the team should work to reduce or overcome such barriers. One major step is to focus on a single message or goal. Because it is difficult for team members to work effectively and efficiently if they do not know what they are working toward, clarifying a single goal provides direction. Moreover, each team member should understand their role in achieving this goal and feel they are contributing to the planning process. Team members should also solicit feedback frequently throughout the planning and implementation process. This allows for prompt professional and constructive feedback to make adjustments accordingly. Biases and limiting beliefs should be identified early and navigated on an individual and group level to prevent these from hindering the program

implementation and outcomes. Underscoring all of these methods, the team should demonstrate respect and understanding for one another. This may include respect for their time, expertise, and/ or perspectives. Together, the team can work to effectively communicate, mitigate barriers, and create a successful health education program.

Chapter Summary

19.1 Principles of Planning in Health Education Practice

Planning health education should be taken seriously using a multidisciplinary approach. Planning principles include completing a community health needs assessment to identify a community's strengths, resources, and needs. Planning requires consideration of the community's interests to obtain buy-in and participation. Additional factors to consider in planning should include using evidence-based teaching materials and considering the target population's health literacy, different abilities, and culture. Cultural sensitivity should be the foundation for planned interventions to ensure they meet the needs of the community in question while respecting its culture.

19.2 Developing a Health Education Plan

The next step of community health education is to develop a health education plan. Learning theories should be the foundation for this process as they provide insight into different learning methods and help nurses and the team understand how people learn and how this can be applied to developing health education plans. Nurses should consider the client's experiences, perspectives, needs, and developmental level. Socioeconomic considerations and literacy level should be evaluated to create and disseminate appropriate information in an accessible way. To create a safe and meaningful environment for all participants, cultural sensitivity should underscore each of these considerations. Widely accepted learning theories include behaviorism, social cognitive learning theory, constructivism, humanism, adult learning theory, and connectivism. Defining the client is imperative in developing health education. Clients can be defined at the individual, family, community, or population level. All curricular components should be supported by evidence-based materials.

19.3 Steps Involved in Planning Health Education Activities

After identifying the community's needs and developing a health education plan, the last step in the process is planning health education activities to be implemented. Steps for planning health education interventions include identifying learning needs, establishing goals and objectives, selecting appropriate education methods, designing and implementing the educational program, evaluating the educational process and effects of the program, and determining if revisions to the plan are needed. Effective team communication is critical to successful implementation of educational activities. Teams should work to identify possible communication barriers and rectify them promptly to achieve their goals.

Key Terms

active listening preparing to hear what another person is saying, receiving the sent message, and responding thoughtfully

coalitions formalized groups of various team members who actively work together toward a common goal

communication barriers circumstances that may impede the overall outcome or block progression of a plan

community health education the process of providing information regarding optimal health and wellness at the community level

community health needs assessment (CHNA) identifies strengths, resources, and current needs of a community

cultural sensitivity an awareness of similarities and differences between cultures without making value judgments about those similarities and differences

national campaigns a series of planned activities or marketing offerings intended to communicate information to the public on a national scale

public service announcement (PSA) a message, video, or broadcast authorized by a government agency or nonprofit organization to provide information about an issue to the public

TeamSTEPPS® an evidence-based set of teamwork tools aimed at optimizing client outcomes by improving communication and teamwork skills among health care professionals

Review Questions

1. Which teaching strategy should the nurse use to enhance learning when teaching a community CPR program?

a. Use passive learning strategies
b. Present materials from simple to complex

c. Assume learners have the same baseline knowledge
d. Choose one learning strategy to present material

2. The community health nurse is performing a community health needs assessment prior to planning a nutrition program for older adults. Which factors will the nurse identify in this needs assessment?
a. Primary language, budget, resources
b. Resources, strengths, land mass
c. Enthusiasm, primary language, currents needs
d. Strengths, resources, current needs

3. Which action should the nurse take when developing a community health education program based on adult learning theory?
a. Assess what the learners already know about the topic
b. Identify positive reinforcements to reward desired behaviors
c. Utilize technology to increase connectivity
d. Allow sufficient time for participant reflection

4. Members of the health education team are meeting to review the team's progress. Which factor may adversely affect team communication?
a. Frequent brainstorming sessions
b. High level of team member engagement
c. Low feelings of trust
d. Team member roles being clear

5. Which activity will the nurse perform during the evaluation step of a health intervention program whose objective is to teach community members about identifying and reducing cardiac risk factors?
a. Select the learning theory to be used in the program
b. Identify what learners already know about cardiac risk factors
c. Determine if learners can identify their cardiac risk factors
d. Develop strategies for teaching about cardiac risk factors

6. A health care team is using TeamSTEPPS® to plan and implement community health programs. Which action will the team take using this framework?
a. Share leadership responsibilities
b. Distribute information as needed
c. Utilize an informal communication format
d. Employ an interdisciplinary approach

7. During a community assessment, the nurse identifies a need for safe after-school space for high school students to socialize, study, and play. Which basic human need does this nurse determine needs to be met?
a. Security
b. Physiological
c. Esteem
d. Self-actualization

8. While planning a community health education program for older adults who want to exercise more frequently, the health education team decides to ask participants to sign a contract where they agree to complete a certain level of physical activity each week. Which learning theory is the team utilizing?
a. Connectivism
b. Constructivism
c. Behaviorism
d. Humanism

9. The school health nurse is planning a community health education workshop on vaping for parents and caregivers of adolescents. To increase participation in the program, the nurse will use which strategy?
   a. Offer the workshop during the school day
   b. Require students to attend with their caregivers
   c. Limit the number of attendees
   d. Involve members of the Parent Teacher Association in the planning

10. The nurse knows which instruction method is most effective for adolescents?
   a. Providing information in small segments
   b. Including family members in the learning
   c. Connecting material to past experiences
   d. Incorporating peer activities into the learning process

CHAPTER 20

Implementation and Evaluation Considerations



FIGURE 20.1 The Five Sandoval Indian Pueblo, Inc. provides services that incorporate the tribal community's sociocultural and linguistic needs. One service includes delivery of food boxes where the client chooses what foods are included in the box. (credit: modification of work by Lance Cheung/USDA Photos/Flickr, Public Domain)

CHAPTER OUTLINE

20.1 Facilitators and Barriers to Program Implementation
20.2 Recruitment and Retention of Program Participants
20.3 Evaluation Strategies
20.4 Communication Strategies
20.5 Funding and Sustainability

INTRODUCTION Nurse Diego and the program team completed an assessment and analysis of community health needs and have created a community health program that aligns with those needs. Before implementing this program, Diego considers what may impact its delivery and activities, such as participant recruitment and retention and the intended target population's sociocultural and linguistic needs. Diego and the program team must also plan for the program's communication, funding, and continuation and write a systematic evaluation plan to determine if the program's goals and objectives have been achieved.

This chapter discusses facilitators and barriers to community health program implementation, specifically focusing on participant recruitment and retention, program evaluation strategies, communication strategies regarding the program and program outcomes, and strategies to enhance program funding and sustainability.

20.1 Facilitators and Barriers to Program Implementation

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 20.1.1 Summarize common facilitators and barriers to program implementation.
- 20.1.2 Discuss strategies for identifying facilitators and barriers for a specific intervention.

Even the most well-developed, evidence-based community health programs encounter barriers to implementation that the program team should consider throughout the program planning and implementation processes. The nurse, as part of the program team, strategizes to decrease or eliminate potential barriers, when possible, and enhance **facilitators** of program implementation. A facilitator is a person or thing that makes the implementation of program interventions and activities easier. The program team identifies barriers and facilitators based on community needs assessment, previous literature and research, and previous experience with the target population, community, and similar programs (Fernandez et al., 2022). The program team should choose strategies to decrease barriers based on their impact on the program's effectiveness and the strategy's potential to decrease the barrier (Fernandez et al., 2022). For example, offering bus fare reimbursement to reduce transportation barriers should result in increased recruitment and retention of participants. The program team continues to assess for barriers during implementation and revises intervention strategies to reduce them.

Table 20.1 provides an overview of facilitators and barriers related to intervention planning and implementation, resource utilization, program implementers, and community partners found in two literature reviews (Cooper et al., 2021; Mathieson et al., 2019). The program team considers each to design strategies to enhance the likelihood of the program's success.

Facilitators and Barriers of Program Implementation

	Facilitators	Barriers
Intervention planning and implementation	• Flexible, adaptable interventions • Alignment of intervention with regular organization functions • Timely and relevant • Geographical accessibility • Previous evidence that program intervention improves participant outcomes	• Interventions standardized, not tailored to context or population • Lack of evidence to support interventions • Use of complex interventions • Underestimation of coordination effort and needs • Lack of planning for participant recruitment and retention
Resource utilization	• Use of existing resources • Return on investment • Cost and time effective	• Poor availability of resources, including finances, facilities, equipment and materials, and volunteers

TABLE 20.1 Facilitators and Barriers of Program Implementation (See Cooper et al., 2021; Mathieson et al., 2019.)

Facilitators and Barriers of Program Implementation		
	Facilitators	**Barriers**
Program implementers	• Clear understanding and allocation of roles • Strong commitment to the program • Skilled and trained in program topic and program implementation • Established relationships with the target population • Sense of reward	• Competing priorities • Conflict of interest • Ineffective delivery of intervention • High workload • Inefficient knowledge, training, and skill related to program topic or implementation • Complexity of intervention and evaluation
Community members and stakeholders role players	• Support and commitment from leaders • Role player engagement • Target population involved in planning • Use of champions from the target population • Effective communication among the program team, partners, and role players • Sense of reward with participation	• Competing priorities • Conflict of interest • Lack of buy-in or interest • Low value placed on program goals • Ineffective communication • Little to no involvement in program planning, participation, or implementation

TABLE 20.1 Facilitators and Barriers of Program Implementation (See Cooper et al., 2021; Mathieson et al., 2019.)

The program team should be aware that facilitators and barriers to program implementation can vary and may depend on the collaborating partners, available resources, current political and social issues, geographical location, time, and participants' values. For example, a program to increase physical activity may be more successful if delivered in the summer instead of during snowy winter months. Cooper et al. (2021) provide the following general recommendations to enhance facilitators and reduce barriers to implementation:

- Ensure community-level coordination and communication to improve the use of existing resources and avoid duplication of services
- Enlist local support of the program to improve community engagement
- Focus on the reliability of program strategies
- Develop standardized but flexible, simple, and regularly evaluated and revised program strategies

20.2 Recruitment and Retention of Program Participants

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 20.2.1 Identify strategies to recruit and retain program participants.
- 20.2.2 Describe ways to tailor recruitment and retention strategies to fit the sociocultural and linguistic needs of target populations.

Recruitment and **retention** of program participants is one of the most important components when planning for implementation because no matter how well a program is planned, it will not successfully meet goals with little or no participation. Recruitment is finding community members from the target population to participate in a community health program. Retention is continued participation in a community health program until its completion. To successfully recruit and retain participants, the program team must develop strategies that utilize evidence from the literature, previous experience with recruitment and retention, and knowledge of the target population's values and beliefs. While several recruitment and retention strategies have been proven to be effective, a combination of strategies is needed to achieve the greatest success (Rural Health Information Hub [RHIhub], 2018b). Table 20.2

provides a description of recruitment strategies and tasks to complete each strategy.

Recruitment Strategy	Tasks
Know the target population	• Develop a clear description based on demographics, geography, values, culture, and needs • Ensure the program is relevant and meaningful for the target population • Address barriers to participation, such as transportation, childcare, stigma, previous negative experiences, and lack of knowledge about program benefits
Develop appropriate materials	• Use more than one type of recruitment material, which can include flyers, newsletters, newspaper articles, radio or television advertisements, presentations, phone calls, and social media • Ensure materials are culturally and linguistically appropriate for the target population
Market strategically	• Communicate the potential value of participation and what participation entails • Develop positive community relationships and use them to spread the word • Advertise using sources the target population commonly accesses • Build partnerships and collaborations to have a broad base of referral sources for the program
Encourage participation	• Be enthusiastic in recruitment materials and messages • Create program strategies based on the target population's interests • Motivate participants by using incentives
Utilize partnerships and members of the target population	• Use program champions to spread the word and increase interest among the target population • Provide partners with recruitment materials for cross-promotion of programs
Revise strategies as needed	• Assess effectiveness of recruitment strategies and revise if they are not working

TABLE 20.2 Participant Recruitment Strategies and Associated Tasks (See Barnes-Proby et al., 2017. RHIhub, 2018b.)

THEORY IN ACTION

Recruitment Strategies and Challenges

The mission of Denver's MotherWise program is to empower women and their families to thrive during pregnancy and after a baby is born. This program focuses on motherhood, healthy relationships, communication and relationship skills, and connecting with a newborn. The following three short videos describe recruitment strategies and challenges. In the first two videos, program staff share experiences and challenges with participant recruitment. In the third video, participants share why they decided to join the program.

Watch each video, and then respond to the questions that follow.

Video 1

Access multimedia content (http://openstax.org/books/population-health/pages/20-2-recruitment-and-retention-of-program-participants)

1. What strategies does the MotherWise program use to recruit participants?

Video 2

Access multimedia content (http://openstax.org/books/population-health/pages/20-2-recruitment-and-retention-of-program-participants)

1. What challenges to recruitment did the MotherWise program staff note?
2. How did the staff attempt to overcome those challenges?

Video 3

Access multimedia content (http://openstax.org/books/population-health/pages/20-2-recruitment-and-retention-of-program-participants)

1. Why did the participants decide to join the MotherWise program?
2. Based on this information, what recruitment strategies can the nurse use to recruit the target population?

The program's goals will likely be unmet if participants do not complete the program in its entirety. As such, the program team develops retention strategies to achieve participant completion goals. Table 20.3 presents strategies to maintain participation.

Strategies to Promote Participant Retention	
Facilitate participant interest and motivation	• Ensure interventions are of interest to participants • Provide incentives throughout the program • Incorporate social support into program interventions
Reduce barriers of retention	• Incorporate strategies to reduce barriers such as inconsistent or lack of transportation, need for childcare, inconvenient program times, inconvenient program location, negative participant attitudes related to the program, and lack of knowledge
Train program implementers	• Ensure implementers' skills enable them to deliver program activities • Assess implementers' attitudes regarding the program and target population and intervene if the attitudes are biased or negative • Train implementers in relationship building to establish trust and connection with participants • Create a welcoming environment • Maintain regular communication with implementers and participants
Incorporate continuous evaluation	• Determine why participants enroll in, remain in, and exit the program • Revise retention and program strategies to meet the participants' needs • Solicit participant feedback regarding program activities • Ensure program activities are flexible and varied

TABLE 20.3 Strategies to Promote Participant Retention (See Barnes-Proby et al., 2017; RHIhub, 2018a.)

Barnes-Prosby et al. (2017) provide a toolkit (https://openstax.org/r/rand) for the program team to enhance participant recruitment and retention. The toolkit includes five strategies, applicable activities, and examples to guide recruitment and retention planning.

Population Considerations: Health Care Providers

Some community health programs utilize health care providers (HCPs) to deliver interventions and assist with program planning, participant recruitment, and program evaluation. For example, community health workers (CHWs) are public health workers who liaise between health services and the community to improve access to services (Carter et al., 2016). One method to promote CHWs and link clients to them is to have HCPs refer their clients to or write prescriptions for a CHW. In these circumstances, the program team considers the recruitment and retention of HCPs and clients.

Multiple factors influence HCP participation. The program team designs strategies to enhance their recruitment and retention and reduce barriers to their participation. For example, HCPs are more likely to participate in community health programs when they understand the program's value for themselves and their clients, the burden of

performing the intervention is low, and the provider's needs match community needs that are met by an evidence-based interventions (Krebs et al., 2021). Conversely, the HCP may be less likely to participate when they lack knowledge and training before program implementation, are inexperienced with client recruitment, have inadequate communication with the program team, and lack time to perform interventions (Krebs et al., 2021).

To successfully recruit and retain HCPs, Krebs et al. (2021) recommend including health care providers in all levels of planning, developing a recruitment strategy at the beginning of the planning process, training HCPs on how to recruit clients and implement the intervention, and using frequent, clear, goal-oriented communication.

Population Considerations: Youth

Facilitators and barriers to recruitment and retention may also differ when youth are the target population. Hull et al. (2022) provide a resource guide (https://openstax.org/r/teenpregnancy) to enhance recruiting and retaining this demographic in community health programs, with strategies such as these:

- Include youth and parents/caregivers in planning and recruitment
  - Assess youth needs, values, and motivators
  - Collaborate with youth to develop recruitment and program materials, including choice of marketing strategy such as type of social media
  - Host a youth and parent night to provide program information and address questions
  - Train a youth champion to participate in the program and promote the program
- Identify barriers to recruitment and retention
  - Youth may need transportation, provide childcare for siblings, or have scheduling issues due to academics, athletics, or work
  - Consider offering the program during school hours, on weekends, and in shorter sessions
- Establish partnerships with implementation location
  - School-based locations may be best due to fewer transportation issues, youth familiarity with the location, and the potential to incorporate the program into the school schedule
- Provide incentives for participation, such as gift cards, non-tangible items, and/or food
- Ensure the environment and program materials promote a safe and inclusive environment
  - Plan strategies that empower youth and allow their opinions to be heard
  - Clarify program goals, participant expectations, and benefits of participation
  - Translate material into languages and use images that represent the target population
  - Provide opportunities for youth engagement and the communication of values and beliefs
  - Incorporate real-life youth experiences into program activities
  - Ensure program staff are positive, respectful, and supportive of youth

THEORY IN ACTION

Creating Inclusive and Engaging Environments for Youth Programs

Access multimedia content (http://openstax.org/books/population-health/pages/20-2-recruitment-and-retention-of-program-participants)

Youth participate and remain in community health programs for reasons that may differ from adults. In this video, adolescents describe their reasons for participating in health programs and provide strategies to enhance youth engagement, especially when programs have sensitive topics.

Watch the video, and then respond to the following questions.

1. Why did the adolescents featured in the video participate in an Adolescent Pregnancy Prevention Program?
2. What strategies did the adolescents suggest as ways to create a safe learning environment and promote youth participation?

Population Considerations: Sociocultural and Linguistic Needs

Facilitators and barriers to recruitment and retention may also differ based upon sociocultural and linguistic needs. The program team must understand the target population's needs and incorporate them into recruitment and

retention strategies. Cultural Influences on Health Beliefs and Practices discusses the impact of culture on individual health behaviors, values, and attitudes. Culturally and Linguistically Responsive Nursing Care and Culturally and Linguistically Appropriate Program Design describe strategies to meet the target population's cultural and linguistic needs. Community programs are more effective when:

- program planning, recruitment and retention planning, and program implementation include the target population;
- linguistic needs are met through provision of materials and activities in English and in any other language used by program participants;
- cultural values, beliefs, and needs are incorporated into program strategies; and
- program staff provide a welcoming and inclusive environment, acknowledge and respect cultural differences, and know how to communicate with those from a different culture.

Prevention First (2022) provides a guide (https://openstax.org/r/preventiona) to increase cultural responsiveness of prevention programs. Table 20.4 lists actions to increase personal and program cultural responsiveness and provides examples of related actions.

Action Steps to Increase Cultural Responsiveness	Examples
Build personal cultural awareness and reflect on cultural differences	• Evaluate personal attitudes, beliefs, and implicit biases • Seek opportunities to learn about cultures other than your own • Respect cultural differences
Understand diverse community populations and their health needs	• Conduct an assessment of community demographic makeup, current needs of all demographics, and community inequities • Assess the target population's cultural and language preferences
Build relationships with diverse community members	• Invite community members who are members of the diverse target population to assist with planning and implementation
Create a culturally responsive program structure	• Use culturally and linguistically appropriate services (CLAS) to develop policies and procedures • Offer language assistance when needed • Adjust communication style based on the needs of the target population
Incorporate cultural and linguistic strategies into interventions	• Create communication that includes images and language that is culturally relevant and easy to read • Incorporate strategies that align with the culture and values of the target population

TABLE 20.4 Actions to Increase Cultural Responsiveness of Community Health Prevention Programs (See Prevention First, 2022.)

THEORY IN ACTION

Incorporating Sociocultural and Linguistic Needs in Community Programs

Access multimedia content (http://openstax.org/books/population-health/pages/20-2-recruitment-and-retention-of-program-participants)

The PA Fresh Food Financing Initiative is a statewide financing program to assist business owners in opening or expanding stores with the goal of increasing access to healthy, affordable foods and improving economic opportunities for low- to moderate-income community members in Pennsylvania.

Watch the video, and then respond to the following questions.

1. How did the PA Fresh Food Financing Initiative incorporate the community's sociocultural and linguistic needs when marketing the program?

2. How did the PA Fresh Food Financing Initiative incorporate the community's sociocultural and linguistic needs when recruiting and retaining participants?

20.3 Evaluation Strategies

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 20.3.1 Describe an intervention evaluation plan for public health services for individuals, families, and groups.
- 20.3.2 Utilize a systematic process to direct the evaluation of public health interventions.
- 20.3.3 Evaluate outcomes of action plans and interventions, considering implications for practice.

Evaluation of community programs occurs throughout implementation and at the conclusion of a program to improve processes and outcomes. The evaluation provides evidence for decisions regarding the program, such as whether the program should continue, if revisions are needed, or if the program should be discontinued. Additionally, evaluation may either be mandated by external funders, driven by a need to determine program effectiveness, or both (Centers for Disease Control and Prevention [CDC], 2012). The program team develops a plan for evaluation during the planning phases of community health programming, determining the evaluation methods before beginning intervention activities. Using a systematic process ensures all components of the program are evaluated in an evidence-based way. No matter the process and methods used, the program team evaluates whether goals and objectives of the program are met. If a health program fails to meet the goals and objectives or the community's needs, the team should carefully consider the program's future.

Evaluation Planning for Public Health Programs

Program evaluation is the ongoing, systematic collection, analysis, and use of data to examine program **efficacy**, **effectiveness**, and **efficiency** to make decisions about current and future health programs (CDC, 2012; Issel & Wells, 2018). Efficacy is the "maximum potential effect under ideal conditions" (Issel & Wells, 2018, p. 222). Ideal conditions are difficult to create in community health programs, so efficacy is rarely evaluated. Effectiveness is the community program's ability to achieve the desired outcome in real-life settings (Issel & Wells, 2018). It is usually measured using statistical data and comparisons to benchmarks. Efficiency occurs when the effect of program interventions, or outputs, are greater than the resources, or inputs, used to provide the intervention (Issel & Wells, 2018). The program team plans for evaluation in order to:

- monitor progress toward program goals and objectives,
- decide if program activities and components are leading to the desired results,
- make comparisons among program participants and other populations,
- provide rationale for further funding and support,
- ensure continuous quality improvement,
- verify program maintenance and efficient use of resources,
- document accountability that the program is fulfilling its purpose and meeting goals, and
- justify sustaining, revising, or discontinuing the program (CDC, 2021).

As noted, the program team plans for evaluation during the program planning process and prior to implementing interventions. Steps to planning for program evaluation include the following:

1. Identify individuals and groups to plan and assist with evaluation.
2. Meet with the program team to determine how to evaluate the program.
3. Examine evaluation types and processes used in the literature.
4. Choose the type of evaluation to be used and a systematic process that aligns with evaluation needs and program goals.
5. Determine what program goals and objectives will be measured, how they will be measured, who will be responsible for collecting data, and what resources are available.
6. Write the program evaluation plan using the types of evaluation and chosen systematic process.

The program team determines which type of community health program evaluation will be conducted. The most common types are **formative evaluation**, **process evaluation**, **outcome evaluation**, and **impact evaluations**. The

choice of type depends upon program activities, organizational needs, funder requirements, and the program's developmental stage.

Formative Evaluation

Formative evaluation occurs during program development to confirm that program interventions are feasible and appropriate (CDC, 2014). Most often, formative evaluation occurs during new program development or when an existing program is revised. Formative evaluation includes a community health needs assessment as discussed in Assessment, Analysis, and Diagnosis.

Process Evaluation

Process evaluation focuses on program implementation processes to determine if the program has been implemented efficiently and as planned. It occurs throughout program implementation, allowing for mid-program revisions and following the program to provide direction for future program improvement. As such, process evaluation should occur to some extent for all community health programs. During process evaluation, the program team describes the program's inputs and outputs. Program inputs are those things and resources required to carry out the program; examples are personnel number and experience, volunteers, informational and technological resources, financial resources and budget, physical location and resources, transportation needs, leadership, time, marketing needs, and other resources needed to complete activities (Issel & Wells, 2018). Program outputs are things accomplished using inputs. Examples of outputs are population reach; number of participants; intervention dose and amount; equipment or incentives distributed; partnerships developed; staff and volunteer hours worked; extent that the budget was followed; quality of information, technological, and physical resources; and staff, volunteer, and participant satisfaction (Issel & Wells, 2018). Most often, the team describes inputs and outputs using qualitative data, but they may use some quantitative data. The program team explains what and how much was accomplished during the program and determines strengths, areas for improvement, and recommendations for ongoing and future program implementation.

Outcome Evaluation

Outcome evaluation assesses the extent to which the program achieves its objectives within the target population and its effect on the target populations' knowledge, attitudes, and behaviors (CDC, 2014). This is an evaluation of the SMART objectives developed during the program development planning stages (Figure 20.2). Planning Health Promotion and Disease Prevention Interventions guides the nurse in the development of SMART objectives. Outcome evaluation should be completed for all community health programs regardless of developmental level. Typically, outcome evaluations are quantitative and include short-, medium-, and long-term measures of change. At times, the team may use qualitative data to provide support for quantitative results. It is recommended that process and outcome evaluation occur simultaneously because if a program objective is not met, it could be a result of implementation process issues (CDC, 2014).



FIGURE 20.2 During outcome evaluation, the team assesses the effectiveness of the SMART objectives on meeting their goals within the

target population. (credit: "Maryland Rural Health Day Calvert County Health Department" by Anthony DePanise/Flickr, CC BY 2.0)

Impact Evaluation

Impact evaluation determines the degree to which the community health program has achieved its primary goal (CDC, 2014). It occurs during an existing program, if appropriate, and at the end of a program and most often uses data collected over the long term, including community health assessment data and benchmarks. Most impact evaluations are quantitative. For example, an evaluation might compare pre-program and post-program morbidity, mortality, and health behavior data for the target population and community as a whole.

THEORY IN ACTION

Types of Program Evaluation

Access multimedia content (http://openstax.org/books/population-health/pages/20-3-evaluation-strategies)
Various program evaluation types are available to determine if a community health program has been effectively and efficiently implemented. This video describes formative, process, impact, and outcome evaluations.

Watch the video, and then respond to the following questions.

1. How does the nurse and program team determine which type of program evaluation should be used?
2. What evaluation designs are used to conduct program outcome evaluations?

Systematic Processes to Direct Program Evaluation

The nurse in collaboration with the program planning team chooses an evaluation framework or tool to guide evaluation planning. Frameworks and tools provide systematic, evidence-based resources to organize important program evaluation components. Commonly used frameworks and tools include the CDC Framework for Program Evaluation in Public Health (CDC, 1999), Public Health Ontario's steps for evaluating health promotion programs (Ontario Agency for Health Protection and Promotion [OAHPP] et al., 2016), and logic models.

CDC's Framework for Program Evaluation in Public Health

The CDC Framework for Program Evaluation in Public Health is commonly used to summarize elements of program evaluation to assign value and judge a community health program based on evidence. The program team assigns value related to program quality, cost-effectiveness, and significance of the health problem. The framework contains two elements: six steps of program evaluation and standards to assess the quality of evaluation (Figure 20.3) (CDC, 1999). While the program team does not need to conduct the evaluation in a linear sequence, they must thoroughly address each step. Table 20.5 provides examples of activities that occur during each step of program evaluation.

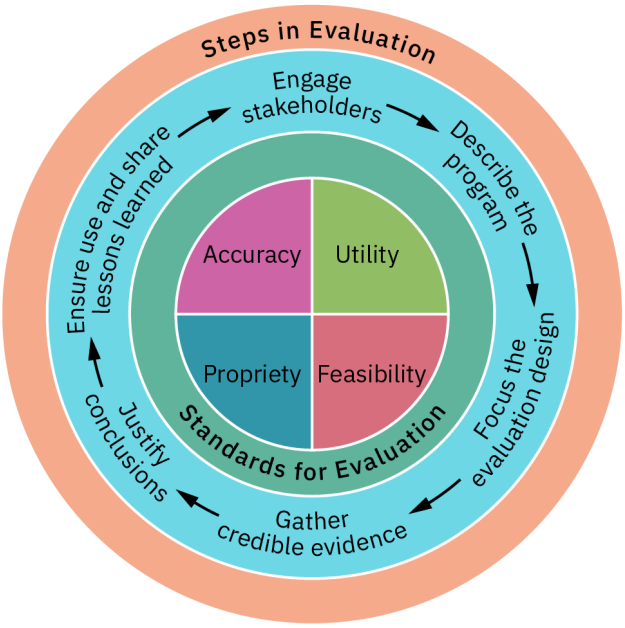


FIGURE 20.3 The Framework for Program Evaluation in Public Health is commonly used to evaluate public health programs. (See CDC, 1999; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Steps of Program Evaluation	Examples of Activities
Engage interested parties	• Invite community members and partners identified during the community assessment and program planning process to assist with program evaluation • Make a list of what evaluation data would be useful to each interested party and partner
Describe the program	• Write the first portion of the evaluation plan, which includes program mission, objectives, activities, intended outcomes, and program maturity • Create a logic model, if desired, that includes program inputs, activities, outputs, and short-, intermediate-, and long-term outcomes
Focus on the evaluation design	• Choose the evaluation design (process, outcome, and/or impact evaluation), considering the program's purpose and maturity
Gather credible evidence	• Determine the quantity and quality of data to collect, using multiple data sources to increase the accuracy of evaluation results • Prepare data collection methods, which could include surveys, interviews, focus groups, retrospective document reviews, and observation • Collect data from participants, staff, volunteers, and other relevant parties, and use secondary data sources for benchmarking

TABLE 20.5 Activities Completed During Program Evaluation (See CDC, 1999.)

Steps of Program Evaluation	Examples of Activities
Justify conclusions	• Analyze and review results, comparing program objectives, benchmarks, literature, and previous implementations, if applicable • Summarize strengths and areas for improvement of the program • Meet with partners to review data and make conclusions regarding the program
Ensure the use and share lessons learned	• Share results with program partners, and community

TABLE 20.5 Activities Completed During Program Evaluation (See CDC, 1999.)

The program team incorporates the standards of utility, feasibility, propriety, and accuracy throughout program evaluation. **Utility standards** include determining who needs evaluation information, what information they need, the evaluation's purpose, and how the information will be used (CDC, 1999). **Feasibility standards** involve considering resources available to conduct program evaluation, including money, time, and effort (CDC, 1999). **Propriety standards** confirm that program evaluation is fair and ethical (CDC, 1999). **Accuracy standards** substantiate that program evaluation methods, data, and documentation are appropriate and contain accurate information (CDC, 1999). The CDC (2011) provides a workbook (https://openstax.org/r/cdcb) to guide program teams through the evaluation process.

Public Health Ontario's Steps for Evaluating Health Promotion Programs

Public Health Ontario (OAHPP et al., 2016), a scientific and technical public health organization in Ontario, Canada, recommends 10 systematic steps to evaluate health promotion programs (Table 20.6). Similar to other public health evaluation frameworks, the program team conducts the first steps of program evaluation planning concurrently with program development. The program team engages interested parties, develops the program goals and objectives, determines the target population, creates program strategies and activities, and locates program resources. The organization recommends developing a logic model to represent the program to summarize its main components and to align evaluation questions with program activities (OAHPP et al., 2016). Planning Health Promotion and Disease Prevention Interventions discusses using logic models in health program planning. Process and outcome evaluation measures should be used. The program team plans to gather data using quantitative and qualitative measures to have substantial information to determine program effectiveness and make decisions regarding health programs. The program team shares findings with interested parties to solicit recommendations and make program decisions. An introductory workbook (https://openstax.org/r/publichealthontario) (OAHPP et al., 2016) is available to assist the program team through evaluation planning and gathering, analyzing, and reporting program data.

Planning	Step 1: Clarify the program
	Step 2: Engage interested parties
	Step 3: Assess resources and evaluability
	Step 4: Determine your evaluation questions
	Step 5: Determine appropriate methods of measurement and procedures
	Step 6: Develop an evaluation plan
Implementation	Step 7: Collect data
	Step 8: Process data and analyze results
Utilization	Step 9: Interpret and disseminate the results
	Step 10: Apply evaluation findings
For more information, see Evaluating health promotion programs: introductory workbook (https://openstax.org/r/publichealthontarioa).	

TABLE 20.6 Public Health Ontario's 10 Steps to Systematically Evaluate Public Health Programs

Logic Models

Logic models are tools used to visually present the relationships among resources that are used to implement a program, the activities planned, and the intended results of a program (W. K. Kellogg Foundation, 2004). Logic

models are also used to map evaluation questions and indicators. If the program team did not create a logic model during the program planning process, it is recommended that the program team create one to assist in evaluation efforts. Planning Health Promotion and Disease Prevention Interventions describes how to create a health program logic model. After creating a logic model, the team can use it to decide on process and/or outcome evaluation methods and link evaluation questions to logic model components.

THEORY IN ACTION

Logic Models in Program Planning and Evaluation

Access multimedia content (http://openstax.org/books/population-health/pages/20-3-evaluation-strategies)
Logic models are used during program planning, implementation, and evaluation. This video demonstrates how to develop a logic model and provides an example using a parent training program.

Watch the video, and then respond to the following questions.

1. What are the components of a logic model?
2. How does the nurse connect the logic model to program evaluation and evaluation methods?
3. Using what you have learned regarding types of program evaluation, which components of the logic model align with process evaluation, which components align with outcome evaluation, and which components align with impact evaluation?

Evaluating Outcomes of Action Plans and Interventions

A community health program's outcomes should always be evaluated to determine if program goals and objectives have been met. Data regarding program interventions and activities should be evaluated and analyzed individually and as a whole. The SMART objectives and logic model written during the planning phase, as discussed in Planning Health Promotion and Disease Prevention Interventions, are used to develop evaluation questions and determine data collection techniques.

Data collection techniques include questionnaires to measure knowledge, attitudes, or behavior; observation; interviews; focus groups; and epidemiologic data. The team may collect data from participants, staff, volunteers, and community partners. Participants should always be evaluated to determine knowledge, attitude, or behavior changes. The team may collect pre-implementation or baseline data from epidemiological data, community health assessments, and participant surveys prior to program interventions.

Short-term objectives are often measured immediately following program intervention. Intermediate objectives are measured within a few months following the program, usually within 3 to 6 months. Long-term objectives are usually measured at least one year following the program. The team evaluates impact using community health data. Most often, the nurse and program team use annual epidemiological data or community health assessment data, which is collected at minimum every three years. Benchmarks help determine the impact of programs. For example, in Planning Health Promotion and Disease Prevention Interventions, the nurse and Kenton Hardin County Family Bike Program (KHCFBP) team determined evaluation questions and data techniques from the outcome and impact sections of the logic model. Table 20.7 describes the outcome evaluation of the program.

Outcome as Stated on the Logic Model	Evaluation Question	Data Collection Technique
Short term—Increase participant bike safety knowledge post-program	What was the effect of the KHCFBP on participants' bike safety knowledge?	• Pre-survey: five questions to determine baseline bike safety knowledge • Post-survey including the same questions at completion of activities to determine change in knowledge
Short term—Increase participant bike helmet use 30 days post-program	What was the effect of the KHCFBP on participants' report of bike helmet use?	• Pre-survey: one Likert-scale question asking frequency of bike helmet use to determine baseline • 30 days post-survey: same question asking frequency of bike helmet use • Pre-survey: one question asking if participant owned a bike helmet
Short term—Increase participant biking frequency 30 days post-program	What was the effect of the KHCFBP on participants' report of bike riding?	• Pre-survey: questionnaire asking days per week, average time per day, and intensity of biking for leisure and commuting to determine baseline • 30-day post-survey: same questionnaire
Long term—Increase incidence of biking in Hardin County over the next 5 years	Did incidence of bike riding increase in Hardin County?	• 2017 CHA data to determine community baseline • 2023 CHA data to be used for comparison • Healthy People data to use for benchmarking
Impact—Increase physical activity of Hardin County residents	Did physical activity of Hardin County residents increase?	• 2017 CHA data to determine community baseline • 2023 CHA data to be used for comparison • Healthy People data and National Physical Activity Guidelines to use for benchmarking

TABLE 20.7 KHCFBP Evaluation Questions and Data Collection Techniques (See Hunsicker, 2020.)

The program team analyzes data after collection. Pre-implementation and post-implementation data are compared. Program evaluation data are also compared to similar program evaluations and national benchmarks. The program team uses this information to evaluate the program's strengths and weaknesses, determines if it has achieved desired outcomes, and examines its efficacy, effectiveness, and efficiency. The program team develops recommendations regarding the program and shares findings and recommendations with community members and partners. Ongoing evaluation of community health programs is necessary to ensure program success, program continuation, and that community needs are being met.

20.4 Communication Strategies

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 20.4.1 Compare information and communication technologies used in the community setting.
- 20.4.2 Describe various communication tools and culturally and linguistically responsive communication strategies.
- 20.4.3 Explain the use of multimedia applications to communicate outcomes.

The nurse uses effective and appropriate verbal and written communication strategies to promote health programs and healthy behaviors, increase awareness of health issues and health programs, recruit and retain program participants, share information with community partners, and disseminate program evaluation findings. The program team strategically develops and employs messages using a variety of tools and technologies. They also

determine communication strategies prior to sending any health-related or program message, considering the intended target population's communication needs.

Communication Tools and Technologies Used in the Community Setting

A variety of community tools and technologies are used in the community setting. The program team must weigh the advantages and disadvantages of each when developing a communication plan. They should use multiple communication tools and methods to reach a larger number of the intended target population (Center for Rural Health, 2023; RHIhub, 2018a; U.S. Department of Health and Human Services [HHS], 2014). Table 20.8 lists the types of communication tools and technologies and their advantages and disadvantages.

Communication Tool	Examples	Advantages of Use	Disadvantages of Use
Broadcast media	• Television • Radio • Podcast	• Broad audience reach • Message conveyed faster • Opportunity to replay message • Script is used for consistent and controlled messaging • Multiple delivery of message is most effective	• May be limited to single message or to one time per day • One-time communication not always effective • Costly if paid advertisement • Limited reach to some populations (those who do not have access to broadcast media)
Print media	• Newspaper • Magazine • Brochures or flyers • Mail • Email	• Broad audience reach • Message conveyed faster • Opportunity to reread message • Script is used for consistent and controlled messaging	• May be limited to single message or to one time per day • One-time communication not always effective • Costly if paid advertisement • Costly if mass-produced for mail • Limited reach to some populations (those who do not have access to print media)
Social and digital media	• Internet/websites • Social media • Mobile applications • Video/YouTube • Kiosks	• Reach a large population rapidly • Combines audio and visual • Script or common material is used for consistent and controlled messaging	• May be costly • Limited reach to some populations (those without internet access) • May require monitoring of comments

TABLE 20.8 Advantages and Disadvantages of Communication Tools Used in Public Health Programs (See HHS, 2014.)

Communication Tool	Examples	Advantages of Use	Disadvantages of Use
Outdoor media and public display	• Billboard • Mass transit • Community • businesses	• Broad audience reach • Message conveyed faster • Opportunity to reread message • Script is used for consistent and controlled messaging	• May be costly • Limited reach for population that does not use the method of transport or visit the community business
Word of mouth	• Personal communication • Telephone • Organizational meetings • Community presentations • Partnerships	• Promotes discussion • More effective in promoting change • Effective in reaching intended audience • Messages can be tailored to individual or audience needs • Partnerships and other organizations provide support of the message	• Time-consuming to coordinate communication and arrange presentations • May have limited audience • Message less controlled

TABLE 20.8 Advantages and Disadvantages of Communication Tools Used in Public Health Programs (See HHS, 2014.)

Communication Strategies

The program team develops and follows a systematic process to plan and implement communication strategies. Systematic processes ensure that communication is grounded in evidence, effective, efficient, and able to reach the intended target audience. HHS (2014) and the Center for Rural Health (2023) provide toolkits for health communication planning and implementation.

Four Stages of the Health Communication Cycle

HHS (2014) provides a workbook (https://openstax.org/r/cancergova) to assist the program team throughout four stages of health communication planning and implementation (see Figure 20.4).

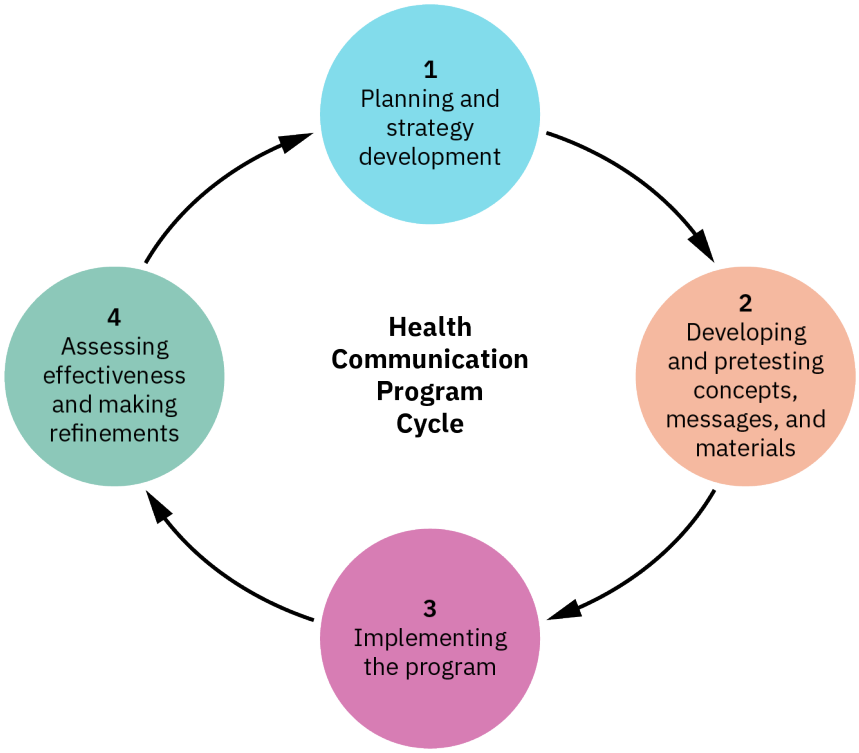


FIGURE 20.4 The nurse and program team use the health communication program cycle to systematically develop and implement health communication. (See HHS, 2014; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

First, the program team decides how to use communication, defines the intended target population, determines communication objectives, plans for evaluation of communication, and drafts communication activities.

Second, they develop messages and materials and collaborate with members of the intended target audience to get feedback and revise messages and materials as needed. The team answers the following questions during the planning stages (HHS, 2014):

- Will this type of communication reach and influence the intended target population?
- Are the chosen types of communication acceptable and trusted by the intended target population?
- Is the type of communication appropriate for the message?
- What is the reach of the type of communication? How many of the target population might be exposed?
- What is the cost of this type of communication?
- Are the resources available to create, maintain, and fund this type of communication?

Third, they implement the message, track exposure of the intended target audience, and continue to solicit feedback to revise the message as needed. Finally, they assess the effectiveness of the message and communication plan and revise them if needed. Strategies for effective health communication include the following:

- Use a variety of communication tools to increase reach (HHS, 2014; RHIhub, 2018a)
- Select evidence-based methods to develop materials and messages (RHIhub, 2018a)
- Incorporate health literacy and cultural needs of the intended target population (HHS, 2014; RHIhub, 2018a)
- Define the goal of the program (HHS, 2014)
- Pretest and revise materials and messages (HHS, 2014)
- Evaluate communication at delivery and throughout implementation (HHS, 2014)

Creating a Communication Plan

The Center for Rural Health provides a communication toolkit (https://openstax.org/r/ruralhealth) to guide the program team to focus “the right message on the right audience at the right time” (Center for Rural Health, 2023, para 1). A systematic communication planning and implementation method leads to efficient and effective communication delivered using the resources of the program budget. The steps of communication plan development include the following:

1. Analysis: Summarize the overarching and communication goals of the program, resources available for communication, and the effectiveness of current communication strategies.
2. Goals & Objectives: Create SMART objectives for communication. Planning Health Promotion and Disease Prevention Interventions describes SMART objectives.
3. Key Messages: Create three to five central messages for the program.
4. Target Audience: Identify the intended target population and assess communication needs and barriers.
5. Tactics: Choose communication tools and technologies to deliver the message.
6. Implementation Timeline: Set target dates for communication implementation, establish accountability for communication activities, and allocate finances and resources for implementation.
7. Evaluate & Revise: Set dates for evaluation throughout implementation to assess the effectiveness of the communication plan and revise if needed.

Communication Considerations

The program team considers the needs of and barriers to communication with the intended target population. They integrate the target population's health priorities, culture, language, and health literacy into messages and materials used in community health programs.

Cultural and Linguistic Communication Needs

The program team incorporates cultural and linguistic needs of the intended target population into communication to enhance communication effectiveness. Assessment of the target population will provide some information, but inviting key members of the target population to assist with program planning and communication planning will increase the likelihood that the team will identify barriers and meet cultural and linguistic needs. The program team should consider the target population's access to the internet and potential for media exposure as well as what communication technologies members use most often. Various communication tools that are used by the intended target population should be incorporated into the communication plan in order to increase reach (RHIhub, 2018a). Additionally, messages and materials should be available in English and languages most commonly used by the target population and should include concepts, priorities, images, and language that represent the target population. Culturally and Linguistically Responsive Nursing Care discusses how the nurse incorporates communication and language assistance services and translates written material for community health programs. Culturally and Linguistically Appropriate Program Design discusses national standards for culturally and linguistically appropriate services and tools to incorporate those standards into community health programs.



CONVERSATIONS ABOUT CULTURE

Stories from the Field: The White Earth Nation

The nurse and program team incorporate culturally and linguistically appropriate messaging and materials into health promotion programs. In this blog, the local public health department incorporated Anishinaabeg culture into messages encouraging COVID-19 prevention and vaccination.

Read the blog (https://openstax.org/r/blogscdc), and then respond to the following questions.

1. How did the White Earth Public Health team incorporate cultural and linguistic needs into COVID-19 health communication?
2. How did tailoring communication to the intended target population influence the health behaviors of the Anishinaabeg?

Health Literacy and Plain Language

The nurse and program team must also consider the health literacy of the target population. Assessment, Analysis, and Diagnosis discusses tools to assess health literacy. One method to account for community health literacy is using **plain language** in messages and materials. Plain language is communication that is visually appealing, logically organized, appropriate for the intended audience, and understandable at the first reading (Smith & Wallace, n.d., para 1). The team should follow these principles when using plain language (National Archives, 2023):

- Write for the intended target audience.

- Begin with the key message.
- Keep it short.
- Write in the active voice.
- Use common language, not medical terminology.
- Omit words that are not needed to convey the message.
- Use headings, lists, and tables.
- Proofread and have a member of the intended target audience review.

THEORY IN ACTION

Demand to Understand: How Plain Language Makes Life Simpler

Access multimedia content (http://openstax.org/books/population-health/pages/20-4-communication-strategies)
In this 19-minute TEDx Talk, Deborah Bosley discusses the importance of using plain language when communicating health information and suggests strategies to improve clarity of health communication.

Watch the video, and then respond to the following questions. If time does not allow full viewing, watch at 8:50 for the definition of plain language and then from 14:37 to the end for strategies.

1. Why is it important to use plain language when developing messages and materials for community health programs?
2. What strategies are recommended to ensure health communication is delivered using plain language?

20.5 Funding and Sustainability

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 20.5.1 Define sustainability.
- 20.5.2 Consider the influence of efficiency, value, and cost on program continuity and sustainability.
- 20.5.3 Examine how external and internal funding streams and levels can influence program continuity.
- 20.5.4 Explain the relevance of creating a sustainability plan early in the planning and implementation stages.

The goal of health promotion and disease prevention is to deliver community health programs that effectively and efficiently meet community needs. Funding and resources are required to deliver community health programs. The program team must address funding needs and program **sustainability** at the beginning of the program planning process and before the end of the initial funding cycle. Sustainability is the continuation of community health programs because the program is valued, cost and resource efficient, effective, and supported by the community (Georgia Health Policy Center, 2011; U.S. Department of Housing and Urban Development [HUD], 2012). The program team enhances sustainability by decreasing dependence on one funding source and shifting to one or more new funding streams. Sustainability goals may differ depending upon the developmental stage of the program. For example, newer programs focus on the continuation of activities once the initial funding stream ends, and experienced programs may focus on expanding program reach, building new partnerships, and promoting policy initiatives (HUD, 2012). Additionally, sustainability does not refer to the continuation of a program using the original strategies and activities. Most often sustainable programs evolve over time to adjust to changing funding, support, and community needs (Georgia Health Policy Center, 2011). Sustainability is influenced by (HUD, 2012):

- Efficiency and effectiveness of program activities
- Community support
- Partnerships that maximize use of resources
- Funding diversification
- Ability to draw new funds and partnerships
- Understanding of the overall cost savings associated with program implementation and improvement of community health status

External and Internal Funding Streams

The program team must identify funding to support new and continuing community health programs. The nurse must be aware of possible external and internal funding streams and have experience with soliciting funds for community health programs (see Table 20.9). Frequently, community health programs begin with funding support from one stream that does not continue throughout the program's lifetime, so it is necessary to identify diverse funding streams to enhance program sustainability.

Funding Stream	Description	Nurse's Role in Acquiring Funds
Grants	Funds provided by a government source or private foundation for a specific purpose and for a specified time frame	The nurse may locate potential grants, write grant applications, communicate with funders, and carry out activities, or deliverables, specified within the grant.
Indirect funding	Resources, such as volunteers, equipment, materials, or funding, provided by an external source	The nurse may solicit or recruit volunteers, materials, etc.
Contributions or sponsorships	Businesses, social and civic clubs, churches, or individuals make financial or resource donations.	The nurse may provide presentations or communicate with potential sponsors to solicit funds. Sponsorships and contributions are often communicated as funders in program messaging and materials.
Government budgets	Local, state, and federal monies are factored into the annual budget and are set aside for community health program funding. The funds are usually acquired via taxes and fees to community residents.	The nurse may advocate for additional annual monies to be provided for community health programs and health promotion activities.
Fundraising events	Sporting events, such as golf outings or marathons, or lunch/dinner events are held to raise funds to support community health programs.	The nurse may plan and implement events.
Earned income	Funds earned through internal streams, such as fee for service, consultation, reimbursement from second party payers, or product sales are used to support community health programs.	The nurse may provide services that contribute to the internal streams, such as vaccination clinics.

TABLE 20.9 Funding Streams and the Nurse's Role in Acquiring Funds (See Georgia Health Policy Center, 2011.)

THEORY IN ACTION

Funding Public Health Projects

Access multimedia content (http://openstax.org/books/population-health/pages/20-5-funding-and-sustainability)

The nurse must understand how to procure funds for public health programs. This video introduces funding for public health projects and describes how funding agencies and funding cycles are structured.

Watch the video, and then respond to the following questions.

1. Why should the nurse understand the funding agency's objective before applying for a grant?
2. What is the general process of grant application and funding?

Sustainability Planning

The program team begins intentionally planning for sustainability during program planning and development. The sustainability plan is supported by program evaluation and achievement of program objectives. The program team

uses evaluation data to decide which program activities will continue following a grant period or when initial funds have been depleted (Georgia Health Policy Center, 2011). Sustainability efforts are strengthened if a program demonstrates effectiveness, positive results, strong leadership, and community engagement (HUD, 2012). Program growth and sustainability are promoted when the program team focuses on evaluation and continuous quality improvement, organizational capacity, expansion of partnerships, systems or policy change, identification of new funding streams, and diversification of sources of funding (RHIhub, 2022). Studies have shown that sustainable programs are adaptable, have leadership that develops a clear, strategic purpose for grants and commit to providing resources, include cross-sector partnerships, consider community needs and demand, use data to show program impact, and align with the current social and political environment (Georgia Health Policy Center, 2020).

The nurse and program team can use the Georgia Health Policy Center (2011) step-by-step workbook (https://openstax.org/r/ruralhealthinfoa) to guide sustainability planning. Generally, the program team answers the following questions when planning for sustainability (Georgia Health Policy, 2011; HUD, 2012):

1. What criteria will be used to determine continuation? For example, criteria could include that the program
    - meets community needs,
    - is valued by the community,
    - has positively impacted participants and the community,
    - achieves objectives and goals,
    - uses cost-effective program delivery,
    - has a return on investment,
    - has sufficient partner and community support, and
    - can access needed resources.
2. Has the program met sustainability criteria?
3. What will continue to be offered—all or part of a program?
4. Who is needed to continue the program (leadership, staffing, and partnerships)?
5. Can support for the program and partnerships be expanded? How?
6. What is the cost of the program (budgeted line items and overall cost)?
7. What are current and potential funding strategies?
8. Are the funding strategies diversified?

RHIhub (2022) offers several resources for sustainability planning (https://openstax.org/r/ruralhealthinfob), including toolkits for specific types of community health programs. For example, the maternal health toolkit lists potential federal, state, and other funding sources.

To successfully implement and sustain community health programs, the program team must consider facilitators and barriers to program implementation to plan interventions that will enhance facilitators and reduce barriers. Participant recruitment and retention is an important consideration. Without program participants, a program would not effectively meet its goals and objectives. Recruitment and retention are facilitated when sociocultural and linguistic needs are met. Systematic evaluation of the community health program provides evidence of efficacy, effectiveness, and efficiency in order to make decisions about the current and future programs. Program evaluation strategies depend upon the needs of the program team and community partners and on the developmental level of the program. Outcome evaluation should occur regardless of the developmental level. Most often process evaluation occurs along with outcome evaluation so that the program team can make inferences about outcome results. Effective communication, diverse funding streams, and sustainability planning are key in promoting and maintaining community health programs.

Chapter Summary

20.1 Facilitators and Barriers to Program Implementation

To successfully implement community health programs, the program team strategizes to decrease potential barriers and enhance facilitators of implementation. Facilitators and barriers are identified based on community needs assessments; intended target population assessment of sociocultural, linguistic, and literacy needs; literature and research; and previous experience with program implementation.

20.2 Recruitment and Retention of Program Participants

The program team utilizes strategies to enhance participant recruitment and retention. Common recruitment strategies include the target population in planning, develop culturally and linguistically appropriate materials, and utilize strategic marketing and partnerships to promote programs. Common retention strategies are facilitating participant motivation, ensuring program implementers have the skills and knowledge to deliver the program, soliciting participant feedback, and reducing transportation, childcare, location, and timing barriers. Strategies vary based upon the population.

20.3 Evaluation Strategies

Evaluation of community health programs occurs to improve processes of implementation and program outcomes, assist in decision-making regarding the program, and meet funder requirements. A systematic process is used to evaluate the efficacy, effectiveness, and efficiency of the program components and the program as a whole. Formative, process, outcome, and impact are types of program evaluation that may be conducted. The CDC's Framework for Program Evaluation in Public Health, Public Health Ontario's steps for evaluating health promotion programs, and logic models are common frameworks and tools used in community health program evaluation. These tools direct the program team to align goals and objectives with type of evaluation, evaluation question, and data collection technique. The evaluation results are shared to make decisions, revisions, and recommendations for the program.

20.4 Communication Strategies

The program team develops a communication plan to deliver effective and appropriate messages and materials. Various communication tools and technologies are used to expand the reach of communication. A communication plan includes developing and testing messages and materials, implementing communication, and assessing effectiveness and revising messages and materials as needed. Cultural, linguistic, and literacy needs of the intended target population are considered when developing communication. It is recommended that plain language and concepts, images, and languages that represents the target population are used in messages and materials.

20.5 Funding and Sustainability

The program team must plan for funding and sustainability in order to continue community health programs. Sustainability planning includes evaluation of the efficiency, value, and cost of a program. Diversification of funding streams enhances sustainability efforts. Potential funding streams include grants, indirect funding, contributions or sponsorships, government budget lines, fundraising, and earned income. Sustainable community health programs are flexible, have strong leadership, include cross-sector partnerships, incorporate community needs and demand, use evidence to show program impact, and align with the current political and social environment.

Key Terms

accuracy standards benchmarks that substantiate that program evaluation methods, data, and documentation are appropriate and contain accurate information

effectiveness ability of a community program to achieve the desired outcome in real-life settings

efficacy maximum potential effect under ideal conditions

efficiency occurs when the effect of program interventions, or outputs, are greater than the resources, or inputs, used to provide the interventions

facilitator person or thing that makes implementation of program interventions and activities easier

feasibility standards benchmarks involving the consideration of resources, which include money, time, and effort, that are available to conduct program evaluation

formative evaluation an assessment that occurs during program development to confirm that program interventions are feasible and appropriate

impact evaluation an assessment to determine the degree to which the community health program has achieved its primary goal

outcome evaluation an assessment of the extent to which the program achieves its objectives within the target population and the effect the program has on the target populations' knowledge, attitudes, and behaviors

plain language communication that is visually appealing, logically organized, appropriate for the intended audience, and understandable at the first reading

process evaluation an assessment focused on program implementation processes in order to determine if the program has been implemented as planned and in the most efficient way

program evaluation ongoing, systematic collection, analysis, and use of data to examine program efficacy, effectiveness, and efficiency to make decisions about current and future health programs

propriety standards criteria used to confirm that program evaluation is fair and ethical

recruitment finding community members from the target population to participate in a community health program

retention continued participation in a community health program until completion

sustainability continuation of community health programs by decreasing dependence on one source of funding and shifting to a new funding stream because the program is valued, cost and resource efficient, effective, and supported by the community

utility standards specifications for determining who needs evaluation information, what information is needed, the purpose of evaluation, and how the information will be used

Review Questions

1. A nurse is planning a community program to decrease youth substance misuse. Which strategy could the nurse implement to promote participant recruitment?
   a. Hold meetings in evening at a local church
   b. Integrate activities into the regular school schedule
   c. Collaborate with the school principal when developing materials
   d. Assess parent and guardian perceptions of youth substance misuse

2. The nurse evaluates how activities were implemented and what resources were needed to carry out a community health program. Which type of evaluation is the nurse using?
   a. Formative
   b. Process
   c. Outcome
   d. Impact

3. A nurse using the CDC's Framework for Program Evaluation in Public Health has chosen the evaluation design in collaboration with program partners. Which evaluation activity represents the next step using the framework?
   a. Developing program goals, objectives, and activities
   b. Creating a logic model of the community health program
   c. Sharing results with program partners and the community
   d. Preparing data collection tools to gather from multiple data sources

4. The nurse is developing communication materials for a community health program. What action should the nurse take to create materials incorporating the needs of the intended target population?
   a. Use medical terminology to increase health literacy
   b. Write in the passive voice and end with the key message
   c. Plan to only release the communication on social media sites
   d. Use images and language that represent the target population

5. Which of the following is an internal funding stream the nurse could utilize for community health programs?
   a. Grants
   b. Sponsorships
   c. Earned income

d. Indirect funding

6. When planning a community health program, which is the best method to ensure the target population's sociocultural and linguistic needs are met?
   a. Incorporate knowledge about the culture into activities
   b. Hire an interpreter to assist with program delivery
   c. Include community members in program planning and implementation
   d. Ensure staff are culturally competent

7. The nurse is analyzing the sustainability of a community health program. Which finding would indicate that a program may need to be discontinued?
   a. Partner support and resources are adequate.
   b. New funding sources need to be identified.
   c. Program goals and objectives have been met.
   d. Attendance is low due to community lack of interest.

8. Which data source would a nurse use to perform an impact evaluation of an existing community health program?
   a. Participant surveys completed prior to and on the final day of the program
   b. Participant surveys completed prior to and 90 days following the program
   c. Local community health assessment prior to and following the program
   d. Local community health assessment following program conclusion

9. Which action by the nurse is an example of community health program sustainability?
   a. Soliciting another funding source to continue a program
   b. Using the same funding source to offer a program
   c. Decreasing the number of community partners
   d. Discontinuing the program due to lack of interest

10. The nurse is looking at different tools to communicate efficiently with the community. Which health activity would be appropriate for the nurse to communicate using a billboard?
    a. Providing health education to an identified at-risk population
    b. Increasing community awareness of common health issues
    c. Prompting discussion regarding common health issues
    d. Recruiting partners for a community health program

CHAPTER 21

Cultural Influences on Health Beliefs and Practices



FIGURE 21.1 The ever-increasing multicultural population in the United States requires nurses to recognize and appreciate cultural differences in health care values, beliefs, and customs. (credit: modification of work by Michael Quinn/NPS/Flickr, CC BY 2.0)

CHAPTER OUTLINE

21.1 Race, Ethnicity, Culture, and Nationality

21.2 Cultural Groups and Formation of a Cultural Identity

21.3 The Role of Culture in Shaping Health Beliefs and Practices

21.4 Overview of Cultural Views and Practices

21.5 Culture Matters in Addressing Health Inequalities

INTRODUCTION On a bustling night shift at an urban hospital in a diverse city, Nurse Sampson is ready to care for a varied group of clients, each with their own cultural and personal background. Using a client-centered approach, Nurse Sampson is committed to providing the best care possible.

The increasingly multicultural U.S. population highlights the need for nurses to recognize and appreciate cultural differences in values, beliefs, and customs. Providing culturally sensitive care improves health outcomes and ensures that health care is accessible and equitable for all clients. By embracing culturally responsive care and cultural humility, nurses can navigate the complexities of cultural diversity and deliver effective and compassionate care, which can contribute to a more equitable and accessible health care system for everyone.

The chapters in this unit consider many facets of culturally congruent care, including the need for this type of care, guiding theoretical perspectives, approaches, and tools nurses can use. This chapter explores the relationship between culture and health and addresses how cultural factors may influence health beliefs, behaviors, practices,

and health outcomes. It emphasizes the importance of recognizing that clients may have different expectations regarding communication, space, social organization, time, dietary practices/preferences, and environmental control from those held by the nurse, health care provider, and dominant culture. Transcultural Nursing explores cultural models and the significance of cultural assessment in the provision of culturally sensitive care for individuals from diverse backgrounds. Culturally and Linguistically Responsive Care examines the journey toward becoming a culturally responsive nurse, while Culturally and Linguistically Appropriate Program Design provides practical tools for culturally responsive care. Finally, Managing the Dynamics of Difference applies the nursing process to a nurse's personal journey of becoming more culturally responsive.

21.1 Race, Ethnicity, Culture, and Nationality

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 21.1.1 Describe the racial and ethnic makeup of the United States.
- 21.1.2 Explain the concept of diversity.
- 21.1.3 Identify the groups utilized in diversity calculations.
- 21.1.4 Discuss the ways in which race and ethnicity describe diversity.
- 21.1.5 Differentiate between race, ethnicity, culture, and nationality.

Diversity in the the United States is not new. Before the country's founding, Native Americans lived in what is now the United States, and settlers immigrated from England, France, Germany, the Netherlands, Poland, Scotland, and other European countries. At the start of the American Revolutionary War in 1775, "more than 250,000 Native Americans lived east of the Mississippi River. They formed more than 80 nations and spoke dozens of languages and dialects" (Museum of the American Revolution, n.d., para. 1).

The U.S. population continues to increase—by 2060 it is projected to number 417 million, and as the population grows, it is becoming increasingly more diverse (U.S. Census Bureau, n.d.). To meet the needs of this multicultural population, nurses must recognize and appreciate the differences in health care values, beliefs, and customs in a diverse society.

The Difference Between Race, Ethnicity, Culture, and Nationality

Race, ethnicity, culture, and nationality are distinct but interconnected concepts that influence how individuals identify and interact. Race is a form of social categorization often based on physical appearance, while ethnicity is tied to social and cultural affiliations (A. García, 2018; J. D. García, 2020). Culture is a broader concept that encompasses learned and shared patterns of behavior, and nationality pertains to one's country of citizenship. These factors can influence human behaviors, beliefs, values, and interactions in a community (Smith & Bond, 2019).

Though these terms have distinct meanings, they are often used interchangeably. As discussed in Structural Racism and Systemic Inequities, **race** is a societal construct that is commonly defined by physical characteristics, such as bone structure, skin, hair, or eye color, as well as social factors and cultural backgrounds. However, race is not biologically predetermined, and different racial categories may not reflect shared genealogy. Unlike heritage or ancestry, race is assigned rather than inherent or chosen. It is a dynamic and evolving concept that is influenced by historical, societal, and political contexts (Jones & Bullock, 2019). The use of racial categories in demographic counts can be traced back to the 1790 U.S. Census.

RACE: A MYTH AND AN ILLUSION

Access multimedia content (http://openstax.org/books/population-health/pages/21-1-race-ethnicity-culture-and-nationality)

Though racial categories have been used in the U.S. Census for hundreds of years, these categories are social constructions, rather than biological facts.

Read RACE: The Power of an Illusion (https://openstax.org/r/pbsorg), watch the video "The Myth of Race, Debunked," and then respond to the following questions.

1. How have racial definitions changed over time?
2. How do demographic shifts and the sociopolitical climate influence the definition of racial categories?
3. What, if anything, surprised you in this video?

Unlike race, the social and cultural groups one belongs to determine their ethnicity. **Ethnicity** is a fluid concept rooted in shared cultural traits such as language, religion, nationality, history, or other cultural factors that bind individuals into distinct social groups. Ethnicity is inherited and shared among a group. Like race, the definition of ethnicity evolves over time and can be broadly or narrowly constructed. While everyone is "born into" certain features of ethnicity, personal experiences and societal influences can reshape these characteristics (A. García, 2018; J. D. García, 2020).

Culture has no single definition and is both universal and personal. Definitions in the literature indicate that culture:

- is learned, shared, and transmitted (McFarland, 2018);
- involves patterned responses to behavior (Giger & Haddad, 2021);
- is a historically transmitted pattern of meaning (Forbes & Mahan, 2017);
- is a learning process (Spradley et al., 2016); and
- distinguishes the members of one group of people from others (Hofstede, 2011).

Nationality denotes an individual's country of citizenship. In the 19th century, nations were formed based on ethnic nationalism, which presumed a shared ethnic origin among their people. Examples include Britain, Germany, Italy, and Sweden. Table 21.1 compares the concepts of race, ethnicity, culture, and nationality.

Social and cultural factors play a significant role in shaping the dynamics of societies. These factors encompass a broad range of elements that influence human behaviors, beliefs, values, and interactions in a community (Smith & Bond, 2019).

	Race	Ethnicity	Culture	Nationality
Definition	A social construct used to categorize or divide individuals based on physical traits, social factors, and cultural backgrounds; not biologically based	Based on everyday ancestral, cultural, national, and social experiences	Based on beliefs, values, norms, and practices that are learned and shared generation by generation	Refers to the country of citizenship
Examples	Black, White, Asian, etc.	Albanian, Amish, Cherokee, English, Polish, Libyan, etc.	American culture, Arab culture, British culture, etc.	Afghan, Chinese, Cuban, Italian, French, etc.

TABLE 21.1 Comparison of Race, Ethnicity, Culture, and Nationality

The Racial and Ethnic Makeup of the United States

Over the last 100 years, the racial and ethnic makeup of the United States has changed dramatically. In fact, in just 10 years, the country has experienced a 276 percent growth in the population of people identifying as two or more races (Jones et al., 2021). While these changes may be due, in part, to a change in the way the the 2020 U.S. Census framed questions about racial and ethnic identification, both the change in the way the questions were asked and the responses suggest a shift in the way Americans think about their racial and ethnic identities toward the embrace of more nuanced multiethnic and multiracial identities. In 2021, the United States was more diverse than in 2010, with the Hispanic/Latino population growing the most, increasing by 2.5 percentage points to 18.9 percent. Conversely, the White, non-Hispanic/Latino population experienced the most significant decrease, dropping by 4.5 percentage points to 59.3 percent. As discussed in Demographic Trends and Societal Changes, the United States will become a majority-minority nation by mid-century because of a decreasing non-Hispanic White population and an increasing minority population (USAFacts, 2022) (Figure 21.2).

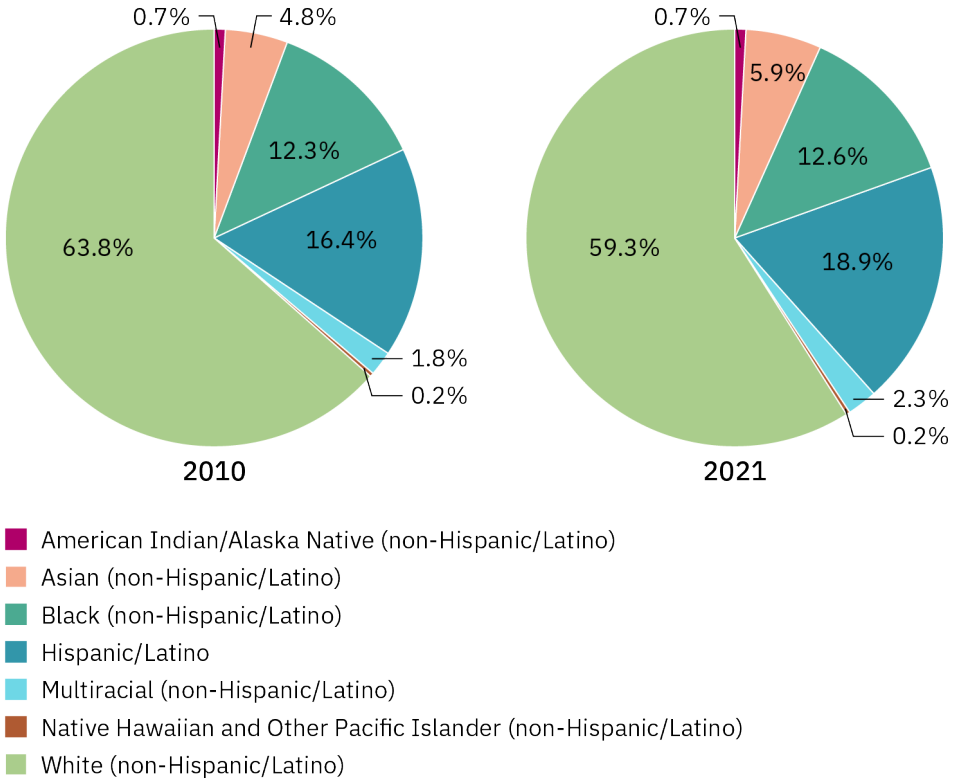


FIGURE 21.2 Between 2010 and 2021, the Hispanic/Latino populations grew the most, increasing by 2.5 percentage points to 18.9 percent. The White, non-Hispanic/Latino population had the most significant decrease, dropping by 4.5 percentage points to 59.3 percent. (data source: U.S. Census; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Diversity refers to the relative size and representation of different racial and ethnic groups—the heterogeneous rather than homogenous nature of the mix of these groups in a population. The U.S. Census uses the following groups in its diversity calculations (Jensen et al., 2021):

- Hispanic/Latino
- White alone, non-Hispanic/Latino
- Black or African American alone, non-Hispanic/Latino
- American Indian and Alaska Native alone, non-Hispanic/Latino
- Asian alone, non-Hispanic/Latino
- Native Hawaiian and other Pacific Islander alone, non-Hispanic/Latino
- Some other race alone, non-Hispanic/Latino
- Multiracial, non-Hispanic/Latino

The United States is a **heterogeneous society**, with people from various ethnicities, cultures, and religions coexisting. Belgium is a European example of a heterogenous society. Belgium is known for its linguistic diversity, with three official languages: Dutch (Flemish), French, and German. The country is divided into distinct regions, including Flanders, Wallonia, and the Brussels-Capital Region, each with its own language and cultural characteristics. In addition to these linguistic divisions, Belgium is home to immigrant communities from various countries, further contributing to its heterogeneous nature (Droixhe & Gsir, 2017). India is another example of a heterogenous society. According to the most recent Census of India data, from 2011, the country has 30 different native languages. The most spoken language, Hindi, is spoken by just 43.6 percent of the population. The next five most spoken languages are Bengali (8 percent), Marathi (6.9 percent), Telugu (6.7 percent), Tamil (5.7 percent), and Gujarati (4.6 percent) (Office of the Registrar General and Census Commissioner, India, 2011). In terms of religious diversity, while the country is more than 80 percent Hindu, it also has large Buddhist, Jain, and Muslim populations and the largest Sikh population in the world (Kramer, 2021). In 2012, the U.S. State Department estimated that there were more than 2,000 ethnic groups in India (U.S. Department of State, 2012).

In contrast, countries such as Japan and South Korea are primarily made up of one dominant culture, making them **homogeneous societies**. Japan is predominantly made up of people of Japanese ethnicity, though there are also

minority groups such as Ainu, Ryukyuan, and Korean communities that contribute to the country's cultural diversity. South Korea is also primarily comprised of people of Korean ethnicity, with other minority groups making up a smaller proportion of the population.

The coexistence of diverse religious, ethnic, or cultural groups in a society, all adhering to the same rules, is called **multiculturalism** (Longley, 2021). In contrast, in **cultural pluralism**, there is one dominant society in which all minority groups participate fully (Clayton, 2020). *Pluralism* refers to multiple cultures existing in the same place with their own unique traditions and regulations. There is typically a dominant culture in pluralism, whereas no single culture holds more importance than the others in multiculturalism.

The success of immigrants in their new countries is greatly influenced by their ability to assimilate, integrate, and/or adapt. The United States is often associated with multiculturalism because of the religious, ethnic, and cultural diversity of its population. However, as a pluralistic rather than truly multicultural society, the United States has a dominant culture and allows minority groups to maintain their unique identities in the larger society. This coexistence of a dominant culture and diverse minority groups can result in positive aspects, such as cultural enrichment, but it can also create challenges, including differential treatment and variations in societal rules (Ziólkowska-Weiss, 2020). Despite efforts to promote inclusivity and tolerance, disparities may persist due to deep-rooted structures and systemic issues (Solomon et al., 2019). These issues are discussed in more detail in Structural Racism and Systemic Inequities.

While *race* and *ethnicity* are commonly used terms to describe diversity, they do not necessarily describe a person's cultural identity. A person can have multiple racial and ethnic backgrounds, and reducing culture to a broad categorical or dichotomous variable in a culturally pluralistic society can hide the individual differences that exist in groups of people. Therefore, it is essential to recognize the underlying intragroup variations and acknowledge the complexity of cultural identity in a diverse society (Singer, 2012; Singer et al., 2016). Culture is much more than a racial or ethnic category.

21.2 Cultural Groups and Formation of a Cultural Identity

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 21.2.1 Explain the concept of culture.
- 21.2.2 Distinguish between nonmaterial and material culture.
- 21.2.3 Identify cultural traits.
- 21.2.4 Describe the visible and invisible elements of culture.
- 21.2.5 Differentiate between individualistic and collective cultural traits.

As discussed previously, culture has no single definition and is both universal and personal. The best way to conceptualize culture is as a set of learned patterns of beliefs, behaviors, ideas, philosophies, and practices that are shared. These cultural elements are not constant but are formed throughout an individual's lifetime.

Cultural Groups, Patterns, and Expression

A **cultural group** shares a core set of beliefs, patterns of behavior, and values. These groups may be large or small, but their thinking and behavior identify them. Cultural groups are defined by not only racial or ethnic background but also by linguistic, religious, spiritual, geographical, and/or sociological characteristics (Office of Minority Health, 2013). Cultural groups consist of **subcultures**, also known as aggregates; a subculture shares distinguishing characteristics that may identify with aspects of its larger parent culture. For example, children born between the early 2010s and the mid-2020s are part of Generation Alpha, a subculture based on generation.

Cultural patterns of behavior are socially acquired, not genetically inherited. Patterns specific to a particular culture are learned through the process of **enculturation**. Social institutions such as the family, religion, the education system, peer groups, community, and the media play a role in enculturation. Each culture shares a particular set of cultural traits, such as rituals, which serve as the fundamental structures of culture. Cultural traits are material (objects or artifacts) and nonmaterial (ideas or values). In each culture, thousands of cultural traits influence identity formation (Fabietti, 2016). Over time, the shared beliefs, values, and norms create cultural patterns that distinguish the group from other cultures.

Culture is like an iceberg with visible and hidden elements (Figure 21.3). Visible cultural elements include dress, food, language, and art. Visible elements are tangible. However, visible elements only make up about 10 percent of cultural identity. The other 90 percent is made up of hidden or invisible elements. Invisible elements are the intangible parts of a culture, such as communication styles, rules, etiquette, views of time and space, and emotional regularity (Hall, 1976). These elements are the most powerful features of culture, shaping perceptions, attitudes, beliefs, and values. Culture informs beliefs regarding what is true and false; values of right and wrong; attitudes, including likes and dislikes; and behaviors. It is from these cultural influences that people's identities are formed (University of Minnesota Libraries Publishing, 2016).

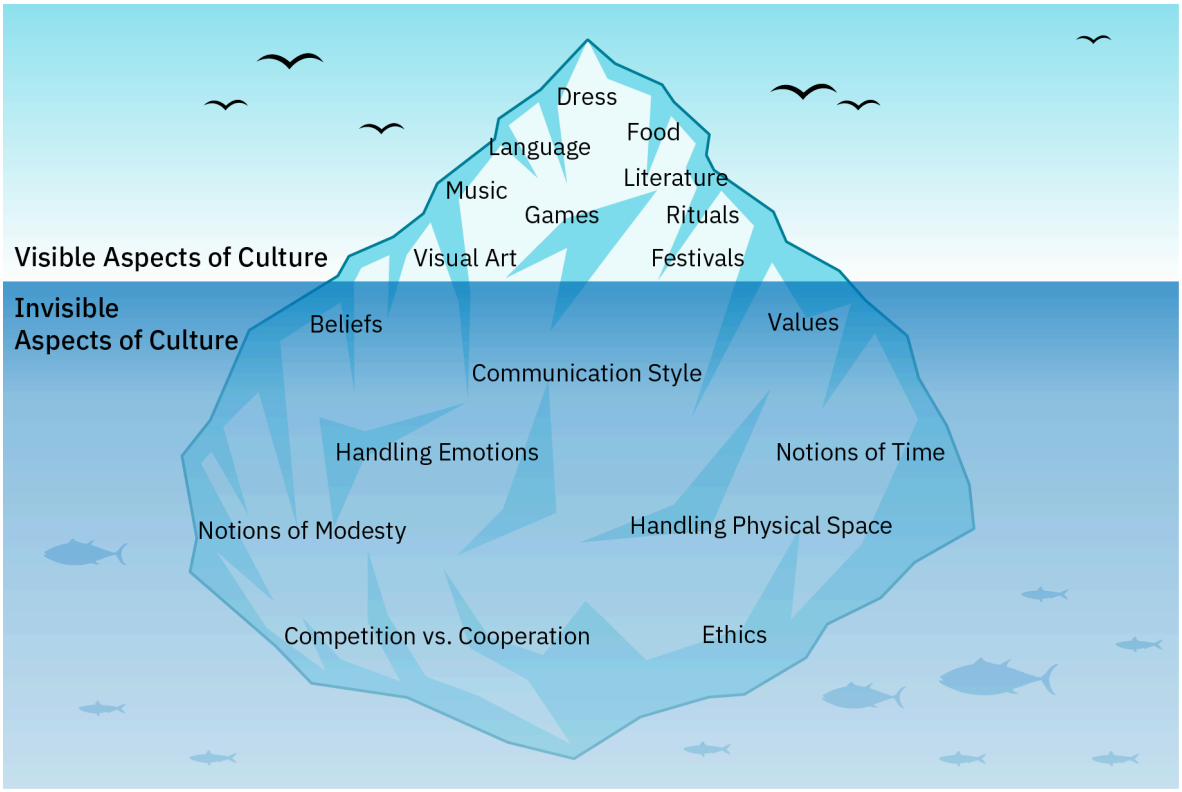


FIGURE 21.3 Culture has visible and invisible elements. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Culture informs how one is socialized to interact with other people and communities. For example, in an individualistic culture, individuals are socialized to be independent and psychologically separate from others. In comparison, collectivist cultures encourage interdependence and promote the interests of the collective over the individual (Fatehi et al., 2020).

For example, Western cultures, including the United States, emphasize the *self* as independent and separate from others. This independence is expressed by focusing on *self*-goals, wishes, and desires. Common expressions in an individualistic culture are *self-fulfillment* and *self-actualization*. In comparison, some Asian cultures emphasize interdependence and fitting in to maintain harmony (Fatehi et al., 2020).

People express their culture in a variety of ways. Examples are traditions, symbols, clothing, foods, and ways of doing things or behaving. From a theoretical perspective, there are two types of culture: nonmaterial and material. Nonmaterial, or symbolic, culture includes elements such as values, beliefs, symbols, and languages. In contrast, material culture relates to physical objects such as clothing, utensils, and tools.

Cultural Identity

Personal identity is influenced by the cultural groups an individual belongs to that form their social identity. These cultural groups may be involuntary (family) or voluntary (book club). Social identities represent who an individual is and who they are not. Food, clothing, celebrations, and religion are all manifestations of culture, and each plays a role in shaping and reinforcing cultural identity and community. The interconnection of an individual's cultural, personal, and social identities helps form their self-concept and their cultural identity.

- Food: Different cultures have different culinary traditions in the types of popular foods and the ways of preparing and consuming food. For example, in many parts of Asia, it is customary to eat with chopsticks, while in the Western world, using a fork and knife is more common. In some cultures, it is considered rude to waste any part of an animal when cooking. Some cultures also believe that certain foods or drinks have medicinal or spiritual properties.
- Clothing is another important aspect of culture; different cultures have different dress codes and styles. For example, in some cultures, it is customary for women to cover their heads or wear long dresses or skirts, while men in some cultures wear traditional robes or hats.
- Holidays and celebrations: Different cultures celebrate various holidays and festivals that are significant to their beliefs, history, and traditions. For instance, the Lunar New Year is a major holiday celebrated across Asia and many other parts of the world. Recognizing its importance, New York State has officially declared the Lunar New Year a public school holiday through legislative approval (New York State, 2023).
- Religious practices: Religion plays a vital role in many cultures, and different religions have their own rituals and practices. For example, Muslims are expected to pray five times a day facing Mecca, while Hindus perform puja ceremonies and offer food and flowers to their deities.

Social Organization

Social organization, or how societies are structured and organized, influences culture, from the distribution of power and resources to the values and beliefs transmitted through education.

Here are a few ways in which social organization can influence culture:

- Power structures: The distribution of power and authority in a society can impact cultural practices. For example, in societies where power is concentrated in the hands of a few, cultural practices may reflect and reinforce this power dynamic. Similarly, cultural practices may reflect a more egalitarian ethos in societies where power is more broadly distributed.
- Social hierarchies: Whether and how social groups are organized and ranked in a society can also shape cultural practices. For example, in societies with rigid caste systems or class hierarchies, cultural practices may reflect and reinforce these social distinctions. In societies with more fluid social hierarchies, cultural practices may be more diverse and flexible.
- Economic systems: How resources are produced, distributed, and consumed in a society influences cultural practices. For example, cultural practices may be more individualistic and consumer-oriented in societies with advanced capitalist economies. In contrast, cultural practices in societies with more collectivist or communal economic systems may focus more on community and shared resources.
- Education: Attitudes regarding education can shape cultural practices. For example, in societies where education is valued and accessible, cultural practices may emphasize learning and intellectual pursuits.

21.3 The Role of Culture in Shaping Health Beliefs and Practices

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 21.3.1 Explain the cultural significance of health.
- 21.3.2 Assess how culture influences health.
- 21.3.3 Describe how the cultural environment informs cultural development.

The World Health Organization (WHO) introduced the modern understanding of health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity” in its constitution in 1948 (Svalastog et al., 2017). In 1986, the Ottawa Charter, signed at the First International Conference on Health Promotion, proposed that health is created in the context of everyday life and environment, where people live, love, work, and play. Societies have historically recognized health as not just the absence of disease but a state of internal harmony. Beliefs about how harmony is created and maintained distinctly influence views on the causes and effects of illness, health-seeking behavior, healing practices, coping mechanisms, and treatment modalities. These views influence one’s sense of control over health, illness, and death.

Historical Views of Health Informing Health-Related Belief Systems

During the period known as ancient Greece, which spanned from the beginning of the Greek Dark Ages around 1200 BCE to the fall of the Western Roman Empire around 600 CE, health was viewed as a harmony between an individual and their surroundings, a unity of both body and soul. Greek philosophy placed great importance on maintaining a healthy body and mind. The Greeks viewed the origin of disease as connected with the geographical and atmospheric environment. In ancient Greece, treatment modalities focused on natural preparations, such as seawater, honey, vinegar, rainwater, and medicinal plants (Kleisiaris et al., 2014).

In East Asian traditions, health results from the unity of body, mind, and spirit, with disease resulting from being off balance. Yin and yang are the underlying principles of Chinese philosophy and medicine. Good health is believed to come from a balance of yin (negative, dark, and feminine) and yang (positive, bright, and masculine) (National Library of Medicine, 2023). The concept of harmony and unity of yin and yang is still practiced today. In some traditional African cultures, health is a balance between the mental, physical, spiritual, and emotional well-being of self, family, and community. Good health includes the ancestors' health, as the ancestors are responsible for keeping the living healthy. Disease is viewed as the result of evil attacks (including spell casting and witchcraft), bad spirits, or punishment by ancestors. Therefore, health is achieved by balancing the visible and invisible worlds (White, 2015). Traditional African practices have influenced views of health and disease globally. For example, Indigenous African beliefs gave rise to the Vodun or Vodou religion (Auguste & Rasmussen, 2019).

Similarly, Native Americans have traditionally believed that physical and spiritual health are connected. To overcome illness, the body and the soul must heal together. Healing ceremonies include prayer, chants, drumming, storytelling, songs, and sacred objects. Concepts of the Spirit, the Creator, and the universe are central to Native beliefs (National Library of Medicine, n.d.-a). The medicine wheel, also called the sacred hoop, has been used by generations of Native American tribes (National Library of Medicine, n.d.-b). The medicine wheel is symbolic of health and the cycles of life. Each tribe has its own interpretation of the medicine wheel, and such wheels continue to be used today. For example, the Medicine Wheel and 12 Steps recovery program is a culturally appropriate 12-step recovery program for Native Americans and Alaska Natives, based on the cycle of life and the four laws of change depicted by the wheel.

CONVERSATIONS ABOUT CULTURE

Medicine Wheel Teaching with Elder Elsey

Access multimedia content (http://openstax.org/books/population-health/pages/21-3-the-role-of-culture-in-shaping-health-beliefs-and-practices)
In this video, Elder Elsey Gauthier speaks about the medicine wheel concept.

Watch the video, and then respond to the following questions.

1. What do the four quadrants of the medicine wheel represent?
2. What is the significance of ceremonies?
3. Describe what it means to be part of the same circle.

The writings of Plato, Aristotle, and Hippocrates influenced the understanding of health in many societies. Plato (429–347 BCE) viewed health as internal harmony and harmony with the physical and social environment. Aristotle associated health with the four basic qualities: hot, cold, wet, and dry. These qualities characterize the four elements, four humors, and four temperaments and serve as the foundations for all notions of balance and homeostasis in ancient Greek medicine. Aristotle emphasized society's role in achieving its harmonious functioning and preserving its members' health (Svalastog et al., 2017). He associated health with the supreme good for humanity, or *eudaimonia*, a philosophical term utilized today as "human flourishing." Hippocrates, widely recognized as the father of medicine, proposed that health depended on the human constitution, proper diet, and exercise. The concept of harmony between the individual, social, and natural environments informed the current holistic health view. Such concepts are reflected in the Hippocratic oath (Kleisiaris et al., 2014).

How people understand health and illness, their beliefs about disease causes, and their strategies to maintain health can vary greatly depending on cultural factors such as beliefs, values, and social norms. For example, in some

cultures, physical and mental health are viewed as interconnected, and holistic approaches to health care are preferred, which may include traditional healing practices, meditation, or herbal remedies. In other cultures, medical treatments may be more focused on addressing specific symptoms, rather than considering the overall health and well-being of the individual.

The Cultural Environment

An individual's **cultural environment** refers to the social, economic, political, and historical factors that shape their experiences and beliefs in a particular culture. This includes the language they speak, the values they hold, the traditions they follow, and the cultural practices they engage in. The cultural environment also includes a culture's social and institutional structures, such as family dynamics, religious institutions, and political systems. The cultural environment can be defined as ecological systems at various levels: microsystems, mesosystems, exosystems, macrosystems, and chronosystems.

The microsystem level consists of the immediate environment in which an individual interacts, including family, friends, and other close relationships. Cultural factors at this level may include family traditions and beliefs, cultural values, and customs related to health and wellness.

The mesosystem level refers to the interactions between different microsystems. For example, at the micro level, family organization influences routine practices essential to psychological health and well-being. Family rituals foster a sense of belonging and personal identity (Fiese et al., 2002). Sharing meals can be an essential family ritual that helps create a sense of togetherness and belonging. Mealtime rituals such as saying grace or having a family member cook a particular dish can be meaningful and reinforce family traditions. Community-level networks promote an individual's and family's physical, psychological, social, and spiritual well-being (Figure 21.4).

Social organizations can affect how community members interrelate, cooperate, and support one another and influence expectations of support norms and social controls that regulate behavior and interaction patterns (Mancini & Bowen, 2013). Cultural factors at this level may include communication styles, expectations around health care, and cultural beliefs related to health and illness.



FIGURE 21.4 The mesosystem level includes community gatherings, such as this Thanksgiving dinner, which was shared by over 900 members of the Presidio of Monterey military community in California. (credit: "Thanksgiving 2015" by Catherine Caruso/Presidio of Monterey Public Affairs/Flickr, Public Domain)

The exosystem level refers to the external systems and institutions that influence an individual's life, such as the health care system, educational system, and media. Cultural factors at this level may include access to culturally appropriate health care, cultural stereotypes, and media portrayals of health and wellness.

The macrosystem level refers to the broader cultural context in which an individual lives, including societal beliefs, values, and norms. Macrosystems can influence access to resources, including health care. For example, immigration policies may make it difficult for migrant workers and immigrants to seek care due to fear of deportation (Toney et al., 2022). In the United States, immigrants are only eligible to receive benefits or have coverage after being "qualified," frequently termed a waiting period. In addition, to qualify for Medicaid and the Children's Health Insurance Program (CHIP), a lawful permanent resident (LPR), also known as a green card holder, must have at least 5 years of residence in the United States (Turner, 2023). See Caring for Vulnerable Populations and Communities for more information. Cultural factors at this level may include cultural attitudes toward health and wellness, cultural norms related to health behaviors, and policies and laws related to health care access.

The chronosystem level refers to the influence of time and history on an individual's cultural experiences, including generational and historical changes in cultural beliefs and practices related to health and wellness.

The cultural environment shapes an individual's perception of the world and influences behavior, including health behavior. It influences perceptions of health, illness, and death; coping mechanisms; and the experience and expression of illness and pain (Agency for Healthcare Research and Quality, 2020).

Cultural Beliefs and Practices Related to Health and Illness

Different cultures have unique beliefs and practices regarding health, illness, and healing, which can influence how individuals approach and manage their health. Health beliefs influence how people think and feel about their health and health problems, when and from whom they seek health care, how they respond to health care interventions, and how well they adhere to treatment (Swihart et al., 2023). For example, in some cultures, people believe that talking about a possible poor health outcome will cause that outcome to occur.

Death and Dying

Different cultures have unique beliefs and practices regarding death, mourning, and the afterlife, which can influence how individuals approach the end of life. In some cultures, mourning may involve specific rituals or customs, such as wearing specific clothing, preparing the deceased, or observing specified periods of mourning. In other cultures, mourning may be less formalized or structured (Giger & Haddad, 2021).

CONVERSATIONS ABOUT CULTURE

Death and Dying: Cultural and Religious Perspectives

Access multimedia content (http://openstax.org/books/population-health/pages/21-3-the-role-of-culture-in-shaping-health-beliefs-and-practices)

This video delves into death, exploring the concept and how cultural and religious perspectives shape our understanding of it.

Watch the video, and then respond to the following questions.

1. How do different cultures conceptualize death, and in what ways do these conceptualizations impact individuals' views on end of life, readiness to die, and funeral rituals?
2. How does death anxiety manifest across various cultures, and in your opinion, do cultural factors contribute to or alleviate this anxiety?
3. How do different religious beliefs influence funeral practices and rituals in the context of death?
4. Select an example of a funeral ritual from the video and describe how it reflects cultural values and beliefs.

Coping Mechanisms

Coping mechanisms are the strategies and behaviors that individuals use to manage stress and difficult situations. Various cultures have unique coping mechanisms that reflect their values, beliefs, and practices. For example, some cultures may use spiritual practices, such as prayer or meditation, to cope with stress or illness. Others may rely on social support networks like family or community members (Giger & Haddad, 2021).

Perception and Reporting of Illness

Culture can shape how individuals perceive and report symptoms. For example, some cultures may view mental

health symptoms (such as depression) as a sign of weakness or moral failing and may be less likely to seek help or report these symptoms. In contrast, other cultures may prioritize mental health and view seeking help as a sign of strength. Differences also exist regarding the meaning of an illness and whether an illness is "real" or "imagined" (Giger & Haddad, 2021).

Pain and Discomfort

Many cultures have unique beliefs, values, and practices that shape their experiences of pain and discomfort. For example, in some cultures, it may be common to downplay or minimize symptoms of illness or pain. This may be due to a cultural belief that expressing vulnerability or weakness is undesirable or that complaining about pain is a sign of ingratitude. In contrast, other cultures may encourage individuals to be vocal about their pain and discomfort to seek help and support from others (Giger & Haddad, 2021).

CONVERSATIONS ABOUT CULTURE

Cultural Influence: Perception of Pain

Access multimedia content (http://openstax.org/books/population-health/pages/21-3-the-role-of-culture-in-shaping-health-beliefs-and-practices)

This video depicts the interaction between a health care provider and Carlos, a postoperative client. It addresses issues associated with making assumptions and emphasizes the importance of listening to the client.

Watch the video, and then respond to the following questions.

1. How does culture influence pain response and expression?
2. Could the physician have responded differently to Carlos's request? If so, how?
3. How do assumptions regarding drug-seeking behavior impact client care?

21.4 Overview of Cultural Views and Practices

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 21.4.1 Explain how generalizations and stereotypes impact health outcomes.
- 21.4.2 Describe various cultural practices and views of the world.
- 21.4.3 Identify shared cultural beliefs, values, and customs influencing health.
- 21.4.4 Develop care plans that consider the impact of cultural influences on disease management.

Disregarding cultural elements in clinical practice can lead to low-quality or unsafe care, such as perfunctory or inadequate evaluations, errors in diagnosis, unsuitable treatment plans, or noncompliance by clients and families (Johnson-Lafleur et al., 2023).

Developing cultural awareness as to how people acquire certain practices in their cultures and the role that culture plays in forming individual personal identity, worldview, lifestyle, and health beliefs and practices is essential preparation for Transcultural Nursing, which will revisit Giger and Davidhizar's transcultural model from the perspective of conducting a cultural assessment.

Cultural Generalizations and Stereotyping

Broad observations about a culture's shared characteristics or patterns are known as cultural generalizations. These generalizations are not necessarily positive or negative and can describe cultural practices, values, or traditions. For instance, it is a cultural generalization to say that family values are highly emphasized in many Asian cultures or that punctuality is highly valued in some European countries. It is important to recognize that these generalizations are tendencies, not universally applicable traits. They can provide insights into the cultural norms of a particular group and promote cultural awareness and sensitivity, but they should be used thoughtfully and cautiously.

On the other hand, stereotyping involves making oversimplified assumptions about individuals or groups based on their cultural backgrounds. It often results from prejudices, biases, or limited knowledge and leads to the unfair characterization of an entire group based on the actions or behaviors of a few individuals. Examples of stereotyping include assuming that all members of a particular ethnicity are good at math or all people of a certain nationality are

loud and aggressive. Stereotyping is damaging and perpetuates harmful biases, leading to discrimination and exclusion of individuals based on their cultural background.

Even though cultural groups may share customs, traditions, and ways of life, there is always diversity and individuality in any culture. Judgments about a particular culture are often based on a limited number of observed characteristics, which can be oversimplified, misrepresented, exaggerated, or distorted. This can lead to false assumptions and stereotyping based on race, gender, religion, or culture, resulting in prejudice, ecological fallacies, and discrimination. As the multicultural population in the United States continues to grow, it is crucial for nurses to recognize and appreciate cultural differences in health care values, beliefs, and customs.

To create a more inclusive and understanding society, it's important to distinguish between cultural generalizations and stereotypes. Nurses should strive to learn and appreciate the uniqueness and diversity within cultures while recognizing that each person has their own beliefs, values, and experiences that may or may not align with cultural generalizations. By promoting cultural competence and avoiding stereotypes, nurses can minimize misunderstandings and negative interactions.

Cultural Practices and Views of the World

How someone views the world, or their worldview, has a big impact on their health and approach to health care. Different societies and cultures have their own beliefs, values, and attitudes toward health and illness, which affect how they behave, seek health care, and interact with the health care system.

These cultural practices and views are shaped by factors like history, society, religion, and the environment. They affect how people communicate, feel about personal space, organize socially, perceive time, control their environment, and form dietary habits. These concepts are part of the transcultural model developed by Giger and Davidhizar, which is introduced in Transcultural Nursing.

As health care providers, nurses must acknowledge and appreciate the impact of cultural factors on health to deliver effective and culturally sensitive care. This requires nurses to embrace cultural diversity and be receptive to diverse perspectives. By doing so, nurses can broaden their understanding of the world and contribute to a more inclusive and harmonious global community. Providing culturally responsive health care promotes trust, enhances communication, increases treatment adherence, and leads to better health outcomes for individuals from diverse cultural backgrounds.

Communication

Culture influences everything from language and nonverbal communication to communication styles and the values and beliefs that underlie communication. Communication is learned, transmitted, universal, and inclusive of human interaction and behavior. Although two individuals may speak the same language, differences can exist in communication patterns and understandings because of cultural orientation. Culture influences linguistic patterns, how feelings are expressed, and the appropriateness of verbal and nonverbal expressions (Giger & Haddad, 2021).

Verbal communication is associated with languages, including vocabulary and grammatical structure (Halliday, 2006). Language is a form of verbal and written communication and a key component of culture, with different cultures having different languages, dialects, and accents. Language affects what one says and how they say it, so cultural language differences have an impact on how people communicate. For example, some cultures may emphasize formality and politeness in their language use, while others may be more blunt and more direct.

In comparison, body language or motion (kinetic behavior) is an example of nonverbal communication. **Nonverbal communication** conveys messages without words. Different cultures may use different nonverbal cues to convey meaning or express emotion. In some cultures, direct eye contact may be seen as a sign of respect and engagement. For example, some Haitian Americans use direct eye contact to gain attention and respect during communication. In comparison, others may see this as disrespectful or confrontational. For example, among some Vietnamese Americans and Native Americans, avoidance of eye contact is a sign of respect. Among other cultures, such as Mexican Americans, looking at and admiring a child without touching them can be viewed as giving the child the "evil eye" (Giger & Haddad, 2021). In Buddhist cultures, the head is considered sacred, as it is the highest part of the body, and patting the head is considered rude, while the feet are considered dirty. Table 21.2 lists examples of

verbal and nonverbal forms of communication.

Verbal Forms of Communication	Nonverbal Forms of Communication
• Vocabulary • Grammatical structure • Voice qualities • Intonation • Rhythm • Speed • Pronunciation • Silence	• Touch • Facial expression • Eye movement • Body posture • Hand gestures

TABLE 21.2 Forms of Communication

Different cultures may also have different communication styles, such as whether communication is more direct or indirect or whether emotions are expressed openly or kept hidden. These communication styles can impact how messages are received and interpreted by others.

Cultural values and beliefs can influence what is considered appropriate or acceptable to talk about. For example, in some cultures, it may be considered impolite to criticize others openly or to express strong emotions. In others, it may be seen as necessary for honest communication (Giger & Haddad, 2021).

Understanding these cultural differences is essential for effective communication across cultures. Cultural practices affect how people interact with each other. For example, some Alaska Natives seldom disagree publicly with others and may nod yes to be polite, even if not in agreement. In some cultures, it is customary to bow or shake hands when greeting someone, while in others, people may kiss each other on the cheek or give a hug. Among Orthodox Jews and Hasidim, touching, particularly from members of a different sex, is offensive (Giger & Haddad, 2021).

Nurses must be aware of a client's preferences and practices to avoid miscommunication. Nurses should monitor body language and clients closely to detect meaning.

Space

Space is the setting where communication occurs and includes the space surrounding a person's body and the objects in the space. An individual's comfort level is related to inner and outer personal space, which can vary from culture to culture.

Human perception of social and personal space is culturally bound. For example, in Western culture, space is viewed as having four dimensions, or zones: the intimate zone (0 to 18 inches), the personal zone (18 inches to 3 feet), the social zone (3 to 6 feet), and the public zone (6 feet or more) (Figure 21.5) (Hall, 1976). Each dimension or zone has a different purpose. For example, the intimate dimension is associated with comforting, protecting, and counseling. The **personal dimension** is best illustrated as the "friend zone," in which communication with less intimate but still familiar companions occurs. Touch is an essential feature of both the intimate and personal dimensions. The **social dimension** is considered the impersonal business zone and is associated with people working together. Sensory involvement, such as touch, is generally less intense in the social dimension (Giger & Haddad, 2021).

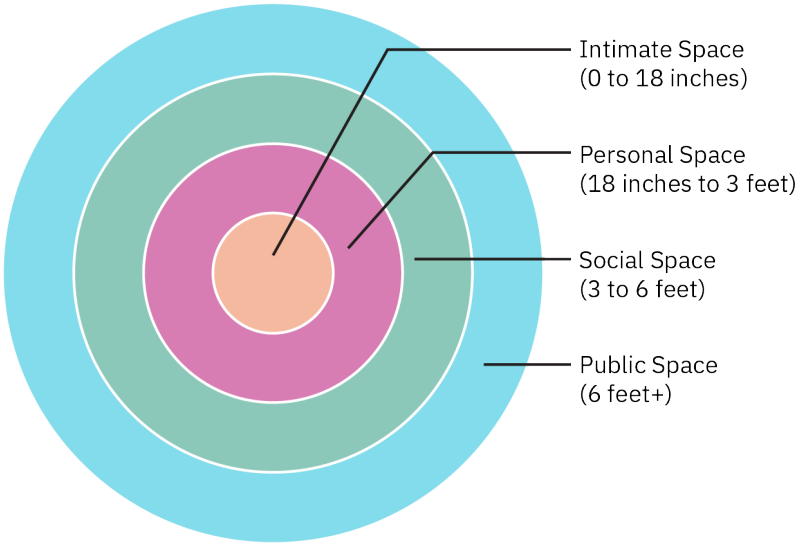


FIGURE 21.5 Western culture has four dimensions of physical distance between people, depending on the situation. Other cultures view personal space differently. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Color can have symbolic cultural implications. For example, in some Asian cultures, white is associated with a funeral, while in some African cultures, red symbolizes death (Giger & Haddad, 2021). The color red may be associated with luck, love, and prosperity in some cultures, while in others it may be seen as a symbol of danger or warning.

Cultural traditions and religious beliefs can also influence color choices. For example, in some African cultures, bright, bold colors are often used in clothing and textiles, reflecting these regions' vibrant and colorful environments. In Christianity, purple is associated with Lent and is often used in liturgical decorations during this season.

Social Organization

As discussed in Cultural Groups and the Formation of a Cultural Identity, social organization refers to the ways in which groups organize themselves. The social organization of societies influences culture, and the social organization of a cultural group, including family structure and organization, religious values and beliefs, and role assignment, is a part of that group's culture (Giger & Davidhizar, 2002).

The family is discussed in more detail in Caring for Families. Family structure and organization are culturally bound, which means that culture affects the attitudes, practices, or behaviors of the family.

Family structure and organization and religious values and beliefs inform gender norms and role assignment in group settings. Children are socialized into gender roles. As a social construct, gender roles vary from society to society and can change over time (World Health Organization, 2023, para. 1). Additionally, gender roles are generally associated with a social hierarchy that gives different statuses to different group members. Cultural expectations around gender roles can also impact family organization and function.

Different cultures may have different expectations for family structure, such as the number of generations living together or the role of extended family members. In many cultures, it is common for multiple generations to live together in a single household, while in others, the nuclear family is emphasized.

Often, decisions about health care are made by the family rather than solely by the individual. Family organization can impact how health care decisions are made and who participates in decision-making. Family members can also play a role in communication with health care providers. In cultures where family members are heavily involved in health care decision-making, they may be more likely to accompany the individual to medical appointments and participate in discussions with health care providers.

Time Perception

Cross-cultural research indicates that there are two types of time: clock time, where an external timepiece dictates action and events, and social time, which is governed by the flow of activity or when "the time is right." The view of

social time vs. clock time differs globally (Begic & Mercer, 2017). For example (Giger & Haddad, 2021):

- Khasi people, an ethnic group in the state of Meghalaya in northeastern India, have an 8-day week.
- Some Amish people keep *slow time*, in which they set clocks a half hour ahead when others convert from daylight saving time to standard time.
- Many people of Asian origin view time as flexible.

Perspectives on time may be oriented to past, present, or future (Begic & Mercer, 2017). Here are a few examples of how different cultures may perceive time (Giger & Haddad, 2021):

- Past orientation: Some cultures place a strong emphasis on the past and may view time as cyclical or circular rather than linear. These cultures may prioritize traditions and rituals passed down through generations and may view the present and future as interconnected with the past.
- Present orientation vs. future orientation: Some cultures may have a more present-oriented perspective, focusing on enjoying the moment and responding to immediate needs. Other cultures have a strong focus on planning for the future and investing time and resources in long-term goals.

Cultures may also be influenced by biological rhythms, such as the cycle of day and night. Some cultures may emphasize waking and sleeping at particular times or may have cultural practices tied to natural cycles, such as farming or hunting.

Environmental Control

Environmental control describes an individual's control over nature and environmental factors. Views of environmental control affect illness and health-seeking behaviors, which are influenced by one's sense of locus of control. *Locus of control* (Rotter, 1966) refers to an individual's beliefs about the extent of their control over the environment and what happens to them. Locus of control can be external or internal:

- Internal locus of control:
  - Individuals believe that they are responsible for their success/outcomes.
  - Individuals are more likely to take independent action to manage disease symptoms.
- External locus of control:
  - Individuals believe that external forces, like luck or fate, determine outcomes.
  - Individuals are more likely to depend on others to manage disease symptoms.

Whether the cause of illness is believed to be natural or unnatural further influences health behavior. **Natural events** are considered an inherent aspect of the world, resulting from causes such as environmental sanitation, personal hygiene, poverty, or biological or psychological factors. They are perceived to have some degree of predictability and to be subject to some element of control (Kahissay et al., 2017). In comparison, **unnatural events** are viewed as the consequence of disharmony in nature. They are not predictable and are beyond human control (Giger & Haddad, 2021). For example, some cultures may attribute illness to supernatural causes, such as curses or evil spirits, and may use spiritual or religious practices to address these causes (Kahissay et al., 2017).

An individual's belief about whether an illness has natural or unnatural causes affects the types of cures/treatments they may seek. Alternative therapies are practices intended to promote health that are not represented in traditional Western/modern medical treatment or conventional medical practices. They often represent traditional health practices that are customary to various cultural groups. These therapies can be categorized as energy-based, biologically based, manipulative or body-based, and mind-body-based. These alternative therapies are often embedded in the folk medicine belief system. In many cultures and faiths, alternative therapies and religious practices include blessings from spiritual leaders, healing power, and the use of objects in healing ceremonies.

Folk and traditional beliefs are shaped by culture. For example, traditional Chinese medicine includes practices such as acupuncture, tai chi, moxibustion (burning of herbal leaves on or near the body), cupping (using warmed glass jars to create suction on specific points on the body), and use of herbalists (Figure 21.6).



FIGURE 21.6 Cupping is an ancient, holistic treatment for various diseases traced back to early Egyptian and Chinese medical practice. (credit: "Cupping" by Alanna Ralph/Flickr, CC BY 2.0)

The rootwork system is a traditional African American folk practice that involves using herbs, roots, and other natural materials to address various health and spiritual concerns. This practice has its roots in African spiritual traditions and was brought to the United States during the period of enslavement of Africans. Rootwork is a holistic practice that encompasses physical, mental, and spiritual health (Mathews, 1987).

Traditional practitioners who deliver care include healers, shamans, and priests. For example, among some Latin Americans, "treatment comes primarily through a variety of healers that include the *curandero* (healer who uses prayer and artifacts), *yerbero* (herbalist), *espiritista* (practitioner of *espiritismo*, a religious [tradition] concerned with communication with spirits and the purification of the soul through moral behavior), and *santero* (practitioner of *Santería*, a religious [tradition] concerned with teaching people how to control or placate the supernatural)" (Giger & Haddad, 2021, p. 110).

A shaman serves as a mediator between the supernatural and the individual. In comparison, the medicine man or woman utilizes traditional techniques to cure disease. Priests perform rituals and ministerial functions as part of particular religions.

Dietary Practices and Nutritional Preferences

The relationship between food and culture is complex and multifaceted. Food is not only a source of nourishment; it also has social, symbolic, and cultural meanings. Food-related traditions and rituals are an essential aspect of many cultures. Holidays and festivals often involve traditional foods and special meals, which can be a way of connecting with one's cultural heritage and history. Food can also mark important life events such as weddings, funerals, and religious ceremonies.

Cultural practices and beliefs influence what foods are acceptable or desirable and how food is prepared and consumed. Certain foods may be considered taboo or forbidden in some cultures, while in others, they are celebrated and eaten in large quantities. Food can also express cultural or community identity and belonging.

A range of factors, including geography, climate, religion, history, and social norms, shape cultural dietary practices. These practices can vary widely across different regions and communities and significantly impact health. They can also affect health behaviors. For instance, cultural norms may dictate specific dietary restrictions or preferences. These factors can influence the prevalence of obesity, diabetes, and cardiovascular disease.

Some cultures believe that certain nonfood items have medicinal or healing properties. For example, some African and Caribbean cultures believe that consuming clay or dirt (known as *geophagia*) aids digestion, prevents nausea

during pregnancy, and improves overall health (Madziva & Chinouya, 2020). In other cultures, consuming nonfood items such as charcoal, chalk, or ice may be seen as a remedy for various ailments (Sruthi, 2023).

Dietary practices can affect dietary needs and create mineral deficiencies. For example, some Native Americans consume inadequate amounts of protein, calcium, and vitamins A and C. This is due to various factors, including limited access to healthy foods, cultural dietary practices, and historical factors such as the forced removal of Indigenous peoples from their traditional lands and the imposition of Western diets. Traditional Native American diets were often based on locally sourced foods rich in protein, fiber, and nutrients.

Cultural dietary practices are complex and multifaceted. The nurse should approach cultural dietary practices with respect and cultural sensitivity and work with clients to understand their unique dietary needs and preferences.

The Role of Culture in Disease Management

The role of culture in disease management is significant and multifaceted. Culture influences how individuals perceive, experience, and respond to health, illness, and treatment. The box below provides an example of the role culture plays in shaping the health of a South Asian community. Understanding cultural context is crucial for health care professionals to provide effective, client-centered disease management.

THE ROLE OF CULTURE IN SHAPING HEALTH BELIEFS AND PRACTICES IN THE MANAGEMENT OF DIABETES

By 2050, around 134 million people in South Asia, including those in India, Pakistan, Bangladesh, and Sri Lanka, will be affected by type 2 diabetes (Hills et al., 2018). Even after considering age, sex, and body mass index (BMI), South Asian immigrants in the United States have a much higher rate of type 2 diabetes (27 percent) than non-Hispanic White individuals in the United States (8 percent) (Hills et al., 2018). When helping individuals of South Asian descent manage diabetes, nurses should be aware of the following culturally influenced health beliefs, behaviors, and practices that may contribute to this difference:

- Diet and nutrition: South Asian cuisine often includes staple foods like rice, chapati, and lentils, which can be high in carbohydrates. Traditional cooking methods may involve frying or using ghee (clarified butter), which can contribute to a higher intake of unhealthy fats. Cultural preferences for certain foods, spices, and flavors can influence dietary choices, making it essential to address culturally appropriate dietary modifications that balance taste and health needs.
- Cultural perceptions of health: Cultural beliefs and norms surrounding health and illness can impact diabetes management. Traditional wellness concepts and ideas about the causes and treatment of diseases may differ from Western biomedical perspectives. Understanding these beliefs can help health care professionals tailor interventions and promote health literacy.
- Family and social support: South Asian communities often prioritize strong family ties and social networks. In diabetes management, family support can be crucial for adopting and sustaining lifestyle changes. Involving family members in education sessions, meal planning, and exercise routines can enhance adherence and overall success in managing the condition.
- Language and communication: Language barriers can hinder effective communication between health care providers and South Asian clients. Cultural nuances and expressions related to diabetes management may not have direct translations, impacting the delivery and understanding of medical advice. Culturally responsive health care providers or interpreters who understand South Asian cultural contexts can help bridge these communication gaps.
- Stigma and mental health: Diabetes can carry a stigma in some South Asian communities, leading to emotional and psychological challenges for individuals with the condition. Fear of judgment or discrimination may discourage clients from seeking appropriate health care or openly discussing diabetes-related concerns. Addressing mental health aspects, providing psychosocial support, and creating safe spaces for open dialogue can help individuals overcome stigma.

(See Adhikari & Mishra, 2019; Subhan et al., 2023.)

Culture plays a role in disease management, influencing how individuals perceive, experience, and respond to health

and illness. Nurses must approach disease management with cultural sensitivity, humility, and respect to provide client-centered care and improve health outcomes for all individuals. Figure 21.7 illustrates how aspects of culture can affect health behaviors and treatment for a client with type 2 diabetes.

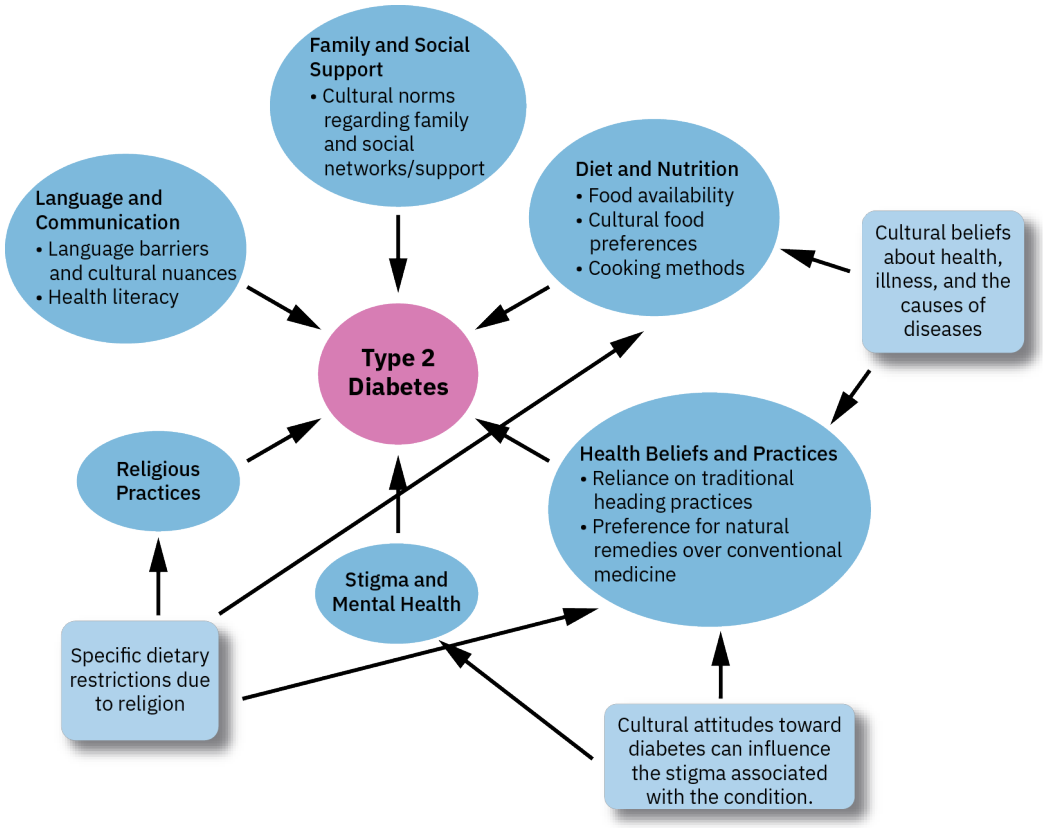


FIGURE 21.7 This web of causation shows the many cultural factors that affect client health behaviors and that should inform treatment plans for individual clients. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Understanding and incorporating cultural beliefs, values, and practices into care plans demonstrates cultural competence. This enhances the nurse's ability to deliver practical, client-centered care that respects and addresses the client's cultural background. Clients are more likely to adhere to treatment plans that align with their cultural beliefs and practices. By considering cultural factors, nurses can design care plans that are more acceptable and meaningful to clients, leading to better treatment adherence and improved health outcomes.

21.5 Culture Matters in Addressing Health Inequalities

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 21.5.1 Recognize how culture influences health outcomes.
- 21.5.2 Identify questions nurses can ask to promote cultural understanding.
- 21.5.3 Describe culture's role in shaping health beliefs and practices and the implications for health outcomes.

Minority populations in the United States face persistent racial disparities resulting from systematic inequality. Factors such as poverty; lack of access to healthy food, safe housing, and quality health care; discrimination; and environmental toxins can contribute to the development of chronic diseases such as diabetes, heart disease, and asthma, as well as mental health disorders. See Structural Racism and Systemic Inequities for more information.

Disparities in health outcomes have significant implications for individuals, families, and communities. They can lead to reduced quality of life, increased health care costs, and decreased productivity and economic opportunities. In addition, they can perpetuate cycles of poverty and disadvantage as individuals and communities struggle to overcome the burden of poor health.

Social Determinants of Health and Culture

As discussed in Social Determinants Affecting Health Outcomes, social determinants of health (SDOH) are the conditions in which people are born, grow, live, work, and age. This definition includes socioeconomic status, education, immigration status, language, neighborhood and physical environment, employment, social support networks, and access to health care. These determinants are shaped by social, economic, and political forces and can profoundly impact health outcomes.

Culture is also an SDOH because it can shape health beliefs, behaviors, and practices. As discussed previously, cultural beliefs and values can influence a person's decision to seek health care, adherence to treatment plans, and perceptions of health and illness. For example, cultural beliefs about mental health may influence a person's willingness to seek treatment for depression or anxiety. Ultimately, cultural and social determinants impact an individual's health and well-being.

Furthermore, cultural factors can intersect with other social determinants of health. For instance, individuals from racial and ethnic minority populations may experience disparities in health care access and outcomes due to social and economic factors such as poverty, limited education, and discrimination. These disparities can be exacerbated by cultural factors such as language barriers, mistrust of the health care system, and traditional health practices.

Legal scholar Kimberlé Crenshaw coined the term **intersectionality** in 1989 to describe the interconnectedness of social identities, such as race, gender, sexual orientation, and socioeconomic status, and how they overlap and intersect to create unique experiences of privilege or oppression. These experiences cannot be understood by looking at each identity in isolation. This framework is particularly relevant when considering health disparities, as people of color, women, LGBTQ+ individuals, and those with lower socioeconomic status may experience compounding disadvantages that impact their health outcomes. The box in the previous section examined the role culture plays in diabetes management for South Asian communities. The box below considers how SDOH have influenced diabetes management among this population.

INFLUENCE OF SOCIAL DETERMINANTS OF HEALTH IN DIABETES MANAGEMENT OF SOUTH ASIAN IMMIGRANTS

Various social determinants of health can significantly influence the management of diabetes in South Asian immigrants. These determinants include language barriers, access to resources, health literacy, education, discrimination, and stress.

- Language and cultural barriers: Language differences can create communication obstacles between health care providers and South Asian immigrants, hindering their ability to comprehend diabetes management instructions, treatment plans, and access to suitable resources. Additionally, cultural beliefs, norms, and practices can impact diabetes management decisions and adherence to treatment recommendations. South Asian immigrants tend to place great importance on family (Bhandari & Titzmann, 2017); therefore, involving family members in self-management is crucial (Baig et al., 2015).
- Health literacy and education: Limited health literacy and lack of diabetes education materials in native languages can hinder South Asian immigrants' ability to self-manage diabetes. Addressing health literacy gaps and providing culturally appropriate educational resources are crucial for diabetes management (Estacio et al., 2015; Min et al., 2022).
- Discrimination and acculturation stress: South Asian immigrants may face discrimination, racism, and acculturation stress, which can contribute to chronic stress levels and impact diabetes management. Discrimination in health care settings can lead to mistrust and reluctance to seek necessary care. Acculturative stress can have a negative impact on mental health when individuals attempt to integrate host country customs into their own culture. This stress can manifest in various forms, including intergenerational conflict, discrimination, and depression (Karasz et al., 2019).

To effectively manage diabetes—or any other health issue—in South Asian immigrants, nurses must consider these factors; provide culturally sensitive health care services, language access, and health education; and address the effects of cultural and intersectional discrimination. Collaborating with South Asian immigrants to

address their specific needs and overcome barriers is key to effective diabetes management.

Understanding and addressing the cultural and social determinants of health is essential to promoting health equity and reducing health disparities. By recognizing the influence of culture on health outcomes and working to reduce barriers to care, health care providers can improve health outcomes for all individuals and communities.

Client-Centered Care

Cultural misunderstandings can affect the nurse's ability to assist clients in achieving optimal health outcomes. Nurses and other health care providers caring for a client whose native culture is different from their own may make assumptions about the client's intelligence and perceive them as irresponsible or disinterested in their health due to a lack of understanding of cultural beliefs and values (Dowling, 2002). As discussed at the beginning of this chapter, nurses and other health care providers must avoid stereotyping based on religious or cultural background as a measure of client safety. Nurses must recognize that each person has a cultural identity (Agency for Healthcare Research and Quality, 2020). Cultural misunderstandings can be avoided by asking clients to share their health beliefs and customs.

According to the Agency for Healthcare Research and Quality (2020), nurses and other health care providers should be prepared to respectfully ask clients about their culture and beliefs in the context of providing care. Centering the client's view and experience builds trust and can help ensure the nurse provides respectful, appropriate care. For example, a nurse might ask a client the following:

- Do you have any dietary restrictions we should consider as we develop a food plan to address your health concerns?
- Some people like to know all the details about their illness, while others prefer to know only what is most important. How much do you want to know, and is there anyone else you would like me to talk to about your condition?
- What do you call your illness, and what do you think caused it?
- Do any traditional healers advise you about your health?

Health care professionals, particularly nurses, have an ethical responsibility to fully understand how culture shapes health beliefs and practices and influences health outcomes. Nurses must recognize that a person's culture is a crucial aspect of their identity. Nurses must be capable of managing cultural differences in beliefs and practices to promote a client-centered relationship. These topics will be examined further in Transcultural Nursing and Culturally and Linguistically Responsive Nursing Care.

Chapter Summary

21.1 Race, Ethnicity, Culture, and Nationality

Race, ethnicity, culture, and nationality are related concepts that are often used interchangeably but have distinct meanings. A person's race and ethnicity can shape their cultural experiences and traditions, while their nationality can influence their legal status and access to resources. Understanding the complexities and nuances of these concepts is important for promoting diversity, equity, and inclusion in society.

21.2 Cultural Groups and Formation of a Cultural Identity

Culture is a broad term that refers to the shared beliefs, values, customs, behaviors, and artifacts that characterize a particular group or society. Culture encompasses many distinct aspects of the human experience, including language, religion, ceremonies, celebrations, art, music, food, clothing, social habits, and more. It is transmitted from generation to generation through socialization, education, and other means of communication, and it shapes how an individual thinks, behaves, and interacts with the world. Culture can be specific to a particular region, country, or ethnic group or shared across national and ethnic boundaries, and it evolves over time. Nurses must understand and appreciate cultural differences to provide client-centered care.

21.3 The Role of Culture in Shaping Health Beliefs and Practices

The definition of *health* has evolved over time and varies across cultures depending on cultural beliefs, values, and practices. Among many cultures, the causes of illness are believed to include both physical and spiritual factors. For example, some cultures attribute illness to a lack of spiritual balance, while others see it as the result of social or emotional stressors. Understanding an individual's perception of health can help nurses develop plans of care that are appropriate and effective for the individual client.

21.4 Overview of Cultural Views and Practices

Culture plays a significant role in shaping health beliefs and practices. Health is viewed and experienced differently across cultures, and beliefs about appropriate treatments for conditions and diseases can vary widely. Cultural beliefs can influence health behaviors and decision-making, such as seeking medical care or adhering to treatment plans. By understanding and respecting cultural beliefs and practices related to health, nurses can provide more effective client-centered care.

21.5 Culture Matters in Addressing Health Inequalities

Culture is a social determinant of health because cultural factors affect an individual's health and well-being. These cultural factors include beliefs, values, traditions, and social norms, which can all influence an individual's health behaviors and outcomes. Intersectionality acknowledges that individuals may experience multiple forms of discrimination or privilege based on their various identities and that these experiences cannot be understood by looking at each identity in isolation. In health care, an intersectional approach can help nurses address health disparities by recognizing and addressing the complex and intersecting factors that contribute to health outcomes. Nurses have a primary responsibility to understand the role culture plays in shaping not only health beliefs and practices but also implications for health outcomes.

Key Terms

cultural environment the social, economic, political, and historical factors that shape an individual's experiences and beliefs in a particular culture

cultural group a group formed through the unification of shared activities and values

cultural pluralism a state of having one dominant culture in which all minority groups participate fully

culture a historically transmitted pattern of meaning based upon learned and shared values, beliefs, attitudes, and customs that involves patterned responses to behavior and distinguishes the members of one group of people from others

diversity the representation and relative size of different groups, such as racial and ethnic groups, in a population

enculturation the social acquisition of cultural patterns of behavior

environmental control an individual's control over nature and environmental factors, views of which affect illness and health-seeking behaviors

ethnicity inherited affiliation with a group that is defined by shared cultural traits, such as language, religion, nationality, history, or other cultural factors

heterogeneous society a society that is made up of

multiple cultures

homogeneous society a society that is primarily made up of only one dominant culture

intersectionality the interconnectedness of social identities, such as race, gender, sexual orientation, and socioeconomic status, and how they overlap and intersect to create unique experiences of privilege or oppression

multiculturalism the coexistence of diverse religious, ethnic, or cultural groups in a society while adhering to the same rules, with no single culture holding more importance than the others

nationality an individual's county of citizenship

natural events events that are considered an inherent aspect of the world and are perceived to have some degree of predictability and be subject to some element of control

nonverbal communication the conveying of messages without words

personal dimension the "friend zone," in which communication with less intimate but still familiar companions occurs

race a societal construct commonly defined by physical characteristics, such as bone structure, skin, hair, or eye color, as well as social factors and cultural backgrounds; not biologically predetermined

social dimension the impersonal business zone, associated with people who are working together

space the setting where communication takes place; includes the space surrounding a person's body and the objects in that space

subculture a smaller group in a cultural group that shares distinguishing characteristics that may identify with aspects of its larger parent culture

unnatural events viewed as the consequence of disharmony in nature and are often associated with forces of evil; not predictable and beyond human control

verbal communication the conveying of messages through the use of words

Review Questions

1. Which action should the nurse take to meet the nutritional needs of a Jewish client?
   a. Order a kosher meal for the client.
   b. Ask the client about their dietary preferences.
   c. Have the meal served on paper plates.
   d. Consult with the dietitian.

2. The nurse is providing care to a client who follows a holistic medicine approach to health care. Which aspect of care should the nurse anticipate when developing a plan of care for this client?
   a. Decisions are guided by fate.
   b. Treatment should be aggressive.
   c. Physical and mental needs should be balanced.
   d. Statistical data will guide care.

3. A nurse who works with clients from different cultures wants to understand the invisible elements of culture. Which is an example of an invisible cultural element?
   a. Notions of time
   b. Clothing worn
   c. Traditional foods
   d. Language spoken

4. Which action should the nurse take to communicate with a client from a culture that is different from their own?
   a. Use touch as a therapeutic tool.
   b. Sit close to the client.
   c. Pay attention to the client's nonverbal cues.
   d. Maintain eye contact even if the client does not.

5. Which level of the cultural environment is being assessed when the nurse asks a client about family rituals and traditions?
   a. Microsystem

b. Mesosystem
c. Exosystem
d. Macrosystem

6. The nurse is discussing the importance of regular exercise with a client diagnosed with hypertension. The client responds, "I just don't have the time for exercise." The nurse determines that the client has which time orientation?
a. Past time orientation
b. Present time orientation
c. Future time orientation
d. Lack of time orientation

7. The nurse is caring for a client who is reluctant to take pain medication, fearing that if they do so others will see them as weak. Which of the following statements best describes how the nurse should initially respond?
a. The nurse should acknowledge the client's cultural influences and listen to the client's concerns.
b. The nurse should provide additional education on the benefits of taking the medication.
c. The nurse should encourage the client to prioritize their personal health and well-being.
d. The nurse should encourage the client to prioritize their physical needs over what others may think.

8. The nurse is assessing a migrant worker who has abdominal pain. Which of the following questions should the nurse include as part of a culturally sensitive assessment?
a. "Have you used any over-the-counter medications to treat the pain?"
b. "Have you taken any medications or herbs or used any home treatments for the pain?"
c. "Why do you think you are having this problem?"
d. "What does your manager think about your illness?"

9. The nurse is discussing risk factor modification with a client diagnosed with hypertension. Which client statement does the nurse recognize as representing an external locus of control?
a. "High blood pressure causes blood vessel damage."
b. "My fate has already been determined."
c. "Eating right can improve my health."
d. "I am motivated to make lifestyle changes."

10. The nurse anticipates that a client from a culture that values collectivism will utilize which concept when making a health care decision?
a. Making an independent decision
b. Seeking input from the community
c. Prioritizing mental health needs
d. Considering all available options

CHAPTER 22
Transcultural Nursing



FIGURE 22.1 The focus of transcultural nursing is to provide culturally sensitive and competent care to individuals from diverse cultural backgrounds. This U.S. Navy nurse takes care to explain what she is doing in terms that her client, a child and resident of El Salvador, can understand. (credit: modification of work "ACAJUTLA, El Salvador (July 31, 2007) - Lt. Megan Zeller, an intensive care unit nurse, checks the vital signs of patient" by Mass Communication Specialist 3rd Class Kelly E. Barnes/U.S. Navy/Wikimedia Commons, Public Domain)

CHAPTER OUTLINE

22.1 What Is Transcultural Nursing?
22.2 Cultural Models
22.3 Cultural Assessment

INTRODUCTION Maria is a nurse assigned to care for Wang Xiu, a client who recently emigrated from China to the United States and speaks English as a second language. Maria approaches the client with respect and curiosity, eager to learn more about her cultural background. Wang Xiu shares that she follows traditional Chinese medicine and prefers herbal remedies over Western medications. Maria listens attentively and asks follow-up questions to better understand the client's cultural beliefs. She also documents her findings in the client's medical record to ensure that other health care providers on the team will provide culturally sensitive care in the future.

Throughout Wang Xiu's stay, Maria incorporates the client's cultural needs into her care plan. She works with the health care team to ensure her client receives herbal remedies and traditional Chinese foods that align with her cultural beliefs. Thanks to Maria's cultural assessment and sensitivity, Wang Xiu feels respected and valued as an individual with unique cultural needs. Maria's work helps to bridge cultural gaps in health care and ensures that Wang Xiu receives the best possible care.

Nurses like Maria need to know about transcultural nursing to provide culturally sensitive care to clients from diverse backgrounds, whether, like Wang Xiu, they may have recently immigrated to the United States or have cultural identities that are different from those of the nurse. This chapter discusses transcultural nursing, the

models that guide care, and how to perform a cultural assessment.

22.1 What Is Transcultural Nursing?

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 22.1.1 Define transcultural nursing.
- 22.1.2 Discuss the importance of transcultural models and frameworks to nursing practice.

Transcultural nursing is a concept that has emerged in response to the increasing diversity of clients in health care settings. It is a framework that seeks to provide **culturally sensitive care** to individuals from diverse cultural backgrounds. Transcultural nursing recognizes that culture significantly shapes an individual's health beliefs, behaviors, and practices. Therefore, it emphasizes the importance of understanding and respecting cultural differences in health care delivery.

Transcultural nursing has its roots in the mid-1950s, when nursing pioneer Hildegard Peplau began considering the importance of culture as a variable affecting mental health (Hagerty et al., 2017). During this same time period, nurse and anthropologist Madeleine Leininger, widely recognized as the founder of the field, began developing a concept she defined as "a comparative study and analysis of different cultures and subcultures in the world with respect to their caring behaviors, values, and beliefs about health, illness, and death" (Alligood, 2014; The Madeleine M. Leininger Collection, 1953-1995). Leininger worked with Native American communities in the United States, observing the importance of cultural beliefs and practices in health care delivery. She established the first transcultural nursing program at the University of Colorado in 1974 to train nurses to provide culturally sensitive care to clients from diverse backgrounds (The Madeleine M. Leininger Collection, 1953-1995).

According to Leininger's model, transcultural nursing can be applied at all levels of health care institutions. With the ever-increasing multicultural population in the United States, nurses increasingly encounter clients from diverse cultural backgrounds. These clients may have different beliefs about health and illness, attitudes toward health care providers, and expectations for their care. Without an understanding of these cultural differences, nurses may struggle to provide effective care that meets the needs of their clients.

Cultural competence in health care has been shown to positively impact public health outcomes (Jongen et al., 2018). Cultural competence training can include a range of practices, such as understanding the central role of culture in lives and how it shapes behavior, respect, and acceptance of cultural differences, learning to effectively utilize culturally adapted and culturally specific practices, and continuous development of one's awareness of personal cultural influences. Gopalkrishnan (2019) discusses the importance of cultural competence in addressing the possible negative impacts on different cultural groups of **intercultural interactions**—interactions between individuals from different cultural backgrounds—such as discrimination and marginalization. The skills and frameworks to manage these issues are necessary to promote public health and address health disparities among diverse client populations (Gopalkrishnan, 2019). See Culturally and Linguistically Responsive Nursing Care for more information on this topic.

22.2 Cultural Models

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 22.2.1 Explain the purpose of transcultural nursing models.
- 22.2.2 Describe the transcultural nursing models of Leininger, Giger and Davidhizar, Purnell, and Campinha-Bacote.
- 22.2.3 Appraise the strengths and limitations of various transcultural nursing models.

Transcultural nursing models guide nurses' provision of culturally competent care. Culturally competent care is a set of congruent behaviors, attitudes, and policies that enable health care professionals to work effectively in cross-cultural situations. It requires not only knowledge of different cultures but also the ability to apply that knowledge effectively. These models are designed to address the unique cultural needs of individuals, families, and communities. Transcultural nursing models aim to integrate transcultural concepts, theories, and practices into nursing education, research, and clinical applications; to improve transcultural nursing knowledge; and to

incorporate this knowledge into sensitive and effective nursing care to meet clients' cultural needs.

Transcultural Nursing Models

Several transcultural nursing models are used in nursing practice, education, and research. They include the culture care theory, transcultural assessment model, model of cultural competence, and model for cultural competence. Transcultural nursing models generally share a common goal of providing culturally competent care to clients from diverse backgrounds. However, each model has its unique focus and approach to achieving this goal. Nurses can use these models to guide their practice and improve their ability to provide high-quality care to clients from diverse cultural backgrounds. This section introduces each of the four models and compares them.

Leininger's Culture Care Theory

Madeleine Leininger's theory of culture care diversity and universality, also known as the culture care theory (CCT), is a nursing theory that focuses on the importance of understanding and respecting cultural differences in health care. According to Leininger, nurses should not only be aware of different cultural practices but also incorporate them into their care plans in a way that is congruent with the client's cultural beliefs, values, and lifeways.

The central idea of this theory is that nurses must understand clients' values, beliefs, and norms to provide quality care (Figure 22.2). The theory states that culture shapes how people think and behave, as well as their attitudes toward health care providers. If nurses are unaware of these differences, they may make assumptions about their clients' needs or preferences based on their cultural backgrounds. The theory is based on the following five principles (McFarland & Wehbe-Alamah, 2019):

- Culture is a broad concept that encompasses multiple aspects of human life, including beliefs, values, and practices. Cultural care is a necessary and valuable part of nursing care.
- Care is the essence of nursing. It is an essential and vital part of nursing practice that involves cognitively based assistive, supportive, facilitative, or enabling acts or decisions that are mostly tailor-made to fit with an individual, group, or institution's cultural values, beliefs, and lifeways.
- Culturally congruent care is the goal of nursing. It aims to provide care consistent with the client's cultural beliefs, values, and practices.
- Culturally competent care is a process. It involves nursing care that is respectful of and responsive to the cultural beliefs, values, and practices of the client and their community.
- Cultural care preservation, accommodation, and/or repatterning are modes of nursing actions and decisions. These modes of care are used to provide culturally congruent care based on the cultural needs and expectations of the client and their community.

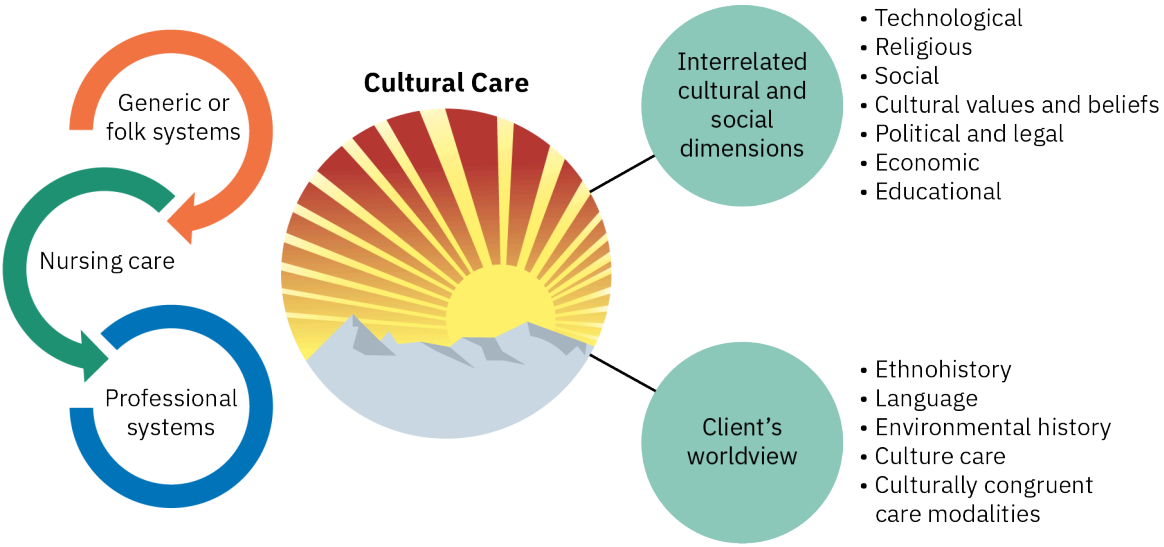


FIGURE 22.2 The sunrise model visually represents Leininger's culture care theory, emphasizing the importance of understanding and incorporating cultural factors in health care delivery. By using this model, nurses and other health care professionals can work toward delivering culturally appropriate and sensitive care that respects the unique needs and values of each individual and community. (See McFarland & Wehbe-Alamah, 2019; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

The Leininger culture care theory and resulting sunrise model illustrate how culture is essential to nursing care and how providing culturally congruent care leads to better client outcomes. The sunrise model encompasses various dimensions essential to understanding culture care, including worldview, cultural and environmental context, and social structure factors. These dimensions help identify the values, beliefs, and practices that shape a particular culture's health care needs and preferences (McFarland & Wehbe-Alamah, 2019). Leininger believed that by recognizing and respecting these cultural factors, health care professionals can deliver culturally congruent care that meets the unique needs of individuals, families, and communities. The dimensions of the sunrise model include the following:

- Worldview is the cultural lens through which individuals perceive the world and their health. It includes spirituality, religion, and ethics, which significantly impact health care decisions and practices. Understanding a client's worldview allows nurses to provide care that aligns with their cultural and spiritual beliefs.
- Cultural and environmental context considers a cultural group's physical, social, economic, and political aspects, acknowledging the influence of the wider cultural and environmental factors on health and health care practices. By recognizing these contextual influences, nurses can adapt their care to better address the cultural nuances and challenges that clients face.
- Social structure factors reflect a culture's family roles, gender roles, and social hierarchies. These factors shape health care decision-making processes and expectations. Understanding the social structure factors allows nurses to provide care that considers the dynamics and hierarchies within a culture.

Culture care theory may be used in practice. For example, Nguyen et al. (2019) described how a culturally sensitive intervention was developed and implemented to improve the health outcomes of Vietnamese American women with type 2 diabetes. The intervention was developed based on the principles of Leininger's Culture Care Theory and included cultural care accommodation and negotiation. **Cultural care accommodation** was used to adapt the intervention to the cultural beliefs and practices of Vietnamese American women. For example, the intervention included a nutrition education component incorporating traditional Vietnamese foods and recipes. The intervention also included group exercise sessions held in a community center, a familiar and comfortable environment for the women. **Cultural care negotiation** addressed cultural conflicts and facilitated communication between the health care providers and the Vietnamese American women. For example, the health care providers worked with the women to develop a shared understanding of the importance of blood sugar control and the benefits of taking medication. The providers also discussed the potential side effects of medication and worked with the women to find a medication regimen that was acceptable to them.

The study found that the culturally sensitive intervention led to improvements in the participants' health outcomes, including better blood sugar control and improved quality of life. The authors suggest that using Leininger's culture care theory can help nurses and other health care providers develop culturally sensitive interventions that improve the health outcomes of diverse client populations (Nguyen et al., 2019).

Giger and Davidhizar Transcultural Assessment Model

In 1988 Giger and Davidhizar developed the transcultural assessment model, introduced in Cultural Influences on Health Beliefs and Practices, to address the need for nursing students to provide care for clients from diverse cultural backgrounds. This model is designed to help health care providers identify and understand cultural differences in clients and to provide culturally competent care. According to this model, every culture shares six dimensions: communication, space, social organization, time, environmental control, and biological variation (Figure 22.3) (Giger & Davidhizar, 2002).

Communication: This dimension acknowledges that communication patterns and language differ among cultures and that health care professionals should be aware of these differences to provide culturally competent care.

Space: This dimension refers to the physical and personal space individuals require in different cultures. For instance, some cultures prefer to have more physical space between themselves and others, while others prefer to be in closer proximity to others. Understanding a client's space expectations can help health care providers create a comfortable care environment, which is crucial for building trust, rapport, and communication with the client. Additionally, space expectations can influence how clients respond to treatments or procedures; for example, some clients may feel more comfortable if a family member is present during a medical examination, while others may feel uncomfortable with the same arrangement.

Social Organization: This dimension is the way a culture structures itself around the family group and/or community, including the way communication, decision making, and role distribution occur within and among groups.

Time: This dimension is "a cultural specific orientation to the past, present, and future." Inquiries about the perception of time can help health care providers understand how clients view the timing of events, the importance of punctuality, and the value of time concerning health and illness.

Environmental Control: This dimension is defined as the perception of an individual's ability to control nature and the environment, including the use of natural resources, cultural sanctions, and technology.

Biological Variation: This dimension is defined as the factors such as race, body structure, genetic variations, nutritional preferences, and psychological characteristics that need to be considered when assessing a client's cultural foundation to avoid stereotypes and discrimination.

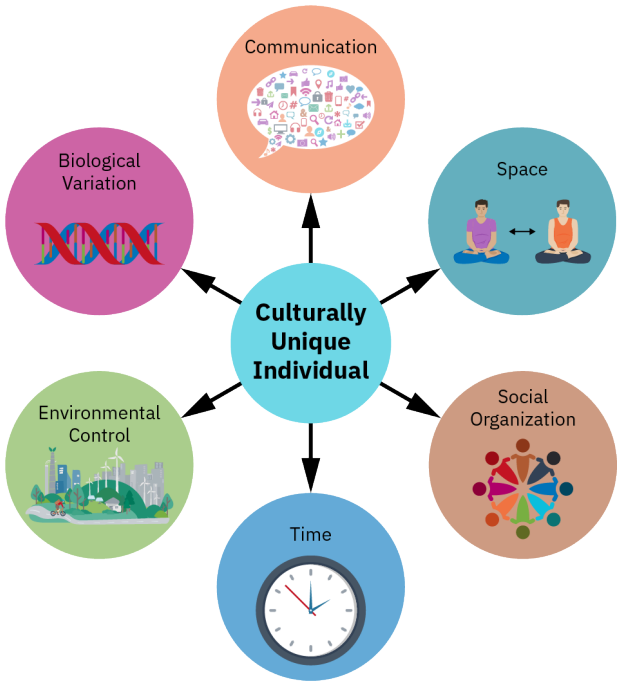


FIGURE 22.3 In the Giger and Davidhazar transcultural assessment model, six cultural dimensions provide a framework for client assessment and from which culturally sensitive care can be designed. (See Giger & Davidhizar, 2002; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

One strength of the Giger and Davidhizar transcultural assessment model is its holistic approach to cultural assessment (Albougami et al., 2016). The model looks at multiple dimensions of culture and how they interact with health and illness in order to provide nurses with a comprehensive understanding of clients' experiences. However, the model has its limitations. Some critics argue that the model does not consider the diversity within cultures and assumes that all individuals from a particular culture will have the same beliefs or practices. For instance, if a nurse assumes that all people who identify as Hispanic have the same culture, they may make incorrect assumptions about an individual client, which may lead to cultural misunderstandings that affect the client's care.

Additionally, the model may not be as useful for clients from cultures not well-represented in the model's dimensions (Albougami et al., 2016). Let's say that a nurse is caring for a client from a small, remote tribe in Africa. The tribe has unique cultural beliefs and practices that are not well-represented in the Giger and Davidhizar Transcultural Assessment Model's dimensions. The nurse may struggle to understand the client's cultural needs and be unable to provide culturally sensitive care using the model alone. The tribe may have specific beliefs around illness and healing that are not captured in the transcultural assessment model's dimensions. The nurse may not be aware of these beliefs and may not be able to provide care that aligns with the client's cultural practices. This can lead to a breakdown in trust between the client and the nurse and may result in the client receiving suboptimal care. Nurses should be aware of the limitations when using the model to provide culturally sensitive care. Table 22.1 provides a case example using the Giger and Davidhizar transcultural assessment model.

In a diverse community health setting, Lou, a nurse, provides care for 70-year-old Mrs. Sato, who recently emigrated to the United States from Japan. Mrs. Sato has been experiencing symptoms of depression and anxiety since her arrival. Lou recognizes the importance of applying transcultural nursing principles and utilizes the Giger and Davidhizar transcultural assessment model to understand and address Mrs. Sato's unique needs.	
Step 1: Gathering Data Lou creates a safe and nonjudgmental environment for Mrs. Sato to share her experiences.	
Mrs. Sato's cultural background: Japanese Length of time living in the United States: 6 months Primary language spoken: Japanese Perceived support systems: Limited social connections in the new community Physical health conditions: No significant medical issues reported Previous experiences with the health care system: Limited exposure to Western medicine	
Step 2: Assessing Six Cultural Phenomena	
1. Communication	Mrs. Sato relies on her son to communicate in English, which may hinder effective communication with health care providers.
2. Space	Mrs. Sato values personal space and may feel uncomfortable with certain physical examinations or procedures.
3. Social Organization	Mrs. Sato has limited social support in the new community, which may contribute to her feelings of isolation and depression.
4. Time	Mrs. Sato may have different perceptions of time, which may affect her adherence to appointment schedules or medication regimens.
5. Environmental Control	Mrs. Sato may have different beliefs regarding control over her health decisions, which could influence her level of engagement in care.
6. Biologic Variations	Mrs. Sato's genetic and physiological makeup may differ from those of individuals from other cultures, impacting her response to treatment and medications.
Step 3: Analyzing the Data	
The nurse develops an understanding of the potential influences of cultural factors on Mrs. Sato's mental health and overall well-being.	
Step 4: Planning and Implementing Culturally-Sensitive Care	
1. Communication	Lou arranges for a qualified interpreter fluent in Japanese to ensure accurate communication during health care visits.
2. Space	Lou explains the physical examinations and procedures in a culturally sensitive manner, allowing Mrs. Sato to express any discomfort or concerns.
3. Social Organization	Lou connects Mrs. Sato with community resources, such as local cultural organizations or support groups, to foster social connections and reduce feelings of isolation.
4. Time	Lou discusses appointment timings with Mrs. Sato, taking into consideration her cultural understanding of time to enhance adherence and punctuality.
5. Environmental Control	Lou involves Mrs. Sato in her care decisions, respecting her cultural views on health care and encouraging her to take an active role in managing her health.
6. Biologic Variations	Lou collaborates with the health care team to assess Mrs. Sato's genetic variations that may impact medication response to personalize her treatment plan.

TABLE 22.1 Case Review Using Giger-Davidhizar Transcultural Assessment Model (See Giger & Davidhizar, 2002.)

Purnell Model for Cultural Competence

The Purnell model for cultural competence is based on the belief that culture affects every aspect of human life, including health and illness (Purnell, 2002). The model offers a framework for health care providers to develop cultural competence and improve client outcomes. Figure 22.4 illustrates the model, and Table 22.2 presents a client example incorporating the 12 domains of the model.

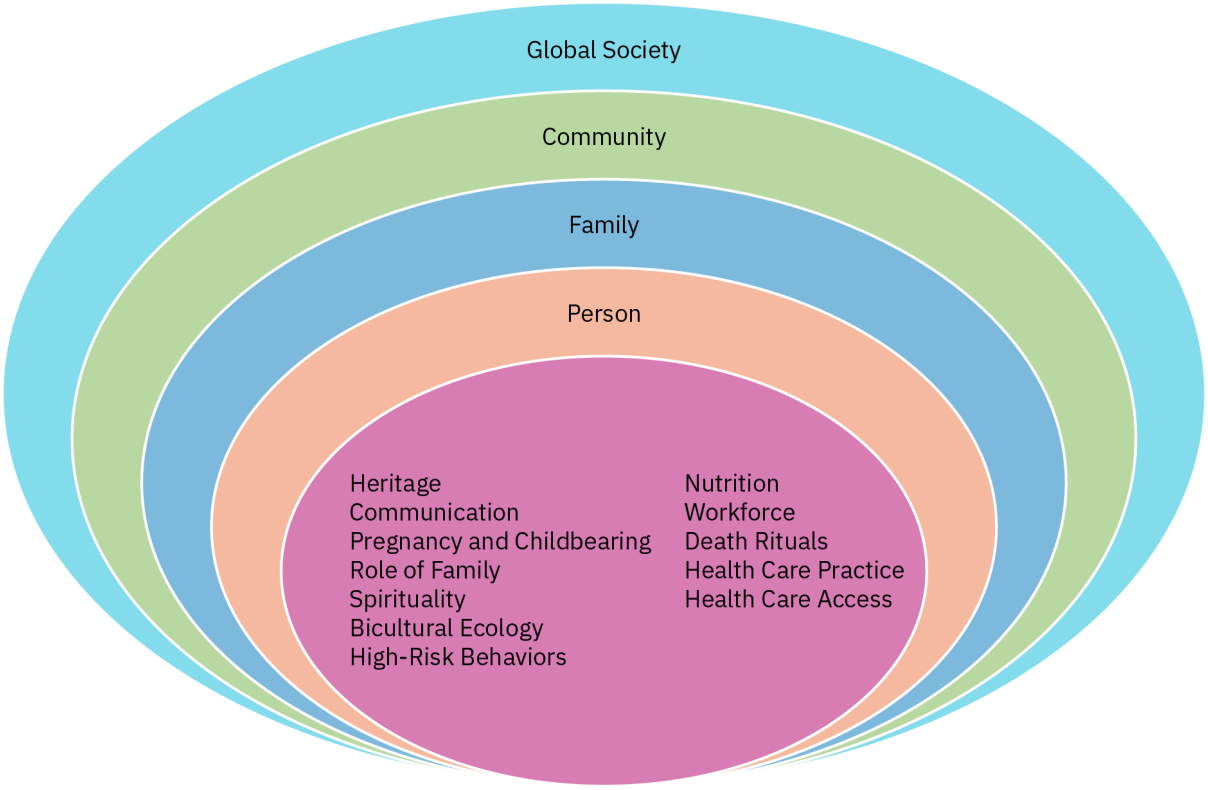


FIGURE 22.4 The Purnell model for cultural competence consists of 12 domains that provide a comprehensive framework for understanding and promotion cultural competence in health care. (See Purnell, 2018; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Domain	Name	Description	Example: Mr. Rodriguez, a 45-year-old male seeking health care in a community clinic
1	Overview and heritage	This domain includes the client's ethnic and racial background, as well as their country of origin and primary language.	• Ethnicity and nationality: Mexican • Length of time living in the United States: 6 months • Primary language spoken: Spanish • Cultural beliefs and practices regarding health and illness: The importance of family support and the use of traditional herbal remedies • Dietary preferences and restrictions: Traditional Mexican cuisine and possible dietary restrictions due to diabetes • Spiritual beliefs and practices: Catholicism and religious rituals practiced within the family
2	Communication	This domain includes the client's language proficiency, nonverbal communication, and other cultural communication patterns.	• The nurse ensures bilingual services or language interpreters are available during health care encounters to enhance communication between Mr. Rodriguez and the health care team.
3	Family roles and organization	This domain includes the client's family structure, gender roles, and family values.	• The nurse involves Mr. Rodriguez's family in his diabetes management education and provides resources for family members to understand his condition and contribute to his care.
4	Workforce issues	This domain includes the client's employment status, occupation, and education level.	• The nurse acknowledges any potential language barriers Mr. Rodriguez may face in finding employment or accessing health care services.

TABLE 22.2 Purnell Model for Cultural Competence Domains of Culture (See Purnell, 2018.)

Domain	Name	Description	Example: Mr. Rodriguez, a 45-year-old male seeking health care in a community clinic
5	Biocultural ecology	This domain includes the client's physical and environmental factors that affect their health, such as diet and exercise habits.	• The nurse understands the influence of traditional Mexican cuisine, home remedies, and cultural beliefs on Mr. Rodriguez's overall health.
6	High-risk behaviors	This domain includes the client's behaviors, such as smoking or substance use, that may lead to negative health outcomes.	• The nurse addresses potential high-risk behaviors, such as traditional remedies conflicting with prescribed medications, and educates Mr. Rodriguez about potential risks.
7	Nutrition	This domain includes the client's dietary habits, food preferences, and beliefs about food and health.	• The nurse assesses Mr. Rodriguez's understanding of nutrition, providing culturally appropriate recommendations to accommodate traditional Mexican cuisine while managing his diabetes. • The nurse works with a registered dietitian to tailor a diabetes meal plan incorporating traditional Mexican cuisine, making necessary adjustments to ensure adherence to dietary restrictions and optimal glycemic control.
8	Pregnancy and childbearing	This domain includes the client's beliefs and practices related to pregnancy and childbirth.	• Although not applicable in this case, the nurse is aware of the cultural practices surrounding pregnancy and childbirth in Mexican culture.
9	Death rituals	This domain includes the client's beliefs and practices related to death and dying.	• Although not applicable in this case, the nurse is aware of the cultural practices surrounding death rituals in Mexican culture.

TABLE 22.2 Purnell Model for Cultural Competence Domains of Culture (See Purnell, 2018.)

Domain	Name	Description	Example: Mr. Rodriguez, a 45-year-old male seeking health care in a community clinic
10	Spirituality	This domain includes the client's beliefs and practices related to spirituality and religion.	• The nurse demonstrates respect for Mr. Rodriguez's religious practices and incorporates any relevant rituals or spiritual support in his care.
11	Health care practices	This domain includes the client's beliefs and practices related to health care, including beliefs about illness and treatment.	• The nurse explores traditional herbal remedies, discusses their potential interactions with prescribed medications, and collaborates with Mr. Rodriguez to find a compromise that aligns with his beliefs while ensuring safety and efficacy.
12	Health care access	This domain includes the client's access to health care services, including insurance coverage and transportation.	• The nurse learns from Mr. Rodriguez's experiences, seeks resources, collaborates with interdisciplinary teams (including care management), and incorporates cultural humility into their practice.

TABLE 22.2 Purnell Model for Cultural Competence Domains of Culture (See Purnell, 2018.)

Community health nurses using the Purnell model would consider factors such as communication styles, family dynamics, health care practices, and dietary preferences within specific cultural groups. For instance, when working with a Hispanic community, a community health nurse using the Purnell model would recognize the importance of language and might utilize interpreters to facilitate effective communication. The nurse would also understand the significance of family involvement in health care decisions and involve family members in the care process. Additionally, the nurse would consider traditional Hispanic food preferences and cultural beliefs around nutrition, incorporating culturally appropriate dietary advice.

Strengths of the Purnell model include its comprehensive nature and emphasis on understanding each client's unique cultural background. It provides a structured framework for nurses to assess, plan, and implement care tailored to each client's cultural needs. The model has also been revised and updated to reflect changes in health care practices and incorporate new research findings.

Limitations of the Purnell model are its complexity and that it may be too time-consuming to apply in a busy clinical setting. This is because the model involves a detailed assessment of all 12 domains of an individual's culture, including beliefs, values, traditions, and practices. The model also requires nurses and other health care providers to be knowledgeable about a wide range of cultures. Additionally, the model focuses primarily on individual clients and may not adequately address the cultural needs of families or communities.

Campinha-Bacote's Process of Cultural Competence in the Delivery of Healthcare Services

Campinha-Bacote's model of cultural competence in the delivery of healthcare services is a framework that helps health care providers become more culturally competent in their care delivery. This model is based on five constructs: cultural awareness, cultural knowledge, cultural skill, cultural encounter, and cultural desire (Campinha-

Bacote, 2018). Within these constructs, cultural competence and cultural humility are not alternative approaches. Instead, they work together to define a process that not only is a lifelong reflective process but also places importance on cultural encounters and learning to increase cultural competence.

- **Cultural awareness** is the first construct and refers to nurses' self-awareness of their own cultural values and beliefs.
- **Cultural knowledge** refers to nurses' understanding of different cultures and their values, beliefs, and practices.
- **Cultural skill** refers to nurses' ability to adapt their skills to meet the needs of clients from different cultures.
- **Cultural encounters** are nurses' direct engagement with clients from different cultures.
- **Cultural desire** refers to nurses' motivation to become culturally competent.
- **Cultural competemility** refers to the synergistic relationship between cultural competence and cultural humility.

One of the strengths of this model is its emphasis on the importance of the nurse's self-awareness and motivation to become culturally competent. It recognizes that cultural competence is not just about acquiring knowledge or skills but also about a nurse's commitment to providing culturally sensitive care. Both are critical for providing culturally sensitive care to clients from diverse backgrounds.

There are also some limitations to Campinha-Bacote's model of cultural competence. Some critics argue that this model does not clearly define cultural competence and does not offer specific strategies for health care providers to become more culturally competent (Albougami et al., 2016). Additionally, this model may not be as useful for clients from cultures not well-represented in the model's constructs. For example, consider a nurse who is working with a client from a culture that places a high value on community and collective decision making. While the Campinha-Bacote model includes the construct of cultural encounters, which emphasizes the importance of interacting with individuals from diverse cultural backgrounds, it may not fully prepare the nurse to understand and respect the client's cultural values around decision making. In this case, the nurse may need additional resources or training to address the client's cultural background and values. This could involve consulting with a cultural expert or community leader or seeking out literature or other resources that provide insights into the client's culture. Table 22.3 presents a client example incorporating the constructs of this model.

Fifty-five-year-old Mr. Ivan Petrov, who recently emigrated to the United States from Russia, presents to a community health clinic with symptoms of depression. His primary language is Russian. The nurse caring for Mr. Petrov speaks Russian and has completed a Qualified Bilingual Staff (QBS) Assessment for general communication; additional assessment would be needed for medical interpretation.	
Cultural Awareness	The nurse understands that Mr. Petrov's recent emigration from Russia might influence his perceptions, health beliefs, and attitudes toward health care. The nurse acknowledges the potential challenges this client might face as an immigrant, such as language barriers and cultural adjustment.
Cultural Knowledge	The nurse researches Russian cultural values, health beliefs, and customs to gain insight into Mr. Petrov's cultural background. The nurse learns about the importance of family, the potential stigma associated with mental health in Russian culture, and the role of traditional healing practices.
Cultural Skill	During the interaction, the nurse greets Mr. Petrov in Russian and uses culturally appropriate greetings, such as "Здравствуйте" (Hello). They introduce themselves by their name and role, explaining their purpose and the reason for their inquiry. The nurse ensures confidentiality and builds a rapport with Mr. Petrov to foster trust and comfort.

TABLE 22.3 Campinha-Bacote's Model of Process of Cultural Competence in the Delivery of Healthcare Services (See Campinha-Bacote, 2002.)

Cultural Encounters	The nurse engages in a therapeutic conversation with Mr. Petrov to understand his symptoms, concerns, and cultural background. The nurse asks open-ended questions to explore his experiences, considering any cultural factors that may impact his mental health.
Cultural Desire	The nurse demonstrates genuine interest in and respect for Mr. Petrov's cultural background and experiences by expressing empathy and compassion, showing a desire to provide client-centered care that respects his autonomy and values.
Cultural Competence	The nurse collaborates with language interpreters or utilizes professional translation services to ensure effective communication and reduce language barriers. With Mr. Petrov's consent, the nurse involves the client's family in decision making and care planning, understanding the importance of family support in his health care journey.

TABLE 22.3 Campinha-Bacote's Model of Process of Cultural Competence in the Delivery of Healthcare Services (See Campinha-Bacote, 2002.)

Strengths and Limitations of Transcultural Nursing Models

One strength of transcultural nursing models is their emphasis on culturally sensitive care. Culturally sensitive care involves respecting and incorporating clients' cultural beliefs, practices, and values into health care delivery (Purnell, 2013). This approach can help health care providers better understand and address the unique health needs and concerns of clients from diverse backgrounds. Another strength of these models is their focus on trust-building and communication. Trust is a critical component of effective health care delivery, and it is often built through good communication and mutual respect between health care providers, including nurses, and clients. Campinha-Bacote (2002) emphasizes the importance of establishing trust and rapport with clients to facilitate effective communication and promote positive health outcomes. Collaborative care is another essential component of transcultural nursing models. It involves working with clients and their families to develop treatment plans that align with their cultural beliefs and values. Leininger's sunrise model of transcultural nursing emphasizes the importance of collaboration between clients, families, and health care providers to ensure that care is culturally congruent.

However, despite these strengths, transcultural nursing models also have several limitations. For example, **ethnocentrism**, or the tendency to view one's culture as the norm and superior to others, can lead nurses to lack understanding and respect for cultural differences. Nurses must be aware of their biases and work to overcome them to provide culturally sensitive care. **Cultural imposition**, or imposing one's cultural beliefs and values on others, is another danger of transcultural nursing models, as it can result in cultural conflicts and misunderstandings. Nurses must be careful not to impose their own cultural views on clients and must work to understand and respect clients' cultural beliefs and practices. **Cultural essentialism** can be a limitation of transcultural nursing models. This is the assumption that all members of a particular cultural group share a set of essential traits that define their identity. Nurses must be careful not to make assumptions about clients based on their cultural background and must work to understand and respect the unique needs and experiences of each client. Finally, clients may experience **culture shock**, another potential limitation of transcultural nursing models. Culture shock is the experience of personal disorientation when confronted with an unfamiliar way of life. Nurses must be aware of this phenomenon and work to understand and address the unique needs of clients experiencing culture shock. Table 22.4 compares the four transcultural models just discussed.

Theory	Theory of Culture Care Diversity and Universality	Transcultural Assessment Model	Model for Cultural Competence	Process of Cultural Competence
Theorist	Leininger	Giger and Davidhizar	Purnell	Campinha-Bacote

TABLE 22.4 Comparisons of Transcultural Nursing Models

Emphasis	The importance of understanding and respecting cultural differences in health care	The assessment of cultural characteristics and their impact on health and illness	The belief that culture affects every aspect of human life, including health and illness	The importance of cultural competence in nursing practice
Main Tenets	Cultural care is essential to nursing; providing culturally congruent care leads to better client outcomes.	Includes six cultural phenomena: communication, space, social organization, time, environmental control, and biological variations	Includes 12 domains of culture: communication, family roles and organization, workforce issues, health beliefs and practices, and biocultural ecology	Includes five constructs: cultural awareness, cultural knowledge, cultural skill, cultural encounters, and cultural desire
Purpose	To provide a framework for the delivery of culturally congruent care	To help nurses assess cultural factors that may affect client care	To help nurses develop the knowledge and skills needed to provide culturally competent care to clients from diverse backgrounds	To help nurses develop the knowledge, skills, and attitudes needed to provide culturally competent care

TABLE 22.4 Comparisons of Transcultural Nursing Models

CONVERSATIONS ABOUT CULTURE

Health Care Outlook: Exercising Cultural Sensitivity / Carmen Alvarez

Access multimedia content (http://openstax.org/books/population-health/pages/22-2-cultural-models)
In this short video, Assistant Professor of Nursing Carmen Alvarez describes why nurses should spend time asking clients questions to understand their needs and adapt their care.

Watch the video, and then respond to the following questions.

1. Why is the first step in providing culturally sensitive care understanding your own limitations?
2. What cultural assumption did Carmen make when caring for a client?
3. Think of a time when you made a cultural assumption about another person. How might you prevent a similar situation from occurring in the future?

22.3 Cultural Assessment

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 22.3.1 Assess how different cultures, customs, and social and health care practices impact nursing care to enhance cultural sensitivity and promote delivery of compassionate care.
- 22.3.2 Perform a cultural assessment to promote cultural sensitivity and humility in practice.
- 22.3.3 Describe strategies to incorporate traditions and personal views in the plan of care to demonstrate empathy for the individual's life experience.

As discussed in Cultural Influences on Health Beliefs and Practices, *diversity* refers to the differences among clients in terms of their culture, race, ethnicity, religion, language, customs, beliefs, and other factors that shape their health care needs and preferences. Culturally competent care involves acknowledging diversity, respecting and valuing it, and providing care sensitive to each client's needs and preferences.

Cultural impacts on nursing care include differences in health care outcomes for racial and ethnic groups, which can vary significantly from one region to another and may result from structural inequities or cultural preferences in care. Other factors influencing cultural competence in nursing care include race, socioeconomics, health literacy,

and language barriers. Additionally, increasing the diversity of the nursing workforce can improve client care, as it helps ensure that clients receive care from health care providers who understand their cultural backgrounds.

Cultural Nursing Assessment

A **cultural nursing assessment** systematically identifies the beliefs, values, meanings, and behaviors of an individual client or population while considering their history, life experiences, and social and physical environments. In a brief cultural assessment, the nurse should ask about ethnic background, religious preference, family patterns, food preferences, eating patterns, and health practices (Narayan & Mallinson, 2022). A cultural assessment can provide the information needed for a nurse to engage in effective **cultural bridging**, in which the nurse recognizes the elements of care that may be different from what a client is accustomed to and respectfully explains what the client can expect and why. A respectful exchange of information benefits both the nurse and the client and leads to better health outcomes.

Community health nurses are crucial in delivering culturally appropriate care to diverse populations. It is essential for these nurses to actively engage in efforts to provide care that respects the unique needs of individuals from different backgrounds. By involving clients in their care and empowering them to participate in decisions regarding their health-related goals, plans, and interventions, nurses help to ensure improvement in both client compliance and outcomes. As a community health nurse, embracing a continuous learning mindset is vital. It is important to have a commitment to ongoing personal and professional growth while also seeking to deepen the understanding of others. By striving to provide the best possible care and continuously expanding knowledge, community health nurses can ensure they contribute effectively to the well-being of their diverse client populations.

CONVERSATIONS ABOUT CULTURE

Cultural Competency for Providers

Access multimedia content (http://openstax.org/books/population-health/pages/22-3-cultural-assessment)
This video presents a case study about Najma, a young Somali woman who was resettled by the United Nations in Lewiston, Maine, and soon discovers she is pregnant. The case follows Najma as she navigates the unfamiliar U.S. health care system.

Watch the video, and then respond to the following questions.

1. How can health care workers seek to understand cultural differences, especially in refugee populations?
2. Explain the concept of cultural bridging and identify techniques that can help.

Culturally Sensitive Environment

Nurses perform cultural assessments by first establishing a culturally sensitive environment and then incorporating a cultural assessment when caring for all clients. A **culturally sensitive environment** is a health care setting that is respectful and responsive to clients' and their families' cultural backgrounds, beliefs, and values. It is an environment that recognizes and values the diversity of clients and strives to provide care free from cultural bias or discrimination.

A culturally sensitive physical environment in health care incorporates various characteristics to accommodate clients' diverse cultural needs This includes displaying décor, symbols, and artwork that reflect the diversity of the client population, providing multilingual signage and communication to overcome language barriers, ensuring client privacy and modesty, and promoting a knowledgeable and diverse staff. This environment promotes open communication between health care providers and clients. It encourages clients to express their beliefs and concerns about their health and health care. It also involves providing health care services that are appropriate and effective for clients from different cultural backgrounds. This includes being aware of cultural differences in areas such as diet, lifestyle, and religious practices and adapting care to meet each client's individual needs.

Nurses can create a culturally sensitive environment by actively promoting cultural competence, learning about and understanding the cultural backgrounds of their clients, and developing the skills necessary to provide respectful and responsive care to meet their needs. Nurses may attend cultural competence training programs, use interpreters when necessary, and create informational materials that are culturally appropriate for clients from

different backgrounds. Overall, a culturally sensitive environment is essential for providing high-quality health care that is accessible and respectful to clients from diverse cultural backgrounds.

Once the nurse has established a culturally sensitive environment, they must learn about the meaning of the illness in terms of the client's unique culture. This can be done by asking open-ended questions about the client's background, beliefs, and values. For example, some questions to ask during a cultural assessment include "What do you think has caused your problem?" and "Why do you think it started when it did?" Effective verbal and nonverbal communication is also essential for building trust and promoting respect with the client.

Before the assessment, the nurse should know the key topics to address, how to address them without offending the client and family, and whether an interpreter is necessary.

Performing Cultural Nursing Assessment

A culturally competent nursing assessment is a process of gathering information about a client's cultural background, beliefs, and practices to provide culturally sensitive care. The assessment aims to identify cultural factors that may influence the client's health care needs and decisions and to develop a care plan that is respectful and responsive to the client's cultural beliefs and practices.

The following are key components of a culturally competent nursing assessment:

1. Gathering cultural information: The nurse should collect information about the client's cultural background, including their beliefs, values, and practices related to health and illness. This includes asking the client about their language preferences, religious practices, dietary restrictions, and other cultural practices.
2. Awareness and knowledge: The nurse should have foundational knowledge about the community and diversity within the community. For example, nurses should be familiar with concepts related to sexual orientation and gender identities, including common terminology.
3. Assessing health literacy: The nurse should assess the client's health literacy, which is the ability to understand and use health information to make informed decisions. The nurse should use plain language and culturally appropriate materials to assess the client's understanding of their health condition and treatment plan.
4. Identifying cultural barriers: The nurse should identify any cultural barriers that may affect the client's health care access or outcomes, such as language barriers, limited access to health care services, or cultural beliefs that conflict with Western medicine. Understanding why clients might delay care due to the barriers they encounter when accessing safe health care can help nurses plan for a client's ongoing care.
5. Assessing cultural competence: The nurse should assess their own cultural competence, including their knowledge, attitudes, and skills related to providing culturally sensitive care. This includes recognizing any biases or stereotypes they may hold and addressing them appropriately.
6. Developing a culturally sensitive care plan: Based on the information gathered during the assessment, the nurse should develop a care plan that is respectful and responsive to the client's cultural beliefs and practices. Additionally, the nurse should use inclusive and gender-neutral language and respect names and pronouns. Treatment plans may need to be adapted to accommodate cultural practices, using interpreters or culturally appropriate resources or involving family members in the care plan.

During the assessment, the nurse should be aware of the environment. They should look around and also assess verbal and nonverbal communications.

The brief cultural assessment helps determine the need for an in-depth cultural assessment, which can be conducted throughout the nurse-client relationship as trust builds. The longer Culturological Assessment, a term coined by Leininger (2002), also known as the Cultural Assessment, includes additional questions in major data categories covering a wide range of topics. The box below provides sample questions nurses may use to begin a brief cultural assessment.

CONVERSATION STARTERS FOR A BRIEF CULTURAL ASSESSMENT

"Forgive me…I was wondering if I could ask a few questions…"

"At times like this, many people draw on their religious/spiritual beliefs to help them..."

- Is there anything the nurses can do to help you find the spiritual strength you need at this time?
- Are there spiritual practices that we can facilitate for you? Is there a religious leader/healer who you might find helpful?
- The health care team caring for you wants to be polite and respectful to you and your family...
- How would you like to be addressed by our staff?
- What pronouns do you prefer?
- Are there certain cultural courtesies we should practice when we come to visit you?
- Are there things we might do that you would find offensive?
- Could you please let us know if anything we do seems rude or offensive so we can fix it?

"Everyone has cultural beliefs and customs that they find help them to heal..."

- Are there special beliefs or customs you would like to keep related to this health problem?
- Are there special herbs/foods/treatments you have found helpful?
- Are there healers from your community who might also be able to help you?
- How does your family think this illness should be treated?
- What do you think about this treatment?
- What are the characteristics of a good health care provider (e.g., nurse, doctor, social worker, etc.)?

(Adapted from Narayan, 2003.)

CONVERSATIONS ABOUT CULTURE

Using Inclusive Language When Taking a Patient History

Access multimedia content (http://openstax.org/books/population-health/pages/22-3-cultural-assessment)
This video explores the necessity of using inclusive language when taking a client history.

Watch the video, and then respond to the following questions.

1. Why is it important to standardize language in assessments and use them with all clients; for example, asking all clients for their preferred pronouns?
2. Explain the concept of identity versus biology and how you might use inclusive language to ask assessment questions.

Incorporating Culture into the Plan of Care

Incorporating traditions and personal views in the care plan is essential to demonstrate empathy and respect for the client's life experience. **Empathy**, the ability to understand and share the feelings, perspectives, and experiences of others, is an important part of providing culturally responsive care. Nurses can establish trust and rapport by consistently demonstrating empathy and respect. Nurses should actively listen to clients, demonstrating genuine interest and using appropriate nonverbal cues such as nodding, eye contact, and facial expressions to show empathy (Figure 22.5). Nurses should acknowledge and validate clients' emotions and experiences, ensuring they feel heard and understood.



FIGURE 22.5 A nurse shows empathy by actively listening and using nonverbal cues, such as eye contact, to build trust and rapport with the client. (credit: "University of California, Irvine" by Paul R. Kennedy/Flickr, Public Domain)

Here are some strategies that nurses can use to incorporate these elements in their care plan:

1. Ask the client about their cultural traditions and preferences: By doing this, the nurse can gain insight into the client's values and beliefs and incorporate these elements into the plan of care in a way that is respectful and meaningful to the client.
2. Use interpreters: If the client and the nurse do not speak the same language, using an interpreter can help the nurse understand the client's beliefs and preferences. This can help the nurse incorporate these elements into the plan of care.
3. Involve family members (when culturally appropriate): Family members can play an essential role in incorporating traditions and personal views into the care plan. Involving family members in discussions about the plan of care can help the nurse understand the client's cultural beliefs and preferences.
4. Be flexible: Being willing to adapt the plan of care to meet the client's needs and preferences is essential. This can involve adjusting the timing of treatments or medications to accommodate the client's religious practices or dietary restrictions.
5. Use culturally appropriate resources: Educational materials and videos can help the nurse provide respectful and culturally sensitive care.

Incorporating traditions and personal views into the care plan requires nurses to be open-minded, flexible, and willing to learn about the client's cultural background and beliefs. By doing so, they can provide care that is respectful, empathetic, and meaningful to the client.

CASE REFLECTION

Incorporating Culture in a Refugee Vaccination Program

Read the scenario, and then respond to the questions that follow.

A public health nurse working with a community of refugees is tasked with implementing a vaccination program to prevent the spread of a highly contagious disease in the community. The nurse is aware that many community members come from cultures where vaccinations are not widely accepted or are met with suspicion and wants to ensure that the program is culturally sensitive and effectively reaches and educates the community about the importance and safety of vaccines.

Public health nurses must consider the community's cultural beliefs and values surrounding vaccination to effectively reach and educate them. By conducting comprehensive cultural assessments and implementing appropriate strategies, the nurse can ensure that the program is culturally sensitive and meets the unique needs of the refugees.

1. Conducting Cultural Assessments
    - Gather community information: Research and gather information about the cultural backgrounds of, languages spoken by, and beliefs of the members of the refugee community.
    - Engage cultural brokers: Collaborate with cultural brokers or community leaders who can provide insights into the community's beliefs and assist in designing the vaccination program.
    - Conduct interviews and focus groups: Conduct interviews and focus groups with community members to understand their perceptions, concerns, and experiences related to vaccination.
2. Developing Culturally Sensitive Strategies
    - Understand cultural beliefs: Research and understand the cultural beliefs and values surrounding vaccination within the refugee community.
    - Tailor educational materials: Develop culturally appropriate educational materials that acknowledge and address the specific concerns and beliefs of the community.
    - Collaborate in decision making: Engage community members in the decision-making process, ensuring their opinions and preferences are considered in the development of the vaccination program.
    - Ensure language accessibility: Provide interpreters and translated materials to overcome language barriers during the education and vaccination process.
    - Provide culturally competent health care providers: Ensure that health care providers involved in the program are trained in cultural competence and demonstrate sensitivity and respect toward different cultural beliefs.
3. Promoting Community Engagement
    - Establish trust and rapport: Build trust and rapport within the community by establishing relationships, respecting cultural practices, and showing empathy and understanding.
    - Utilize community influencers: Collaborate with community influencers and leaders to raise awareness, address concerns, and promote vaccination within the refugee community.
    - Conduct culturally tailored health-education sessions: Host culturally tailored health-education sessions that address the community's cultural beliefs and values surrounding vaccination, providing accurate and evidence-based information.
    - Utilize culturally sensitive messaging: Develop messaging that resonates with the community, acknowledging their concerns and highlighting the importance of vaccination in the context of their cultural beliefs and values.

Implementing a culturally sensitive vaccination program for a community of refugees involves conducting cultural assessments, developing appropriate strategies, and promoting community engagement. By understanding and respecting the cultural beliefs and values of the community, public health nurses can effectively reach and educate the refugees, ultimately preventing the spread of a highly contagious disease. This approach exemplifies how transcultural nursing can play a vital role in providing culturally sensitive and inclusive health care to diverse communities.

1. How should the nurse approach addressing and overcoming vaccine hesitancy among refugees, considering their cultural beliefs and experiences?
2. Describe how the nurse should assess the effectiveness and impact of the culturally sensitive vaccination program for refugees.

Chapter Summary

22.1 What Is Transcultural Nursing?

Transcultural nursing involves providing client-centered care that is culturally competent and sensitive to individuals from diverse cultural backgrounds. The practice of transcultural nursing is based on understanding culture's influence on health care decisions, illness, and health. Transcultural nursing aims to promote culturally inclusive health care, enhance client engagement, and reduce health care disparities by incorporating the cultural beliefs, values, and practices of clients into the plan of care.

22.2 Cultural Models

Cultural models are frameworks or patterns of thinking and behavior shared among members of a particular cultural group. These models influence how individuals perceive and interpret the world, including their views on health, wellness, and health care. Nurses can use these models to effectively communicate, establish trust, and tailor interventions that align with clients' cultural beliefs and values, ultimately improving client outcomes and satisfaction.

22.3 Cultural Assessment

Cultural assessment in nursing is the systematic process of gathering information about clients' cultural beliefs, values, norms, and practices to better understand their health care needs. It involves exploring the client's cultural background, language preferences, religious or spiritual beliefs, family dynamics, and health care practices to provide culturally competent care. Through cultural assessment, nurses can identify any cultural barriers or influences that may impact client care and develop individualized care plans that respect and accommodate the client's cultural context, promoting better health outcomes and client satisfaction.

Key Terms

cultural awareness having an understanding of and sensitivity to the values, beliefs, and customs of different cultures

cultural bridging the act of building connections between individuals or groups from different cultures to promote understanding and collaboration

cultural care accommodation the process of adjusting nursing care to meet the specific cultural needs and preferences of the client

cultural care negotiation the process of finding a mutually acceptable way to provide nursing care that is congruent with the client's cultural beliefs and practices

cultural competemility the synergistic relationship between cultural competence and cultural humility

cultural desire a nurse's motivation to become culturally competent

cultural encounters a nurse's direct engagement with clients from different cultures

cultural essentialism the belief that there are inherent, unchanging qualities that define a particular culture

cultural imposition the act of imposing one's own cultural values and beliefs onto others, without regard for their own cultural background

cultural knowledge an understanding of the beliefs, values, and practices of different cultures

cultural nursing assessment the process of assessing a client's cultural background and its potential impact on their health and health care needs

cultural skill a nurse's ability to adapt their skills to meet the needs of clients from different cultures

culturally sensitive care health care that respects and incorporates clients' cultural beliefs, practices, and values

culturally sensitive environment a health care environment that is designed to be welcoming and respectful of diverse cultural backgrounds

culture shock the disorientation and discomfort that can result from being in an unfamiliar cultural environment

empathy the ability to understand and share the feelings, perspectives, and experiences of others

ethnocentrism the belief that one's own cultural group is superior to others

intercultural interactions interactions between individuals from different cultural backgrounds

transcultural nursing a framework that seeks to provide culturally sensitive and competent care to individuals from diverse cultural backgrounds, recognizing that culture significantly shapes an individual's health beliefs, behaviors, and practices and emphasizing the importance of understanding and respecting cultural differences in health care delivery

transcultural nursing models models of nursing care that are designed to be effective across different cultural backgrounds and settings

Review Questions

1. A nurse is caring for a client from a different cultural background who refuses a certain medication. How can understanding transcultural models and frameworks help the nurse in this situation?
    a. By disregarding the client's cultural beliefs and administering the medication
    b. By respecting the client's cultural beliefs and finding an alternative medication
    c. By consulting with the health care team to override the client's choice
    d. By educating the client about the importance of the medication and convincing them to take it

2. A nurse is caring for a client from a different cultural background who is experiencing chronic pain. The nurse asks the client, "Mr. Smith, I would like to understand how you generally manage pain or if you have any preferences for pain management. Could you please share with me any cultural practices or approaches that you or your family find helpful in managing pain?" The nurse's approach is most closely aligned with which of the following models?
    a. Giger and Davidhizar transcultural assessment model
    b. Leininger's culture care diversity and universality theory
    c. Purnell model for cultural competence
    d. Peplau's interpersonal relations theory

3. A nurse is providing care to an older adult client who follows a traditional cultural practice of using herbal remedies alongside prescribed medications. How can the nurse incorporate the client's cultural practice of using herbal remedies into the plan of care while ensuring the client's safety and well-being?
    a. Educate the client about the risks of using herbal remedies and encourage discontinuation.
    b. Advise the client to consult with a traditional herbalist for proper guidance.
    c. Collaborate with the client and health care team to assess safety and potential interactions.
    d. Disregard the client's cultural practice to prioritize evidence-based care.

4. A 35-year-old client has recently been diagnosed with high blood pressure. He is concerned about taking medications for the rest of his life and is interested in alternative therapies. He expresses an interest in using traditional healing practices and asks you what other options exist apart from medications. To integrate culturally responsive care while caring for this client, the nurse would need to:
    a. Dismiss the client's concerns and explain the importance of taking medications to control his blood pressure.
    b. Provide the client with a list of alternative healing modalities without exploring his cultural beliefs.
    c. Collaborate with the client to identify traditional healing practices that are safe and effective to use with his prescribed medications.
    d. Encourage the client to try the medications and explain that they are the only effective way to control his blood pressure.

5. A client who is pregnant and from a Middle Eastern background expresses discomfort with receiving prenatal care from health care providers who are men. To provide culturally responsive care for the client, the nurse should:
    a. Explain the importance of receiving care from health care providers who are men regardless of cultural preferences.
    b. Schedule all prenatal appointments with health care providers who are women to accommodate the client's cultural preferences.
    c. Disregard the client's concerns and continue to assign health care providers who are men for the client's prenatal care.
    d. Discuss the client's concerns and work collaboratively with the client to find a solution that respects their cultural preferences.

6. A newly admitted client from a Hispanic background is hesitant to communicate her symptoms and concerns to the health care team. Which of the following best describes the nurse's aim of conducting a cultural assessment for this client?

a. To identify potential language barriers and provide appropriate interpretation services
b. To promote cultural sensitivity and understanding of the client's needs in the health care setting
c. To acknowledge the client's hesitations and insist that she communicate openly about her symptoms
d. To ensure that culturally appropriate interventions are included in her care plan

7. A nurse is providing care to a client from a different cultural background and notices that the client seems reluctant to ask questions or express concerns. Which of the following strategies should the nurse implement to ensure culturally sensitive care?
a. Provide translation services for effective communication.
b. Use plain language and visual aids to enhance understanding.
c. Create a safe and open environment for the client to ask questions.
d. Involve the client's family or community in health care decisions.

8. A nurse caring for an older client learns that the client finds peace and comfort in a personal spiritual practice and aims to incorporate this into the plan of care. How can incorporating traditions and personal views in the plan of care demonstrate empathy to the individual's life experience?
a. It shows the nurse is willing to compromise their own beliefs to provide care.
b. It allows the nurse to ignore the client's cultural practices.
c. It demonstrates respect for the client's cultural practices and personal beliefs.
d. It decreases health care costs.

9. A client from an Asian background prefers a holistic approach to health care and believes that physical and mental health are interconnected. According to the Giger and Davidhizar model, which component of the model should the nurse consider when providing care for the client?
a. Biological variation
b. Social organization
c. Communication
d. Time

10. A client with a visual impairment requires information about his medication regimen in accessible formats such as braille or audio recordings. According to the Campinha-Bacote model, which component of the model should the nurse consider when providing information about the medication regimen to the client?
a. Cultural competence
b. Cultural awareness
c. Cultural skill
d. Cultural desire

CHAPTER 23

Culturally and Linguistically Responsive Nursing Care



FIGURE 23.1 Culturally responsive nurses recognize and respect cultural differences to better understand and respond to their clients' needs. (credit: modification of work by Russell Watkins/Department for International Development/Flickr, CC BY 2.0)

CHAPTER OUTLINE

23.1 Culture, Cultural Identity, and Cultural Humility
23.2 What Is Culturally Responsive Care?
23.3 Factors Affecting Culturally Responsive Care
23.4 Becoming a Culturally Responsive Nurse
23.5 Linguistically Responsive Care
23.6 Providing Culturally and Linguistically Responsive Care

INTRODUCTION Cory, a community health nurse working at the county clinic, introduces himself to a new client, Mrs. Rodriguez. Focused on providing individualized care, Cory begins by asking about her health practices and preferences. Mrs. Rodriguez shares that she recently moved to the United States to be closer to her family and prefers to involve them in her health care decision-making and planning. When asked if she would like to include a family member in the visit, Mrs. Rodriguez accepts the offer, explaining that her daughter, Selma, is in the waiting room. After welcoming Selma into the room, Cory notes that Mrs. Rodriguez is visibly more comfortable discussing her health. As he empathetically listens to her concerns, Cory prioritizes his client's cultural beliefs and preferences. At the end of the visit, Cory provides culturally adapted materials to facilitate Mrs. Rodriguez's plan of care.

Cory's experience as a community health nurse is like that of many other nurses working in health care today. As our society and world become more globalized, nurses need to adapt to a rapidly changing landscape of cultures, information, and ideas. This chapter provides the knowledge and tools to understand and begin assessing the role of

culture in nursing and client care.

23.1 Culture, Cultural Identity, and Cultural Humility

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 23.1.1 Examine the meaning of culture in the nursing context.
- 23.1.2 Explain cultural identity.
- 23.1.3 Discuss the importance of culture and cultural identity to achieving the goals of population health.
- 23.1.4 Discuss the concept of cultural humility and its significance to nursing.
- 23.1.5 Explain how cultural humility and cultural awareness affect nursing care.

One effect of rapid globalization is that the U.S. population is always changing. Based on 2021 U.S. Census data, more than one in five adults living in the United States speak a language other than English at home (U.S. Census Bureau, n.d.). Each new generation is increasingly diverse, comprising individuals who identify with a multitude of ethnicities, races, religions, genders, and sexual orientations. This diversity has increased faster than our society's ability to navigate the many cultural factors underlying these rapid changes.

Culture

Culture is learned in a dynamic process passed from generation to generation, shaping a person's beliefs, influencing their behaviors, and playing a large role in shaping their identities (Giger & Davidhizar, 2002). Individuals within a cultural group share common values, beliefs, and norms that influence their responses to the world around them. Amish communities in Pennsylvania and transgender youth are examples of cultural groups. Everyone, regardless of where they are born or live, belongs to one or more cultures.

Although cultures consist of many people, every individual behaves differently depending on their own circumstances and experiences. This makes it impossible to pick one person from a cultural group as a "typical" example of that group. On a smaller scale, think of how different two siblings in the same family can be.

Cultural Identity

Cultural identity is the unique combination of beliefs, values, attitudes, behaviors, customs, practices, and language that make up an individual's sense of belonging to a particular cultural group. Like culture, cultural identity is fluid and can change throughout a person's lifetime. How? Cultural identity can be influenced by factors such as migration, globalization, social forces, interpersonal relationships, and individual experiences. Each person's cultural identity is an important aspect of their self-concept, encompassing who they are, how they fit into society, and what their larger context is within the human experience. All nurses bring their unique cultural identities to every client encounter, and all clients do the same.

Let's return to Cory's work with Mrs. Rodriguez. Mrs. Rodriguez moved to another country, the United States, to involve her family in her health care, something she considers vitally important. Family involvement is a part of Mrs. Rodriguez's cultural identity. The priority Cory places on adapting to his client's needs is a part of his cultural identity as a nurse. Why? It's something Cory has learned, supported by his commitment to evidence-based practice. It shapes his role as a health care professional, affecting his interactions with clients and his decisions about how to approach client care.

Culture significantly influences many aspects of life, including the health of individuals and of populations. Population health emphasizes equitable access and quality of care regardless of a person's background. Nurses who recognize and respond to the role culture plays in client health provide higher-quality care and achieve better outcomes for their clients. The ability of a nurse to provide safe, quality care regardless of cultural identities depends on developing cultural sensitivity, cultural awareness, and cultural humility, and that process begins with an examination of their own attitudes, values, and beliefs. See Cultural Influences on Health Beliefs and Practices for more information on cultural identity.

Cultural Humility and Cultural Awareness

Cultural humility refers to being open-minded and reflective about one's own values and beliefs, along with acknowledging, respecting, and valuing cultural differences. A nurse practicing cultural humility will demonstrate a

desire to understand other perspectives. Developing cultural humility begins with self-reflection, open communication, and collaboration with diverse groups and populations. Yet this isn't enough—cultural humility also requires awareness of one's own biases and how they may impact interactions with people from other backgrounds.

One way to learn about cultural humility is to explore and come to appreciate different cultures and their beliefs and values. Although no one can possess knowledge of every culture they interact with, to provide quality care, nurses should strive for **cultural awareness**. Cultural awareness in nursing is defined as "the process of understanding and respecting the beliefs, customs, languages, and values of clients from diverse cultures" (Giger & Haddad, 2020). It recognizes that culture shapes perspectives and experiences, influences the way people express themselves, and acknowledges that a client's or group's cultural norms may differ from those most often found in conventional health care settings. Cultural awareness is rooted in values such as openness, fairness, and mutual understanding.

Evidence shows that when nurses engage in positive, respectful, trusting, and caring interactions with clients, these clients experience better health outcomes. To develop such relationships with a broad range of people from varied backgrounds, nurses must become culturally aware and engage in cultural humility. Respectful relationships prioritize client self-determination and promote greater equity. They are at the heart of providing culturally and linguistically responsive nursing care.

23.2 What Is Culturally Responsive Care?

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 23.2.1 Describe culturally responsive care.
- 23.2.2 Explain the basic concepts of culturally competent nursing care.
- 23.2.3 Discuss the relationship between cultural competence and health outcomes.
- 23.2.4 Describe how valuing and respecting diversity affect health care.

Culturally responsive care fully considers the cultural backgrounds, values, and preferences of individuals, groups, and populations. Culturally responsive care goes beyond being aware of a culture; it involves actively ensuring that all aspects of health care are customized to address the needs and beliefs of the specific population (Schwartz, 2023; Schwartz & Silva, 2023). Nurses who provide culturally responsive care do so by aligning their practice with the values, beliefs, and practices of a client or population. Culturally responsive care improves a nurse's ability to understand, communicate with, and effectively provide care to individuals from diverse cultural backgrounds, resulting in improved health outcomes for individuals and communities.

Cultural Competence and Culturally Congruent Care

Culturally responsive care is one potential outcome of the dynamic process of **cultural competence**. Although many definitions of cultural competence exist, this chapter uses the one adopted by the American Association of Colleges of Nursing: "cultural competence encompasses the attitudes, knowledge, and skills necessary for providing quality care to diverse populations" (AACN, 2008, p. 1).

The concept of cultural competence in nursing has its roots in the work of Cross et al. (1989) and has since expanded to encompass critical components for effective cross-cultural interactions, such as cultural awareness, cultural humility, and cultural sensitivity. The idea of cultural competence in nursing care can be traced back to Leininger's book *Nursing and Anthropology: Two Worlds to Blend* (1970). As discussed in Transcultural Nursing, the field of transcultural nursing has since grown, generating a major theory, several models, and hundreds of research studies. As a result, professional organizations and educational institutions have begun incorporating cultural competence into their policies, standards, and curricula (Marion et al., 2016).

In 2014 the American Nurses Association formed a work group of 40 expert nurses to review and revise the 2010 version of the nursing scope and standards of practice. The work group reviewed all scope statements and standards in light of the increasing cultural and ethnic diversity in health care and the rise in humanitarian needs. Recognizing the need for nurses to have expert guidance on how to provide **culturally congruent care**, or care that is aligned with a client's culture, the work group developed a new Standard 8, Culturally Congruent Practice, to describe "nursing care that is in agreement with the preferred values, beliefs, worldview, and practices of the healthcare consumer" (American Nurses Association, 2015, p. 31). This standard sets expectations for nurses' education, legal responsibilities, and societal obligations. Cultural congruence is a fundamental part of nursing

practice and is integral to the agreement between the profession and society. Standard 8 provides guidance for implementation by practicing nurses (Marion et al., 2016).

The latest research emphasizes the importance of improving nurses' ability to provide culturally congruent care (Im & Chee, 2021). Culturally congruent care is the implementation of evidence-based nursing practice that recognizes and is consistent with the values, beliefs, worldviews, and practices of clients and populations, with the goal of improving health outcomes (Marion et al., 2016). It is customized to the needs of the client, group, or population. For example, a client with diabetes tells their nurse that they come from a culture with different health beliefs and practices and that they frequently consult with a traditional healer about their dietary choices. To provide culturally congruent care, the nurse prioritizes the client's beliefs and practices, collaborating with them to identify culturally appropriate foods and traditions, and then incorporates these preferences into the care plan. The nurse can then provide culturally responsive education to the client about their dietary choices and encourage them to continue incorporating healthy practices that are congruent with their culture.

Several critiques of cultural competence have emerged. While some health care professionals consider the process of cultural competence an imperative for reducing health inequities, others argue that it is based on ethnocentrism, a belief that one's own cultural values, traditions, and practices are superior to those of other cultures (Beser et al., 2021). According to this critique, the ethnocentric orientation of cultural competence can lead to stereotyping and, as a result, perpetuate already existing biases and inequities (Berger & Ribeiro Miller, 2021). Other critics argue that the process of developing cultural competence oversimplifies the complex nature of culture, reducing it to facts and easily acquired knowledge while failing to consider cultural change and variability (Campinha-Bacote, 2018). A recent shift toward culturally responsive care focuses on nurses' ability to recognize and respond inclusively to diverse perspectives, and it emphasizes the importance of social justice (Day & Beard, 2019).

The Significance of Culturally Responsive Nursing

A nurse's ability to provide effective, culturally responsive nursing care begins by exploring their own attitudes, beliefs, and values and involves an ongoing reflective process with the aim of providing culturally congruent care (Leininger, 1991, 1999). Nurses are not expected to know everything about every culture; acquiring such knowledge would be impossible. Although it is important for nurses to be aware of the different cultural groups prevalent in the areas where they practice, the only way to be certain of a client's or population's beliefs is to approach them with an open mind, inquire about preferences and needs, and listen with empathy and humility.

As the U.S. population becomes more diverse, cultural competence becomes increasingly important in health care. Studies have shown that when nurses provide care that responds to a client's or population's health beliefs and behaviors, they demonstrate more empathy, communicate more effectively, and provide more substantive client education (Sharifi et al., 2019). Nurses who practice this way can more readily navigate challenging situations when providing care for diverse populations. They are more likely to be aware of potential biases that can come into play when delivering care and are more likely and better able to take steps to minimize those biases. Building relationships of trust between communities and health care professionals can help ensure that individuals receive the appropriate care they need, regardless of their cultural backgrounds or differences. Incorporating culturally competent care is essential for promoting health equity, particularly for underserved groups that have faced significant health disparities and increased rates of illness and mortality. Culturally competent care therefore serves as a means of advocating for these clients' health and well-being (Pacquiao et al., 2023).

By understanding their clients' unique cultural needs, nurses can provide more effective and personalized care that encourages client collaboration and engagement. Culturally responsive care facilitates better communication between nurses and clients, improved health management, increased adherence to treatment plans, and greater client satisfaction, all of which can lead to improved health outcomes.

Social Determinants of Health and Health Inequities

Effective culturally responsive care relies on nurses' understanding of the social determinants of health, which are the conditions in which people are born, grow, work, live, and age, along with the wider set of forces and systems shaping the conditions of daily life that influence health outcomes. As discussed in The Social Determinants of Health, these conditions include income, education, housing, environment, employment, and access to health care. Social determinants of health can create significant health inequities (Office of Disease Prevention and Health Promotion [ODPHP], n.d.-b). The unequal distribution of health care services, quality of care, and health status

among groups is based on factors such as race, ethnicity, culture, gender, ability, and socioeconomic status.

Health inequities are persistent across the United States. These inequities can follow a person from before birth throughout their lifespan, affecting the health and well-being of communities as well as individuals. Although their causes are systemic, health inequities are preventable. Culturally responsive nurses employ an understanding of the roots of health inequities to reduce them.

For example, some communities with high poverty levels are considered "food deserts," areas where access to affordable and nutritious food is limited or nonexistent. Food deserts can occur due to a lack of grocery stores or farmers markets in the area, inadequate transportation options, or low income levels that make it difficult for residents to afford fresh, healthy food (Figure 23.2). Food deserts are a serious public health concern because they can contribute to various health problems, including obesity, diabetes, and heart disease.



FIGURE 23.2 People living in food deserts are often forced to rely on convenience stores and fast-food restaurants, which tend to offer unhealthy food options that are high in calories, fat, and sodium, resulting in a higher prevalence of chronic diseases. (credit: "Grand City Corner Store" by Paul Sableman/Flickr, CC BY 2.0)

A nurse who recognizes and considers the client's environment will understand the impact of a food desert on the local community and can provide education and resources to help people obtain nutritious food and make healthier choices. They can also advocate for increased availability of nutritious foods in places such as corner stores, promote the incorporation of healthy foods into school meal programs, and work with clients to identify foods that are important to their cultural backgrounds and traditions.

Health inequities became especially apparent during the COVID-19 pandemic, when Black, Hispanic, Native American/Alaskan Indian, and Native Hawaiian/Pacific Islander individuals had a 1.5 times greater risk of contracting the infection than White individuals and were twice as likely to die. Various factors contributed to the higher disease and death rates, including greater exposure to the pathogen for essential workers, greater proportions of people living in crowded conditions, less access to health care, and a greater burden of chronic diseases (Alcendor, 2020).

Racial and ethnic minority groups endure higher rates of morbidity and mortality from chronic diseases. For example, the tuberculosis rate among Native Americans is nearly fifteen times greater than that among White Americans, at 4.4 vs. 0.3 cases per 100,000 people (Schildknecht et al., 2023). Life expectancy for Native Americans is 7 years lower than the national average, at 71.8 vs. 78.8 years (Arias et al., 2021). A higher proportion of rural adult Black and American Indian or Alaska Native individuals (40.3 percent for both groups) report having multiple chronic health conditions compared with non-Hispanic White individuals (36 percent). Individuals with chronic conditions need more health care and interact more frequently with health care providers and services; those without a primary care provider are less likely to have their chronic conditions managed. Although chronic illness is more prevalent among racial and ethnic minorities, in rural areas, for example, only 61.5 percent of Hispanic and 63.7 percent of Native American individuals report having a primary care provider.

Younger Black adults live with and succumb to health conditions typically seen in White Americans in old age. For

example, 33 percent of Black adults aged 35 to 49 have diagnosed hypertension, compared with 22 percent of White adults in the same age group (Centers for Disease Control and Prevention [CDC], 2017). Diabetes rates show an even greater disparity: 10 percent of Black adults have diabetes compared with 6 percent of White adults. Among children, asthma prevalence in Black children (18.1 percent) and Native American/Native Alaskan children (18.0 percent) is nearly twice that of White children (9.5 percent), and it is alarmingly high among children of Puerto Rican descent (23.6 percent) (Asthma and Allergy Foundation of America, 2020). Early onset of these conditions leads to greater morbidity and earlier mortality. The challenges presented by structural racism and the social determinants of health are covered in more detail in Unit 2, Issues and Challenges of Population Health.

Culturally Responsive Care and Health Inequities

Culturally responsive care increases client satisfaction, reduces health inequities, and leads to improved outcomes. By promoting respect and understanding between nurses and clients, cultural humility and culturally responsive care can help reduce inequities because the client is more likely to understand, collaborate, and follow the recommended care plan, regardless of their background or circumstances.

Consider this example of the effects of culturally responsive care. Although Black newborns are more than twice as likely to die as White newborns (1,090 vs. 490 deaths per 100,000 births), this number is halved when the physician providing care to the newborn is also Black. This difference may be due to Black providers' recognition and understanding of the unique challenges and needs of babies born to people already prone to poorer health outcomes (Greenwood et al., 2020).

Health outcomes also improve when community preferences and needs are considered. Native Americans experience multiple structural inequities, including discrimination, poverty, forced relocation, and a history of trauma, all of which play a role in the high rates of substance misuse among some Native populations. In addition to these challenges, Native American communities often have limited access to quality health care services, including substance misuse treatment and mental health services. Nurses are responding to this need by advocating for culturally adapted, locally based interventions. For example, the Native Alaskan Yup'ik community-initiated alcohol abuse prevention program Qungasavik was developed as a toolbox for building on Native community strengths (Rasmus et al., 2014). Similarly, work by the Native Transformations Project identified the importance of family, community, and spirituality as protective factors against substance abuse (Rasmus et al., 2016).

CASE REFLECTION

A Culturally Responsive Approach to Working with a New Client

Read the scenario, and then respond to the questions that follow.

Cory, the community health nurse introduced at the start of this chapter, is meeting another new client in the clinic today. Faiza is a married 28-year-old woman who is trying to establish primary and obstetric care. Cory is scheduled to meet with Faiza to assist her in arranging for appropriate and timely care and to assess whether she needs other health-related resources. When Cory goes to the waiting room and calls Faiza's name, a man rises from his seat, and only then does the young woman seated beside him move her head and stand. The woman, who is wearing a hijab head covering, walks behind the man to the front of the room where Cory is waiting. The man says, "She is Faiza." Faiza does not look directly at Cory. Cory reaches his hand out to Faiza and says, "Hi, my name is Cory, and I'm the nurse you're seeing today; nice to meet you." Faiza does not look up and does not take Cory's hand. She says nothing and takes a small step backward. The man, who appears to be upset, says, "She needs a woman nurse. And she does not speak English, but I always translate for her."

1. Why do you think the man with Faiza requests a woman nurse?
2. Does anything about this scenario make you uncomfortable? If so, consider why.
3. What additional information should Cory obtain before proceeding?
4. How should Cory respond to the statements "She needs a woman nurse . . . she does not speak English . . . I always translate for her"?
5. What does the client's nonverbal communication (no eye contact, no handshaking, backward step) signify?
6. If the clinic cannot provide this client with a woman nurse, how should Cory proceed?

7. Do you think Cory should have done anything differently from the beginning?

(See Attum et al., 2022.)

23.3 Factors Affecting Culturally Responsive Care

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 23.3.1 Discuss the impact of personal factors on culturally responsive care.
- 23.3.2 Describe systemic barriers to providing culturally responsive care.
- 23.3.3 Identify strategies to overcome barriers to providing culturally responsive care.

Numerous factors can affect the process of providing culturally responsive care. These include both personal and systemic factors that may act as barriers. This section addresses both.

Personal Factors

Personal factors including value system, beliefs, customs, and cultural identity, as well as knowledge and attitudes about other cultures, play a role in nurses' interactions with clients. Cultural factors such as language and communication barriers, gendered roles, and health care practices can impact these interactions. Nurses who have limited experience interacting with clients from different backgrounds may lack cultural humility. These nurses may exhibit biases, othering, stereotyping, and ethnocentrism in their approach to care.

A nurse's age and educational preparation can also affect their provision of culturally responsive care. Younger generations are increasingly more diverse (Fry & Parker, 2018), and older individuals may be less familiar with changing cultural dynamics. Education can provide the knowledge, skills, and critical thinking tools to effectively interact with a wide range of people. Individuals educated in a diverse environment who have some cross-cultural knowledge may be more adept at interacting with people outside their own culture (Sharifi et al., 2019). Socialization, personality, and prior experiences also play a role. For instance, people who were raised in diverse communities or who have traveled outside their own culture may feel more comfortable interacting with people from different cultures in a variety of settings, such as in the workplace, in social situations, and in their community.

Biases, Stereotyping, and Othering

Biases are prejudicial attitudes that filter the way people perceive, interpret, and react to the world. These opinions or beliefs (involving gender, race, age, or other categories) affect decision-making in ways that can be subtle or overt. When nurses focus only on certain information while ignoring other relevant data, their biases can lead to incorrect assumptions, judgments, and actions. In health care, biases can cause health care workers to draw false conclusions. They can lead to disparities in diagnoses and treatments, unequal access to services and resources, and slower response times. For example, due to bias, a nurse may view one group as lower priority and less deserving of care than other groups and, as a result, may not give clients from that group the same level of attention, fully explain procedures or medications, or advocate for them as strongly.

Bias can be both explicit and implicit. **Explicit bias** refers to clear and intentional feelings, attitudes, and behaviors; it exists at a conscious level and is often expressed verbally. When it reaches an extreme, explicit bias can manifest overtly as negative behaviors, such as physical or verbal harassment, or through more subtle forms, such as exclusion. **Implicit bias** is a type of prejudice that unconsciously affects a person's behavior, decisions, and attitudes, even if it contradicts their expressed beliefs and values. Because it operates at an unconscious level, the individual is not fully aware of their behaviors. Implicit bias undermines clinical assessments, the establishment of therapeutic relationships, and decision-making, all of which negatively affect health outcomes.

Bias among health care providers can have a substantial impact on an individual's or group's health. For example, evidence increasingly demonstrates that individuals who identify as LGBTQ+ experience significant disparities in their physical and mental health because of implicit biases (Lick et al., 2013). In a 2020 study, 24 percent of LBGTQ people of color reported some form of negative or discriminatory behavior from a health care provider in the previous year, and 19 percent stated they were cared for by a provider who was visibly uncomfortable with their sexual orientation (Mahowald, 2021).

THE ROOTS OF HEALTH INEQUITIES

Implicit Bias

Access multimedia content (http://openstax.org/books/population-health/pages/23-3-factors-affecting-culturally-responsive-care)

Implicit biases among nurses and other health professionals contribute to the persistence of health inequities. In this Institute for Healthcare Improvement video, Dr. Anurag Gupta discusses how different forms of implicit racial bias may negatively impact three areas of health care.

Watch the video, and then respond to the following questions.

1. What are the three manifestations of implicit racial bias Dr. Gupta describes?
2. How does implicit racial bias affect the care some clients receive?
3. What are some strategies nurses can use to identify implicit racial bias?

Stereotyping is the act of ascribing certain characteristics or behaviors to someone based on their membership, or perceived membership, in a particular group. Stereotyping can lead to assumptions about people based on race, ethnicity, religion, gender identity, age, socioeconomic status, ability, or sexual orientation that may not be accurate or fair. In health care, stereotyping can have a negative impact if it leads to unequal, inadequate, or inappropriate care of clients. Stereotyping can also create a barrier to effective communication between nurses and their clients, negatively impacting the quality of care. For example, a nurse working with an older adult may assume, based on the client's age, that they are not computer literate and therefore neglect to provide helpful online resources. Nurses must gather and use accurate information about their clients as individuals rather than relying on learned, and potentially damaging, assumptions.

Othering is the process of excluding, marginalizing, or differentiating individuals or groups based on their perceived differences from the dominant group in a society. Othering is used to separate individuals who do not fit social norms or expectations, and it often implies that a person or group is inferior. This can involve ascribing negative characteristics or traits, which can lead to feelings of isolation, discrimination, and social inequality. Othering can have harmful effects on individuals and communities because it can create barriers to social inclusion, equal opportunities, and fair treatment. It can also reinforce negative stereotypes and prejudices and prevent individuals and groups from being treated with dignity and respect. For example, a community health nurse is teaching a group of adults about the importance of smoking cessation. One of the clients who has been quiet throughout the session finally asks a question, speaking in a heavy accent. Rather than responding to the client the same way they answered questions from others in the group, the nurse speaks loudly and slowly, using very simplistic words and assuming that the client does not understand English. This behavior, while potentially meant to be helpful, can stigmatize, exclude, and isolate the client, ultimately having a negative impact on their health and well-being.

Ethnocentrism

Ethnocentrism, as previously mentioned, is the belief that one's own culture is superior to other cultures (Beser et al., 2021). Ethnocentrism involves judging others by the standards of one's own culture, assuming that one's own culture is the norm against which all others should be measured. Ethnocentrism can result in discrimination, bias, and suboptimal care. For example, a client newly diagnosed with heart failure has been prescribed a diuretic. The nurse is reviewing the medication with the client and asks if they have any questions. The client, feeling apprehensive, expresses a wish to consult with a traditional healer from their cultural group. Rather than encouraging collaboration, the nurse perceives the traditional cultural practices as inferior to their own cultural orientation to biomedicine. Assuming that non-Western medicine is ineffective or irrational while Western biomedicine is superior is an example of ethnocentrism. Nurses need to be aware of their own ethnocentric tendencies, striving to be more culturally aware and culturally sensitive. Practicing cultural humility (see Attitudes, Skills, and Knowledge) allows nurses to recognize the biases created by ethnocentrism and to emphasize the client's values, rather than those of the nurse or the dominant culture (Foronda et al., 2022).

Systemic Barriers to Providing Culturally Responsive Care

Some of the policies, practices, and procedures in U.S. health care present systemic barriers to providing culturally

responsive nursing care. These systemic barriers may be organizational or structural. Organizational barriers are related to a particular clinic, hospital, or other health care institution, whereas structural barriers result from factors in the broader health care environment—for example, the composition of the health care workforce, the workings of the U.S. health insurance industry, and state and federal laws governing the provision of health care.

Organizational Barriers

Barriers to cultural competence may exist within organizations. These barriers can be far-reaching in scope because they extend well beyond the individual. Organizational barriers include lack of diversity in the workforce, lack of education in cultural competence, inadequate or absent translation or interpretive services, policies and procedures that fail to consider a diverse clientele, and lack of support from leadership. Leadership in particular plays a key role in creating a culture of inclusion and respect for diversity, as well as in designing, implementing, and enforcing policies to support an inclusive workplace and provide culturally and linguistically responsive services (Office of Minority Health, n.d.). For example, a lack of support from organizational leaders who do not prioritize or value cultural competence makes it more difficult for nurses to provide culturally responsive care. Furthermore, because culture is ever changing, providing culturally responsive care requires a commitment to updating and maintaining programs and policies that support it.

Structural Inequities

Structural inequities in health care are the systemic barriers and disparities in the health care system that prevent certain individuals or groups from receiving optimal care. These inequities can be caused by a range of factors, including unequal access to health care resources, discriminatory policies and practices, and inadequate representation in the health care workforce. In the United States, lack of health insurance coverage and the cost of health care are structural inequities that greatly affect health outcomes. Specifically, among rural adults, 24.5 percent of Black and 23.1 percent of Hispanic individuals report not seeing a health care provider because of the cost, compared with 15 percent of White individuals (James et al., 2017). Although Black, Hispanic, and Native American individuals bear a greater burden of chronic diseases than White individuals do, more of them lack a consistent source of medical care, health insurance coverage, and the ability to afford care (James et al., 2017).

Another example of structural inequity is the unequal distribution of health care resources, such as diagnostic and treatment facilities, across different communities. For example, individuals in rural areas or those living in communities of lower socioeconomic status may have limited access to specialized medical care. This lack of access can have a significant impact on population health because it can result in individuals' not receiving the care they need, leading to an increase in preventable illnesses and chronic conditions.

A lack of representation of certain groups in the health care workforce is also a structural inequity. For instance, Black and Latina/Latino individuals are underrepresented in the health professions, including nursing, which can diminish efforts to provide culturally responsive care for clients from these backgrounds and reduce the quality of care provided. Evidence shows that the majority of Black (61.1 percent) and Hispanic (61.3 percent) adults prefer a health care provider who either shares or understands their culture. However, of those with this preference, 13.4 percent of Black and 14.7 percent of Hispanic individuals were never able to meet with such a provider, compared with 4 percent of White individuals (Terlizzi et al., 2019).

23.4 Becoming a Culturally Responsive Nurse

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 23.4.1 Demonstrate self-awareness in attitudes, beliefs, and values.
- 23.4.2 Explain the significance of valuing and respecting diversity.
- 23.4.3 Apply models of cultural competence.
- 23.4.4 Apply self-assessment tools to measure cultural competence.

The process of becoming a culturally responsive nurse is ongoing and informed by evidence-based practice. This section highlights the attitudes, skills, and knowledge required to engage in this process, and it examines how to apply three major theoretical frameworks for culturally responsive nursing practice. It also presents tools nurses may use to evaluate a client's cultural values, health perspectives, and disease behaviors, as well as tools for assessing and measuring their own cultural competence.

Attitudes, Skills, and Knowledge

The American Association of Colleges of Nursing definition of cultural competence is, above all, a call to action: It sets nurses the task of building the attitudes, skills, and knowledge necessary to provide quality care. What are these attitudes, skills, and knowledge?

An open, nonjudgmental attitude is essential to providing culturally responsive care. A culturally responsive nurse displays the following:

- An interest in learning about other beliefs and practices
- A willingness to engage in dialogue that encourages learning and mutual respect
- The motivation to challenge assumptions and biases
- A commitment to equity and inclusion
- The desire to help create a safe space for everyone

Among the many skills required to provide culturally responsive care, a few key skills should be part of every nurse's tool kit. Critical thinking is needed to identify and analyze policies, structures, and practices that are oppressive or that disadvantage certain individuals or groups. Linguistic competence is necessary for communicating effectively with people from different backgrounds and for listening empathetically and openly (see Linguistically Responsive Care). The ability to adapt to new cultural environments and navigate unfamiliar situations is essential. Culturally responsive attitudes also include approaching diversity positively, valuing and respecting cultural differences, practicing cultural humility, and not discriminating against individuals on the basis of culture. These attitudes support cultural awareness, one of the skills most critical to providing culturally responsive care.

Valuing and Respecting Diversity

Valuing diversity means recognizing that everyone is unique and that diversity is a valuable aspect of society. It involves treating all individuals with respect and without discrimination and being open to learning from, and collaborating with, people from diverse backgrounds. Valuing diversity can foster a more inclusive and welcoming environment, and it can lead to better outcomes for both individuals and organizations.

What does valuing and respecting diversity look like? It begins with recognizing the unique backgrounds, experiences, and perspectives of clients and colleagues, including varied cultural health beliefs and practices. For example, a nurse serving a community that has experienced a recent influx of immigrants could follow local news stories about the new immigrant population and read books and articles about the immigrant group's culture to develop a baseline knowledge that would become richer and more informed with each client interaction.

Nurses can engage with people from different backgrounds and cultures, both at work and socially, to get to know them and better understand their perspectives. An open mind is critical, as are effective communication and a willingness to learn from others. Nurses should advocate for diversity and inclusion in the workplace and recognize any personal biases or stereotypes that may impact their interactions with others. Self-awareness is key to both understanding one's own perspective and challenging it. By taking these steps, nurses can show their commitment to valuing and respecting diversity, thereby fostering a more inclusive and nurturing environment for their clients, colleagues, communities, and organizations.

Developing Self-Awareness

To value and respect diversity, nurses must recognize and understand their personal biases, values, and beliefs; the ways those are influenced by their own cultural backgrounds; and the ways they influence their own perceptions and behaviors. To achieve that recognition and understanding, nurses must seek **self-awareness** (Foronda et al., 2018). This self-awareness can enable a nurse to identify the role their own biases, values, and beliefs play in their interactions with clients, nurse colleagues, and other health care professionals. Each nurse needs to examine their own life experiences, family background, cultural traditions, religious beliefs, health practices, and personal preferences. Because values change over time, it is helpful for nurses to consider how their biases, values, and beliefs have developed and to reflect on how they may be continuing to evolve. Nurses need to examine their own biases to ensure they are not perpetuating any stereotypes or prejudices, and they need to reflect on their own values and beliefs to identify how they may help or hinder their ability to provide culturally responsive care.

To develop self-awareness and identify hidden biases, nurses can start by reflecting on their experiences, cultural background, and stereotypes and how these may impact their ability to objectively evaluate and care for others. The

Implicit Association Test (IAT) (https://openstax.org/r/takeatest), a psychological tool designed to measure bias and the impact of unconscious attitudes and beliefs on day-to-day decision-making, can help nurses identify their hidden biases (Project Implicit, 2011). Nurses can challenge their biases by engaging in open and respectful conversations with people from different backgrounds, asking questions to learn more about the experiences and perspectives of others.

Participating in activities that embrace and promote diversity can also help nurses develop self-awareness and cultural understanding. Such activities include attending cultural events, volunteering at health clinics that serve immigrant communities, and attending interfaith services. By engaging in these activities, nurses can continue to learn and grow in their understanding of individuals and groups from diverse cultural backgrounds, building the skills and knowledge necessary to provide compassionate, culturally congruent care to their clients. Managing the Dynamics of Difference describes strategies for developing cultural awareness in more detail.

The Central Vancouver Island Multicultural Society (2021) has developed a cultural competence self-assessment checklist (https://openstax.org/r/culturalcompetencechecklist) that individuals can use to check their progress toward developing cultural competence.

CONVERSATIONS ABOUT CULTURE

What Is Cultural Competence?

Access multimedia content (http://openstax.org/books/population-health/pages/23-4-becoming-a-culturally-responsive-nurse)
In this Kentucky Inclusive Health Collaborative (2021) video, people speak about the different ways they identify themselves and how they feel health care professionals' perceptions of them affect the care they receive.

Watch the video, and then respond to the following questions.

1. What are the different terms you use to describe your identity?
2. How may others' perceptions of your identity affect the health care you receive?
3. What can you do to increase your cultural competency as a nurse?
4. What effect does your level of cultural competency have on your clients?

Applying Models of Cultural Competence

Transcultural Nursing introduced several frameworks for providing effective, culturally appropriate nursing care that produces positive, equitable outcomes. These models can serve as tools for considering how best to provide culturally responsive care.

Campinha-Bacote's Process of Cultural Competence Model

Campinha-Bacote's process of cultural competence model emphasizes that cultural competence is not a fixed attribute or trait but rather a process that health care professionals engage in to provide high-quality, effective care to clients from diverse cultural backgrounds (Campinha-Bacote, 2002). This process has five components: cultural awareness, cultural skill, cultural knowledge, cultural encounters, and cultural desire.

- **Cultural awareness** involves examining and exploring one's own cultural background, beliefs, and biases and consciously avoiding them when interacting with clients from other cultures.
- **Cultural skill** is the ability to collect cultural data, perform culturally sensitive assessments, and consider biological and physiologic variations.
- **Cultural knowledge** serves as a foundation for understanding the diversity of cultural groups.
- **Cultural encounters** are interactions with clients from different cultural backgrounds.
- **Cultural desire** is the motivation to engage in the process of becoming culturally competent and to provide culturally responsive care.

Recently, Campinha-Bacote refined her model to include **cultural competemility**, the combination of cultural competence and cultural humility in the delivery of health care services (Campinha-Bacote, 2018), to encourage health care professionals to be culturally humble throughout the process of cultural competence.

Because Campinha-Bacote's model specifically examines the process of cultural competence, it is easy to use in clinical situations. For example, a nurse who is motivated to engage in the process of cultural competence expresses a desire to provide culturally responsive care for a client from a religious background that observes dietary restrictions. Through cultural awareness, the nurse recognizes that the client's beliefs and traditions may impact which foods they can eat. Therefore, the nurse clarifies these preferences during their assessment and continues to use cultural assessment skills to seek knowledge about the client's dietary practices.

The Giger and Davidhizar Transcultural Assessment Model

Giger and Davidhizar's transcultural assessment model (Giger & Haddad, 2020) is used to evaluate a client's cultural values and perspectives of health and disease behaviors. According to this model, every individual is culturally unique and should be assessed according to six phenomena: communication, space, social organization, time orientation, environmental control, and biological variations.

- Communication, both verbal and nonverbal, transmits cultural norms and expectations, thereby conveying meaning and forming identity.
- Space refers to the distance between individuals when they interact; different cultural groups have different behaviors concerning personal distance and physical interaction.
- Social organization refers to how a cultural group is organized and includes factors such as family structure, religious values, and role assignments.
- Time orientation, which is the perspective and value placed on the past, present, or future, can vary based on culture.
- Environmental control refers to the belief in one's ability to control and plan for factors in the environment.
- Biological variations are differences between individuals in developmental patterns, disease prevalence, and genetic variations.

Nurses may use Giger and Davidhizar's transcultural model to evaluate how different individuals and groups perceive and approach illness to develop tailored plans of care. For example, some cultures place a greater emphasis on the present and less value on planning for the future. This can affect the way group members approach health care, such as their willingness to adhere to long-term treatment plans or to obtain preventive care. On the other hand, cultures that have a more future-oriented perspective place greater emphasis on planning and preparing for the future, including taking steps to prevent illness and maintain good health.

Another example of this model's application is to consider how, in some cultures, illness may be viewed as a natural part of life, with more emphasis on the social and spiritual aspects of disease than on physiologic or biological manifestations. Individuals from these cultural backgrounds may prefer to seek care from traditional healers or practitioners instead of, or in addition to, Western medical care. In contrast, Western culture emphasizes biomedical explanations for illness and tends to prioritize evidence-based interventions. When differences arise, it is critical for the nurse to remain nonjudgmental and respectful of the client's preferences. For example, if a client expresses a desire to receive acupuncture, the nurse should work with the client and healer to develop a culturally congruent care plan (Figure 23.3). This care plan should be communicated to all members of the care team and tailored to the individual's needs.



FIGURE 23.3 Some clients may seek care from traditional healers or other practitioners of complementary and alternative medicine. A nurse would incorporate these practices into a culturally congruent care plan. (credit: "Curandera-Traditional Healers" by Larry Lamsa/ Flickr, CC BY 2.0)

The Purnell Model for Cultural Competence

The Purnell model for cultural competence (Purnell, 2019) promotes cultural awareness and appreciation in the context of health care. Consisting of 12 domains of cultural knowledge, the model covers a wide range of concepts and skills related to cultural competence. Each domain includes a range of topics related to cultural differences and their impact on health care. For example, the death rituals domain identifies a client's beliefs and practices related to death, dying, and bereavement. Pregnancy and childbearing practices vary widely around the world; this domain covers cultural beliefs and practices related to fertility, birth control, pregnancy, childbirth, and postpartum care. See Transcultural Nursing for more about the Purnell model.

Nurses can implement Purnell's model throughout the nursing process, using their clinical judgment and collaborating with the client to select and emphasize the components that are most relevant to the individual client's care (Purnell & Fenkl, 2021). For instance, using Purnell's model, a nurse caring for a Native American client who follows traditional spiritual practices would elicit the client's views and preferences about incorporating care from a tribal healer and then work to facilitate that collaboration if the client desires.

CASE REFLECTION

Culturally Responsive Approaches to Transgender Care

Read the scenario, and then respond to the questions that follow.

Joseph, a 25-year-old Black transgender man, arrives at the community clinic seeking information about the services provided. Joseph explains that, despite his gender identity, his legal documents still reflect his assigned female name, Jada. Last month, Joseph began hormone therapy to increase his masculine features and is considering gender-affirming surgery that will include breast reduction and a hysterectomy. During his visit, he appears nervous and jittery and avoids making eye contact. Joseph explains that he recently had unprotected sex and is concerned about his HIV status.

1. How should a nurse begin their encounter with Joseph?
2. How might personal factors affect a nurse's interaction with Joseph?
3. Identify other factors that can impact Joseph's experience and care.
4. Using Giger and Davidhizar's transcultural assessment model, how would you provide culturally responsive care to Joseph during his first visit to the clinic?

5. Alternatively, how would the use of Purnell's model inform the care provided to Joseph?

(See White et al., 2020.)

THEORY IN ACTION

Cultural Competence

Access multimedia content (http://openstax.org/books/population-health/pages/23-4-becoming-a-culturally-responsive-nurse)

In this Human Rights Campaign (2011) video, Cecelia Chung, a transgender client, tells her story of discrimination in the health care system and how she learned to advocate for her own care.

Watch the video, and then respond to the following questions.

1. How could you apply Giger and Davidhizar's transcultural assessment model to improve the care that Cecelia Chung received?
2. Describe how the Purnell model for cultural competence could be applied to Cecelia Chung's health care encounter to positively impact the outcomes.
3. In what ways can you use the Campinha-Bacote process of cultural competence model to improve health care encounters for all individuals?

Tools for Measuring Cultural Competence

Although the importance of cultural competence is well recognized in nursing, developing accurate and reliable assessment tools to measure it has been challenging. Measurement tools provide nurses with a way to assess their own development of cultural competence and confidence when caring for clients from different backgrounds. A recent review of tools to measure cultural competence found that only a limited number have been tested (Yadollahi et al., 2020), two of which are presented here. These tools provide nurses and nursing students a means for self-assessment of their development of cultural competence and self-efficacy in providing culturally responsive care.

The **Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals** (IAPCC-R) is used to assess the cultural competence of health care professionals according to the five constructs of Campinha-Bacote's model (Camphina-Bacote, 2002). The IAPCC-R consists of 25 items evaluated using a four-point scale. Scores on the IAPCC-R range from 25 to 100, with higher scores indicating a higher level of cultural competence. The inventory has been widely used in health care research and has been translated into multiple languages, including Swedish, Hebrew, German, Spanish, Korean, Finnish, French, and Japanese. However, one criticism of the tool is that the reading level is very advanced, potentially making it more difficult to use than others.

The **Transcultural Self-Efficacy Tool** (TSET) is designed to measure the confidence of nurses and nursing students on a 10-point scale ranging from 1 (not confident) to 10 (fully confident) in providing transcultural nursing care (Jeffreys & Dogan, 2010). It consists of 83 items in three categories: cognitive, practical, and affective. The cognitive subscale assesses self-efficacy, or confidence, regarding knowledge about caring for clients from different cultural backgrounds; the practical subscale evaluates self-efficacy in cross-cultural interactions; and the affective subscale assesses self-efficacy regarding cultural awareness, acceptance, and respect for other cultures.

23.5 Linguistically Responsive Care

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 23.5.1 Identify factors that affect communication with clients from diverse backgrounds.
- 23.5.2 Compare and contrast communication patterns in high- and low-context cultures.
- 23.5.3 Explain the effects of low health literacy on health outcomes.
- 23.5.4 Use effective communication strategies with clients with low literacy and low health literacy.

Cultural and linguistic competence refers to the ability of health care professionals and health care organizations to understand and respond effectively to the cultural and linguistic needs clients bring to the health care encounter.

Like cultural competence, **linguistic competence** exists along a continuum and is not based on comprehensive knowledge. Linguistic competence enables nurses to care for clients with limited English proficiency. It involves providing these clients easily accessible and culturally appropriate language services, both written and oral. It also requires an awareness of how verbal, nonverbal, and written messages may vary across cultures. Nurses who understand the relationship between communication and cultural identity can adapt their communication to meet each client's needs and preferences. This adaptation includes being mindful of a client's communication preferences and cues and trying to understand and respect them.

Linguistically competent care begins with assessment. The first step is to identify the client's primary language, by asking either the client, a family member, or another individual who is familiar with the client's language. If the client does not speak the same language as the health care provider, the nurse must use a certified medical interpreter to facilitate communication (see Working with Translated Materials and Interpreters). When communicating with clients with limited English proficiency, nurses need to use clear and simple language, avoid medical jargon and technical terms, and give the client ample time to express themselves and to ask questions.

The Office of Minority Health (n.d.) has developed standards that provide information, resources, and continuing education opportunities for health care professionals to learn about **culturally and linguistically appropriate services** (CLAS). CLAS (https://openstax.org/r/enhancenational) emphasizes the importance of tailoring health care services to an individual's culture and language preferences, respecting and responding to the health needs and preferences of all individuals to achieve health equity, and ensuring that everyone has access to high-quality care.

Differences in Communication Styles

Cultural variations in communication can significantly affect how health care professionals and clients interact and how individuals understand and interpret messages. Nurses need to understand how communication styles differ across cultures. By adapting their communication to align with the client's preferences, nurses can avoid potential misunderstandings and communicate more effectively with clients from different backgrounds.

Tone, volume, and speed of speech vary among cultures. Loud, fast, and expressive speech is customary for some individuals, whereas others may perceive it as rude or aggressive. Clients from some cultures may consider it rude or disrespectful to make eye contact while speaking to a health care provider, whereas others may consider it a sign of attentiveness and respect. In some cultures, low facial expressiveness is considered typical, whereas other cultures may view it as indicating a lack of interest or even resistance. Culture can also influence the level of emotional expressiveness considered appropriate in social interactions. Some clients may be more open about discussing their feelings and expressing emotions, whereas others may consider it inappropriate to show strong emotions in public or to discuss their health with people who are not close friends or family. As always, it is important to follow the client's cues in order to provide culturally and linguistically responsive care.

Cultural differences in communication can impact the way that people understand and interpret messages. For example, in **high-context cultures**, such as those found in Latin American and Asian countries, communication tends to be more subtle and rely more on nonverbal cues and context. Words alone may not convey the full meaning of a message, so nurses should consider the context and relationships between people when communicating. In addition, it may be considered rude or disrespectful to be overly direct, particularly when discussing negative or embarrassing topics; instead, these cultures may use more subtle and implicit language, with a focus on harmony and the interpersonal relationship. In contrast, in **low-context cultures**, such as those found in North America and Northern Europe, people tend to be more direct in their communication, using clear and explicit language.

In some cultures, communication is more oriented toward the self, whereas in others it is more focused on other people. This difference can be seen in the way people use "I" statements versus third-person language and plural pronouns. In the United States, where the dominant cultural norm is individualistic, people tend to speak in terms of their own experiences and preferences. In contrast, many other cultural groups are more collectivistic, meaning they prioritize the needs and perspectives of the group or community over those of the individual. For members of these cultures, it may be more common to speak in the third person and to use plural pronouns, such as "we" or "they," rather than "I."

Health Literacy

Health literacy—the ability to access, understand, and use health information and services to make informed

decisions about one's health—ensures that individuals are empowered to take positive actions to improve their health and well-being. Individuals who are health literate can understand and use health-related information and services. Health literacy enables people to read and comprehend medical instructions and labels, follow a treatment plan, and communicate effectively with health care providers, all of which can lead to better health outcomes. Health literacy can also reduce health care costs by preventing unnecessary hospitalizations and other costly interventions. Additionally, health literacy is important for reducing health disparities and promoting health equity.

Research has demonstrated that health literacy can have numerous positive impacts on health care (Shahid et al., 2022). Health literacy increases the use of preventive health care, reduces unnecessary emergency department visits and preventable hospital stays and readmissions, decreases medication errors, and assists clients in better managing chronic conditions such as diabetes, high cholesterol, hypertension, and HIV. Moreover, it can increase client satisfaction, improve overall health outcomes, and enhance client safety, and it results in greater cost savings for the health care system (McDonald & Shenkman, 2018).

HEALTHY PEOPLE 2030

Increasing the Health Literacy of the U.S. Population

One overarching goal of Healthy People 2030 is to remove health disparities and improve health literacy (https://openstax.org/r/priorityareas) in all people (ODPHP, n.d.-a). Health literacy is the ability to access, understand, and use health information and services to make informed decisions about one's health. Healthy People 2030 identifies health literacy as being vital to reaching all Healthy People 2030 objectives. However, health information can be difficult to understand, especially in those with limited English proficiency. Healthy People 2030 has expanded its definition of health literacy to emphasize not only things individuals can do to improve health literacy but also the role that organizations play in helping individuals find, comprehend, and use health information and services to participate in decisions about their care. This new definition goes beyond simply ensuring that individuals understand health information: It focuses on the individual's ability to use this information to make well-informed choices.

Low literacy refers to the inability to read, write, and comprehend basic information. It is a widespread issue; an estimated 21 percent of adults in the United States have low literacy levels (U.S. Department of Education, 2019). Individuals with low literacy have limited ability to access information, learn new skills, and fully participate in society. Low literacy is often linked to other socioeconomic factors, such as poverty, low education levels, and limited access to health care. It can negatively impact health outcomes because those with low literacy may struggle to understand health information, follow treatment plans, and manage their own health.

Effectively communicating with clients with low health literacy involves using plain, nonmedical language; speaking clearly and slowly; and being specific and concrete, avoiding vague or subjective terms such as "not well" and "a few." Common words one would use to explain medical information to friends or family, such as "stomach" or "belly" instead of "abdomen," are appropriate. Nurses should pay attention to the words clients use to describe their illness and then use those words in conversation. Showing a client how to do something, such as performing an exercise or taking medicine, may be clearer than verbal explanations.

23.6 Providing Culturally and Linguistically Responsive Care

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 23.6.1 Identify strategies to use when communicating through an interpreter.
- 23.6.2 Apply principles of culturally responsive care to clients and populations from diverse cultures.
- 23.6.3 Evaluate translated materials for accuracy and effectiveness.

Nurses use a number of strategies to provide clients with culturally and linguistically competent care. These include evaluating translated materials, using communication strategies, and developing culturally tailored interventions. This section provides an overview of the skills necessary to deliver culturally responsive care and improve the health outcomes of clients from diverse cultures.

Working with Translated Materials and Interpreters

Translation and interpretation are two different processes used to exchange information from one language to another. For both, a thorough knowledge of cultural and linguistic differences is necessary to effectively communicate meaning. **Translation** involves written communication, in which written text in one language is converted into written text in another language. **Interpretation**, on the other hand, involves oral communication, in which the words spoken in one language are rendered into another language in real time. Because of the difficulties presented by the live setting, interpretation can be more challenging than translation, such as when the speakers use the wrong words, correct themselves, or use local dialects. Furthermore, unlike the translation process, interpreters lack the ability to review the text or go back and listen again. These disadvantages can make it more difficult for interpreters to accurately convey the meaning of the message.

In any clinical setting, it is critical to use certified medical interpreters, professionals trained in the use of medical terminology, cultural awareness, and ethical conduct. The interpreter should be treated as a respected professional, and extra time should be allotted for messages to be conveyed and understood (Figure 23.4). The environment should be free of distractions, and the interpreter should be provided with a summary of the client's background, goals, and needs for the session. The name of the interpreter should be clearly documented.



FIGURE 23.4 A medical interpreter communicates information from a nurse to a client at a health clinic in Uganda. (credit: Staff Sgt. Samara Scott/U.S. Army Southern European Task Force, Africa/Flickr, CC BY 2.0)

When working with a client who needs an interpreter, the nurse should speak directly to the client rather than addressing the interpreter, even if the client makes eye contact with the interpreter. The nurse should observe and monitor nonverbal communication. Sentence-by-sentence interpretation and clear, simple language without medical jargon will ensure that the nurse and interpreter convey all important information to the client. The interpreter may ask open-ended questions to establish rapport or clarify client statements; during these times, the nurse should avoid interrupting the interpreter. Finally, near the end of a visit, the nurse should use the "teach-back" method to confirm that the client understands the directions and recommendations.

As a student or professional nurse, you may find yourself in a situation where a certified medical interpreter is not present. In these situations, it is critical to follow organizational policy and consult with leadership to locate or access remote interpretation services. Family members or friends should never be used as interpreters under any circumstances. The reasons for this are many, including a potential lack of accuracy, violation of privacy, potential conflicts of interest, and ethical and legal concerns. Think back to Cory's interaction with Faiza. How should he have responded when the man accompanying Faiza offered to translate for her? What if the man accompanying Faiza is not actually her husband but a trafficker who has been forcing Faiza into providing commercial sex?

Developing Culturally Tailored Materials

Nurse scientists have made significant contributions to the development and implementation of culturally tailored materials and interventions to address the specific needs of different cultural groups and to improve their engagement and outcomes. According to nurse researcher Miyong Kim, adapting materials and interventions to

respond to a client's or population's cultural needs should consider eight domains: 1) audience, 2) language, 3) contents, 4) context, 5) concepts, 6) metaphors, 7) methods, and 8) goals (Kim et al., 2022). For example, culturally tailored materials use language, content, and ideas that reflect the values and traditions of the targeted cultural group; align with belief systems; and frame outcomes within the customs and traditions of the targeted group.

When a professional nurse designs a culturally tailored intervention, they first identify the cultural group on which the intervention will focus. This may be a specific ethnic or racial group, a religious group, a linguistic group, or any group that has unique customs, experiences, or perspectives. So that the intervention is appropriate, acceptable, and effective, research is needed to understand the beliefs, values, and practices related to the issue being addressed (Im & Chee, 2021). This research may involve adapting an existing intervention or creating new ones, using culturally appropriate materials such as visuals, activities, and language that are respectful of the culture. Members of the targeted cultural group are often involved to ensure that the intervention is tailored to their needs (Kim et al., 2022). Involving multiple community members in the review process can help create buy-in and awareness.

The U.S. Department of Health and Human Services has developed a strategy to create culturally tailored interventions using the mnemonic CAPABLE, in which each letter represents a consideration related to the best ways to meet a community's needs when developing educational materials (Kelly et al., 2007):

- Colors: Do the colors used have special significance for the target population?
- Art: Are the images appropriate for and reflective of the target population?
- Paper: If the materials are printed, is the paper easy to handle and read, and is its size appropriate for the target population?
- Access: Will the materials be placed in physically accessible locations? Should the information be provided electronically?
- Buy-in: Were members of the target population involved in developing or reviewing the materials? If so, do they endorse them?
- Language: Are the words in a type size most people will be able to read? Is the content easy to comprehend, appropriate for the community being served, and written at a level most readers will understand?
- Evaluation: What changes are needed to meet the needs of the target population?

After the intervention, the nurse should survey community members for feedback or observe health behaviors and outcomes to evaluate the impact of any changes made as a result of the materials. The findings would then be used to inform any revisions or additions to the materials.

CULTURAL ADAPTATION OF MATERIALS

Access multimedia content (http://openstax.org/books/population-health/pages/23-6-providing-culturally-and-linguistically-responsive-care)

This video from the CDC (2020) discusses best practices for making materials more culturally relevant for clients.

Watch the video, and then respond to the following questions.

1. Why is it necessary to develop culturally adapted materials and make them available for clients?
2. What are some potential barriers or challenges nurses and other health care professionals may face when developing culturally adapted materials for clients? How can these be overcome?
3. In what ways can culturally adapted materials enhance client engagement, health literacy, and adherence to treatment plans?

Chapter Summary

23.1 Culture, Cultural Identity, and Cultural Humility

Individuals and groups pass culture from one generation to the next in a dynamic process that influences a person's actions and helps to shape their identities, roles, and lifeways. Cultural identity is the unique combination of beliefs, values, attitudes, behaviors, customs, practices, experiences, and language that make up an individual's sense of belonging to a particular group. To provide culturally and linguistically responsive nursing care, nurses must develop cultural humility and awareness and prioritize client self-determination.

23.2 What Is Culturally Responsive Care?

Culturally responsive care fully considers the needs of individuals and groups in relation to their cultural backgrounds, values, and preferences and is one potential outcome of the dynamic process of cultural competence. A nurse's ability to provide effective, culturally responsive care involves ongoing reflection about their own attitudes, beliefs, and values, as well as an understanding of health inequities and the social determinants of health.

23.3 Factors Affecting Culturally Responsive Care

Personal factors that affect a nurse's ability to provide culturally responsive care include value system, beliefs, customs, cultural identity, and knowledge and attitudes about other cultures. Implicit and explicit biases, stereotypes, othering, and ethnocentrism play a role in nurses' interactions with clients. Barriers to providing culturally responsive nursing care include systemic and organizational barriers within the health care system and structural inequities in the broader health care environment.

23.4 Becoming a Culturally Responsive Nurse

Culturally responsive attitudes include a positive approach to diversity, respect and equal treatment for cultural differences, and cultural humility. Models of cultural competence offer ways to best provide culturally responsive care and include Campinha-Bacote's process of cultural competence, Giger and Davidhizar's transcultural model, and the Purnell model of cultural competence. Tools for self-assessment of cultural competence include the IAPCC-R and the TSET.

23.5 Linguistically Responsive Care

Cultural and linguistic competence is the ability to understand and respond effectively to the culturally diverse needs that clients bring to health care encounters. Different communication styles affect how individuals interpret messages and may involve tone, volume, and speed of speech; eye contact; facial expressions; emotional expressiveness; and high- and low-context communication. Promoting health literacy—the ability to access, understand, and use health information or services to make informed decisions—can reduce health disparities.

23.6 Providing Culturally and Linguistically Responsive Care

Strategies to provide clients with culturally and linguistically competent care include translation, interpretation via certified medical interpreters, observation of nonverbal communication, use of jargon-free language, the "teach-back" method, and culturally tailored materials. Such strategies address the specific content, language, and delivery needs of different clients and can improve their engagement and outcomes.

Key Terms

biases prejudicial attitudes or preconceptions that act as filters to the way one perceives, interprets, and reacts to the world

cultural awareness the state of examining and exploring one's cultural background, beliefs, and biases and consciously avoiding these biases when interacting with clients from other cultures

cultural competemility the combination of cultural competence and cultural humility in a synergistic process that infuses cultural humility into the five components of the Campinha-Bacote process of cultural competence model, encouraging health care professionals to be culturally humble in the delivery of health care services (Campinha-Bacote, 2018)

cultural competence the attitudes, knowledge, and skills necessary for providing quality care to diverse populations (American Association of Colleges of Nursing, 2008)

cultural desire in the Campinha-Bacote process of cultural competence model, the motivation to engage in the process of becoming culturally competent and the commitment to providing culturally responsive care

cultural encounters in the Campinha-Bacote process of cultural competence model, deliberate interactions with clients from different cultural backgrounds intended to modify or refine one's existing beliefs about one's own culture and help prevent stereotyping

cultural humility acknowledging, respecting, and valuing cultural differences by taking responsibility for one's own perceptions and ideas; cultivating a deep respect for all cultures represented; and striving to learn more about and understand different people's perspectives

cultural identity the unique combination of beliefs, values, attitudes, behaviors, customs, practices, experiences, and language that make up an individual's sense of belonging to a particular group or culture

cultural knowledge in the Campinha-Bacote process of cultural competence model, the foundation for understanding the diversity of cultural groups

cultural skill in the Campinha-Bacote process of cultural competence model, the ability to collect relevant cultural data in a culturally appropriate manner, perform culturally sensitive assessments, and understand how biological and physiologic variations can influence the accuracy of the data

culturally and linguistically appropriate services (CLAS) services that emphasize the importance of tailoring health care to an individual's cultural and language preferences, respecting and responding to the health needs and preferences of all individuals to achieve health equity, and ensuring that everyone has access to high-quality care

culturally congruent care care that is meaningful to, and aligns with, a client's or population's health beliefs and behaviors (Leininger, 1991, 1999)

culturally responsive care the process of providing care to individuals or populations while fully considering their cultural backgrounds, values, and preferences; involves actively making sure that all aspects of health care are tailored to the needs and beliefs of the specific population

explicit bias overt prejudicial attitudes or preconceptions that exist at a conscious, intentional level and are often expressed verbally

high-context culture a communication style that relies more on nonverbal cues, context, and relationships between people than on verbal language, meaning that words alone may not convey the full meaning of a message

implicit bias a type of prejudice that unconsciously affects a person's behavior, decisions, and attitudes, even if it contradicts their expressed beliefs and values

interpretation a process that occurs during oral communication in which the words spoken in one language are rendered into another spoken language in real time

Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals Revised (IAPCC-R) a tool used to assess the cultural competence of health care professionals according to the five constructs of Campinha-Bacote's model

linguistic competence the knowledge, attitudes, and skills that enable nurses to care and advocate for clients who communicate in a language other than the one most commonly spoken or understood in the service setting

low literacy the inability to read, write, and comprehend basic information

low-context culture a direct communication style that uses clear and explicit language

othering the process of excluding, marginalizing, or differentiating individuals or groups based on their perceived differences from the dominant group in a society

self-awareness a process that involves understanding one's own values and beliefs, how they are influenced by one's cultural background, and how they influence one's perceptions and behaviors

stereotyping the act of ascribing certain characteristics or behaviors to a person based on their membership in a particular group

Transcultural Self-Efficacy Tool (TSET) a scale consisting of 83 items in the cognitive, practical, and affective categories that is designed to measure the confidence of nurses and nursing students in providing transcultural nursing care (Jeffreys & Dogan, 2010)

translation a process in which written text in one language is converted to written text in another language

Review Questions

1. The nurse is assessing a client who lives in an area described as a food desert. The nurse identifies that the client is therefore at risk for which disorder?
   a. Obesity
   b. Parkinson's disease

c. Multiple sclerosis
d. Chronic obstructive pulmonary disease

2. Which is an example of a nurse practicing culturally congruent care?
a. Using evidence-based nursing practice
b. Practicing nursing according to the nurse's beliefs
c. Discouraging the use of a traditional healer
d. Using standardized care plans

3. Which term describes the actions of a nurse who orders a kosher diet for a Jewish client based on previous experience with other Jewish clients?
a. Stereotyping
b. Bias
c. Othering
d. Ethnocentrism

4. Which concept does the nurse identify as an organizational barrier to culturally competent health care in a community?
a. Not enough primary care providers in a community
b. A lack of medical interpreters
c. Absence of health care insurance
d. An inability to afford health care

5. Which construct do nurses exhibit when they engage in self-reflection about their own cultural beliefs and biases?
a. Cultural skill
b. Cultural desire
c. Cultural awareness
d. Cultural knowledge

6. Which actions by the nurse demonstrate that the nurse values cultural diversity?
a. The nurse discusses cultural diversity with people from their own culture.
b. The nurse compares other cultures to the nurse's culture.
c. The nurse treats everyone from the same culture in a similar manner.
d. The nurse volunteers at a free immigrant health clinic.

7. Which action should the nurse take when a client of a different culture than the nurse stares out the window while the nurse is providing preoperative instruction?
a. Stare out the window with the client.
b. Move around the bed to stand in front of the client.
c. Observe how the client uses eye contact.
d. Stop the instruction and return later.

8. Which action should the nurse take when teaching a client with a low health literacy level?
a. Use the correct medical terminology.
b. Speak in a loud voice.
c. Choose terms that the client uses.
d. Use verbal instruction only.

9. Which is the best action for the nurse to take when communicating with a client who speaks a language the nurse does not understand?
a. Arrange for a medical interpreter.
b. Ask a family member to translate.

c. Ask a clerical staff member who speaks the language to translate.
d. Use a smartphone app to translate.

10. Which action should the nurse take when developing written educational materials for a specific population?
a. Use black print on a white background.
b. Use appropriate medical terms.
c. Ask community members to review the materials.
d. Write at a high school reading level.

CHAPTER 24

Designing Culturally and Linguistically Appropriate Programs



FIGURE 24.1 Nurses and other health care providers often rely on medical interpreters to facilitate communication with clients if they do not share a common language. (credit: modification of work by Jeffrey Allen/U.S. Air Force/Flickr, CC BY 2.0)

CHAPTER OUTLINE

24.1 Culturally Responsive Care

24.2 Health Care Tools to Identify Organizational Strengths and Areas for Improvement

24.3 The Nurse's Role in Promoting Organizational Cultural and Linguistic Competency

INTRODUCTION Hyeon Lee, a 68-year-old Korean immigrant, has been recently discharged from the hospital after being treated for pneumonia. She lives with her daughter, Nari, who is fluent in English and initially offers to interpret for her mother. However, Emily, the home care nurse, recognizes that using a family member as an interpreter, although well-intentioned, is not considered best practice due to potential misunderstandings and biases. How might Emily explain this to Hyeon's daughter? What does the nurse need to consider to provide culturally and linguistically appropriate care? In an increasingly globalized world, community nurses often find themselves caring for clients from diverse cultural and linguistic backgrounds. The ability to deliver health care that is attuned to these unique aspects of client identity is an essential component of modern, client-centered care.

This chapter provides an in-depth exploration of culturally and linguistically appropriate care, using the clinical scenario of Hyeon as a case study. Hyeon's situation—a recent immigrant discharged from the hospital while navigating cultural and language barriers—is a good example of the challenges many clients and health care providers face in today's diverse communities.

24.1 Culturally Responsive Care

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 24.1.1 Define culturally responsive care versus cultural competence.
- 24.1.2 Discuss the National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care.
- 24.1.3 Identify the characteristics of a culturally and linguistically competent organization.
- 24.1.4 Evaluate an organization's structure, mission, vision, philosophy, and values to assess cultural and linguistic competency.

Cultural diversity can pose significant challenges for the successful implementation of community health programs and services. As culturally and linguistically diverse populations continue to grow, health care professionals are increasingly recognizing the need for culturally tailored approaches that can improve outcomes, streamline processes, and enhance client satisfaction. This shift in perspective reflects a broader recognition of the importance of ensuring that health services are delivered in a way that is respectful, responsive, and appropriate to the unique needs and perspectives of each client.

As discussed in Culturally and Linguistically Responsive Nursing Care, to improve health outcomes, nurses need to provide clients with care that is consistent with their values, beliefs, worldviews, and practices (Marion et al., 2016). Cultural competence, defined as the process of developing "the ability to recognize and navigate differences in cultural attitudes, beliefs, and values in order to provide equitable and effective health care to all clients" (Betancourt et al., 2003, p. 1), is one component of culturally congruent care. These concepts are crucial aspects of health care service delivery that require health care professionals to have an understanding and appreciation of diverse cultural backgrounds. In March 2001, the U.S. Department of Health and Human Services (HHS) and the Office of Minority Health released standards for culturally and linguistically appropriate services (CLAS) in health care (Federal Register, 2013) (see Table 24.1). The office revised and republished the standards in 2013, making them a comprehensive and nationally recognized guide for cultural and linguistic competence in health care (HHS, 2013). The National CLAS Standards provide a blueprint for health and human services organizations to ensure that culturally and linguistically appropriate services promote a more inclusive definition of culture that is sensitive to the unique aspects of race, ethnicity, and language, as well as sexual orientation and gender identity (HHS, n.d.-a).

Standard	Description
Principle Standard	• Provide effective, equitable, understandable, and respectful quality care and services that are responsive to diverse cultural health beliefs and practices, preferred languages, health literacy, and other communication needs.
Governance, Leadership, and Workforce	• Advance and sustain organizational governance and leadership that promotes CLAS and health equity through policy, practices, and allocated resources. • Recruit, promote, and support culturally and linguistically diverse governance, leadership, and workforce that are responsive to the population in the service area. • Educate and train governance, leadership, and workforce in culturally and linguistically appropriate policies and practices on an ongoing basis.

TABLE 24.1 Culturally and Linguistically Appropriate Services Standards (See HHS, n.d.-a.)

Standard	Description
Communication and Language Assistance	• Offer language assistance to individuals who have limited English proficiency and/or other communication needs, at no cost to them, to facilitate timely access to all health care and services. • Inform all individuals of the availability of language assistance services clearly and in their preferred language, verbally and in writing. • Ensure the competence of individuals providing language assistance; the use of untrained individuals and/or minors as interpreters should be avoided. • Provide easy-to-understand print and multimedia materials and signage in the languages commonly used by the populations in the service area.
Engagement, Continuous Improvement, and Accountability	• Establish culturally and linguistically appropriate goals, policies, and management accountability, and infuse them throughout the organization's planning and operations. • Conduct ongoing assessments of the organization's CLAS-related activities and integrate CLAS-related measures into measurement and continuous quality improvement activities. • Collect and maintain accurate demographic data to monitor and evaluate the impact of CLAS on health equity and outcomes and to inform service delivery. • Conduct regular assessments of community health assets and needs and use the results to plan and implement services that respond to the cultural and linguistic diversity of populations in the service area. • Partner with the community to design, implement, and evaluate policies, practices, and services to ensure cultural and linguistic appropriateness. • Create conflict and grievance resolution processes that are culturally and linguistically appropriate to identify, prevent, and resolve conflicts or complaints. • Communicate the organization's progress in implementing and sustaining CLAS to all community partners, constituents, and the general public.

TABLE 24.1 Culturally and Linguistically Appropriate Services Standards (See HHS, n.d.-a.)

As Culturally and Linguistically Responsive Nursing Care notes, recent critiques of cultural competence contend that it is based on ethnocentrism, a belief that one's own cultural values, traditions, and practices are superior to those of other cultures (Beser et al., 2021). According to this critique, the ethnocentric orientation of cultural competence can lead to stereotyping and, as a result, perpetuate already existing biases and inequities (Berger & Ribeiro Miller, 2021). Other critics argue that the process of developing cultural competence oversimplifies the complex nature of culture, reducing it to facts and easily acquired knowledge while failing to consider cultural change and variability (Campinha-Bacote, 2018). As such, a recent shift toward culturally responsive care focuses on nurses' ability to recognize and respond inclusively to diverse perspectives, and it emphasizes the importance of social justice (Day & Beard, 2019). These critiques underscore the importance of cultural humility, self-reflection, and committing to a client-centered nursing practice.

By prioritizing culturally responsive care, nurses and other health care professionals can ensure that all individuals, regardless of their cultural background, receive equitable and effective care. One example of culturally responsive care in nursing is the ability to effectively communicate with clients from diverse cultural backgrounds. This may involve using interpreters or language services, when necessary, but also involves being aware of potential communication barriers such as differences in language, nonverbal communication, and health literacy levels.

Culturally responsive nurses also actively listen to their clients, seek to understand their cultural beliefs and practices, and incorporate this knowledge into their care plans. For example, a nurse may modify a client's care plan to accommodate cultural food preferences while in relation to dietary restrictions into the client's treatment. By demonstrating cultural competence in their practice, nurses can build trust and rapport with their clients and improve their overall health outcomes.

Additionally, the lesbian, gay, bisexual, transgender, queer/questioning, and asexual/aromantic/agender plus other unknowns (LGBTQIA+) community consists of a cross-cultural broad range of community members and individuals of all races, ethnic and religious backgrounds, and socioeconomic statuses. The health care needs of the LGBTQIA+ community should be considered to provide the best care and avoid inequalities of care. Culturally competent care of a member of this community includes the following:

- Care that targets a specific population
- Social and structural equality of care
- Avoidance of discrimination and stigmatization

Importantly, when providing care to LGBTQIA+ clients, nurses should keep in mind that members of socially marginalized groups may present with mistrust and fear of the health care system (Damaskos et al., 2018). Culturally sensitive, holistic care is based on treating the client as a whole person while conducting comprehensive assessments that are sensitive to race/ethnicity, social class, sexual orientation, and gender identity, as well as the individual's past interactions with the health care system.

National Standards for Culturally and Linguistically Appropriate Services

Before the development of the CLAS standards, national organizations and federal agencies had varying ideas about what constituted culturally appropriate health care. As a result, health care professionals were often left with a wide spectrum of ideas and policies to choose from. However, the CLAS standards provide a cohesive and standardized framework for health care professionals to follow, ensuring that they provide culturally appropriate services for every client (see Table 24.1).

Nurses incorporate the CLAS standards into their daily work by providing language assistance services to clients who have limited English proficiency. This language assistance may involve using a **professional medical interpreter** or a **qualified bilingual staff member** to facilitate communication between the nurse and the client. The nurse also uses plain language and avoids medical jargon to ensure that the client understands their condition, treatment plan, and medications. Additionally, this nurse may incorporate cultural beliefs and practices into the client's care plan. For example, if a client prefers traditional remedies or therapies, the nurse may work with the client to find ways to incorporate these practices into the client's treatment plan. The nurse may also be sensitive to clients' cultural or religious beliefs when providing care, such as accommodating dietary restrictions or scheduling procedures around prayer times.

A culturally responsive nurse is aware of the importance of health literacy and provides client education materials in a way that is accessible and understandable to clients with varying levels of health literacy. This may involve using visual aids, interactive tools, or other methods to help clients understand their condition and treatment plan. Additionally, learning to take care of members of the LGBTQIA+ community involves understanding multiple special considerations and avoiding unconscious and perceived biases. Members of the LGBTQIA+ community have unfortunately experienced a challenging history, but with education, health professionals can learn to provide compassionate, comprehensive, and high-quality care. By incorporating CLAS standards into their daily work, nurses can improve client outcomes and promote health equity for all individuals, regardless of their cultural background. A study by Beach et al. (2020) found that the implementation of CLAS standards in a primary care setting led to improved client-provider communication, increased client trust, and better client engagement.

CASE REFLECTION

Providing Linguistically Appropriate Care

Read the scenario, and then respond to the questions that follow.

Hyeon Lee, a 68-year-old Korean immigrant, has been recently discharged from the hospital after being treated for pneumonia. She lives with her daughter, Nari, who is fluent in English and initially offers to interpret for her mother. However, Emily, the home care nurse, recognizes that using a family member as an interpreter, although well-intentioned, is not considered best practice due to potential misunderstandings and biases.

Emily listens respectfully to Nari's offer to translate for her mother, Hyeon. Emily then tactfully explains the importance of using a professional medical interpreter to ensure accurate communication while still involving Nari in her mother's care. Emily arranges for a Korean-speaking medical interpreter to facilitate communication and ensures that written materials, such as medication instructions, are provided in Korean.

1. What were some potential negative consequences of relying solely on Nari to translate for Hyeon, and how did Emily address these concerns while still involving Nari in her mother's care?
2. How did Emily's actions to arrange for a Korean-speaking medical interpreter and provide written materials in Korean align with the CLAS standards, and how did these actions impact Hyeon's care experience?
3. How did Emily's interactions with Nari and Hyeon demonstrate awareness and respect for cultural differences?

ASSESSING HEALTH LITERACY

Determining health literacy in culturally diverse clients can be a complex process, as it requires understanding not only the client's level of literacy but also their cultural background and experiences. Here are some strategies nurses can use to assess health literacy in culturally diverse clients:

- Use validated health literacy assessments: The National Library of Medicine in cooperation with Boston University and CommunicateHealth keeps a database of these tools (Health Literacy Tool Shed (https://openstax.org/r/healthliteracybu)). These assessments can be administered orally, in writing, or through visual cues and can be translated into different languages and adapted to different cultures.
- Use plain language: Nurses can use plain language and avoid medical jargon when communicating with clients. This can help ensure that clients understand their health information and can make informed decisions about their care.
- Observe client behavior: Nurses can observe client behavior to assess their level of health literacy. For example, if a client appears confused and/or asks many questions, this may indicate that they have limited health literacy.
- Assess numeracy skills: Numeracy skills are an important component of health literacy. Health care providers can assess a client's numeracy skills by asking them to perform tasks such as calculating dosages of medication or understanding nutritional labels.
- Assess cultural beliefs: Cultural beliefs can impact health literacy and health care decision-making. Health care providers can assess a client's cultural beliefs and practices to better understand how these factors may impact their health literacy.

By using a combination of these strategies, health care providers can better understand their clients' health literacy levels and develop interventions to improve health outcomes for culturally diverse populations.

(See HHS, 2010; Nutbeam & Lloyd, 2021.)

CLAS standards provide a framework for achieving effective, culturally responsive, and linguistically appropriate care for clients from diverse backgrounds. Language access services aim to ensure that clients with **limited English proficiency** (LEP) can access health care services and receive quality care without language barriers. The CLAS standards recommend several strategies to improve language access services, including offering interpretation services, translation of vital documents, and training of staff in cultural and linguistic competency. The provision of language assistance is a requirement for all health care providers that receive federal funding, under Title VI of the Civil Rights Act of 1964 (HHS, n.d.-b).

Research has demonstrated the importance of language access services in improving health care outcomes for clients with LEP. A study by Schwei et al. (2019) found that the use of professional interpreters improved the quality

of care for clients with LEP, increased client satisfaction, and reduced medical errors. Additionally, Ngo-Metzger et al. (2007) found that clients with LEP who received language assistance were more likely to receive preventive services and had better health outcomes than those who did not receive language assistance.

Characteristics of a Culturally and Linguistically Responsive Organization

Culturally and linguistically responsive organizations should provide readily available, culturally appropriate oral and written language services to LEP members through such means as bilingual/bicultural staff, trained medical interpreters, and qualified translators (Figure 24.2). Additionally, such organizations should be aware of and address the different barriers faced by culturally and linguistically diverse clients such as language barriers, legal restrictions, or differences in health beliefs, and they should have the ability to recognize the importance of race, ethnicity, and culture in health care (Handtke et al., 2019).



FIGURE 24.2 Culturally and linguistically responsive organizations ensure printed client educational materials are appropriate for the needs of the populations they serve. (credit: U.S. Department of Agriculture/Flickr, Public Domain)

An Agency for Healthcare Research and Quality (AHRQ) report also highlights the importance of providing culturally and linguistically appropriate care to diverse groups and individuals, including those with LEP. The AHRQ report (2019) states that culturally competent organizations should strive to provide adequate access to high-quality health care, provide improved health outcomes for diverse populations, and eliminate disparities in health care.

Culturally responsive organizations can recognize and respect differences in culture, understand and manage the dynamics of cross-cultural interactions, and adapt to the needs of diverse populations (Table 24.2). Such organizations should be able to provide **cultural safety**, which is defined as an environment that is spiritually, socially, and emotionally safe, as well as physically safe for people, "where there is no assault, challenge or denial of their identity, of who they are and what they need" (Williams, 1999, p. 213). Overall, a culturally and linguistically responsive organization is one that provides culturally appropriate care, recognizes and addresses the barriers faced by diverse populations, works to eliminate health care disparities, and creates an environment that is safe and respectful of diverse cultures and identities.

Characteristic	Explanation	Examples
Diverse workforce	The organization should strive to recruit and retain a diverse workforce that reflects the cultural and linguistic diversity of its client population.	The clinic actively recruits and retains a diverse workforce that reflects the cultural and linguistic diversity of its client population. It ensures that there is adequate representation of staff from different ethnic and language backgrounds to enhance communication and cultural understanding.
Language services	The organization should provide professional and certified language services, such as interpreters and translators, to support effective communication between clients and health care providers.	The clinic has trained interpreters available in-person, over the phone, or through telehealth services, based on the client's preference and needs.
Cultural awareness and sensitivity	The organization should provide cultural competence training to its staff to improve their understanding of cultural differences and to promote respectful and effective communication with clients from diverse backgrounds.	A state department of health offers free cultural competency training for participating providers to help them develop knowledge and skills to deliver client-centered care that respects their clients' cultural and linguistic needs and preferences.
Client-centered care	The organization should prioritize client-centered care that considers the cultural and linguistic needs and preferences of its clients.	Inclusive communication with LGBTQIA+ clients is essential for providing culturally competent care. Using inclusive language is one way to create a welcoming and affirming environment. For instance, health care providers should use gender-neutral terms like "partner" instead of assuming a client's marital status or using gender-specific language like "husband" or "wife." It is also important to ask clients about their preferred name and pronouns to ensure respectful and accurate communication.
Culturally appropriate policies and procedures	The organization should establish policies and procedures that are culturally appropriate and responsive, such as policies for providing language services and assessing clients' cultural and linguistic needs.	The primary care clinic has guidelines for providing language services, conducting cultural assessments to identify client needs, and ensuring that culturally appropriate materials, resources, and signage are available throughout the clinic.

TABLE 24.2 Characteristics of a Culturally and Linguistically Responsive Organization (See Handtke et al., 2019; Tellez & the Institute for Economic and Racial Equity, Brandeis University, 2015.)

Characteristic	Explanation	Examples
Community engagement	The organization should engage with the local community to better understand the cultural and linguistic needs of its client population and to build trust and rapport with clients and their families.	Recognizing the importance of engaging with the local community, the primary care clinic actively seeks feedback, collaborates with community organizations, and conducts community needs assessments to better understand the cultural and linguistic needs of its client population. This helps to build trust and rapport with clients and their families and ensures that services are tailored to their specific needs.
Ongoing evaluation and assessment	The organization should regularly monitor and evaluate its services for effectiveness and make changes as needed to improve cultural and linguistic competence.	A clinic regularly evaluates the effectiveness of its practices by collecting feedback from clients on the services it offers, tracking health outcomes, and making necessary changes to continuously improve the delivery of care.
Commitment to diversity and inclusion	The organization should have a mission, a vision, a philosophy, and values committed to cultural and linguistic competence, diversity, and inclusion.	An example of a vision that communicates a commitment to culturally and linguistically responsive care is: Our vision is to create a health care environment where cultural and linguistic diversity are celebrated and embraced. We strive to be an organization that promotes inclusivity, respects individual differences, and provides the highest standard of care to all individuals, regardless of their cultural or linguistic background.

TABLE 24.2 Characteristics of a Culturally and Linguistically Responsive Organization (See Handtke et al., 2019; Tellez & the Institute for Economic and Racial Equity, Brandeis University, 2015.)

Organizational Evaluation of Cultural and Linguistic Effectiveness

Culturally effective organizations enable, cultivate, and support the delivery of high-quality health care for all groups of people (Tellez, T., & the Institute for Economic and Racial Equity, Brandeis University, 2015). When evaluating an organization's structure, mission, vision, philosophy, and values to assess cultural and linguistic effectiveness, it is important to consider several key factors (see Figure 24.3).

The CLAS standards highlight the significance of integrating culturally and linguistically appropriate goals, policies, and management accountability into an organization's planning and operations. To achieve this, organizations should conduct ongoing assessments of their CLAS-related activities and integrate CLAS-related measures into measurement and continuous quality improvement activities. The CLAS standards also direct organizations to provide communication and language assistance to individuals with LEP and ensure that their workforce is trained and educated in culturally and linguistically appropriate services.

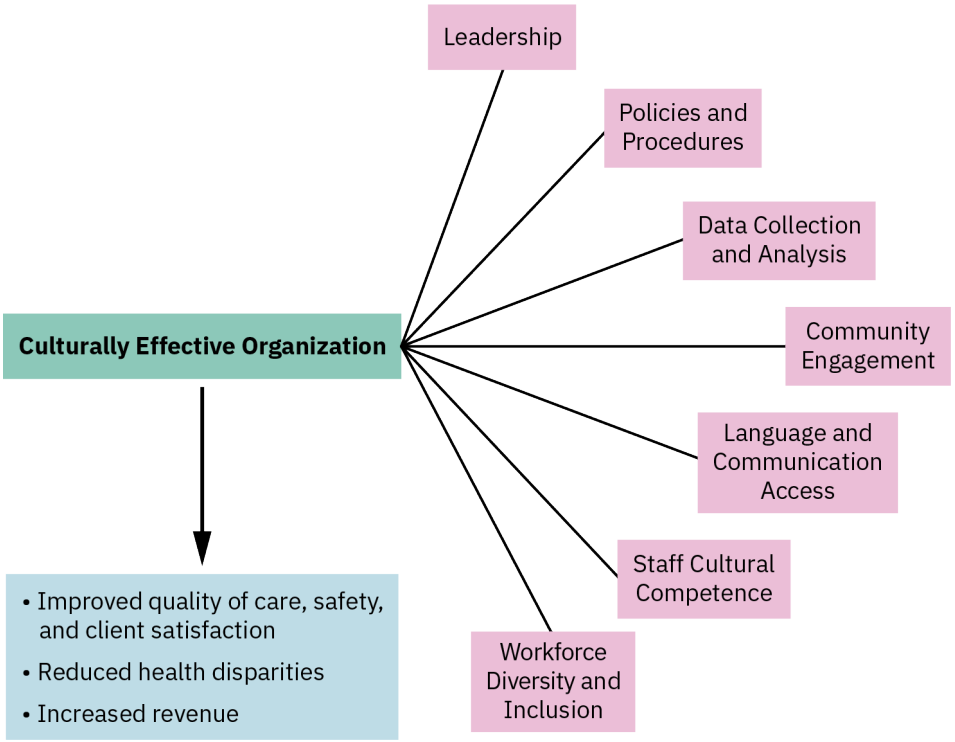


FIGURE 24.3 Culturally effective health care organizations know that ongoing assessments and continuous process improvement during planning and operations are needed to improve quality of care, safety, and client satisfaction. (See Tellez, T., & the Institute for Economic and Racial Equity, Brandeis University, 2015; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Additionally, the National Center for Cultural Competence (NCCC) at Georgetown University (NCCC (https://openstax.org/r/ncccgeorgetown)) identified six compelling reasons that health care organizations across the United States are making cultural effectiveness a priority (n.d.):

- To improve service quality and health outcomes
- To gain a competitive edge in the marketplace
- To respond to current/projected demographic changes
- To eliminate longstanding health disparities
- To meet legal, regulatory, and accreditation mandates
- To decrease the likelihood of malpractice claims

By taking steps to achieve culturally congruent care, organizations can align themselves with new industry standards and regulations. For instance, accrediting bodies like The Joint Commission (2023) now require an organizational focus on culturally appropriate care. Newer payment models incentivize health care providers to deliver culturally competent care, as it has been shown to improve client satisfaction and other outcomes. As a result, organizations that successfully implement culturally competent care can potentially increase their revenue.

Organizational Supports for Cultural Competence

Organizational supports play a critical role in enhancing cultural competence among health care providers, ultimately improving health outcomes for clients from diverse backgrounds. Lekas and colleagues (2020) note that organizational supports for cultural competence include leadership commitment, **workforce diversity**, cultural competence training, defined set of values and principles, client-centered care, and **community engagement**. Here are several examples of organizational supports for cultural competence:

- Leadership commitment: Leadership commitment refers to the active involvement and support of organizational leadership in promoting cultural competence. This includes developing and implementing policies and practices that prioritize cultural competence and diversity, allocating resources to cultural competence initiatives, and holding staff accountable for meeting cultural competence goals.
- Workforce diversity: One essential principle of cultural competence is valuing diversity, which means accepting and respecting differences between and within cultures. Organizations can demonstrate this by

promoting diversity and inclusivity in their hiring practices and encouraging employees to participate in cultural competence training.

- Cultural competence training: Cultural competence training involves providing staff with the knowledge, skills, and attitudes necessary to provide culturally appropriate care. This includes training on cultural beliefs and practices, on communication skills, and on strategies for addressing cultural barriers to care.
- Defined set of values and principles: Cultural competence requires that organizations have a defined set of values and principles that enable them to work effectively cross-culturally. This includes demonstrating behaviors, attitudes, policies, and structures that support cultural competence. Organizations can achieve this by developing a formal policy statement, providing cultural competence training, and regularly assessing their progress in meeting cultural competence goals.
- Client-centered care: A culturally competent health care organization recognizes the importance of culture in delivering client care and focuses on reducing disparities in health care due to race, ethnicity, culture, gender, economic status, and other factors. To achieve this, organizations can develop client-centered care strategies that incorporate cultural beliefs and values, provide interpreter services, and use culturally appropriate materials in client education and outreach.
- Community engagement: Community engagement involves collaborating with community organizations and partners to develop culturally appropriate services and programs. This includes conducting outreach to underserved communities, partnering with community organizations to provide education and support, and involving clients and families in the design and implementation of cultural competence initiatives. See Assessment, Analysis, and Diagnosis for more information on performing a community health assessment.

24.2 Health Care Tools to Identify Organizational Strengths and Areas for Improvement

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 24.2.1 Describe the Promoting Cultural and Linguistic Competency Self-Assessment Checklist for Personnel Providing Primary Health Care Services.
- 24.2.2 Identify the components of the ACCESS model.
- 24.2.3 Use the ACCESS model as a framework to deliver transcultural nursing care.

There are a range of tools and strategies, including cultural competency self-assessments, communication, and interventions such as the ACCESS model, all aimed at identifying strengths and pinpointing areas where improvements can be made. By focusing on these aspects, nursing professionals and health care organizations can create an environment where all clients, regardless of their cultural or linguistic background, feel understood, respected, and well cared for.

Promoting Cultural and Linguistic Competency Self-Assessment Checklist

The Promoting Cultural and Linguistic Competency Self-Assessment Checklist for Personnel Providing Primary Health Care Services is a useful resource for improving cultural and linguistic competency in health care settings. It is designed to enhance awareness of and sensitivity to cultural and linguistic diversity and to provide examples of practices that foster an environment of cultural and linguistic competence. Developed by the National Center for Cultural Competence (NCCC (https://openstax.org/r/ncccgeorgetown)) at Georgetown University, the checklist is intended for use by health care personnel in primary care settings (n.d.) and consists of six sections:

- Creating a welcoming environment
- Communicating effectively across cultures
- Conducting a cultural self-assessment
- Understanding and applying cultural knowledge
- Engaging in cross-cultural interactions
- Advocating for culturally and linguistically competent practices

Each section is designed to help health care personnel assess their level of cultural and linguistic competence and identify areas for improvement. The checklist provides a list of items to consider and offers examples of best practices for each section. By completing the checklist, health care personnel can gain a better understanding of

their cultural and linguistic competencies and take steps to improve the care they provide to clients from diverse backgrounds. For example, in the section on communicating effectively across cultures, the checklist suggests using plain language, avoiding medical jargon, and utilizing an interpreter when necessary.

According to the NCCC, the checklist has been widely used in health care settings and has been shown to be effective in improving cultural and linguistic competence among health care personnel (n.d.).

PROMOTING CULTURAL AND LINGUISTIC COMPETENCY SELF-ASSESSMENT CHECKLIST

Visit this link (https://openstax.org/r/georgetownedu) to the National Center for Cultural Competence checklist, complete a self-assessment, and then respond to the following questions.

1. How has this self-assessment influenced your understanding of cultural differences? Can you identify any specific insights you gained?
2. What additional tools or resources do you think could complement this assessment?
3. Have you uncovered any preconceptions or biases that you were previously unaware of? How will you address these in your professional development?
4. In what ways have you identified areas for personal growth regarding cultural and linguistic competency? What steps do you plan to take to improve in these areas?

Creating a Welcoming Environment

A welcoming environment in health care refers to a setting that is inclusive, respectful, and culturally sensitive to clients from diverse backgrounds. Such an environment promotes client-centered care and is culturally responsive to clients' diverse needs—a place where clients feel respected, valued, and included, regardless of their cultural or linguistic backgrounds. By creating a welcoming environment, health care workers can improve the quality of care and promote positive health outcomes for all clients (Figure 24.4). Creating a welcoming environment is part of the NCCC checklist (NCCC, 2013); the following list presents examples of how this may be accomplished:

- Introducing oneself and asking how the client prefers to be addressed, including name and pronouns
- Using professional interpreters or language services to communicate effectively with clients who have LEP or speak a different language
- Displaying posters, brochures, and other materials that represent the diversity of the client population
- Providing information about the client's rights and responsibilities in multiple languages and formats
- Asking about the client's cultural beliefs, practices, and values related to health and illness
- Providing accommodations that meet the client's specific cultural and linguistic needs, such as dietary restrictions or prayer times
- Avoiding assumptions or stereotypes based on the client's race, ethnicity, or cultural background
- Being aware of one's own cultural biases and seeking to understand the client's perspective
- Creating a safe and supportive environment that promotes trust and open communication between the client and health care provider
- Assessing if the physical environment is welcoming and accessible to all clients, including those with disabilities



FIGURE 24.4 Making clients feel comfortable and welcome goes a long way toward improving health outcomes. In this photo, Ensign Chaquel Shiver places a client at ease while checking them into a Navy hospital ship in Riohacha, Colombia. (credit: "Sailor gives a patient a thumbs-up while checking him" by Kris R. Lindstrom/U.S. Navy/Flickr, CC BY 2.0)

The following is an example of a welcoming environment: The waiting room in a clinic has accessible seating for clients with mobility impairments and clear signage—including signage in Braille—that indicates accessible routes throughout the facility. Clinic staff has received training on how to interact with clients with disabilities in a respectful and inclusive manner. Providing accessible seating, clear signage, and staff training can help create a welcoming environment that is inclusive of all clients, regardless of their physical abilities. By assessing accessibility, health care personnel can identify areas for improvement and take steps to fix them.

LGBTQIA+ PEOPLE TALK ABOUT THEIR EXPERIENCES ACCESSING HEALTH CARE

Access multimedia content (http://openstax.org/books/population-health/pages/24-2-health-care-tools-to-identify-organizational-strengths-and-areas-for-improvement)

In this video from North Western Melbourne Primary Health Network based in Melbourne, Australia, LGBTQIA+ people talk about their experiences accessing health care and offer suggestions to help health care professionals improve their communications and interactions with this population. Although the clients in the video are Australian, much of their comments apply to health care in the United States.

Watch the video, and then respond to the following questions.

1. What are some reasons individuals who identify as a member of a LGBTQIA+ group, including transgender people, might not be accessing health care?
2. When a health care professional misgenders a client, what does it communicate to that client?
3. As a nurse, how can you create a welcoming environment for transgender clients?
4. What trainings do you think would help nurses provide culturally safe care to LGBTQIA+ clients?

For more information on nursing advocacy for LGBTQIA+ populations, read Nursing Advocacy for LGBTQ+ Populations (https://openstax.org/r/nursingworldglobalassets) from the American Nurses Association.

Communicating Effectively Across Cultures

Trust provides the foundation for effective communication with clients. Building trust is essential because it lays the groundwork for a strong therapeutic relationship between health care providers and their clients from different backgrounds. When clients trust their health care providers, they are more likely to openly share their concerns, beliefs, and preferences, which enhances diagnostic accuracy and treatment planning. In a culturally diverse health

care setting, trust helps overcome potential language and cultural barriers that may otherwise hinder effective communication. By fostering trust, nurses can create an environment where clients feel safe, respected, and valued. Additionally, trust plays a significant role in ensuring client compliance and adherence to treatment plans. Clients are more likely to follow treatment recommendations from health care providers they trust, leading to improved health outcomes.

To build trust, nurses need to demonstrate cultural humility, which involves acknowledging their own biases, being open to learning about different cultures, and actively engaging in respectful and nonjudgmental communication. Nurses should prioritize active listening, empathy, and validating clients' experiences and perspectives. Additionally, they should be sensitive to cultural differences in communication styles, nonverbal cues, and health beliefs and adapt their approach accordingly. See Culturally and Linguistically Responsive Nursing Care for more information.

Effective communication across cultures is a cornerstone of inclusive and compassionate nursing care, encompassing differences not only in ethnicity and language but also in sexual orientation, gender identity, and relationships. For example, recognizing and respecting the unique needs of LGBTQIA+ individuals is vital in fostering trust and understanding. One tangible step is to include nonbinary choices on intake forms, allowing clients to identify themselves in a way that feels most authentic. This sends a strong message of acceptance and can significantly impact the client's comfort and willingness to engage in care. Additionally, environmental factors such as displaying LGBTQIA+ inclusive symbols, offering gender-neutral restrooms, and displaying inclusive signage can further promote an inclusive atmosphere. Collaborating with LGBTQIA+ advocacy groups and implementing these best practices can help ensure that health care providers are meeting the diverse needs of all clients, demonstrating a commitment to care that respects and honors individual identity and cultural background.

In many cultures, concepts of health and illness are deeply connected to spiritual or religious beliefs. For example, some clients may believe that an illness is caused by a lack of balance between the body, mind, and spirit. To communicate effectively with these clients, health care providers can ask about their spiritual or religious beliefs and how they relate to their health. They can also provide information about spiritual or religious resources that may be available, such as chaplains, clergy, or prayer groups.

Another example of effective communication across cultures is the use of professional interpreters or language services. Clients who have LEP or speak a different language may struggle to communicate their health concerns or understand medical instructions. By using interpreters or language services, health care providers can ensure that clients receive accurate and appropriate care. Interpreters can also help health care providers to understand cultural nuances and provide culturally responsive care.

Finally, health care providers can use visual aids or other materials to communicate effectively with clients from diverse cultural backgrounds. For example, providing information in multiple languages or using pictures or diagrams to explain medical procedures can help to overcome language and cultural barriers. Health care providers can also use **cultural brokers** or community health workers to help clients navigate the health care system and understand their health needs. Cultural brokers are individuals who act as intermediaries or go-betweens among different cultures. They use their knowledge and understanding of different cultures to help facilitate communication, understanding, and advocacy on behalf of an individual or group. The concept of cultural brokering has evolved and permeated many aspects of U.S. society, including health care, education, and child welfare programs. Cultural brokers can come from various backgrounds and may receive extensive training in cultural humility and community partnerships to better serve their role.

BEING A "CULTURAL BROKER"

Access multimedia content (http://openstax.org/books/population-health/pages/24-2-health-care-tools-to-identify-organizational-strengths-and-areas-for-improvement)

Cultural brokers play an indispensable role in bridging the gap between different cultures, especially in diverse settings like health care, education, and community services. Acting as intermediaries, they facilitate communication and understanding by interpreting cultural norms, values, and languages, ensuring that individuals from various backgrounds can effectively interact and collaborate. This video explores the vital function of cultural brokers, their skills, and the impact they have on creating more inclusive and empathetic environments.

Watch the video, and then respond to the following questions.

1. How would you define the role of a cultural broker?
2. How does this role contribute to effective communication between different cultural backgrounds?
3. Can you think of a situation in your own life where a cultural broker might have been helpful? How might the outcome have been different with a cultural broker involved?

Effective communication with individuals from diverse backgrounds is critical in health care settings. Research has shown that culture is central to effective messaging for community engagement in health care and that cultural respect is critical for accuracy in medical research (Tse et al., 2020). Interprofessional collaboration—actively partnering with professionals from diverse backgrounds with distinctive professional cultures—is also essential for meeting the needs of diverse populations in health care settings (Kline et al., 2019).

CONVERSATIONS ABOUT CULTURE

Culture, Language, and Health Literacy

Access multimedia content (http://openstax.org/books/population-health/pages/24-2-health-care-tools-to-identify-organizational-strengths-and-areas-for-improvement)
To improve individual health and build healthy communities, nurses and other health care providers need to recognize and address the unique culture, language, and health literacy of diverse consumers and communities as presented in this Health Resources and Services Administration video.

Watch the video, and then respond to the following questions.

1. Why is effective communication as important to health care as clinical skills?
2. How does cultural competence contribute to health equity?

Conducting a Cultural Self-Assessment

Organizations and nurses working in the field of population health are uniquely positioned to understand and meet the diverse cultural needs of the communities they serve. Assessment tools are available to evaluate and enhance the cultural competence of nurses and their practice. For example, diversity, equity, and inclusion (DEI) organizational assessment tools can be utilized as a benchmark, specifically tailored for nursing environments, to guide quality improvement and recognize cultural competence as an ongoing, adaptive process. As introduced previously, institutions like Georgetown University's NCCC also offer tools such as the Cultural and Linguistic Competence Health Practitioner Assessment (CLCHPA), designed to assess nurses' cultural awareness and responsiveness. Additionally, frameworks like "Becoming a Culturally Competent Nurse in Population Health" provide guidelines and strategies for nursing professionals to develop, implement, and sustain culturally competent care within their practice. These resources emphasize the essential role nurses play in delivering care that is not only clinically effective but also culturally sensitive, ultimately contributing to the overall well-being and health of diverse populations.

Although the CLCHPA (https://openstax.org/r/clchpa) is an individual assessment for health practitioners, having culturally competent providers within an organization enhances the organization's cultural competence as a whole. The CCHPA is based on three assumptions: (1) cultural competence is a developmental process at both the individual and organizational levels; (2) with appropriate support, individuals can enhance their cultural awareness, knowledge, and skills over time; and (3) cultural strengths exist within organizations or networks of professionals but often go unnoticed and untapped (NCCC, 2006).

The CLCHPA has six subscales:

- Values and Belief Systems
- Cultural Aspects of Epidemiology
- Clinical Decision-Making
- Life Cycle Events
- Cross-Cultural Communication

- Empowerment/Health Management

The NCCC believes that self-assessment is a process based on an organizations strengths. Upon completion of the CLCHPA, response fields identify awareness, knowledge, or skill level for each of the six subscales. Depending on the response pattern, a listing of resources such as web-based journals, textbooks, multimedia materials, and suggested learning experiences should be provided.

Understanding and Applying Cultural Knowledge

To apply cultural knowledge, health care providers should use culturally competent communication skills to understand their clients' cultural backgrounds and how that might affect their health beliefs, behaviors, and preferences. According to Campinha-Bacote (2002), culturally competent communication involves being aware of one's own cultural biases and assumptions—using appropriate language and nonverbal communication—and actively listening to clients to understand their unique perspectives. Providers can tailor their care to meet the individual needs of each client.

Health care providers should also be aware of the impact of organizational culture on health care quality. Health care organizations with a strong culture of safety and quality are more likely to provide high-quality care and improve client outcomes. Providers can use their knowledge of organizational culture to identify areas for improvement and drive change within their organizations to improve quality and eliminate health care disparities. Applying cultural knowledge in health care involves understanding and respecting the cultural beliefs and values of individual clients while also recognizing the impact of organizational culture on health care quality. By doing so, nurses can improve client outcomes and provide more equitable care to all clients.

CASE REFLECTION

Applying Cultural Knowledge

Read the scenario, and then respond to the questions that follow.

This scenario continues to follow Emily's work with Hyeon Lee. After completing a cultural assessment with Hyeon, Emily takes time to understand Korean cultural norms and beliefs that may influence Hyeon's care and maintains respect for her preferences, including modesty during physical assessments. With Hyeon's permission, Emily actively involves members of the family, such as Nari, in Hyeon's care plan and connects her client with local Korean community centers that may provide support. Emily gives careful attention to explaining Hyeon's medication regimen, utilizing visual aids when necessary.

1. How did Emily's actions in understanding Korean cultural norms and beliefs align with the CLAS standards for culturally responsive care?
2. Why is it beneficial to actively involve family members, like Nari, in the care plan of a client from a different cultural background? How does this contribute to providing culturally responsive care?
3. Discuss the importance of maintaining respect for client preferences, such as modesty, during physical assessments when providing culturally responsive care.

Advocating for Culturally and Linguistically Responsive Practices

Health care organizations can advocate for culturally and linguistically responsive practices by implementing policies and procedures that prioritize DEI. Here are some specific ways that health care organizations can advocate for culturally and linguistically responsive practices:

- Provide training and education to nurses and other health care providers: Health care organizations can provide cultural competency training and education to their staff to increase their understanding of different cultures, values, beliefs, and practices. This can include training on how to communicate effectively with clients who have LEP, as well as education on cultural diversity and sensitivity.
- Use interpreters: Health care organizations can ensure that clients with LEP have access to qualified interpreters. This can include in-person interpreters, telephone interpreters, or video interpreters, depending on the needs of the client.
- Use translated materials: Health care organizations can provide translated materials in languages commonly

spoken by the client population they serve. This can include client education materials, consent forms, and other important documents.
- Engage with community organizations: Health care organizations can partner with community organizations to better understand the health care needs of their client population. This can include collaborating with community leaders to develop culturally appropriate outreach and education programs.
- Collect and analyze data: Health care organizations can collect and analyze data on the cultural and linguistic needs of their client population. This can help identify areas where improvements can be made and inform targeted interventions to address disparities.

By implementing these strategies, health care organizations can advocate for culturally and linguistically sensitive practices and improve health outcomes for all clients, regardless of their background or language proficiency.

THE ROOTS OF HEALTH INEQUITIES

The Cultural Roots of Health Inequities

Cultural behaviors have been shown to have important implications for human health. Culture—a socially transmitted system of shared knowledge, beliefs, and practices that varies across groups—has been a critical mode of adaptation throughout the history of our species. Socioeconomic status, gender, religion, and moral beliefs are among the cultural factors that have been shown to affect health outcomes.

Racial and cultural minority groups have documented disparities across a number of health indicators, including Black Americans, Native Americans, and Latino Americans. Some evidence suggests that particular groups may receive poorer standards of care due to biased beliefs or attitudes held by health professionals.

Researchers have also found a clear pattern of disparities in health, which was first observed in the 1970s. These disparities are attributed to a range of factors, including cultural and social determinants, access to care, and individual behaviors.

Cultural factors have been shown to play an important role in the development and persistence of health inequities. Identifying and addressing these factors is essential to achieving health equity for all individuals and communities.

(See Hatzenbuehler et al., 2013; Latif, 2020; Lavizzo-Mourey et al., 2021; Rural Health Information Hub, 2022.)

The ACCESS Model

The ACCESS model is a comprehensive approach to promoting cultural competence in health care services. It emphasizes the importance of awareness, knowledge, and skills in providing effective care for diverse populations. By understanding the unique cultural perspectives and experiences of clients, health care providers can work to build trust, reduce disparities, and improve health outcomes.

Nurses and other health care providers can use the ACCESS model to deliver culturally responsive care by first assessing clients' cultural background and beliefs and then adapting their communication style and negotiating a care plan that is respectful of the client's beliefs and values. Nurses can also establish a trusting relationship with clients by demonstrating sensitivity to nonverbal cues and ensuring that the client feels safe and comfortable in the health care setting.

Components of the ACCESS Model

The ACCESS model is a framework that health care providers can use to deliver culturally competent care to clients from diverse backgrounds. The model consists of six key components: assessment, communication, cultural negotiation and compromise, establishing respect and rapport, sensitivity, and safety (Narayanansamy, 2002). Assessment involves evaluating a client's cultural background, including their health beliefs and practices. Additionally, understanding the client's previous interaction with the health care system, such as LGBTQIA+ clients, is needed. This information can help nurses and other health care providers tailor care plans to meet the unique needs of each client:

- Communication is a critical component of delivering transcultural care. Nurses must be aware of and use the

cultural communication norms of the client, both verbal and nonverbal, to ensure effective communication.

- Cultural negotiation and compromise involve being aware of cultural differences and understanding how the client perceives the health care issue. This can help nurses and other health care providers tailor care plans that are respectful of the client's beliefs and values.
- Establishing respect and rapport is vital for clients to maintain their dignity. When health care providers show respect for the client's culture and beliefs, the client is more likely to have trust in the health care provider, especially during times of crisis.
- Sensitivity involves demonstrating sensitivity toward clients during interactions with health care providers. This includes using terms that clients understand to explain their health situation and trying to understand their needs pertaining to their culture and beliefs.
- Safety is the idea that health care providers should not engage in any action that disrespects the client's culture, which could cause the client to feel culturally unsafe. This component emphasizes the importance of cultural sensitivity and respect in delivering effective health care services.

Using the ACCESS Model as a Framework to Deliver Transcultural Nursing Care

The ACCESS model provides nurses with a comprehensive framework for delivering transcultural nursing care. As discussed in Transcultural Nursing, transcultural nursing seeks to provide culturally sensitive and competent care to individuals from diverse cultural backgrounds. By assessing cultural backgrounds, communicating effectively, acquiring cultural knowledge, establishing supportive care environments, and seeking client feedback, nurses can enhance their cultural competence and deliver care that is sensitive, respectful, and culturally responsive.

The first step of the ACCESS model involves assessing the cultural background of individuals and understanding how it shapes their health beliefs and behaviors. This supports the development of a culturally sensitive care plan tailored to their specific needs. According to Romem et al. (2021), by conducting a comprehensive assessment, nurses can identify cultural factors that may influence health practices and beliefs, facilitating the delivery of client-centered and culturally responsive care.

Effective communication is pivotal to transcultural nursing care. It involves using inclusive language, avoiding assumptions, and ensuring cultural nuances are acknowledged. The ACCESS model emphasizes the importance of clear communication and understanding clients' preferences. Effective communication involves active listening, being respectful, and acknowledging cultural differences, which can foster trust and enhance client-provider rapport (Narayanasamy, 2002).

Cultural knowledge is essential for providing quality care to culturally diverse clients. The ACCESS model promotes cultural competence by encouraging nurses to continually update and broaden their knowledge of diverse cultures and communities. Sharifi et al. (2019) emphasize the importance of nurses familiarizing themselves with the customs, beliefs, values, and practices of various cultures to provide culturally sensitive care.

A supportive care environment is crucial for promoting positive health outcomes among clients from diverse cultural backgrounds. The ACCESS model suggests displaying visual cues such as posters or brochures that show support for different cultures. Providing a welcoming environment that respects clients' unique backgrounds and values is associated with improved client satisfaction and better health outcomes (Medina-Martínez et al., 2021).

The final step of the ACCESS model involves seeking client feedback and continuously evaluating the effectiveness of care. By actively involving clients in their care and soliciting their feedback, nurses can identify areas for improvement and adjust accordingly. Medina-Martínez et al. (2021) highlighted the importance of client feedback in identifying areas of cultural insensitivity within health care settings, which underscores the need for ongoing evaluation to provide quality, person-centered care. Table 24.3 provides an example of using the ACCESS model with a client.

Assessment	Assess the client's cultural background, and understand how it influences their health beliefs and expectations. Inquire about the client's gender identity, pronouns, and how they want to be addressed.
Communication	Use inclusive language, and avoid heteronormative assumptions or reinforcing stereotypes. Provide clear explanations, and discuss the need for sensitive exams, respecting the client's comfort level. Familiarize yourself with legal protections, discrimination laws, and organizational policies related to LGBTQIA+ individuals.
Cultural negotiation and compromise	Continuously update knowledge about LGBTQIA+ culture and communities. Stay informed about new information and resources supporting LGBTQIA+ health. Talk with the client to understand their concerns, and work with them to find an alternative treatment plan that is respectful of their values and beliefs.
Establishing respect and rapport	A nurse is working with a client who has experienced discrimination in the past due to their race, ethnicity, sexual orientation, or gender identity. The nurse shows respect for their experiences, helping to build trust and rapport.
Sensitivity	Create an environment that is supportive and affirming of LGBTQIA+ clients. Display posters or brochures in waiting areas that show support for LGBTQIA+ individuals Take the time to understand the client's concerns, and use language that is respectful and sensitive to their background when discussing their diagnosis and treatment.
Safety	A nurse is working with a client who identifies as transgender and has experienced trauma related to their identity. The nurse takes care not to engage in any actions or language that could trigger traumatic memories or cause the client to feel unsafe or disrespected.

TABLE 24.3 Example of the ACCESS Model in Action (See Romem et al., 2021.)

CASE REFLECTION

Applying the ACCESS Model

Read the scenario, and then respond to the questions that follow.

This scenario continues to follow Emily's work with Hyeon Lee. Working with the interpreter, Emily helps schedule regular follow-up visits and establishes clear communication channels for any questions or concerns between visits. Hyeon's recovery proceeds smoothly, and her cultural and linguistic needs are met, leading to a positive client experience and adherence to the care plan.

The home care nurse can also use the ACCESS model as a framework for this scenario:

A—Assessment: Emily begins with a comprehensive assessment of Hyeon's needs, including her language proficiency, cultural background, family dynamics, and medical condition. Emily's recognition that using a family member as an interpreter is not best practice is part of this initial assessment.

C—Communication: Emily ensures that communication is clear and effective by engaging a professional interpreter. Although Hyeon's daughter speaks English well, Emily opts for professional services to maintain objectivity and accuracy in conveying medical information.

C—Cultural Competence: Emily actively seeks to understand Korean cultural norms and beliefs that may influence Hyeon's care. This includes respecting preferences such as modesty during physical assessments and considering cultural attitudes toward health, illness, and family roles.

E—Establishment of Mutual Goals: Emily involves Hyeon's family in the care plan and sets recovery goals that align with Hyeon's cultural values and expectations. By involving the family, she ensures that the care plan is acceptable and tailored to Hyeon's individual needs.

S—Sensitivity: Emily exhibits sensitivity to Hyeon's cultural background, recognizing that care practices must be adapted to meet her unique needs. This includes connecting Hyeon with Korean community centers and being mindful of dietary preferences and other culturally specific aspects of care.

S—Support: Regular follow-up visits and clear communication channels support Hyeon's ongoing care. Emily's approach facilitates a smooth recovery process, ensures adherence to the care plan, and leads to a positive client experience.

By utilizing the ACCESS model, Emily is able to deliver care that is culturally sensitive, respectful, and effective. Emily works to understand and respect Hyeon's cultural background, beliefs, and values while also ensuring her safety and comfort. This helps to build trust and rapport, which is essential for providing effective care.

1. How did Emily's approach to establishing mutual goals with Hyeon's family align with the CLAS standards for culturally responsive care? Provide at least one specific example to illustrate your answer.
2. What specific aspects of Hyeon's needs might be included in Emily's comprehensive assessment, and how did this assessment contribute to providing culturally responsive care?
3. Explain the role of trust building and rapport in providing effective, culturally responsive care for clients like Hyeon, and provide specific examples of how Emily's approach helped to build trust and rapport with Hyeon.

24.3 The Nurse's Role in Promoting Organizational Cultural and Linguistic Competency

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 24.3.1 Advocate for policies of social justice and health equity that promote cultural and linguistic responsiveness.
- 24.3.2 Implement sociocultural and linguistically responsive interventions.
- 24.3.3 Develop partnerships to support organizational cultural and linguistic competence.

Nurses play an important role in promoting organizational cultural and linguistic competency. According to Cervený et al. (2022), nurses can integrate culturally competent behaviors into their daily interactions by putting their awareness, attitude, and knowledge into practice through effective and respectful communication and body language. Additionally, promoting ethnic diversity within the nursing workforce enhances the ability to provide culturally competent care to meet the needs of an increasingly diverse population. At the organizational level, cultural competence or responsiveness refers to a set of congruent behaviors, attitudes, and policies that enable a system, agency, or group of professionals, including nurses, to work effectively in multicultural environments. Nurses, along with other health care professionals, should have the capacity to value diversity, conduct self-assessment, manage the dynamics of difference, acquire and institutionalize cultural knowledge, and adapt to diversity and the cultural contexts of the communities they serve. By embodying cultural and linguistic competency in their daily practice, nurses can help promote the provisions of CLAS, which respond to the individual preferences and needs of each client, improve health outcomes, and decrease health disparities.

Nurse Advocacy for Policies That Support Cultural Responsiveness

According to the American Nurses Association (ANA) Standard 8 (2021), nurses play a vital role in advancing health care policy and ensuring equal access to health care for all individuals. Policy discussions often involve the effects of discrimination, oppression, and social and environmental determinants of health on cultural groups, leading to health disparities. As advocates, nurses promote policies that aim to improve the health and well-being of culturally diverse, underserved, or underrepresented individuals. This includes advocating for equal access to health care

services, tests, interventions, and health promotion programs for all consumers, with a particular emphasis on those who are culturally diverse and underserved.

To achieve this goal, nurses must advocate for appropriate funding to support the planning, delivery, and sustainability of culturally congruent care. This means advocating for sufficient resources and funding to ensure that health care services are culturally sensitive and responsive to the needs of diverse populations.

Nursing schools should incorporate cultural content throughout all nursing curricula that place an emphasis on education about cultural norms, values, and health-related needs within diverse communities. This foundational knowledge enables nurses to identify policy areas that require attention and reform. Nurses can participate in policy-making processes at local, state, and national levels, where they can contribute to drafting policies that promote cultural training, adequate interpretation services, and equitable resource allocation. Nurses can also support policies that encourage a diverse nursing workforce and create welcoming spaces for clients and health care workers.

Direct involvement with communities is essential for nurses to understand specific cultural needs, preferences, and barriers to health care access. This grassroots-level insight can guide advocacy efforts in shaping policies that directly address community needs. Evidence-based practice is central to nursing, and the same applies to advocacy. Nurses must employ existing research and generate new evidence to support the need for policies promoting cultural competency.

Nurse researchers are encouraged to build substantial research programs beyond descriptive investigations. The essential next step is to design and test interventions that have meaning for populations from different cultures and improve their health and quality of life. Because this step requires sample sizes large enough to support meaningful conclusions, nurses and supporters need to advocate for more funding for these studies at the national level. Such research can help to eliminate the dismal inequities seen in diverse-consumer health outcomes.

Nurses can raise awareness about the importance of cultural competency and the specific policy changes needed to support it. Utilizing media, professional networks, and public speaking opportunities can help to reach wider audiences and generate support for cultural competency policies. Table 24.4 provides some strategies nurses can use to advocate for policies that support cultural competency.

Advocacy	Explanation	Examples
Engage with Health Care Organizations	Nurses can collaborate with health care organizations to advocate for policies and initiatives that support cultural competency.	• Participate in quality improvement projects and processes • Serve on diversity, equity, and inclusion committees • Provide input on the development of policies and guidelines that promote culturally competent care
Partner with Administrators	Nurses can collaborate with administrators to promote cultural competency within health care institutions.	• Advocate for the inclusion of cultural competency training in staff development processes and programs • Ensure that resources and support materials are available to health care providers • Promote the implementation of inclusive practices that address the cultural needs of diverse client populations

TABLE 24.4 Strategies for Advocacy (See Williams et al., 2018.)

Advocacy	Explanation	Examples
Get Involved with Policymakers	Nurses can engage with policymakers at local, regional, and national levels to advocate for policies that support cultural competency.	• Participate in policy development processes and programs • Provide evidence-based research on the impact of cultural competence on health care outcomes • Collaborate with policymakers to shape policies that address health care disparities and promote health equity
Collaborate with Community Leaders	Nurses can actively collaborate with community leaders to gain insights into the specific cultural needs and preferences of diverse communities (Figure 24.5).	• Build partnerships with community leaders to develop culturally tailored strategies and initiatives that address the unique needs of different populations • Work with community leaders to promote cultural competence and improve access to quality health care
Conduct Nursing Research	Nurse researchers can design and test interventions.	• Create interventions that have meaning for populations from different cultures and improve their health and quality of life

TABLE 24.4 Strategies for Advocacy (See Williams et al., 2018.)



FIGURE 24.5 Members of the Baton Rouge, Louisiana, community participate in community engagement and listening sessions to discuss opportunities and challenges around food, nutrition, and health in Black communities. By participating in such community sessions, nurses

learn firsthand about the needs of the communities they serve. (credit: Perry Rainosek/USDA/Flickr, Public Domain)

Nursing Practice That Is Congruent with Cultural Diversity

Nurses can practice with sociocultural and linguistically responsive interventions (Jongen et al., 2018). Cultural practices can vary widely between different ethnic, religious, and social groups, and it is important for nurses to be aware of and sensitive to these differences to provide appropriate care (Figure 24.6). Table 24.5 provides some examples of the types of cultural practices that nurses might encounter.



FIGURE 24.6 Providing care that is congruent with cultural diversity requires nurses to be aware of clients' health beliefs and practices. For example, some clients may integrate traditional Chinese medicine into their health care practices. (credit: "Apothecary mixing traditional Chinese medicine at Jiangsu Chinese Medical Hospital in Nanjing, China" by Kristoffer Trolle/Flickr, CC BY 2.0)

Communication Styles	• Nonverbal communication: gestures, eye contact, and physical touch might have different meanings across various cultures. • Language barriers: understanding the client's preferred language and possibly using medical interpreters if necessary
Health Beliefs and Practices	• Traditional healing practices: use of herbal remedies, acupuncture, or spiritual healing • Perceptions of illness: different cultures might have varying beliefs about the causes and appropriate treatments for illness.
Dietary Practices	• Religious dietary restrictions: such as halal or kosher diets, vegetarianism in Hinduism, or fasting during Ramadan for Muslims • Cultural food preferences: preferences and taboos about foods and preparation methods
Family Roles and Dynamics	• Decision-making: in some cultures, family members or community elders might be deeply involved in medical decisions. • Gender roles: understanding the appropriate interactions between genders in different cultures

TABLE 24.5 Examples of Cultural Practices

Modesty and Personal Space	• Dress requirements: preferences for covering certain parts of the body • Examination etiquette: respecting preferences for a same-sex health care provider or having a family member present during physical examinations
End-of-Life Care and Death Rituals	• Advance directives: understanding cultural perspectives on life-sustaining treatment • Death rituals: respecting cultural rituals related to death and grieving, such as handling of the body or mourning practices
Mental Health Perspectives	Stigmatization: recognizing cultural stigmas related to mental health conditions and adapting communication and treatment accordingly
Childbirth Practices	Birthing customs: preferences for birthing positions, people present at birth, post-birth rituals, etc.
Disability and Long-Term Illness	Cultural attitudes: understanding how different cultures perceive and manage disability and long-term illnesses
Alternative and Complementary Therapies	Acceptance or rejection: different attitudes toward conventional medicine versus alternative therapies
Trust in Health Care Providers	Historical or cultural mistrust: recognizing potential mistrust due to historical or cultural factors and building rapport accordingly
Substance Use and Addiction	Cultural perspectives: understanding how various cultures perceive and respond to substance use and addiction
Sexual Health and Orientation	Cultural norms: respecting cultural norms related to sexuality and sexual orientation

TABLE 24.5 Examples of Cultural Practices

Being aware of these cultural practices requires ongoing education, openness to learning, and a willingness to ask clients about their preferences and beliefs. Individualized care that respects cultural diversity will generally lead to better client satisfaction and outcomes. It is important to approach cultural practices with curiosity rather than judgment, recognizing that each client's cultural context is unique and multifaceted.

Developing Partnerships to Support Organizational Cultural and Linguistic Competence

Cultural and linguistic competence within health care organizations is essential for delivering effective and equitable care to diverse populations. Community health nurses play a pivotal role in this endeavor by developing partnerships with various concerned parties (Handtke et al., 2019) and can use the following strategies:

1. Assessing Community Needs
    - Engaging with the community: understand the unique cultural and linguistic needs of the community through direct engagement.
    - Using existing research: analyze data and existing studies that identify cultural and linguistic gaps in care.
    - See Assessment, Analysis, and Diagnosis for more details on conducting a community needs assessment.
2. Collaboration with Key Community Partners
    - Identifying partners: engage with community leaders, cultural organizations, educational institutions, and other health care providers.
    - Defining shared goals: develop common objectives aligned to the community's cultural and linguistic needs.
    - See Assessment, Analysis, and Diagnosis for more details on collaborating with community partners.
3. Implementing Cultural and Linguistic Training:
    - Developing curricula: create training programs that enhance cultural awareness and linguistic skills.
    - Promoting ongoing education: encourage continuous learning through workshops, seminars, literature, and online resources.
    - See Planning Community Health Education for more details on planning community education programs.

4. Leveraging Technology:
    - Using language assistance tools: implement technology that facilitates effective language translation and interpretation.
    - Promoting telehealth services: ensure that virtual health care platforms accommodate individuals with diverse linguistic needs.
5. Policy Advocacy:
    - Supporting legislative initiatives: advocate for policies that promote cultural and linguistic competence at local, state, and national levels.
    - Aligning with accreditation standards: ensure that practices align with standards set by accrediting bodies.
6. Evaluating and Adapting Strategies:
    - Monitoring outcomes: regularly assess partnership initiative effectiveness via feedback and data analysis.
    - Iterating strategies: continuously refine and adapt strategies to meet evolving community needs.
    - See Implementation and Evaluation Considerations for more details on evaluating program effectiveness.

Developing partnerships to support organizational cultural and linguistic competence is a dynamic and multifaceted process. Community health nurses, in collaboration with various community partners, can spearhead efforts to ensure that health care delivery aligns with the diverse needs of the communities they serve. Through thoughtful engagement, education, advocacy, technology utilization, and continuous evaluation, health care organizations can create an environment that truly resonates with all members of the community.

Chapter Summary

24.1 Culturally Responsive Care

Culturally and linguistically diverse populations continue to grow, and health care professionals, including nurses, are recognizing the need to consider cultural attitudes, beliefs, and values to provide equitable and effective health care to all clients. The CLAS standards provide a framework to provide culturally and linguistically appropriate services.

24.2 Health Care Tools to Identify Organizational Strengths and Areas for Improvement

There are a range of tools and strategies, including cultural competency self-assessments, communication, and interventions such as the ACCESS model, that are aimed at identifying strengths and pinpointing areas where improvements can be made in culturally responsive care. By focusing on these aspects, nursing professionals and health care organizations can create an environment where all clients, regardless of their cultural or linguistic background, feel understood, respected, and well-cared for.

24.3 The Nurse's Role in Promoting Organizational Cultural and Linguistic Competency

Nurses play an important role in promoting organizational cultural and linguistic competency. Nurses can integrate culturally competent behaviors into their daily interactions by putting their awareness, attitude, and knowledge into practice through effective and respectful communication and body language. Nurses, along with other health care professionals, should have the capacity to value diversity, conduct self-assessment, manage the dynamics of difference, acquire, and institutionalize cultural knowledge, and adapt to diversity and the cultural contexts of the communities they serve.

Key Terms

community engagement collaborating with community organizations and partners to develop culturally appropriate services and programs

cultural brokers individuals who act as intermediaries or go-betweens among different cultures, using their knowledge and understanding of different cultures to help facilitate communication, understanding, and advocacy on behalf of an individual or group

cultural safety an environment that is spiritually, socially, and emotionally safe, as well as physically safe for people where there is no assault, challenge, or denial of their identity, of who they are and what they need

limited English proficiency (LEP) individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand the English language

professional medical interpreter an individual who has passed a certification examination to demonstrate they have met nationally set standards to ensure client safety and compliance with federal guidelines and requirements

qualified bilingual staff member a staff member who has completed an assessment of their ability to communicate in a medical setting directly with clients who speak a target language

workforce diversity when the workforce of an organization resembles the population at large

Review Questions

1. Which action should the nurse perform when teaching a client with LEP and who is from a culture different than their own?
    a. Use accurate medical terms
    b. Assume the client has basic math skills
    c. Perform a health literacy assessment
    d. Research practices of the client's culture online

2. A community health nurse has taken the Promoting Cultural and Linguistic Competency Self-Assessment Checklist for Personnel Providing Primary Health Care Services and is reviewing the results. Which action describes how the results of this self-assessment checklist should be utilized?
    a. To identify areas for self-improvement

b. To determine readiness for job advancement
c. To rate job performance
d. To discipline an employee

3. Which action by a health care organization is an example of a leadership commitment to cultural competence?
a. Developing a policy for use of trained interpreters
b. Enhancing client satisfaction
c. Improving health care outcomes
d. Increasing health care access to all individuals

4. Which action by a nurse promotes a welcoming environment for culturally diverse clients?
a. Calling the client by the name on their birth certificate
b. Using a family member to interpret for a client with LEP
c. Displaying brochures and posters that represent diversity
d. Providing a client's bill of rights in languages other than English

5. Which action by a nurse working at a community health center is an example of using the ACCESS model of transcultural care?
a. Utilizing a standardized plan of care
b. Developing the plan of care with the client
c. Using a plan of care developed for a specific cultural group
d. Collaborating with other nurses to develop the plan of care

6. Which action by a health care organization demonstrates the development of a culturally and linguistically competent plan to meet the needs of diverse populations of the community?
a. Informing the community about their cultural needs
b. Collaborating with community leaders
c. Developing strategies that have worked at other health care organizations
d. Developing consistent strategies that will not change over time

7. A nurse is evaluating the effectiveness of a cultural competence training program. Which outcome is the nurse most likely to measure?
a. Increase in client acuity levels
b. Reduction in health care costs
c. Improvement in client satisfaction scores
d. Decrease in client wait times

8. A nurse is a member of an interdisciplinary committee whose goal is to develop a culturally and linguistically competent organization. Which action by the committee would help to meet this goal?
a. Develop an organizational mission statement for cultural competence
b. Encourage each department to develop a cultural competency plan
c. Encourage employees to find ways to develop their cultural competence
d. Hire individuals with the most work experience

9. Using the National CLAS as a guide, which service should be offered to clients who have LEP?
a. Availability of interpreter services at a minimal fee
b. Language assistance in the client's preferred language
c. Interpretation services using family members
d. Trained interpretation within 48 hours of hospital admission

10. Which action by a community health center demonstrates its commitment to providing a welcoming environment for LGBTQIA+ individuals?

a. Clearly marking restrooms for men and women
b. Including options other than male/female on intake forms
c. Using pronouns consistent with outward appearance
d. Avoiding asking about sexual orientation

CHAPTER 25
Managing the Dynamics of Difference



FIGURE 25.1 Learning how to provide culturally responsive care is an ongoing process for nurses, enabling them to customize care based on a broad understanding and sincere appreciation of the rich diversity of humanity. (credit: modification of work by Mike Kaplan/U.S. Air Force/Flickr, CC BY 2.0)

CHAPTER OUTLINE

25.1 Strategies to Promote Culturally Responsive Nursing
25.2 Root Causes of Stereotypes and Biases
25.3 Managing Conflict
25.4 Creating an Atmosphere of Trust and Mutual Respect

INTRODUCTION Sarah, a new nurse from a middle-class neighborhood, works at a public health department in a culturally diverse community. She conducts home visits as part of a maternal and child health program, providing women's health services, hosting immunization clinics, and organizing community health fairs to promote preventive health measures. Though the community members Sarah works with come from cultural backgrounds different from her own, Sarah remains confident in her ability to provide clients with culturally responsive, high-quality care.

Health care is increasingly characterized by encounters between individuals from varied cultural backgrounds. Because nurses interact with clients, families, and colleagues with a rich tapestry of cultural beliefs, values, and practices, the need for nurses to manage cultural conflicts is paramount. Nurses foster an inclusive and respectful health care environment conducive to improved client outcomes. Cultivating cultural sensitivity and humility is an imperative for modern nursing practice.

This chapter provides guidance on effectively managing cultural conflicts. By understanding and implementing effective strategies, nurses can ensure that clients receive high-quality, client-centered care regardless of cultural differences. Building on prior chapters, this chapter highlights the significance of assessing personal biases and assumptions by participating in self-reflection and lifelong learning. The chapter will follow Sarah as she moves

through the process of managing conflict to promote culturally responsive care for the clients in her community.

25.1 Strategies to Promote Culturally Responsive Nursing

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 25.1.1 Describe strategies to integrate cultural humility into the five components of cultural competence.
- 25.1.2 Utilize the mnemonic A-S-K-E-D to promote cultural competemility.
- 25.1.3 Differentiate between conscious impermeability and unconscious impermeability.
- 25.1.4 Describe the process of advancing from a state of unawareness to a heightened state of mindfulness.
- 25.1.5 Identify actions that promote cultural humility in providing client-centered care.
- 25.1.6 Differentiate between cultural sensitivity and cultural humility.

Culturally and Linguistically Responsive Nursing Care discusses the importance of cultural responsiveness, particularly the attributes of cultural awareness, knowledge, skills, encounters, and humility. These concepts are essential in establishing positive client relationships. This chapter builds on this foundation to address strategies to promote culturally responsive nursing.

Integrating Cultural Humility

As discussed in Culturally and Linguistically Responsive Nursing Care, cultural humility is a lifelong process of self-awareness, self-reflection, and a willingness to learn from and engage with individuals from different cultural backgrounds that promotes effective health care interactions (Tervalon & Murray-García, 1998). Cultural humility goes beyond competency, emphasizing a continuous process of self-reflection and self-awareness. Nurses who practice cultural humility approach each interaction as an opportunity to learn, appreciating that they may not always have the answers but can seek better to comprehend the nuances of another person's cultural background.

The framework for cultural humility is based on two models: The Process of Cultural Competence in Healthcare (Campinha-Bacote, 2002) and A Biblically Based Model of Cultural Competence (Campinha-Bacote, 2013). These models form the foundation for cultural competemility, "the synergistic process between cultural humility and cultural competence in which cultural humility permeates each of the five components of cultural competence: cultural awareness, cultural knowledge, cultural skill, cultural desire, and cultural encounters" (Figure 25.2) (Campinha-Bacote, 2018). **Conscious permeability** emerges when individuals actively apply cultural humility in their daily lives and interactions. It involves acknowledging that cultural competence is a continuous journey rather than a destination. Conscious permeability enables individuals to be flexible and adapt their behavior, communication style, and decision making in response to different cultural contexts.



FIGURE 25.2 This image depicts the infusion of cultural humility into each of the five components of cultural competence: cultural awareness, cultural knowledge, cultural skill, cultural desire, and cultural encounters. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Campinha-Bacote (2019) contends that for nurses to enhance their journey toward cultural competemility, they must humbly consider, "Have I ASKED myself the right questions?" The A-S-K-E-D mnemonic represents self-examination questions regarding one's cultural awareness, skill, knowledge, encounters, and desire. The components of the mnemonic include:

- **A**wareness: Am I aware of my prejudices and biases and the presence of racism and other "isms"?
- **S**kill: Do I know how to conduct a culturally specific history, physical, mental health, medication, and spiritual assessment in a culturally sensitive manner?
- **K**nowledge: Do I have knowledge regarding different cultures' worldview, the field of biocultural ecology, and the importance of addressing social determinants of health?
- **E**ncounters: Do I have sacred and unremitting encounters with people from cultures different from mine, and am I committed to resolving cross-cultural conflicts?
- **D**esire: Do I really "want to" engage in the process of competemility?

Cultural sensitivity in nursing care refers to the awareness, understanding, and consideration of clients and their families' diverse cultural backgrounds, beliefs, practices, and preferences. It involves providing health care services that respect and accommodate cultural differences, ensuring clients receive care tailored to their needs that maintains their cultural dignity and values (Leininger, 2002). Cultural sensitivity and cultural humility are closely related concepts that work in tandem to promote cultural competency in health care. Both emphasize the importance of recognizing and respecting clients' diverse cultural backgrounds, beliefs, and practices. Cultural sensitivity serves as a foundation for cultural humility, allowing health care professionals to recognize and appreciate cultural differences. Cultural humility goes further, requiring individuals to question their assumptions, engage in self-examination, and strive for a deeper understanding of other cultures (Tervalon & Murray-García, 1998). Cultural humility builds on cultural sensitivity to promote curiosity, respect, and a willingness to be corrected or educated by clients about their cultural beliefs. It encourages health care professionals to collaborate with clients, share power, and foster more effective partnerships in care.

Moving from a State of Becoming Aware to a State of Being Aware

The process of fully integrating cultural humility occurs across a continuum from impermeability to permeability (Campinha-Bacote, 2018). As nurses progress toward competency, they move through stages from being unaware of cultural humility to being mindful and spontaneously engaging in it during cultural encounters. **Unconscious impermeability** refers to a lack of recognition that cultural humility is necessary to become culturally competent. At this stage, the nurse may not be aware of power imbalances that influence care (Campinha-Bacote, 2019). Power imbalances, which arise due to various factors, including social status, language fluency, health system familiarity, and previous discrimination, can impede culturally sensitive care delivery.

At the stage of **conscious impermeability**, a nurse recognizes the importance of cultural humility but struggles to demonstrate it in practice (Campinha-Bacote, 2018). In contrast, conscious permeability is the mindful act of learning to become culturally humble and use a cultural lens throughout the entire client encounter (Campinha-Bacote, 2018). Finally, in **unconscious permeability**, the nurse can spontaneously operate from a place of cultural humility. These stages represent the process of moving from a state of becoming aware to a state of being aware. Integrating cultural humility into all aspects of cultural awareness, knowledge, skills, encounters, and desire can lead to unconscious permeability, as shown in Table 25.1.

Attribute	Actions to Promote the Integration of Cultural Humility
Cultural Desire	• Develop cultural competence out of genuine desire, not obligation • Commit to understanding and appreciating diverse cultures with sincere curiosity and eagerness to engage
Cultural Awareness	• Develop deep understanding of how cultural factors impact human interactions, relationships, and communication • Be open-minded and receptive to learning about different cultures and be willing to examine one's cultural biases and assumptions • Reflect on one's cultural background, experiences, and beliefs in relation to those of others
Cultural Knowledge	• Acquire solid educational background in diverse groups to provide culturally sensitive care • Learn from the community's lived experiences and stay curious about other cultures • Ask questions, read diverse texts, watch films, learn another language, attend classes and workshops, and participating in cultural events
Cultural Skill	• Effectively and sensitively integrate one's cultural awareness and knowledge into practical actions and interactions • Assess clients with open-ended interviews, cultural competence tools, or questionnaires while respecting their autonomy and preserving confidentiality • Be mindful that each client is unique and avoid cultural generalizations while remaining aware of biases
Cultural Encounters	• Seek cultural encounters in various forms, from community events to immersive travel experiences, to interact with people from different cultural backgrounds, fostering mutual respect and enhancing cultural competence • Learn to navigate diverse and globalized environments effectively • Recognize the limits of one's understanding and be willing to learn from others • Acknowledge that each person's experiences are unique and cannot be fully understood without active engagement

TABLE 25.1 Actions to Promote the Integration of Cultural Humility into the Five Components of Cultural Competence (See Campinha-Bacote 2011, 2018.)

25.2 Root Causes of Stereotypes and Biases

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 25.2.1 Explore various techniques to assess cultural and social identity.
- 25.2.2 Distinguish between the factors that create and reinforce stereotypes and biases.
- 25.2.3 Recognize the principles of decolonization in nursing.
- 25.2.4 Define privilege.
- 25.2.5 Explain how privilege can affect health care interactions.
- 25.2.6 Examine how nurses can utilize privilege to promote health equity and address health care disparities.
- 25.2.7 Identify areas for growth and development.

The process of developing cultural humility involves addressing bias and stereotypes and managing conflicts. On this journey, nurses shift from being unaware of their biases and cultural stereotypes (unconscious impermeability) to heightened awareness of their biases and active commitment to self-reflection and learning (active engagement). To accomplish these goals, nurses must understand where their stereotypes and biases come from.

Assessing One's Own Cultural and Social Identity

Cultural and social identity are related but distinct concepts that refer to different aspects of a person's sense of self and belonging. An individual's cultural and social identities combine to form their cultural background. The ANA Code of Ethics (https://openstax.org/r/nursingworldethics) (2021) emphasizes the need for nurses to be aware of their cultural background to avoid letting personal biases affect the therapeutic relationship. This requires introspection into one's cultural beliefs, perceptions, and assumptions. Nurses should recognize and understand the effects of oppression, racism, discrimination, and stereotyping personally and professionally (ANA, 2015).

As discussed in Cultural Influences on Health Beliefs and Practices, cultural identity refers to a sense of belonging and identification with a particular cultural group. Cultural identity provides a foundation of cultural values, beliefs, and practices that contribute to how individuals engage with their community and express themselves culturally. On the other hand, social identity encompasses the various aspects of an individual's identity that are shaped by their membership in different social groups beyond just culture.

Assessing one's cultural identity is a process of self-reflection and exploration that helps individuals better understand their cultural background, beliefs, values, and experiences. While there is no definitive tool to fully capture an individual's cultural identity, various methods and exercises can aid in this process; examples include:

- **Cultural genogram**: A cultural genogram depicts family members' cultural identities, traditions, and migration histories. Creating a cultural genogram helps individuals understand the interplay of cultural influences within their family and how it has shaped their cultural identity (Haber et al., 2022).
- **Cultural autobiography**: This written account of an individual's cultural experiences, upbringing, and identity development allows individuals to reflect on significant cultural events, interactions, and how they have shaped their sense of self and cultural identity. Telling one's life story can promote self-reflection on power dynamics, but it can also reinforce harmful biases (Bruewer et al., 2021).

Social identity refers to an individual's self-concept derived from social groups. Cultural Influences on Health Beliefs and Practices discusses how individuals define themselves according to the social groups to which they belong. The Social Identity Wheel can aid nurses in exploring and comprehending their social identity (Figure 25.3). The Social Identity Wheel visually represents the different social identity categories that a person may hold by dividing a circle into sections or categories. These categories can include but are not limited to (University of Michigan LSA Inclusive Teaching, 2021):

- Race and Ethnicity
- Gender
- Sexual Orientation
- Religion
- Socioeconomic Status
- Age
- Nationality
- Disability Status
- Language
- Education
- Occupation
- Geographic Location

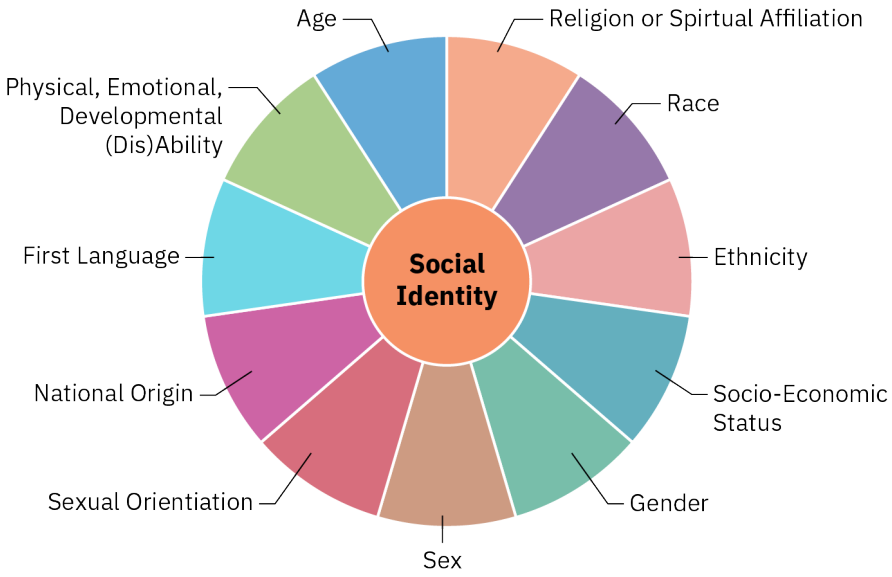


FIGURE 25.3 The Social Identity Wheel is a tool for promoting self-awareness and exploring the complexity of one's identity. (See University of Michigan LSA Inclusive Teaching, 2021; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

The Social Identity Wheel helps individuals reflect on their many intersecting identities and understand how they impact their experiences and interactions with others. It can foster empathy when it helps an individual to acknowledge the privileges and disadvantages of their different identities. This awareness is crucial in promoting a more inclusive and equitable environment, as it helps individuals recognize their biases and become more sensitive to the experiences of others. By utilizing this tool, nurses can gain insights into their identities and develop a deeper appreciation for the diversity within themselves and others (University of Michigan LSA Inclusive Teaching, 2021).

SOCIAL IDENTITY WHEEL

The non-profit organization Facing History and Ourselves provides a template for creating your own Social Identity Wheel (https://openstax.org/r/facinghistory). Visit the site, create your own wheel, and then respond to the following questions.

1. Which identities most substantially impact how you perceive or define yourself?
2. Which identities strongly impact how you think other people perceive or label you?
3. Which identities most substantially impact how you perceive or define others?
4. How do factors of your identity inform your decision making in nursing practice?
5. How does your identity align with or differ from (conflict with) the identities of others?
6. What privileges and advantages are associated with your identity?
7. Describe how your social identity may inform your unconscious biases.
8. What have you learned about yourself from the process of creating your Social Identity Wheel?

Let's return to the scenario from the beginning of the chapter. For a few weeks, Sarah kept a journal and listened mindfully during client interactions. She realized that her viewpoints differed significantly from those of her clients and worried that she might have unconscious biases that could hinder her ability to show cultural humility and responsiveness. To overcome this challenge, Sarah decided to explore her own social identity by completing a Social Identity Wheel and assessing how her identity influences client care.

By recognizing the filters through which she views the world, Sarah became aware of potential biases and assumptions that may unconsciously influence her client interactions. This first step enabled Sarah to approach client interactions more openly, free from preconceived notions. Recognizing the impact of personal biases on client interactions prompted Sarah to question her assumptions to ensure she doesn't impose her values on clients and remains receptive to diverse perspectives. Sarah's decision to explore her social identity reflects a commitment to continuous learning. She understands that cultivating cultural humility is an ongoing process, and humility comes from a willingness to learn and adapt. This translates into more effective and empathetic care.

The insights Sarah gains from self-reflection directly inform her approach to client care. She becomes more attuned to each client's unique needs and values, ensuring that her care is culturally sensitive and respectful and increasing the likelihood that her clients feel seen, heard, and understood, fostering a therapeutic relationship built on trust.

Nurses can better understand their biases and stereotypes by acknowledging their cultural backgrounds and social identities. This helps nurses avoid making inaccurate assumptions about clients and mitigates their impact on client care. The next section explores the impact of cultural and social identity on biases and stereotypes.

Factors That Inform Stereotypes and Biases

As discussed in Cultural Influences on Health Beliefs and Practices, values and beliefs can shape how individuals perceive the world and others. When these values and beliefs are based on limited information about others, they can lead to stereotypes and biases.

Cultural values and beliefs can shape biases that affect interpersonal interactions and decision-making processes. Ingrained through upbringing and societal influences, these values and beliefs can lead to the development of unconscious biases that impact how people interact with individuals from different cultural backgrounds, and these biases can influence judgments, attitudes, and behaviors toward others.

Social identity plays a role in shaping how individuals perceive themselves in relation to different social groups, and it can contribute to the development of biases and stereotypes toward others. The nested-levels framework developed by Skinner-Dorkenoo et al. (2021) depicts how different systemic levels influence individual attitudes and how individual attitudes also impact systems (Figure 25.4). For example, personal and interpersonal encounters, which are nested within communities and institutions that set the local context for interpersonal experiences, are the most immediate influences on racial bias. Communities are situated within broader cultural contexts that shape society's norms, values, and beliefs. At the outermost level, temporal influences capture how past manifestations of these systems continue to influence members of society (Skinner-Dorkenoo et al., 2021).

Skinner-Dorkenoo et al. (2021) contend that each level influences racial bias bidirectionally across the nested levels of the framework. At the innermost level, personal and interpersonal experiences, such as socialization from caregivers and interracial friendships, have the most proximal influence on individual-level racial bias, nested within communities and institutions that set the local context for interpersonal experiences. Communities are situated within a broader cultural context that shapes the norms, values, and beliefs that structure society. At the outermost level, temporal influences capture how past interpersonal, institutional or community, and societal influences continue to affect individuals throughout their lives.

While this model's primary focus is on how each level of influence affects individual-level attitudes, the levels also influence one another. For instance, culture can shape organizations and interpersonal experiences within that culture, as well as individual-level biases. Likewise, individual-level racial biases can mold interpersonal experiences, which can shape factors at the organizational and community level.

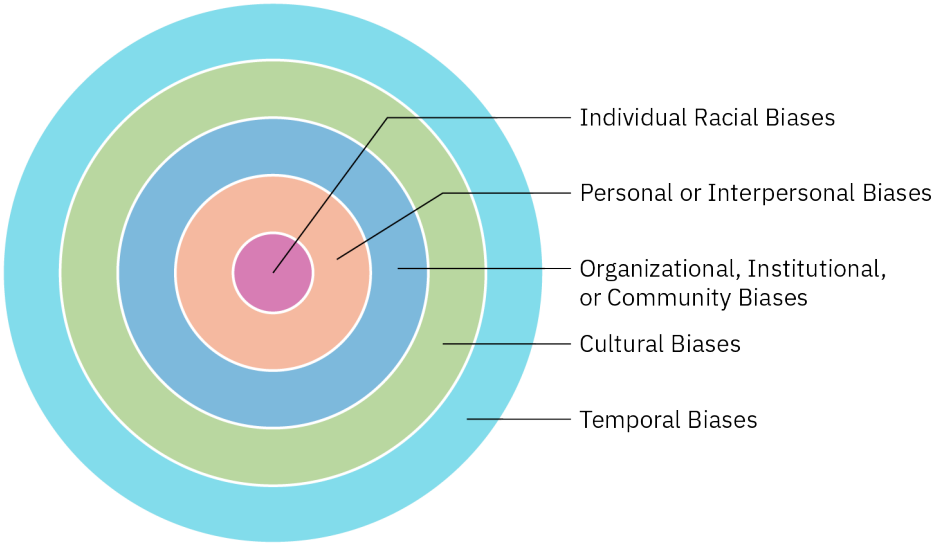


FIGURE 25.4 The nested-levels framework focuses on how each systemic level of influence influences individual-level attitudes and how individual-level attitudes influence systems. (See Skinner-Dorkenoo et al., 2023; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

In-group favoritism, or **in-group bias**, is a psychological phenomenon referring to people's tendency to favor members of their own social or cultural in-group. This bias can manifest in various ways, including positive judgments, greater willingness to cooperate, and allocation of resources in a more favorable manner toward members of the in-group compared to individuals from other groups—*out-groups*. In 1979, both Tajfel & Turner and Brewer published research establishing the foundation for understanding in-group favoritism and its implications for intergroup relations. This knowledge is essential for comprehending theories on social identity, categorization, and cognitive biases that contribute to forming and maintaining in-group favoritism. Table 25.2 outlines various factors that shape and influence stereotype and bias development.

Action	Description
In-Group Favoritism	People tend to show a preference for members of their social identity groups. This bias can lead to a more positive evaluation of individuals within one's group and a tendency to perceive them more favorably than those from different groups (Brewer, 1979; Tajfel & Turner, 1979).
Out-Group Homogeneity	Individuals may perceive members of other social identity groups as more similar than they are. This bias can result in oversimplified and generalized views of others from different groups and may influence social judgments and behaviors (Andreychik et al., 2020).
Confirmation Bias	Individuals may be more likely to notice and remember information confirming their biases or stereotypes about certain social identity groups. This **confirmation bias** reinforces and strengthens these biases over time (Velez et al., 2021).
Media and Cultural Influences	The portrayal of certain social identity groups in media can reinforce or perpetuate stereotypes or create new biases based on intersections of race, gender, and other social categories (Mastro, 2020).
Limited Interactions	Limited or negative interactions with individuals from certain social identity groups can contribute to forming biases and stereotypes. Lack of exposure to diverse perspectives may perpetuate inaccurate beliefs about these groups and contribute to developing and reinforcing negative stereotypes and biases (Craig et al., 2018).
Cognitive Efficiency	When information is presented in a format that is easy to understand, individuals tend to be more easily persuaded by that information, which can lead to biased perceptions and decision making (Critcher & Gilovich, 2021).

TABLE 25.2 Factors That Shape and Strengthen Stereotypes and Biases

Nurses need to understand how these factors shape their beliefs and values to comprehend their influence on

nursing decision making. Here are some effective techniques to create an inventory of personal values and beliefs:

- Performing Self-Reflection: Using introspection and thinking critically about personal values, beliefs, and cultural heritage can provide insight into how these factors influence perceptions, decisions, and interactions. This process also helps nurses recognize unconscious biases that might impact client care, encouraging them to question their assumptions and consider alternative perspectives (Richardson & Storr, 2020).
- Writing Down Values and Beliefs: Documenting personal values and beliefs, including those related to nursing practice, allows for clarity and deeper exploration. Consider how personal values align or conflict with professional standards and ethical guidelines. Writing down specific values related to respect, empathy, and client-centered care can be a foundation for ethical decision making (Gallagher, 2020).
- Evaluating Influence on Decision Making: After identifying values and beliefs, evaluate how they shape one's nursing practice. For example, how do they impact interactions with clients, colleagues, and health care team members? Reflect on instances where values might have influenced decisions and consider whether these decisions were aligned with client needs and cultural considerations (Epstein & Hundert, 2002).
- Identifying Areas for Improvement: Recognize areas where values and beliefs may differ from those of clients, colleagues, or the broader health care environment. Identifying potential conflicts helps one proactively address them. Consider situations where values might unintentionally affect one's ability to provide unbiased and culturally sensitive care (Haas & Greiner, 2020).

YOUR IDENTITY IS YOUR SUPERPOWER

Access multimedia content (http://openstax.org/books/population-health/pages/25-2-root-causes-of-stereotypes-and-biases)
In this video, actor, director, and activist America Ferrera discusses her experiences with cultural stereotypes in the entertainment industry.

Watch the video, and then respond to the following questions.

1. In the presentation, America Ferrera describes the challenges she faced based in the entertainment industry based on cultural stereotypes. How did these challenges impact her personally and professionally?
2. America Ferrera mentions a casting director asking her to "sound more Latina." What does this request reveal about the stereotypes and expectations placed on individuals based on their cultural background, and how does it connect to the broader issue of representation in the media?
3. America Ferrera received messages throughout her life that her identity was an obstacle. How did these messages affect her perception of herself, and what steps did she take to overcome these obstacles?
4. How can America Ferrera's emphasis on the importance of questioning our own fundamental values and beliefs for change to occur be applied to the nursing field? Why is it essential for nurses to understand and reflect on their beliefs about others in the context of decision making?
5. America Ferrera states, "My identity is not my obstacle. My identity is my superpower." How can this shift in perspective contribute to a more inclusive and diverse health care environment, and what lessons can nurses draw from this statement in their interactions with clients?

Privilege

The nursing profession has been shaped by Western perspectives and beliefs, representing a Eurocentric viewpoint, and by colonial ideologies which that been imposed on other cultures and societies. The ANA (2022) has urged the **decolonization** of nursing by addressing the lasting effects of colonialism on practice, education, and research. Decolonization in nursing is a process of critically examining and deconstructing the Eurocentric and colonial ideologies that have influenced nursing. It also promotes practices that center on decolonization and cultural humility. To promote decolonization in nursing, it is necessary to challenge these influences and create a health care system that is culturally sensitive and inclusive. This process requires challenging and dismantling historical and ongoing systems of oppression, including the privilege of specific knowledge systems and cultural perspectives over others (Zappas et al., 2021). This involves recognizing and valuing diverse cultural knowledge, traditional healing practices, and worldviews. A decolonization approach prioritizes culturally competent care that recognizes and

respects clients' unique cultural backgrounds and experiences (Fedje & Bissonette, 2019).

Decolonizing nursing requires acknowledging past injustices, establishing meaningful partnerships with diverse communities, integrating cultural humility into nursing practice, and advocating for policies that address health disparities and promote social justice. By doing so, nurses can contribute to providing equitable and respectful health care services that meet the unique needs and preferences of all individuals and communities, regardless of their cultural background. By adopting a decolonizing approach, nurses can help to eliminate health disparities and promote health equity for marginalized communities (Fedje & Bissonette, 2019).

The decolonization of nursing practice is closely related to the concept of privilege. **Privilege** refers to the advantages and benefits that specific individuals or groups enjoy due to their social identities, such as race, gender, sexual orientation, socioeconomic status, or other factors. Privilege can influence access to quality care, treatment decisions, and health outcomes. According to the ANA (2022), nursing students should develop a solid moral character and undergo professional formation to promote fair and respectful care while advocating effectively. To accomplish this, ANA (2022) contends that students must acknowledge their social privileges and ethically take responsibility to address unjust systems and structures. This requires critically analyzing beliefs, biases, and social structures contributing to health disparities.

The concept of privilege significantly impacts the provision of health care services, affecting both nurses and clients. Those who are privileged often have better access to health care resources, including insurance coverage, transportation, and medical facilities, which gives them an advantage over others (Togioka et al., 2023). The impact of privilege on health care encounters is explained in the following:

- Privilege can consciously or unconsciously lead to biases and stereotypes among health care providers. *For example*, providers with privilege may make assumptions or have preconceived notions about clients from marginalized groups, potentially leading to unequal treatment, discrimination, or neglect of certain clients' needs (Hobbs, 2018).
- Privilege can influence the dynamics of communication and trust between clients and health care providers (Togioka et al., 2023). *For example*, clients who belong to marginalized groups may be more skeptical or wary of providers who hold privileged identities, leading to challenges in establishing trust and effective communication.
- Privilege often results in a lack of diversity and representation in the nursing workforce (Togioka et al., 2023). Although the nursing population is becoming more diverse, minority nurses remain underrepresented. *For example*, the most common ethnicity of nurses in 2022 was White: 73.6 percent; Black or African American: 14.5 percent; Asian: 8.9 percent; and Hispanic or Latino: 8.1 percent (U.S. Bureau of Labor Statistics, 2023). This lack of representation can result in a deficiency of cultural understanding and sensitivity among nurses, causing cultural gaps. In addition, clients from marginalized groups may feel more comfortable and understood when they have health care providers with similar backgrounds or experiences.
- Privilege is intertwined with social determinants of health (SDOH) and health disparities. *For example*, clients who belong to marginalized groups often face higher rates of disease, limited access to health care, and poorer health outcomes than privileged individuals (Brown & White, 2020). Nurses need to be aware of these disparities and work toward mitigating them through advocacy, culturally competent care, and addressing SDOH. Social Determinants Affecting Health Outcomes provides a more in-depth discussion of SDOH.

To grasp the concept of privilege, it is crucial to differentiate between the agent and target groups. The **agent group** refers to those who hold a dominant social status either by birth or acquisition and may knowingly or unknowingly take advantage of their position over the target group. The **target group**, on the other hand, includes individuals belonging to social identity groups who experience discrimination, marginalization, oppression, or exploitation at the hands of the agent and the institutionalized system that they represent (Garran et al., 2020).

Systemic oppression has distinct features, one of which is the dominant group's ability to impose their version of reality and dictate what is considered normal, authentic, and right. The target group's culture, history, and language are often misrepresented or dismissed, while the dominant cultures are enforced. This type of oppression takes many forms, such as racism, sexism, ableism, and ageism, and is present at all levels of society, contributing to systemic injustices and unequal power dynamics. These forms of oppression can be deeply ingrained in cultural norms, institutions, policies, and practices, resulting in marginalization, discrimination, and disadvantage for certain

groups of people (Garran et al., 2020). See Structural Racism and Systemic Inequities for more information.

Discrimination and unequal treatment can arise from stereotypes and prejudice based on characteristics such as race, gender, disability, age, and more. Additionally, societal norms can perpetuate oppressive systems like gender roles or hierarchical power structures that limit opportunities for marginalized groups. Institutional biases also exist in policies, procedures, hiring practices, and decision-making processes, leading to unequal outcomes for individuals and communities who face discrimination. Table 25.3 depicts target groups that experience discrimination, marginalization, oppression, or exploitation by the agent by types of oppression (Garren et al., 2020).

Type of Oppression	Target Group	Agent
Racial	BIPOC (Black, Indigenous, and People of Color)	White People
Religion	Non-Christian	Christian
Class	Working Class	Middle and Upper Class
Gender	Women, Transgender People	Men, Anti-Transgender
Sexual Orientation	Lesbian, Gay, Bisexual, Queer, Pansexual People	Heterosexual People
Ability	People with Disabilities	People without Disabilities
Age	People over Age 65	Young People
Immigrant Status	Immigrant	U.S. Born
Language	Non-English Speaking	English Speaking

TABLE 25.3 Examples of Oppression, Target Groups, and Agents in the United States Today (Adapted from University of Southern California, 2020.)

Privilege exists within and perpetuates the framework of systemic inequalities and historical injustices. It can vary in type and degree depending on an individual's identity and life circumstances. Acknowledging and comprehending privilege is crucial for addressing disparities and promoting social equity (Johnson, 2020).

Nurses have access to various assessment tools that can help them better understand their privilege and how it affects their interactions with others. For example, the Privilege Checklist lists different privileges associated with various social identities. By reflecting on these statements, individuals can recognize the privileges they may possess based on their social identities. In addition, the Privilege and Responsibility Curricular Exercise (PRCE) offers a hands-on learning experience that encourages participants to reflect on their own privileges, consider the responsibilities that come with those privileges, and develop a deeper awareness of the impact of privilege on individuals and communities. This tool guides participants through a process that promotes critical thinking, self-reflection, and open dialogue (Matthews et al., 2020).

Acknowledging one's privilege and being mindful of its influence are critical to fostering empathy, understanding, and promoting social justice. Recognizing privilege does not diminish an individual's struggles or challenges but addresses systemic inequities and creates a more equitable and inclusive society. When discussing privilege, it is essential to ask questions that prompt self-reflection, foster awareness, and promote a deeper understanding of how privilege operates in society.

Nurses can use their professional status to promote health equity and address health care disparities by advocating for policies and practices. They can collaborate with community organizations and policymakers to address social determinants of health, improve access to health care services in underserved areas, and support community health initiatives. Nurses can also advocate for language access services, like interpreter services and translated health care materials, to enable clients with limited English proficiency to understand and participate in care.

One way for nurses to tackle privilege-based issues is to focus on improving health literacy. As discussed in Culturally and Linguistically Responsive Nursing Care, health literacy refers to an individual's ability to obtain, comprehend, assess, and apply health-related information to make informed decisions about their well-being and health care. It encompasses various skills related to health information and activities, such as reading, writing, numeracy, communication, and critical thinking (Institute of Medicine (US) Committee on Health Literacy, 2021). By tailoring health education materials and resources to the client's health literacy level, nurses can ensure that

everyone can access relevant and easily comprehensible information, regardless of socioeconomic status or educational background. Addressing health literacy empowers clients to take charge of their health and make informed choices about their health care (Frosch, 2020; Trachtenberg et al., 2021).

As a nurse, it is essential to reflect on one's privileges, comprehend how they contribute to health care disparities, and actively strive to provide fair and equitable care to all clients.

Identifying Areas for Growth and Development

Self-assessment improves a nurse's ability to provide culturally and linguistically competent care by identifying areas of growth and strengths.

As a nurse, it is essential to possess the knowledge and awareness of different cultures to provide appropriate care. This includes understanding customs, traditions, languages, family structures, religious practices, and health care beliefs. While one cannot be an expert on every cultural nuance, learning about the cultural groups in the community or client population being served is a crucial aspect of providing culturally responsive care.

When interacting with individuals from different cultures, it can be useful to categorize them based on their cultural traits. Cultural Influences on Health Beliefs and Practices discusses how cultural generalizations can provide a foundation for understanding and anticipating what to expect when interacting with individuals from a specific culture. These generalizations play a role in intercultural communication, helping nurses comprehend new experiences and information. However, generalizations should not be applied to every person within a cultural group and should not be confused with cultural stereotypes. Unlike stereotypes, which are fixed and often negative, generalizations are flexible and can change as new information is integrated. Generalizing about cultural groups can help nurses determine which questions to ask and provide a starting point to understand the extent to which the client adheres to cultural characteristics. To manage cultural differences effectively, nurses must cultivate skills in differentiating between generalizations and stereotypes (Figure 25.5).

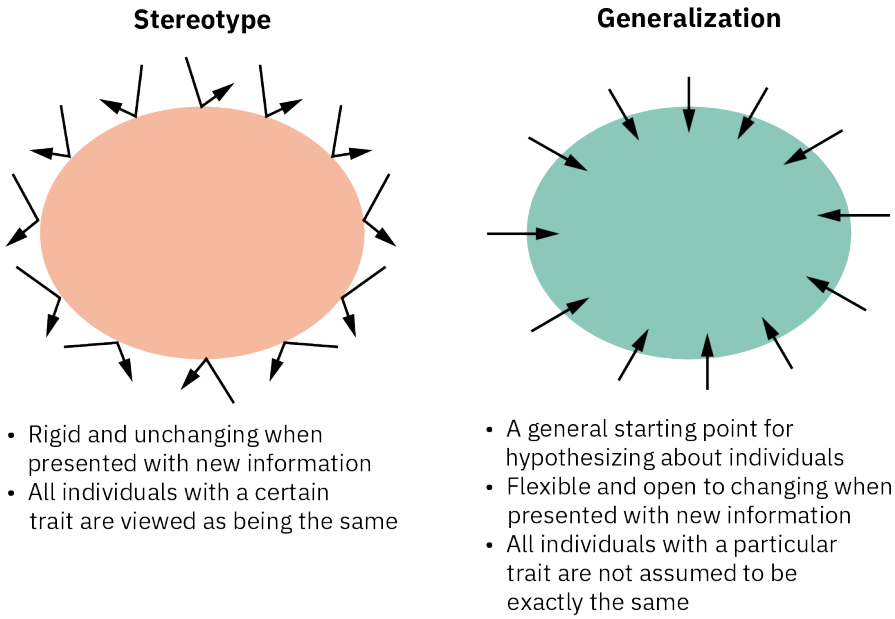


FIGURE 25.5 When projecting inward, generalizations may involve reflecting on one's own cultural background and recognizing common patterns or values. The use of stereotypes in projecting outward involves applying fixed beliefs to individuals from a particular culture without considering their unique qualities. This can lead to unfair judgments and discriminatory behavior. Conversely, projection inward with stereotypes involves accepting and internalizing biased beliefs about one's own culture, which can lead to self-limiting beliefs and internalized prejudices. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

To become culturally aware, one must also recognize and acknowledge their culture, experiences, feelings, thoughts, and surroundings without imposing them on others from different backgrounds. As defined by Purnell (2005), cultural self-awareness involves a deliberate and conscious process of understanding oneself, including personality, values, beliefs, professional knowledge standards, and ethics, and how these factors impact interactions with individuals from diverse backgrounds. Suggestions within this chapter that focus on promoting cultural self-awareness include practicing mindfulness, cultivating cultural humility, evaluating one's cultural

identity, and creating an inventory of one's cultural background. Cultural Influences on Health Beliefs and Practices provides additional information on the utilization of assessment tools to measure cultural competence.

Remember Sarah? She was initially confident in her ability to provide culturally appropriate care when she joined the public health department. However, during the first few weeks, she had several encounters with clients who had views and health practices that differed from her own, making her realize she needed to become more aware of the cultural groups her agency served.

After assessing her cultural knowledge and skills, Sarah recognized she was unfamiliar with Vietnamese culture and expressed a desire to learn more about its customs and traditions. As a result, Sarah set goals to understand cultural norms concerning health beliefs, family involvement, and communication styles. She participated in cultural competency workshops and welcomed feedback from her colleagues to improve her understanding of the diverse cultures in the public health service region. Additionally, Sarah engaged in self-reflection to identify and challenge her own biases and stereotypes about Vietnamese culture. She consciously tried to suspend judgment and assumptions based on cultural differences, recognizing that cultural humility requires a willingness to confront and overcome personal biases.

SARAH DEMONSTRATES PROVIDING CLIENT-CENTERED CARE

One day, Sarah attends to Mrs. Nguyen, an older client who appears hesitant and reserved. Sarah recognizes the importance of cultural humility in providing client-focused care and takes the necessary steps to demonstrate it.

Respectful and open communication:

Sarah approaches Mrs. Nguyen with a warm smile and greets her using a respectful greeting in Vietnamese, such as "Xin chào." Sarah learns that Mrs. Nguyen is fluent in English and will not require the services of a medical interpreter. Nevertheless, she uses simple, straightforward language to communicate with Mrs. Nguyen, avoiding medical jargon and ensuring that Mrs. Nguyen understands the information she shares.

Active listening and valuing the client's perspective:

Sarah takes the time to actively listen to Mrs. Nguyen's concerns and preferences and any cultural practices that may be important to her. She respects and values Mrs. Nguyen's perspective, allowing her to express her feelings and thoughts without interruption.

Collaborative decision making:

Sarah involves Mrs. Nguyen and her family in the decision-making process. She seeks their input and respects their autonomy and preferences. Sarah recognizes that the Nguyens are the experts in their own cultural practices and integrates their input into the client's care plan.

Adapting care practices:

Sarah modifies her care practices to align with Mrs. Nguyen's cultural preferences and needs. For example, she works with Mrs. Nguyen to create a diet plan to include traditional Vietnamese dishes that are familiar and acceptable to Mrs. Nguyen.

By becoming culturally knowledgeable and demonstrating cultural humility in her interactions with Mrs. Nguyen, Sarah ensures that she provides client-centered care that is respectful, inclusive, and responsive to Mrs. Nguyen's cultural background and needs. Sarah's actions foster trust, promote effective communication, and contribute to a positive health care experience for her client.

25.3 Managing Conflict

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 25.3.1 Recognize the many forms that biases and stereotypes can take.
- 25.3.2 Analyze factors contributing to conflicts arising from differences in values, beliefs, communication styles, and expectations.
- 25.3.3 Apply strategies and methodologies to effectively confront biases resulting from one's cultural and social identity.
- 25.3.4 Differentiate between emotional intelligence (EI) and cultural intelligence (CQ).
- 25.3.5 Explain how emotional intelligence (EI) and cultural intelligence (CQ) contribute to conflict resolution in diverse health care environments.
- 25.3.6 Describe the effects of power imbalances on nurse-client relationships in health care while distinguishing between different power dynamics.
- 25.3.7 Identify client-centered strategies to mitigate power imbalances and promote equitable and client-centered care.
- 25.3.8 Apply mindful practices to enhance cultural competence in health care interactions.

In nursing practice, cultural diversity can sometimes cause conflict between health care providers and clients who come from different cultural backgrounds. This is often due to differences in values, beliefs, communication styles, and expectations. Such conflicts can have a negative impact on client care and communication, as well as overall health care outcomes. Effective communication, empathy, cultural understanding, and a commitment to respectful resolution are necessary to manage conflicts that arise from cultural diversity. It is essential to address both conscious and unconscious biases, which can help to reduce stereotypes and assumptions. By continuously striving to be culturally responsive, health care providers can achieve better client outcomes, higher levels of client satisfaction, and improved overall health care quality.

Confronting Biases

As discussed in Culturally and Linguistically Responsive Nursing Care, implicit biases can lead individuals to unknowingly treat people from certain groups differently based on their race, gender, sexual orientation, or other characteristics. Implicit biases can affect health care outcomes, resulting in disparities in treatment and client experiences (Belton et al., 2018). Providers' implicit biases may also play a role in causing racial health disparities (FitzGerald & Hurst, 2017), and clinical decision making can be influenced by these biases (Hoffman et al., 2016).

Health care professionals, including nurses, have demonstrated unconscious biases toward clients based on irrelevant characteristics such as weight, mental health, clients with AIDS, clients with brain injuries who may have contributed to their injury, clients who are intravenous drug users, and clients with disabilities, in addition to race, ethnicity, gender, socioeconomic status, and age. These biases can affect the care provided to these individuals and contribute to health disparities (FitzGerald & Hurst, 2017). Unconscious processes may affect judgments, negatively impacting the nurse-client relationship and compromising client care (Greenwald et al., 2022). Table 25.4 presents examples of common forms of bias that may be either implicit or explicit.

Type of Bias	Definition	Implications in Health Care
Gender	The differential treatment, attitudes, and expectations toward individuals based on their gender, leading to unequal opportunities and outcomes	Can manifest in various ways, affecting client care, medical research, and career opportunities for health care professionals (Piercy & Fletcher, 2020). For example, studies have shown that women are often undertreated for their pain, wait longer to receive a diagnosis or treatment, and are less likely to be the subjects of research studies. Gender bias also affects women's reproductive health, and the stigma associated with sexual assault may lead women to avoid seeking care following an attack (Concern Worldwide US, 2022).
Age (ageism)	Discrimination or stereotyping of individuals based on age, either old or young	Older individuals may face challenges accessing appropriate health care due to age-related stereotypes and assumptions. Health care providers might attribute specific symptoms to aging rather than considering underlying medical conditions, leading to delayed diagnoses, inadequate care, and a lack of attention to the unique health care needs of older clients (Levy & Macdonald, 2020).
Weight	Involves negative attitudes and stereotypes toward individuals based on their weight or size	Health care providers may hold prejudiced beliefs about clients with obesity, leading to substandard care, misdiagnoses, or stigmatization. Clients with obesity may receive incomplete assessments, and their health concerns may be attributed solely to their weight rather than addressing underlying medical issues (Puhl & Suh, 2020).
Socioeconomic	Differential treatment based on an individual's economic status or social class	Clients from lower socioeconomic backgrounds may face barriers to accessing health care services and may receive less personalized care than those with higher socioeconomic status. Socioeconomic bias can also result in disparities in health care quality and health outcomes (Hohl et al., 2020).

TABLE 25.4 Common Forms of Bias with Examples

Type of Bias	Definition	Implications in Health Care
Disability	Prejudices and discrimination against individuals with disabilities	Health care providers and settings may not fully accommodate the needs of clients with disabilities. Inadequate communication, inaccessible facilities, and a lack of consideration for the specific challenges this population faces in seeking and receiving health care services lead to disparities in health care access and outcomes (McMahon et al., 2020).
Sexual orientation, also known as LGBTQ+ (lesbian, gay, bisexual, transgender, and queer/questioning) bias	Discrimination or prejudices against individuals based on their sexual orientation or gender identity	This bias can affect access to health care services, health insurance, quality of care, and nurse-provider communication for LGBTQ+ individuals (National LGBTQIA+ Health Education Center, 2020; MAP, 2023a). Bias also includes heteronormative assumptions that clients are cisgender or heterosexual.

TABLE 25.4 Common Forms of Bias with Examples

Addressing biases is a critical aspect of providing client-centered care for nurses. Negative impacts such as unequal treatment, misdiagnosis, and reduced client trust can be avoided by addressing biases. Nurses can achieve this by increasing their self-awareness, being culturally responsive, and adopting humility through education. By doing so, they can provide equitable care that respects clients' diverse backgrounds and needs.

BECOMING SELF-AWARE OF UNCONSCIOUS BIAS

As described in Culturally and Linguistically Responsive Nursing Care, the Implicit Association Test (IAT) can help the nurse become more self-aware and reflect on any implicit biases they may have related to gender, race, age, or other social categories.

Select an Implicit Association Test (https://openstax.org/r/implicit) (IAT) from a list of possible topics. Complete the assessment. Reflect on the findings, and then respond to the following questions.

1. Are there any discrepancies between your explicit beliefs and the implicit biases indicated by the test?
2. What actions could you take to address biases?

Maintaining a balance between personal and professional obligations is crucial for nurses to avoid client misunderstandings. Self-awareness plays a vital role in reducing biases. Having cultural sensitivity is important in reducing biases and promoting inclusivity. As a nurse, it is important to appreciate diversity in all forms and recognize that cultural differences enrich society and provide opportunities for learning and growth. Respectfully celebrating cultural practices, holidays, and traditions without appropriating or trivializing them is essential to fostering inclusivity, mutual respect, and understanding among diverse cultural groups.

To recognize and mitigate the impact of implicit biases, nurses must make a conscious effort to challenge them. Nurses must redirect their responses and counteract implicit biases when dealing with individual interactions. Recognizing one's implicit biases requires self-reflection, observation, and a willingness to confront and examine one's thoughts and beliefs. Nurses can prevent conflicts, promote effective communication, and prioritize client well-being by addressing personal biases.

Strategies to mitigate unconscious biases typically include training programs that increase awareness of personal beliefs, implicit attitudes, and stereotypes (Schmader et al., 2022). Identifying contexts that may lead to bias expression and creating plans to regulate behavior actively are also essential. Similarly, interventions to reduce unintentional biases involve effectively training individuals to regulate their beliefs, implicit attitudes, and stereotypes. Examples of strategies to reduce biases are presented in Table 25.5.

Strategy	Description
Stereotype replacement	• Consciously challenging and replacing stereotypical beliefs and assumptions with more accurate and nuanced understandings • Actively recognizing and questioning stereotypes and replacing them with diverse, individualized perceptions
Counter-stereotypic imaging	• Deliberately representing individuals or groups in a way that challenges or counters traditional stereotypes associated with them • This action helps the nurse to break away from stereotypical portrayals, challenge biases, promote inclusivity, and encourage more accurate perceptions.
Evaluative conditioning	• Repeatedly pairing a target stimulus (the one for which the attitude change is desired) with positive or negative stimuli to influence or modify attitudes or evaluations toward the target stimulus • Repeated pairing links emotional response to target stimulus with associated stimulus. Evaluative conditioning creates positive associations to combat negative biases and stereotypes.
Individuation	• Seeing individuals as unique and distinct rather than as part of a broad category or stereotype • This action helps nurses recognize and appreciate people's individuality, complexity, and diversity and can help replace biases and promote a more accurate understanding of others.
Perspective taking	• Empathizing with others to comprehend their thoughts, emotions, and experiences • Helps minimize biases, develop empathy, and foster mutual understanding
Identifying self with the outgroup	• Participating in tasks that lessen barriers between oneself and others • Finding commonalities and shared identities with people from different social or cultural backgrounds can reduce biases and promote empathy, understanding, and a greater sense of connectedness.
Cultural immersion and engagement	• Proactively engaging with people from diverse racial, ethnic, gender, and sexual orientation groups through various means, such as participating in cultural events, traveling to a different country, living in a culturally diverse community, or forming meaningful relationships with individuals from that culture • Deepens one's understanding of a culture beyond surface interactions

TABLE 25.5 Strategies to Mitigate Biases (See Devine et al., 2012; FitzGerald et al., 2019.)

Recall that Sarah, a home health nurse, has been assigned to conduct a home visit for a new client, Mr. Ramirez, who recently relocated to the community from a Latin American country. Arriving at Mr. Ramirez's residence, Sarah observes the neighborhood and senses a subtle discomfort within herself. Unbeknownst to her, this discomfort is driven by implicit biases that influence her perceptions and attitudes. During the visit, Sarah unintentionally makes assumptions about Mr. Ramirez's health practices, family dynamics, and overall lifestyle based on her own cultural background and preconceived notions. These biases may manifest subtly, such as in nonverbal cues or unintentional microaggressions, impacting the quality of care and communication.

SARAH'S STEPS TO REDUCE THE IMPACT OF HER IMPLICIT BIASES

Sarah reflects on her interactions with Mr. Ramirez and becomes aware of the implicit biases that may have influenced her perceptions. Recognizing the need to address these biases to provide culturally congruent care, Sarah undergoes training and education to increase her cultural awareness and seeks guidance from her supervisor on strategies to overcome implicit biases.

Self-awareness and reflection:

- Sarah acknowledges her reaction to her client's neighborhood and reflects on her biases and assumptions.
- She recognizes that her biases can influence her interactions and decisions and commits to addressing them.

Cultural sensitivity:

- Sarah engages in ongoing education and training to enhance her cultural responsiveness and sensitivity.
- She seeks to understand the experiences, values, and beliefs of the diverse population she serves. This includes learning about the cultural practices, health care beliefs, and community resources relevant to the Latin American community.

Building rapport and trust:

- Sarah focuses on building rapport and trust with Mr. Ramirez and other community members.
- She recognizes that establishing a respectful and trusting relationship is essential for effective communication and engagement. She actively listens to their concerns, values their perspectives, and involves them in their health care decisions.

Challenging stereotypes and assumptions:

- Sarah consciously challenges stereotypes and assumptions she may have about individuals from different cultures or backgrounds. She reminds herself that each person is unique, with their own strengths, challenges, and aspirations.
- She avoids making assumptions based on external factors, such as neighborhood appearance or socioeconomic status.

Seeking diverse perspectives:

- Sarah actively seeks opportunities to engage with members of the Latin American community and learn from their experiences.
- She attends community events, participates in cultural celebrations, and seeks input from community leaders to better understand their needs, values, and concerns.

Reflective practice and continuous learning:

- Sarah regularly reflects on her experiences and interactions with the community to identify any moments where implicit biases may have influenced her actions or decisions.
- She self-reflects, accepts feedback, and commits to continuous learning and improvement.

Sarah's actions reflect her commitment to providing equitable and culturally sensitive care to the community. She acknowledges the potential impact of her implicit biases on health care delivery and tries to overcome them. Sarah prioritizes self-awareness, cultural competence, collaboration, and reflection to provide unbiased care that respects her client's needs and values.

Emotional and Cultural Intelligence

Emotional and cultural intelligence are essential in managing cultural conflicts in nursing practice. Understanding emotional intelligence (EI) and cultural intelligence (CQ) is crucial for effectively navigating interactions and relationships, particularly in diverse and multicultural environments. Although they have some similarities, they are separate concepts that deal with different aspects of human behavior and interpersonal abilities.

Emotional intelligence (EI) refers to the ability to recognize, understand, and manage one's emotions and the emotions of others effectively. Daniel Goleman coined the term in his 1995 book *Emotional Intelligence: Why It Can Matter More Than IQ*, where he introduced EI's significance in personal and professional success. Goleman argues that traditional measures of intelligence, such as IQ (intelligence quotient), do not fully predict a person's success in life. EI involves several key components (Goleman, 1995):

- **Self-awareness**: The ability to recognize and understand one's emotions, strengths, weaknesses, and values
- **Self-management**: The capacity to manage and regulate one's emotions, impulses, and behaviors
- **Motivation**: Harnessing emotions to drive and sustain motivation, set, and achieve goals
- **Empathy**: The ability to understand and share the feelings and perspectives of others, demonstrating sensitivity and compassion
- **Social skills**: Proficiency in building and maintaining positive relationships, effective communication, conflict resolution, and teamwork

EMOTIONAL INTELLIGENCE (EI) TEST

This Emotional Intelligence Test from the Global Leadership Foundation consists of 40 questions derived from the Global *EI Capability Assessment* instrument and is based on Goleman's four-quadrant Emotional Intelligence Competency Model (2002). You may use your test results as a guide to assess areas where you are doing well and others you may need to develop further. The test generally takes 10 minutes.

1. Take the Emotional Intelligence Test (https://openstax.org/r/eitest).
2. Click on the Score Test button, and wait for the computer to generate an EI profile of your scores.
3. Reflect on the capability level within each of the EI quadrants.
4. Discuss how EI can contribute positively to promoting cultural humility.

Emotional intelligence (EI) aids individuals in managing stress, navigating social interactions, and making sound decisions. In various fields, such as leadership, management, and health care, emotional intelligence is vital in establishing solid relationships, motivating others, and resolving conflicts.

Developing **cultural intelligence** (CQ) is another means for addressing cultural conflicts in nursing practice. In *Cultural Intelligence: Individual Interactions Across Cultures*, Earley and Ang (2003) define cultural intelligence as the ability to adapt and interact effectively with people from different cultural backgrounds. It involves having knowledge, awareness, and skills related to cultural diversity. The components of cultural intelligence include:

- **Cultural knowledge**: Understanding of norms, values, beliefs, and practices of different cultural groups
- **Cultural understanding**: Unbiased recognition and appreciation of cultural differences and similarities
- **Cultural skills**: Interpersonal and communication skills to effectively interact and communicate across cultures
- **Cultural adaptability**: Willingness and ability to adjust one's behaviors, attitudes, and beliefs to fit into different cultural contexts

Cultural intelligence enables individuals to navigate diverse settings, foster inclusive relationships, and avoid misunderstandings or conflicts stemming from cultural differences. As health care professionals, nurses must regularly reflect on their emotional and cultural intelligence to identify their strengths and areas for growth in providing culturally competent care.

To assess their emotional and cultural intelligence, nurses can use the following techniques:

1. Consider taking an emotional intelligence assessment to identify personal strengths and areas for growth.
2. Reflect on emotional reactions in various social situations, including the workplace, mainly when dealing with colleagues and clients. Analyze how emotions may impact decision making and interactions with others.
3. Seek feedback to gain insight into how one is perceived regarding emotional and cultural intelligence. This can help nurses identify their **blind spots**, or unconscious or implicit biases they are unaware of (Banaji & Greenwald, 2016). Blind spots can influence a person's perceptions, judgments, and decision making without their conscious knowledge or intention. They are often formed and reinforced by societal norms, cultural

influences, personal experiences, and media portrayals.
4. Observe interactions with others to identify how one responds to situations that involve cultural differences. Consider how interactions may reflect one's level of cultural intelligence.
5. Engage in continuous education to improve emotional and cultural intelligence. This can include reading books or articles, attending cultural competency workshops, or seeking mentorship from colleagues skilled in providing culturally responsive care.
6. Use self-reflection to identify personal cultural biases and beliefs. Then, consider how one's cultural background may influence interactions with clients and colleagues from different cultural backgrounds.

Emotional and cultural intelligence enable empathy and comprehension and promote effective communication when interacting with people from cultures that are different from one's own. With these skills, nurses can foster inclusive and harmonious interactions in personal and professional settings. EI equips nurses to manage conflicts constructively, while CI enhances their capacity to navigate disputes arising from cultural differences. EI and CI enable nurses to manage misunderstandings, bridge cultural gaps, and establish positive relationships across cultures. Conflict resolution and relationship building are essential to cultural competency, as they foster collaboration, trust, and mutual respect in culturally diverse environments.

Addressing Power Imbalances

In nursing, **power imbalances** can create conflicts and hinder effective communication between health care providers and between providers and clients. Imbalances can arise in the nurse-client relationship due to differing roles, knowledge, and authority (Foronda, 2019; Foronda et al., 2016). For example, nurses may perceive themselves as having more power than their clients due to their professional knowledge and authority, while clients often feel a sense of vulnerability and dependence on the health care system (Karim, 2023). Addressing these imbalances is essential for promoting client autonomy and improving outcomes.

In health care organizations, nurses hold varying levels of authority and responsibility compared to clients. This hierarchical structure can impact communication patterns and make clients feel subordinate. Nurses often have decision-making authority in health care settings, which can limit client autonomy and control over their own health care decisions. How power is distributed affects how nurses and clients communicate and make decisions. For example, clients may feel uncomfortable sharing their concerns or preferences because they worry about upsetting or questioning the nurse's authority. Meanwhile, nurses may find it challenging to balance empowering clients and maintaining control over the care process (Karim, 2023). When power is used in an authoritarian manner, clients may feel disempowered and less trusting of the health care system (Karim, 2023). Cultural context can also play a role in shaping power dynamics within nurse-client interactions. In some cultures, clients may defer to the authority of health care professionals, leading to a more pronounced power imbalance (Karim, 2023).

To provide client-centered care, nurses should engage clients in shared decision making, honor their preferences and values, and offer the information they need to make informed choices about their care (Figure 25.6). When nurses advocate for client involvement in decision making and respect their autonomy, it increases client trust and satisfaction (Ringdal et al., 2017). Advocacy and autonomy are principles in the Nursing Code of Ethics (ANA, 2015). Advocacy ensures that clients' voices are heard, their rights are respected, and their needs are met. Autonomy empowers clients to actively participate in their health care decisions, giving them a sense of ownership and control over their well-being. These principles are the foundation of client-centered care and ethical nursing practice.



FIGURE 25.6 To provide client-centered care, nurses should engage clients in shared decision making, respect their preferences and values, and provide them with the information they need to make informed choices about their care. (credit: "A Navy nurse speaks to a woman about medications aboard USNS Comfort (T-AH 20)" by Morgan K. Nall/U.S. Navy/Flickr, CC BY 2.0)

To create a safe and respectful environment, nurses should promote open and respectful communication, actively listen to clients, and encourage them to voice their concerns and preferences without fear of judgment or retribution. To empower clients and promote participation in their care, nurses should strive to create a trusting and supportive environment where clients feel comfortable expressing their needs and preferences (Ringdal et al., 2017). Addressing power imbalances requires nurses to adopt a client-centered approach, promoting partnership and collaboration rather than paternalistic attitudes. Here are some strategies nurses can implement:

- Practice cultural humility and respect clients' unique perspectives and values (Foronda, 2019).
- Foster open and honest communication, ensuring clients feel comfortable asking questions and expressing their concerns (Ringdal et al., 2017).
- Allow clients to have a voice and actively involve them in shared decision-making processes (Molina-Mula et al., 2020), providing them with information and options to make informed choices about their care (Ringdal et al., 2017).
- Engage in relationships that support clients' health care preferences (Pelletier & Stichler, 2014).
- Advocate for client rights and autonomy within the health care system (Molina-Mula et al., 2020).
- Continuously reflect on one's power and privilege and work toward mitigating the impact of power imbalances in the nurse-client relationship.

Cases where power and resources are unevenly distributed can result in health inequalities (National Academies of Sciences, Engineering, and Medicine, 2017). Nurses can tackle power imbalances and encourage care by prioritizing the client, leading to more autonomy and a fairer and more empowering health care setting.

Engaging in Mindful Awareness

Understanding the connection between mindful awareness and cultural humility is essential for creating culturally sensitive interactions in different situations, especially in health care settings. These concepts can help nurses better appreciate cultural diversity and provide client-centered care. **Mindful awareness** means being present in the moment and observing thoughts, emotions, and sensations without judgment. Being consciously or mindfully aware and receptive in the context of cultural responsiveness means actively and intentionally seeking to understand, respect, and appreciate the diverse cultural backgrounds, perspectives, and practices of individuals and communities. It involves recognizing the influence of culture on people's behaviors, values, beliefs, and norms, consciously bridging cultural gaps, and fostering inclusive interactions.

To cultivate mindful awareness, nurses can actively engage in several practices:

- Mindful Listening: Practice active listening by entirely focusing on the speaker. Seek to understand the speaker's perspective without interrupting or judging prematurely.
- Suspension of Judgment: Be aware of automatic judgments and biases that arise and consciously set them aside. Instead, aim to understand the reasoning behind different viewpoints before forming an opinion.
- Empathy and Perspective Taking: To gain a better understanding of someone's experiences, emotions, and motivations, try to adopt their perspective. Cultivate empathy by imagining oneself in the same circumstances.
- Continuous Learning: Foster a growth mindset, and embrace a lifelong learning attitude. Seek new information, engage in diverse experiences, and be open to changing personal beliefs based on new evidence or insights.
- Reflection and Self-Awareness: Regularly reflecting on thoughts, biases, and reactions helps develop self-awareness of times when one may resist new information.

Practicing mindfulness can benefit everyone involved, including clients, professionals, and personal well-being. ANA's Scope and Standards of Practice acknowledges the significance of mindfulness in nursing practice, emphasizing the need for nurses to "practice with presence, intention, and focused attention" to enhance client-centered care and promote a culture of safety (ANA, 2020, p. 10). This requires nurses to possess a heightened self-awareness to cultivate an authentic presence. This means being attuned to their own thoughts, emotions, and reactions as they engage with clients, colleagues, and various clinical situations. Being fully present involves acknowledging and managing distractions that might hinder effective communication or decision making. This concept goes beyond the nurse's physical presence—it requires being mentally present, actively listening, and responding empathetically to clients' needs and concerns. This requires the nurse to have the skill set to adapt their behavior according to their self-awareness and situational awareness. Nurses can employ practical tools to cultivate compassionate habits that support well-being, communication, resilience, and success. These mindfulness practices are not just quick fixes for stress; they can serve as a solid foundation for developing more empathetic nursing practice. Mindfulness practice can enhance engagement, a sense of purpose, and the ability to manage difficult client conversations while fostering empathy (Bertin, 2020; Mindful Communications, n.d.).

MINDFUL BREATHING: PRACTICING SELF-CARE

Access multimedia content (http://openstax.org/books/population-health/pages/25-3-managing-conflict)
Mindful breathing, or intentionally focusing on each inhalation and exhalation, can help increase muscle relaxation and improve sleep and overall mental health and well-being. This video guides the viewer through a short exercise in this technique.

Play the video, complete the exercise, and then respond to the following questions.

1. How can the practice of taking seven mindful breaths, following the rhythm of inhaling, and exhaling on one, help individuals improve their overall health and well-being?
2. How might incorporating the practice of taking seven mindful breaths in moments of crisis or before challenging situations contribute to building stronger interpersonal relationships and fostering a more compassionate society?
3. How does grounding oneself through mindful breathing practice align with the goal of mindful communications to promote healthier and more mindful ways of interacting with oneself and others?

Mindfulness in nursing practice can equip nurses to better manage the challenges of caring for clients from diverse cultural backgrounds. Mindfulness practices can enhance emotional intelligence and empathy (Brewer et al., 2019). Integrating mindfulness into cultural care delivery can help health care providers better comprehend and address the psychological aspects of clients' experiences related to their cultural background (Zandbelt et al., 2017).

By practicing mindfulness, nurses can gain a deeper understanding of their own biases and assumptions. This promotes the nurse's ability to approach client interactions with openness and sensitivity to cultural differences. Nurses can adapt their care strategies and communication styles to meet the unique needs of clients from diverse backgrounds by heightening awareness of cultural variations.

For example, Sarah, the newly hired nurse from the previous examples, is passionate about delivering quality care to her clients. She is keenly aware of the importance of cultural humility but feels overwhelmed by her clients' diverse cultural backgrounds. Struggling to bridge cultural gaps and foster inclusivity, Sarah embarks on a journey to integrate mindfulness principles into her nursing practice.

Sarah started practicing mindful awareness during client interactions. She observes her thoughts, emotions, and assumptions without judgment, allowing her to gain insight into her biases. Utilizing mindfulness practices, Sarah focuses on cultivating emotional intelligence. This involves understanding her emotions and those of her clients, fostering a deeper connection. Sarah extends mindfulness to comprehend the psychological aspects of clients' experiences related to their cultural background. This helps her address the unique emotional needs of each client. As Sarah integrates mindfulness into her nursing practice, she experiences transformative outcomes. Mindfulness allows Sarah to gain a deeper understanding of her biases and assumptions. This self-awareness becomes the foundation for her approach to client interactions. Sarah's mindfulness practices promote openness and sensitivity to cultural differences. She learns to approach each client nonjudgmentally, fostering trust and mutual respect. Heightened awareness of cultural variations empowers Sarah to adapt her care strategies and communication styles. She tailors interventions to meet the unique needs of clients from diverse backgrounds. Sarah's case illustrates the transformative power of integrating mindfulness into nursing practice, particularly in cultural humility and competency, through mindful awareness, emotional intelligence, and a commitment to ongoing learning.

Mindfulness is a practice that teaches personal growth as a never-ending journey. Sarah understands that becoming culturally responsive is a continuous process that requires constant learning and adaptation and encourages humility in approaching different cultures. Being present in the moment allows nurses to engage with their clients fully. This is crucial in understanding subtle cues, nonverbal communication, and nuances that may carry cultural significance, resulting in increased cultural sensitivity. Mindfulness helps to cultivate an open-minded approach to every client interaction, enabling nurses to approach situations with curiosity instead of preconceived notions and creating an environment that values and respects diverse perspectives.

25.4 Creating an Atmosphere of Trust and Mutual Respect

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 25.4.1 Describe factors that lead to mistrust of the U.S. health care system.
- 25.4.2 Identify strategies to promote trust in the U.S. health care system.
- 25.4.3 Establish goals that encourage cultural responsiveness and humility.
- 25.4.4 Engage in regular self-reflection to actively challenge and unlearn biases.

The level of trust that different groups have in the health care system differs. Factors that can contribute to this variance include historical experiences, cultural beliefs, socioeconomic status, language barriers, and access to health care. Historical experiences of discrimination, mistreatment, or disparities in health care can significantly impact an individual's or a community's trust in the health care system.

Factors Influencing Trust of the Health Care System

As discussed in Structural Racism and Systemic Inequities, certain cultural groups have experienced systemic injustices, leading to mistrust of the U.S. health care system. For instance, from 1932 to 1972, the U.S. Public Health Service conducted the Tuskegee Syphilis Study, deliberately misleading Black men about its purpose and withholding penicillin from them when it became available as a treatment. The study had a lasting impact on the Black community's trust in health care providers and the health care system (CDC, 2022; Freimuth et al., 2001).

Negative stereotypes about certain groups of people have led these groups to mistrust government and institutions. For instance, those living in rural areas with low incomes have been stigmatized since the earliest colonial times. At that time, poor White colonists were viewed as unwanted vagrants who were not entitled to their rights and dignity as American citizens. Rural communities tend to be more skeptical of government and institutions. This is largely because these communities face numerous challenges in obtaining affordable, timely, and quality health care services. Such obstacles often stem from financial limitations, transportation issues, and differences in the quality of health care provided (Rural Health Information Hub, 2022).

Members of the LGBTQ+ community have also been subject to high rates of health care discrimination historically,

ranging from harassment and humiliation to being turned away for care. For example, although the Affordable Care Act prohibits discrimination on the basis of sex, including pregnancy, sexual orientation, gender identity, and sex characteristics by federally funded health care providers (U.S. Department of Health and Human Services, 2021), nine U.S. states have laws that allow medical professionals to decline service to LGBTQ+ clients based on religious beliefs (Movement Advancement Project [MAP], 2023b). In 2023, 15 U.S. states banned some forms of best practice medical care for transgender youth, and nine states banned Medicaid from providing coverage for medically necessary health care for all transgender individuals (MAP, 2023a).

Other factors that result in clients' distrust of the health care system include:

- The impact of cultural beliefs and values surrounding health and healing practices and how they affect an individual's trust in the system. Certain cultural groups have traditional or spiritual healing practices that may not align with Western medicine, and it is crucial to respect and acknowledge these beliefs to establish trust.
- Communication difficulties and language barriers. Limited proficiency in the dominant language can make it difficult for individuals from specific cultural groups to effectively express their health concerns, understand medical information, or build rapport with health care providers.
- A lack of diversity and representation in the health care workforce hurts trust. When individuals from specific cultural groups do not see health care providers who share their cultural background or resemble them, it can lead to mistrust and a feeling of being misunderstood or disrespected.

Fostering Trust Through Cultural Responsiveness

Eradicating stereotypes and negative perceptions toward certain groups is a necessary step in establishing community trust in the health care industry. This can be achieved when nurses and other health care providers display an understanding of and respect for diverse cultural practices, beliefs, values, and ways of life. Doing so can enhance trust and strengthen the relationship between clients and health care providers.

To promote trust, the nurse can:

- Take steps to learn about the populations they serve (Association of Public Health Nursing [APHN], n.d.).
- Advocate for a workforce that reflects the diversity of the populations served (APHN, n.d.).
- Practice inclusiveness, listen to understand, and recognize the knowledge and power of each individual and group (APHN, n.d.).
- Role model and exemplify the principles of social justice (APHN, n.d.).
- Use effective communication and resolution strategies respectfully to address conflicts (APHN, n.d.).
- Establish community-engaged partnerships, including rural residents from historically marginalized groups (APHN, n.d.).
- Advocate for rural-centered health care delivery models (Lister & Joudrey, 2022).
- Practice with cultural sensitivity by developing a deep understanding of clients' cultural backgrounds and their impact on health and healing (Seeleman et al., 2015).

Community support and advocacy efforts can play an important role in building trust. When marginalized populations have community organizations, leaders, or advocates actively addressing health disparities and advocating for equitable health care, it can help foster trust and engagement with the health care system.

Recall Nurse Sarah. She is organizing a community health fair to raise awareness about preventive health measures. She wants to ensure that community members feel comfortable and trust the information and services provided at the event. The box below presents actions that Sarah initiates to create an environment of trust.

SARAH'S STEPS TO CREATE AN ENVIRONMENT OF TRUST

When organizing a community health fair, Sarah takes the following actions to create an environment of trust.

Transparent and clear communication:

Sarah shares information about the health fair, its purpose, and what community members can expect with community members and partners. She provides details about the services, workshops, and resources available

and openly addresses any concerns or questions.

Cultural sensitivity and inclusivity:

Recognizing the diversity within the community, Sarah takes steps to ensure cultural sensitivity and inclusivity by involving representatives from various cultural groups in the planning process to ensure that the health fair addresses the needs and preferences of different communities. Sarah tries incorporating diverse perspectives, languages, and cultural practices into the event.

Building relationships and partnerships:

Sarah actively builds relationships with community leaders, organizations, and concerned parties. She collaborates with local community-based organizations, faith-based groups, and other agencies to establish partnerships that can enhance the credibility and reach of the health fair. Sarah engages these partners in the planning and implementation to ensure community ownership and involvement.

Active listening and empathy:

Sarah listens attentively to community members' concerns, feedback, and suggestions. She demonstrates empathy by validating their experiences and emotions. Sarah encourages open dialogue, creates a safe space for sharing, and assures community members that their voices are valued and will be considered.

Confidentiality and privacy protection:

Sarah ensures that all personal health information is treated with confidentiality. She explains to community members how their data will be managed and stored, assuring them that their information will only be used for the intended purposes and in compliance with relevant privacy laws and regulations.

Professional competence and integrity:

Sarah maintains high professional competence and integrity in her work. She stays current with the latest evidence-based practices, research, and guidelines in public health. Sarah provides accurate and reliable information, avoiding misinformation or bias that could undermine trust. She follows ethical guidelines and acts in the best interest of the community.

Sarah's actions foster an environment of trust within the public health department and its community. She prioritizes open communication, cultural sensitivity, and inclusivity while maintaining professionalism and integrity. Her efforts are instrumental in strengthening relationships, promoting community engagement, and ultimately, improving health outcomes. Such interactions build trust over time. Sarah knows that earning and maintaining trust involves cultivating humility and demonstrating her commitment to culturally responsive care through her actions, words, and consistent efforts. Sarah's approach involves ongoing self-reflection, a commitment to learning, and a deep appreciation for the diversity within her community. Through these efforts, she fosters sensitivity and humility and contributes to creating a culturally responsive and inclusive health care environment.

Taking Action to Promote Cultural Humility

To create an inclusive, equitable health care environment, nurses should establish goals that encourage cultural humility. It is essential to review and assess these goals frequently, to ensure they align with ongoing growth and development in these areas. Display the goals in a prominent location and replace accomplished goals with new ones. Here are some suggestions for setting these goals:

- Expand cultural awareness: Make it a goal to learn more about different cultures, including their beliefs, values, practices, and health care disparities. This can involve reading books, attending cultural competency workshops or webinars, and conversing with people from different cultural backgrounds.
- Improve cross-cultural communication skills: Set a goal to actively listen, use appropriate language and tone, and be mindful of nonverbal cues. Practice empathetic and nonjudgmental listening to understand clients' unique cultural perspectives better.
- Reflect on biases and assumptions: Regularly reflect on personal biases, assumptions, and stereotypes that may impact one's interactions with clients from different cultures. Seek to challenge and unlearn these biases

through self-reflection, self-education, and feedback from colleagues or mentors.

- Seek cultural immersion experiences: Actively engage in cultural immersion experiences to deepen one's understanding of different cultures. This can involve participating in community events, volunteering with diverse populations, or undertaking cultural exchange programs.
- Foster self-awareness: Enhance self-awareness regarding one's cultural identity and how it influences interactions with others. Explore one's cultural background, values, and beliefs to better understand one's cultural perspective and how it may differ from others.
- Build cross-cultural relationships: Seek opportunities to interact and build meaningful relationships with people from different cultural backgrounds within and outside the health care setting.
- Promote cultural competence in practice policies: Advocate for integrating cultural competence into a health care organization's policies and practices. Suggest implementing cultural assessment tools, providing staff cultural competence training, and promoting a diverse and inclusive work environment.
- Engage in ongoing education: Commit to learning and professional development related to cultural competence. Stay informed about emerging research, best practices, and evolving cultural dynamics. Attend conferences, seminars, or online courses to expand knowledge and skills in providing culturally sensitive care.

THEORY IN ACTION

Creating an Action Plan

Now that you have explored the concepts of cultural competence and cultural humility, it is time to develop an action plan.

1. Review findings from the learning activities conducted in the previous sections:
    - Cultural Competence Self-Evaluation Checklist
    - Social Identity Wheel
    - Inventory of Values, Beliefs, and Cultural Heritage
    - How to Deal with Unconscious Bias
    - Implicit Bias
2. Project READY is a program funded by the Institute of Museum and Library Services focused on racial equity and culturally sustaining pedagogy. Use this template (https://openstax.org/r/ready) from Project READY: Reimagining Equity & Access for Diverse Youth to set three goals for becoming culturally competent and practicing cultural humility: one short-term goal that you can accomplish immediately, one medium-term goal that you can accomplish over the next several months, and one long-term goal that you can accomplish over the next year.

Chapter Summary

25.1 Strategies to Promote Culturally Responsive Nursing

To provide culturally responsive care, nurses must respect clients' values, customs, and beliefs. Cultural responsiveness encompasses cultural awareness, knowledge, skills, encounters, and humility. Cultural humility should be considered in combination with cultural awareness, knowledge, skills, encounters, and desire. Nurses can adopt this approach to develop cultural competence, which ultimately leads to "conscious permeability."

25.2 Root Causes of Stereotypes and Biases

An exploration of factors that inform stereotypes and biases is essential to promoting client-centered care. Nurses can develop a deeper understanding of how their cultural backgrounds and social identities influence their biases and stereotypes by employing effective self-exploration techniques. Learning self-reflection skills, documenting values and beliefs, evaluating the influence on decision making, and pinpointing areas for improvement will help nurses navigate these complexities in client care.

25.3 Managing Conflict

Dealing with conflict in client care, particularly when cultural differences are involved, requires excellent communication skills, empathy, cultural awareness, and a dedication to respectful resolution. Addressing conscious and unconscious biases is crucial when managing conflicts. This can go a long way in reducing biases and stereotypes. Cultural responsiveness can enhance client outcomes, boost client satisfaction rates, and ultimately elevate health care quality.

25.4 Creating an Atmosphere of Trust and Mutual Respect

A variety of factors, such as historical experiences, cultural beliefs, socioeconomic status, language barriers, and access to health care, influence the degree to which particular groups trust the health care system. By approaching client interactions with cultural humility, nurses can work toward creating an inclusive, equitable health care environment that builds client trust and encourages open communication and collaboration.

Key Terms

agent group those with dominant social status either by birth or acquisition who may knowingly or unknowingly take advantage of their position over the target group

blind spots unconscious or implicit biases that individuals are unaware of

confirmation bias a tendency to notice and remember information confirming one's existing beliefs; can reinforce and strengthen those beliefs over time

conscious impermeability when the nurse recognizes cultural humility's importance but struggles to demonstrate it in practice

conscious permeability the mindful act of learning to become culturally humble and use a cultural lens throughout the entire encounter with the client

counter-stereotypic imaging the deliberate representation of individuals or groups that challenges or counters traditional stereotypes associated with them

cultural adaptability adapting one's behaviors, communication styles, and approaches to fit different cultural environments

cultural autobiography a written account of an individual's cultural experiences, upbringing, and identity development

cultural genogram a genogram depicting family members' cultural identities, traditions, and migration histories

cultural immersion proactively engaging with people from diverse racial, ethnic, gender, and sexual orientation groups

cultural intelligence (CQ) an individual's ability to understand, appreciate, and adapt to different cultural contexts

cultural knowledge understanding different cultural norms, values, beliefs, practices, and historical contexts

cultural sensitivity the awareness, understanding, and consideration of clients and their families' diverse cultural backgrounds, beliefs, practices, and preferences

cultural skills the possession of interpersonal and communication skills to effectively interact and communicate across cultures

cultural understanding the recognition and appreciation of cultural differences and similarities without judgment or bias

decolonization a process of critically examining and deconstructing the Eurocentric and colonial ideologies that have influenced nursing

emotional intelligence (EI) the ability to recognize,

understand, and manage one's emotions and effectively interact with the emotions of others; involves self-awareness, self-regulation, empathy, and social skills

empathy the capability to understand and share the feelings and perspectives of others, demonstrating sensitivity and compassion

evaluative conditioning a psychological concept that explains how repeated pairing with positive or negative stimuli can influence or modify people's attitudes or evaluations toward a particular stimulus

in-group bias a psychological phenomenon referring to people's tendency to favor members of their own social or cultural in-group

individuation the process of seeing individuals as unique and distinct, rather than lumping them into broad categories or stereotypes

mindful awareness being present in the moment and observing thoughts, emotions, and sensations without judgment

motivation harnessing emotions to set and achieve goals

perspective taking empathizing with others by putting oneself in their shoes and trying to comprehend their thoughts, emotions, and experiences

power imbalances imbalances in the nurse-client relationship within the health care setting that stem from the differing roles, knowledge, and authority that nurses and clients hold

privilege the advantages, entitlements, or prospects bestowed upon individuals based on their social identities, such as race, gender, and economic status, among other factors

self-awareness the ability to recognize and understand one's emotions, strengths, weaknesses, and values

self-management the capacity to manage and regulate one's emotions, impulses, and behaviors in various situations

social skills proficiency in building and maintaining positive relationships, effective communication, conflict resolution, and teamwork

stereotype replacement consciously challenging and replacing stereotypical beliefs and assumptions with more accurate and nuanced understandings

systemic oppression the dominant group's ability to impose their version of reality and dictate what is considered normal, true, and right

target group individuals belonging to social identity groups who experience discrimination, marginalization, oppression, or exploitation at the hands of the agent and the institutionalized system that they represent

unconscious impermeability a lack of recognition that cultural humility is necessary to become culturally competent

unconscious permeability spontaneously operating from a place of cultural humility

Review Questions

1. A nurse, concerned that unconscious bias might hinder their cultural humility in providing care to clients with backgrounds different from their own, completes the Social Identity Wheel. Which statement describes the nurse's purpose for using this assessment tool?

a. To learn about the client's cultural identity
b. To learn to ignore biases and focus on client care
c. To assess how the nurse's identity influences client care
d. To confirm that the nurse is culturally sensitive

2. What action by a nurse demonstrates cultural humility in client-centered care?

a. Using complex medical terminology to show expertise
b. Assuming that the nurse's cultural practices are universally applicable
c. Adapting care practices to align with the client's cultural preferences
d. Disregarding the client's input and family's opinions in decision making

3. Which action by a nurse represents the practice of decolonization?

a. Enforcing Eurocentric ideologies to maintain cultural uniformity
b. Prioritizing certain cultural perspectives over others
c. Recognizing and challenging dominating colonial influences
d. Eliminating all traditional healing practices to standardize care

4. A community health nurse critically examines their practice to decrease the influence of privilege when

providing care to clients in a low-income area. Which statement does the nurse understand to be a critical aspect of privilege in nursing?

a. The nursing profession is not influenced by privilege.
b. Privilege is solely determined by socioeconomic status.
c. Acknowledging one's privilege is critical to addressing unjust systems.
d. Privilege has no impact on health disparities or health outcomes.

5. Which action by a nurse demonstrates conscious impermeability in the continuum of developing cultural humility?

a. The nurse spontaneously operates from a place of cultural humility.
b. The nurse is aware of social inequities but struggles to demonstrate cultural humility in practice.
c. The nurse performs a mindful act of learning how to become culturally humble.
d. The nurse synergistically combines cultural competence and humility.

6. Which outcome is a potential consequence of power imbalances in nurse-client interactions?

a. Increased client autonomy and decision making
b. Enhanced trust and rapport between the nurse and client
c. Unequal treatment and compromised client autonomy
d. Improved communication and understanding between parties

7. According to Campinha-Bacote's "Process of Cultural Competemility in the Delivery of Healthcare Services" model, which question by a nurse represents the "E" in the mnemonic "A-S-K-E-D" for self-examination?

a. "Am I aware of my prejudices and biases and the presence of racism and other 'isms'?"
b. "Do I know how to conduct a culturally specific history, physical, mental health, medication, and spiritual assessment in a culturally sensitive manner?"
c. "Do I have knowledge regarding different cultures' worldviews, the field of biocultural ecology, and the importance of addressing social determinants of health?"
d. "Do I have sacred and unremitting encounters with people from cultures different from mine, and am I committed to resolving cross-cultural conflicts?"

8. Which action can a nurse take to cultivate mindful awareness in interactions with clients?

a. Practicing active listening and seeking to understand the speaker's perspective without interruptions
b. Making quick judgments and forming opinions based on automatic biases and assumptions
c. Avoiding reflection and self-awareness to maintain a detached approach in client care
d. Embracing a fixed mindset and resisting new information or diverse experiences

9. Which action is the nurse performing when they show a preference for members of their social identity group, leading to a more positive evaluation of individuals within their own group?

a. Out-Group Homogeneity
b. Confirmation Bias
c. In-Group Favoritism
d. Limited Interactions

10. What action can a nurse take to reduce biases in nurse-client interactions?

a. Providing care based on past encounters with individuals of the same background
b. Explaining the nurse's values and beliefs to the client
c. Reflecting on how their background influences their perception of others
d. Limiting interactions with individuals from certain social identity groups

CHAPTER 26

Health Promotion and Maintenance Across the Lifespan



FIGURE 26.1 Because they care for clients of all ages, nurses must be aware of how health needs change throughout the lifespan. (credit: modification of work "Harrison Ranch in Okfuskee County, Oklahoma" by Preston Keres/USDA/Flickr, Public Domain)

CHAPTER OUTLINE

26.1 Maternal Health
26.2 Newborn, Infant, and Toddler Health
26.3 Preschool, School-Age, and Adolescent Health
26.4 Adult Health
26.5 Older Adult Health

INTRODUCTION As a nurse at the City Clinic, Kai sees many clients of different ages. Today, an extended family arrives seeking care. The family consists of Charles, his partner Cody, and their children: 18-year-old Louisa, who is pregnant with her first child; 10-year-old Devon; and 4-year-old Kris. Charles's mother Pearl also lives with the family and accompanies them to the clinic. Throughout the visit with the family and each member individually, Kai has many opportunities to provide health promotion and maintenance education. This requires Kai to be knowledgeable about the health promotion needs of childbearing, older adult, adult, adolescent, school-age, and preschool clients.

As mentioned in Health Promotion and Disease Prevention Strategies, health promotion is the process of empowering people to increase control over, and to improve, their health. Disease prevention involves specific, population- and individual-based interventions geared toward decreasing the burden of communicable and noncommunicable diseases and their associated risk factors. As clients grow and age, their health needs change. Nurses like Kai, who provide care to various clients, must understand the basics of health promotion and

maintenance concerning clients throughout their lifespan. Nurses present individuals, families, and communities with disease-prevention and injury-prevention services, including immunizations, screenings, health education, and counseling. This means knowing current standards, outcomes, disease prevention strategies, and risk factors. To implement prevention strategies effectively, nurses must develop activities targeted to all age groups throughout the lifespan. Doing so provides clients with anticipatory guidance as they move through their lifespan.

26.1 Maternal Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 26.1.1 Assess the global and national health status of childbearing clients.
- 26.1.2 Examine major risk factors influencing the health of childbearing clients.
- 26.1.3 Create evidence-based educational interventions to promote self-care for health promotion, illness prevention, and illness management of childbearing clients.
- 26.1.4 Identify Healthy People 2030 goals established for childbearing clients.
- 26.1.5 Describe health promotion and disease prevention actions applicable to maternal health.
- 26.1.6 Discuss evidence-based strategies for integrating sociocultural and linguistically responsive health promotion and disease prevention interventions in maternal health clinical practice.

Maternal health begins at preconception and continues throughout the pregnancy. Childbearing is a critical period that requires special attention, as it impacts the health of the pregnant person and the child. This section describes the current health status of childbearing clients in the United States and globally, identifies risk factors that influence their health, and describes educational interventions and Healthy People 2030 goals specific to this population. It also reviews health promotion and disease prevention actions applicable to maternal health and health literacy efforts related to this population.

National and Global Health Status of Childbearing Clients

The **infant mortality rate** is an important measure of the well-being of infants, children, and pregnant clients. This is the number of children dying under 1 year of age divided by the number of live births that year. The infant mortality rate is associated with factors such as maternal health, quality of and access to medical care, socioeconomic conditions, and public health practices.

In the United States, the 2020 infant mortality rate was 5.4 deaths per 1,000 live births (Centers for Disease Control and Prevention [CDC], 2022g). The top five causes of infant death in 2020 were congenital anomaly, preterm birth and **low birth weight** (LBW), **sudden infant death syndrome** (SIDS), injuries such as suffocation, and maternal pregnancy complications. Many of these deaths may have been prevented by improving the childbearing client's health. According to the CDC (2022g), about 1 in every 33 babies has a congenital disorder. Some examples include cleft lip or palate, heart defects, and hearing loss. Managing health conditions and adopting healthy behaviors before pregnancy can increase the chances of a healthy baby. **Preterm birth** occurs when a baby is born before 37 weeks of pregnancy. In 2021, preterm birth affected about 1 of every 10 infants born in the United States, increasing from 10.1 percent in 2020 to 10.5 percent in 2021. In Black women, the rate of preterm births is about 50 percent higher than that among White or Hispanic women (CDC, 2022q).

The CDC (2023g) also monitors trends in pregnancy-related mortality ratios in the United States through the Pregnancy Mortality Surveillance System (https://openstax.org/r/cdcreproductivehealth). Since 1987, the number of reported pregnancy-related deaths has increased from 7.2 deaths per 100,000 live births to 17.6 deaths per 100,000 live births in 2019 (CDC, 2023g). The most common causes of these deaths from 2017 to 2019 included infections, cardiomyopathy, hemorrhage, and other cardiovascular and non-cardiovascular medical conditions (CDC, 2023g). Non-Hispanic Native Hawaiian or other Pacific Islanders, non-Hispanic Blacks, and non-Hispanic American Indian or Alaska Native (AIAN) clients had two or more times more pregnancy-related deaths than non-Hispanic White, non-Hispanic Asian, or Hispanic clients (CDC, 2023g).

Globally, the infant mortality rate in 2021 was 28 deaths per 1,000 live births (CDC, 2023g). An estimated 287,000 maternal deaths occurred in 2020, with an overall global maternal mortality rate of 223 maternal deaths per 100,000 live births (WHO, 2023c). This equates to about 800 maternal deaths daily and one every two minutes globally. The WHO (2023c) indicates that "almost all of these deaths occurred in low-resource settings, and most

could have been prevented" (para. 1). The WHO (2022a) emphasized that maternal mortality is a health indicator that "shows very wide gaps between rich and poor and between countries" (para. 1). This has led to the World Health Organization et al. (2023) developing a Sustainable Development Goal, Target 3.1: Reduce the global maternal mortality ratio to less than 70 per 100,000 live births with a target date of 2030.

THE ROOTS OF HEALTH INEQUITIES

Maternal Mortality in the United States

The U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion (ODPHP, n.d.-g) indicated that in 2016, women in the United States were more likely to die from childbirth than those in other developed countries. Subsequently, a study by Tikkanen et al. (2020) found that the United States has the highest maternal mortality rate among developed countries despite the fact that most maternal deaths are preventable. The study also found that about one-third of the pregnancy-related deaths happen after the client has given birth, which is considered the period up to a year post-birth.

(See Tikkanen et al., 2020.)

Risk Factors Influencing the Health of Childbearing Clients

Existing health conditions, age, and the client's lifestyle can make a pregnancy high risk. Some risk factors related to health issues can occur before and during pregnancy, which the Eunice Kennedy Shriver National Institute of Child Health and Human Development (2018) refers to as "conditions of pregnancy" (para. 7).

Existing Health Conditions

Table 26.1 presents some of the most common existing health conditions that can lead to a high-risk pregnancy. Because each pregnancy is individual, an existing condition may not lead to a risky pregnancy. It is necessary for the nurse, however, to be aware of risk factors.

Existing Condition	Management	Complications
Hypertension	• Before pregnancy, client should schedule a preconception appointment with their provider. • Recommend losing weight before pregnancy if overweight. • Monitor client frequently during pregnancy. • Client should keep prenatal appointments. • Client should take medications as prescribed. • Client should stay active. • Client may receive daily low-dose (81 mg) aspirin starting late in the first trimester.	• Uncontrolled hypertension damages the client's kidneys. • Uncontrolled hypertension increases the risk for a low birth weight (LBW) newborn. • Preeclampsia (a sudden spike in the client's high blood pressure) reduces the blood supply to the fetus, providing less oxygen and fewer nutrients. • Eclampsia (when clients with preeclampsia develop seizures or coma) may occur.
Polycystic ovary syndrome (PCOS)	• Symptoms include absence of ovulation, high androgen levels, ovarian growths, acne, insulin resistance, and obstructive sleep apnea, which may prevent pregnancy. • Clients with PCOS should exercise regularly and monitor weight and blood sugar levels.	• Clients with PCOS have higher rates of losing a pregnancy before 20 weeks, developing diabetes or preeclampsia, and requiring cesarean section.
Diabetes	• Childbearing clients living with diabetes must manage their blood sugar levels before and throughout pregnancy. • Metabolism changes during pregnancy may require special treatment even if diabetes is well-controlled (National Institute of Diabetes and Digestive and Kidney Diseases, 2017).	• High blood sugar levels in the pregnant client can lead to congenital disorders. • Babies born to clients with diabetes may have low blood sugar upon birth and may be large for gestational age.
Kidney disease	• Specific diet changes, medication, and follow-up appointments are often necessary to promote a healthy birth (National Institute of Diabetes and Digestive and Kidney Diseases, 2017).	• May lead to difficulty getting pregnant or maintaining a pregnancy • May lead to preterm delivery, LBW, and preeclampsia

TABLE 26.1 Existing Health Conditions That Can Lead to a High-Risk Pregnancy

Existing Condition	Management	Complications
Autoimmune disease, such as lupus, multiple sclerosis (MS), and myasthenia gravis (MG)	• Some medications used in their treatment may harm the fetus, requiring the client to work closely with the health care team throughout the pregnancy (Office on Women's Health, 2021a).	• Clients with lupus and MS may have difficulties during pregnancy and birth. • Clients with lupus may have preterm birth or stillbirth. • Clients with MG may have difficulty breathing during pregnancy.
Thyroid disease (hypothyroidism or hyperthyroidism)	• Clients with hypothyroidism planning to become pregnant should optimize their thyroid hormone dose preconception, and early dose adjustments may be necessary (Ross, 2023). • Childbearing clients with Graves' disease who take levothyroxine before pregnancy should have their thyroid receptor binding antibody (TRAB) level checked early in pregnancy and at 18–22 weeks gestation if it was found to be elevated initially. Clients with positive antibodies require close observation during and after pregnancy, with serial fetal ultrasounds and postnatal thyroid function tests (Sharma, 2020). • The goal of treatment for childbearing clients with hyperthyroidism should be to maintain persistent, but mild, hyperthyroidism in the mother (Ross, 2022).	• Uncontrolled thyroid disease can lead to problems with the fetus, such as heart failure, poor weight gain, and brain development problems. • There is increased risk of placental transfer and resulting fetal/neonatal hyperthyroidism related to positive TRAB levels. • The goal is to prevent fetal hypothyroidism, as the fetal thyroid is more sensitive to the action of antithyroid drugs.
Obesity (adult body mass index [BMI] of 30 or higher)	• Clients who are obese should only gain between 11 and 20 pounds total during pregnancy (Ramsey & Schenken, 2022).	• Associated with risk of developing diabetes during pregnancy, a larger fetus that makes the birth process more difficult, disordered sleep breathing and sleep apnea, an increased risk of fetal structural heart problems, and increased weight gain that can lead to other poor pregnancy outcomes

TABLE 26.1 Existing Health Conditions That Can Lead to a High-Risk Pregnancy

Existing Condition	Management	Complications
Human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS)	• Effective treatments have been discovered to reduce and prevent the spread of HIV from mother to fetus or infant (Hughes & Cu-Uvin, 2023). • Surgical delivery prior to "water breaking" and feeding formula rather than breastfeeding can also prevent HIV transmission (Hughes & Cu-Uvin, 2023).	• HIV can pass to a fetus during pregnancy, labor and delivery, and breastfeeding.
Sexually transmitted infections (STIs)	• Other STIs can be transmitted intrauterine or during the perinatal period to the fetus or baby. • Clients should be screened at the initial prenatal visit for hepatitis B, syphilis, chlamydia, and gonorrhea. • Additional follow-up and repeat screening will occur later during gestation (Ghanem & Tuddenham, 2022).	• STIs in the childbearing client can lead to premature labor, infection in the uterus after birth, LBW, eye infections, pneumonia, sepsis, brain damage, lack of coordination in body movements, blindness, deafness, acute hepatitis, meningitis, chronic liver disease, and stillbirth. • Some STIs can pass to the baby during breastfeeding (Office on Women's Health, 2021b).
Zika infection	• Symptomatic pregnant clients with recent travel to areas with a risk of Zika infection should be tested (CDC, 2022x). • Pregnant clients infected with Zika should receive an ultrasound between 18 and 20 weeks of pregnancy and again in the second and third trimesters, as indicated (CDC, 2021o). • Further testing of amniotic, placental, and fetal tissues may be performed (CDC, 2022x).	• The fetus of childbearing clients who are infected with Zika just before or during pregnancy is at higher risk for brain and nervous system problems, including microcephaly (a condition where the head is smaller than normal) (Oduyebo et al., 2017). • Zika can also increase the risk for pregnancy loss and stillbirth.

TABLE 26.1 Existing Health Conditions That Can Lead to a High-Risk Pregnancy

Age

The U.S. birth rate per 1,000 females ages 15 to 19 decreased steadily from its peak of 61.8 births in 1991 to 15.4 in 2020 (Osterman et al., 2022). The birth rate for women ages 40 to 44 was 11.8, for women ages 45 to 49 was 0.9, and for women ages 50 and over was 1.0 (Osterman et al., 2022). Age at pregnancy can correlate with pregnancy risks and childbirth and fetal issues.

Pregnant adolescents are more likely to develop pregnancy-related high blood pressure and anemia and to have preterm labor and delivery. Adolescents may have unknown STIs, and they are less likely to seek prenatal care, which can lead to other risk factors. For example, a pregnant adolescent may not know to take certain medications or may not realize the importance of good nutrition (Chacko, 2023).

First-time pregnancies after age 35 are considered "older first-time mothers" and consist of nine percent of births in the United States (Fretts, 2022). These childbearing clients are at higher risk for spontaneous abortion or pregnancy loss, ectopic pregnancy, chromosomal abnormalities (particularly cardiac anomalies), placental problems, LBW newborns, and preterm delivery. Fretts (2022) also indicated that childbearing clients "40 years or older are at a sixfold increased risk of maternal death when compared with women less than 20 years of age" (para. 48); Black childbearing clients aged 40 or older are over three times more likely to die during pregnancy than White childbearing clients in this age group.

Lifestyle Factors

Drinking alcohol during pregnancy can increase the baby's risk for problems such as **fetal alcohol spectrum disorders** (FASDs) and SIDS. FASDs are completely preventable; if a client does not drink alcohol during pregnancy, their child will not have an FASD (CDC, 2022s). Alcohol use can also lead to miscarriage or stillbirth. There is no safe amount of alcohol to drink during pregnancy (CDC, 2022s). Different FASD diagnoses are based on particular symptoms, as shown in Table 26.2.

Diagnosis	Symptoms
Fetal alcohol syndrome (FAS)	Central nervous system (CNS) problems, minor facial features, growth problems; problems with learning, memory, attention span, communication, vision, and/or hearing. May have difficulties in school and trouble getting along with others.
Alcohol-related neurodevelopmental disorder (ARND)	Intellectual disabilities; problems with behavior and learning. May have difficulties in school, particularly with math, memory, attention, judgment, and poor impulse control.
Alcohol-related birth defects (ARBD)	May have problems with the heart, kidneys, bones, and/or hearing.
Neurobehavioral disorder associated with prenatal alcohol exposure (ND-PAE)	The delivering client must have consumed more than 13 alcoholic drinks per month of pregnancy (that is, any 30-day period of pregnancy) or more than two alcoholic drinks in one setting. For diagnosis with ND-PAE, the child must have problems in: 1. Thinking and memory, where the child may have trouble planning or may forget material they have already learned 2. Behavior problems, such as severe tantrums, mood issues, and difficulty shifting attention from one task to another 3. Trouble with day-to-day living, which can include problems with bathing, dressing for the weather, and playing with other children

TABLE 26.2 FASD Diagnoses

Smoking can have adverse health effects before, during, and after pregnancy. The CDC (2020a) indicates that childbearing clients who smoke tobacco have more difficulty becoming pregnant. Smoking tobacco during pregnancy can lead to preterm birth, LBW, miscarriage, congenital disorders, and SIDS. Pregnant clients exposed to secondhand smoke are more likely to have LBW babies. Babies exposed to secondhand tobacco smoke are more likely to die from SIDS and have weaker lungs, which can lead to additional health problems (CDC, 2020a). Childbearing clients who smoke marijuana may double their risk of stillbirth; using marijuana during pregnancy can interfere with fetal brain development (Chang, 2023).

Childbearing clients who use other drugs during pregnancy can experience problems with fetal and infant health. Use of opioids such as heroin, diverted or misused prescription opioids, or other morphine-like drugs is associated with substantial maternal, fetal, and neonatal risks (Seligman et al., 2023). Cocaine use by the pregnant client also leads to preterm birth and LBW. Methamphetamine exposure during pregnancy has been associated with maternal

and neonatal morbidity and mortality (Chang, 2023). Self-reported data from 2019 indicated that 6.6 percent of pregnant clients reported prescription opioid use during pregnancy, and 21.2 percent of these reported drug misuse (Ko et al., 2020). The drug overdose mortality rate per 100,000 for pregnant or postpartum persons almost doubled from 2017 (6.56) to 2020 (11.85) in the United States (Bruzelius & Martins, 2022).

Neonatal abstinence syndrome (NAS) is a treatable condition in newborns exposed to certain drugs, particularly opioids, while in utero. The term **neonatal opioid withdrawal syndrome** (NOWS) specifically describes the symptoms experienced by infants exposed to opioids. Both NAS and NOWS include intense irritability, difficulty with feeding, respiratory issues, and seizures. To mitigate or prevent negative outcomes associated with NAS and NOWS, nurses and health care providers must engage the pregnant client with opioid and substance use disorders in substance use treatment and other supportive services as part of prenatal care (National Center on Substance Abuse and Child Welfare, n.d.).

Challenges and Complications of Childbearing

Table 26.3 lists other challenges and risks that can arise during pregnancy, childbirth, and the postpartum period for the childbearing client. Understanding the challenges and complications of childbearing is crucial for health care professionals. The goal is to support informed decision-making, promote proactive prenatal care, and ultimately contribute to the well-being of childbearing clients and their babies. Due to the risks and concerns with a rising rate of cesarean section deliveries, the WHO (2018) and ACOG et al. (2014) have suggested interventions to reduce the rate of unnecessary cesarean deliveries.

Challenge	Risk Factors	Complications
Multiple gestation	• Giving birth after age 30 • Use of fertility drugs	• Increases the risk of premature birth • Will likely require cesarean section delivery • Newborn likely to be smaller • If born prematurely, likely to have difficulty breathing (Chasen, 2022)
Preeclampsia	• Preeclampsia in a previous pregnancy • Multiple gestation • Preexisting diabetes, hypertension, kidney disease, or an autoimmune disease • First pregnancy • Has not delivered a baby in 10 years or more • Obesity • Family history of preeclampsia • Complications in a previous pregnancy • Use of in vitro fertilization (IVF) • Age 35 or older (March of Dimes, 2023)	• Childbearing client's kidneys and liver may work abnormally • Often leads to preterm birth • Difficulties with blood clotting • Progression to eclampsia • Stroke • Preterm birth to prevent serious problems for the childbearing client and the infant • Placental abruption leading to a lack of oxygen and nutrition for the infant • Intrauterine growth restriction (IUGR) in the infant due to narrowing of blood vessels in the uterus and placenta • Can increase childbearing client's risk for heart disease, diabetes, and kidney disease later in life • Can lead to post-partum preeclampsia (within 48 hours to up to 6 weeks after birth), which can lead to HELLP syndrome, seizures, pulmonary edema, thromboembolism, stroke, and death (March of Dimes, 2023)

TABLE 26.3 Pregnancy, Childbirth, and the Postpartum Challenges and Risks

Challenge	Risk Factors	Complications
Gestational diabetes	• Normal hormonal changes and weight gain during pregnancy may lead to insulin resistance, increasing the body's need for insulin • Insulin resistance prior to pregnancy • Having gestational diabetes during a previous pregnancy • Giving birth previously to a baby who weighed over 9 pounds • Overweight or obese • Age over 25 • Family history of type 2 diabetes • PCOS • Black or African American, Hispanic, Latino, AIAN, Native Hawaii, or Pacific Island ethnicity (CDC, 2022v, para. 4)	• Increases risk of hypertension during pregnancy • Increases risk of having low blood sugar and developing type 2 diabetes later in life • Places the baby at risk of premature birth and being large for gestational age (9 pounds or larger) (CDC, 2022v)
Preterm birth	• Previous preterm birth (ACOG, 2022) • Becoming pregnant within 12 months of previous delivery (Shachar & Lyell, 2023)	• Short-term complications include hypothermia, respiratory abnormalities, cardiovascular abnormalities such as patent ductus arteriosus or low blood pressure, intraventricular hemorrhage, glucose abnormalities, necrotizing enterocolitis, infection, and retinopathy of prematurity (Mandy, 2021). • Long-term complications include need for hospitalizations, neurodevelopmental impairments, vision problems, growth impairments, lung disease, and other chronic health issues (Mandy, 2023).
Delivery via cesarean section	• Complications during pregnancy or complications that affect the baby, labor, and birth	• Risk of surgical site infection • Blood loss that may require transfusion • Injury to organs near the uterus, such as the bladder or intestines • Development of thromboembolism • Development of an amniotic fluid embolism • Difficulty breastfeeding after delivery • More likely in future pregnancies to require a cesarean section • Baby having difficulty breathing • Baby being affected by anesthesia administered during the cesarean section, leading to inactivity or sluggishness • Injury to the baby during surgery (Berghella, 2023, WHO, 2018)

TABLE 26.3 Pregnancy, Childbirth, and the Postpartum Challenges and Risks

Challenge	Risk Factors	Complications
Maternal infections	• Entering pregnancy carrying an infection such as genital herpes or another STI • Pregnancy diverts a large portion of the childbearing client's immune system toward supporting the developing baby	• Urinary tract infection can impact the client's kidneys or lead to a high fever, which could harm the client and baby. • Uterine infections can cause premature labor. • Fifth disease increases the chances of miscarriage. • Many STIs can cause early labor and contraindicate vaginal delivery (i.e., gonorrhea can lead to blindness in a vaginally delivered baby). • TORCH (toxoplasmosis, others [syphilis, Zika virus, varicella-zoster virus], rubella, cytomegalovirus, and herpes simplex virus) can cause fetal and neonatal mortality and abnormal growth, developmental anomalies, and other early and later childhood morbidities (Johnson, 2023).
Postpartum hemorrhage	• Previous postpartum hemorrhage • Previous cesarean or other uterine surgery • History of postpartum hemorrhage in the maternal line • Obesity • High parity • Conception by assisted reproductive technology • Anemia • Multiple gestation • Pregnancy with a large-for-gestational-age baby • Post-term pregnancy • Hypertension during pregnancy • Precipitous labor	• Short-term complications: anemia, need for hysterectomy, organ failure related to hemodynamic instability, thromboembolism, and abdominal compartment syndrome • Long-term complications: Sheehan syndrome (postpartum hypopituitarism) and Asherman syndrome (intrauterine adhesions that can lead to menstrual abnormalities and infertility) • Maternal death (Belfort, 2023)
Postpartum depression	• Depression during pregnancy • History of depression • Stressful life events • Poor social and financial support in the first six weeks after childbirth • Perinatal anxiety symptoms and disorders • Age less than 25 years • Single marital status • Multiparity	• Impaired bonding with baby • Poor health care of the baby • Abnormal infant and child development • Cognitive impairment and psychopathology in the child • Marital discord • Suicide • Infanticide (Viguera, 2023)

TABLE 26.3 Pregnancy, Childbirth, and the Postpartum Challenges and Risks

In some cases, fetal anomalies or genetic conditions may be detected and treated in utero or immediately following birth. For example, spina bifida may be repaired before birth (Bowman, 2022). Certain heart problems common among infants with Down syndrome will require immediate surgical correction following birth (Altman, 2022).

Educational Interventions to Promote Self-Care in Childbearing Clients

Self-care for the childbearing client begins preconception and involves many of the same health promotion activities clients should engage in throughout their lifespan, including during adolescence. Education regarding risk assessment and screening, health promotion and counseling, and any appropriate topic based on identified risk factors will promote optimal health promotion and self-care during pregnancy. Once a pregnancy is identified, education moves toward anticipatory guidance, or what the childbearing client may expect to occur during pregnancy. This may include the normal discomforts during pregnancy, body changes, weight gain expectations, signs and symptoms of problems and when/how to report them, available community resources, nutritional needs, newborn care, and other topics (Lockwood & Magriples, 2023).

Healthy People 2030 Goals for Childbearing Clients

The overarching goal of Healthy People 2030 related to pregnancy and childbirth is to "prevent pregnancy complications and maternal deaths and improve women's health before, during, and after pregnancy" (ODPHP, n.d.-g, para. 1). Healthy People 2023 includes several pregnancy and childbirth objectives related to this goal.

HEALTHY PEOPLE 2030

Pregnancy and Childbirth

Healthy People 2030 Pregnancy and Childbirth Objectives (https://openstax.org/r/healthhealth) focus on the broad goals of preventing pregnancy complications and maternal deaths while also helping women stay healthy before, during, and after pregnancy. They specifically address prenatal care; drug, alcohol, and tobacco abstinence during pregnancy; family planning; reduction of sexually transmitted infections; and vaccination of pregnant clients.

Health Promotion and Disease Prevention Activities to Improve the Health of Childbearing Clients

Health promotion activities can help prevent complications during pregnancy and childbirth, promote healthy behaviors throughout the lifespan, and improve the client's and child's overall health outcomes. The goal is to empower this population to take an active role in their health and well-being while promoting positive health outcomes for the pregnant person and child. A range of health promotion activities is available, including:

- Promoting healthy lifestyles (e.g., healthy diet, exercise, abstaining from alcohol and tobacco)
- Encouraging regular prenatal care
- Providing education on childbirth and parenting
- Supporting breastfeeding
- Providing education to decrease postpartum depression

Health promotion activities can also address social determinants of health (SDOH), such as access to health care, housing, and nutrition, ensuring these clients have the resources necessary to maintain good health. Collaboration among health care providers, community organizations, and other partners will provide childbearing clients with the support and resources they need for a healthy and successful pregnancy and birth.

Childbearing clients can take prevention efforts before and during pregnancy. The Client Teaching feature below lists some of the most important preventive measures for childbearing clients.

CLIENT TEACHING GUIDELINES

Preventive Measures for Childbearing Clients

The community health nurse may teach childbearing clients the following:

- Get regular medical checkups.
- Eat healthy foods and maintain a healthy weight.
- Make sure any medical conditions are under control.

- Take a vitamin with folic acid every day.
- Do not smoke, drink alcohol, or use drugs.
- Talk with your doctor about any medications you are taking or thinking about taking, including prescription and over-the-counter medications and dietary and herbal products.
- Avoid exposure to toxic secondhand smoke, chemicals, and fumes.
- Get tested for infectious diseases and get these recommended vaccinations (Lockwood & Magriples, 2023):
  - COVID-19
  - Influenza, if pregnant during flu season, regardless of stage of pregnancy
  - Tetanus and diphtheria (Tdap) immunizations and boosters should be up-to-date; receive Tdap in the third trimester of each pregnancy to protect the infant from pertussis regardless of prior maternal vaccination (Yawetz, 2023)
- Wash your hands often, especially after contact with diapers or secretions associated with a child who is in daycare.
- Avoid kissing children under age 6 on the mouth or cheek and sharing food or drinks with young children; clean all surfaces and toys that may come into contact with children's secretions.
- Avoid contact with those who have fevers that could be infectious.
- Avoid changing or cleaning cat litter boxes.
- Avoid x-rays and other radiation.
- Use condoms during sex to prevent exposure to STDs.
- Avoid ingesting contaminated, undercooked, or cured meat or meat products; soil-contaminated fruits or vegetables; and contaminated unfiltered water.
- Wash utensils and surfaces that are used to prepare raw fish with hot, soapy water.
- If not immune to varicella infection, Varizig (VZIG) is recommended during pregnancy to prevent maternal complications.
- Avoid Zika virus by postponing travel to areas with ongoing mosquito transmission of the virus.

(See Office of the Surgeon General, 2020.)

Even if a childbearing client takes prevention measures, there is still a risk of having a child with a congenital disorder. Following healthy habits early and consistently throughout the pregnancy gives the best chance of having a healthy baby (New York State Department of Health, 2017).

Primary Prevention

Primary prevention for childbearing clients refers to activities aimed at preventing health problems before they occur. Some examples of primary prevention strategies to improve the health of childbearing clients include:

- Healthy lifestyle promotion
- Immunizations
- Preconception care
- Education on safe sex and family planning
- Screening for infectious diseases

Secondary Prevention

Secondary prevention for childbearing clients refers to activities aimed at detecting and treating health problems at an early stage, before they are even problematic, to prevent subclinical disease progression. Some examples of secondary prevention strategies to improve the health of childbearing clients include:

- Prenatal care
- Screening for genetic disorders
- Screening for gestational diabetes
- Early detection and treatment of infections
- Screening for postpartum depression

Tertiary Prevention

Tertiary prevention for childbearing clients refers to activities aimed at managing and treating health problems that have already occurred and preventing their recurrence or further complications. Some examples of tertiary prevention strategies to improve the health of childbearing clients include:

- Management of chronic health conditions, such as diabetes, hypertension, and asthma
- Treatment of postpartum complications, such as postpartum hemorrhage, infection, and thromboembolism
- Support for breastfeeding
- Mental health treatment
- Family planning to prevent unintended pregnancy in the postpartum period

Table 26.4 summarizes these three levels of prevention and incudes primordial and quaternary prevention as well.

Levels of Prevention	Specific Example of Level of Prevention
Primordial	A state's governmental policy increases taxes on cigarettes to discourage smoking.
Primary	Local advertisements are provided via different forms of media depicting the dangers of smoking to childbearing clients and their babies.
Secondary	A local women's health center offers free tobacco cessation programs to childbearing clients.
Tertiary	The nurse provides care to a LBW newborn whose mother smoked during pregnancy and educates the mother to prevent further complications.
Quaternary	Over-screening for gestational diabetes during the first half of pregnancy is prevented by targeting early pregnancy screening to those at increased risk of undiagnosed type 2 diabetes.

TABLE 26.4 Five Levels of Prevention for the Childbearing Client

Integration of Sociocultural and Linguistically Responsive Interventions in Maternal Health

Providing high-quality maternal health care requires the nurse to integrate sociocultural and linguistically responsive interventions. Pregnancy and childbirth are influenced by a complex set of social, cultural, and linguistic factors that can affect health outcomes for the client and the baby. Nurses must consider their clients' sociocultural and linguistic backgrounds and provide care sensitive to their needs and preferences. This section explores the reasons for integrating sociocultural and linguistically responsive interventions in maternal health care and provides examples of interventions that can improve health outcomes for childbearing clients.

Sociocultural Interventions

Addressing the sociocultural preferences of maternal clients is necessary to provide client-centered care. The WHO (2017) Standards for Improving Quality of Maternal and Newborn Care in Health Facilities (https://openstax.org/r/cdn) recommend that health care professionals participate in regular education to improve their interpersonal communication, counseling skills, and cultural competence to encourage respectful maternity care. The Joint Commission, the National Institutes of Health, the International Confederation of Midwives, and the International Federation of Gynecology and Obstetrics have issued similar initiatives (Hodin, 2018).

Interventions to provide culturally appropriate maternal health services, specifically related to clients' ethnicity, language, and religion, have positively affected pregnant people's continual use of maternity care, particularly prenatal care (Jones et al., 2017). In a review of 15 studies to examine how such interventions affected the use of pregnancy care, 10 studies found this to be true, and four themes evolved to describe the barriers and facilitators to ensuring socioculturally appropriate maternity care. These included (Jones et al., 2017, pp. 5–7):

- Access—Interventions should consider broader economic, geographic, and social factors that affect ethnic minority groups' access to service.
- Community participation—Interventions should include community participation to understand problems with existing services and potential solutions from a community perspective as well as in developing and implementing interventions.
- Person-centered care—Respectful, person-centered care should be at the core of all interventions.

- Continuum of care—Interventions should be spread all along the continuum of care. For example, rather than focusing interventions on prenatal care, effective partnerships should extend interventions between the socioculturally appropriate service and all other health care professionals clients and their families encounter along the continuum of care from detection of pregnancy until after birth.

Several sociocultural interventions can be integrated into maternal health to positively impact maternal health outcomes. Providing cultural competency training for all health care workers will help them better understand the cultural beliefs, practices, and values of the populations they serve and promote the provision of care that is sensitive to that population's needs and preferences. Community-based interventions, such as peer groups and community health workers, can help connect maternal clients with culturally appropriate resources and support. Addressing stigma and discrimination related to pregnancy and childbirth, such as discrimination against teen or single parents or those with HIV, can help promote equitable and respectful care for all clients. By providing each of these interventions, the nurse can work to improve the health outcomes for childbearing clients and their children.

CONVERSATIONS ABOUT CULTURE

Addressing Racial and Ethnic Disparities in Maternal and Child Health Through Home Visiting Programs

Access multimedia content (http://openstax.org/books/population-health/pages/26-1-maternal-health)
Aligning Early Childhood and Medicaid (https://openstax.org/r/chcs) is a national initiative funded by the Robert Wood Johnson Foundation that works to better align Medicaid and state agencies responsible for early childhood programs. Its goal is to improve the health and social outcomes of low-income infants, young children, and families. The initiative included eight states: Colorado, Minnesota, New Jersey, New York, Oregon, Rhode Island, Vermont, and Washington. A specific intervention taken within this initiative involved addressing racial and ethnic disparities in maternal and child health through home visiting programs.

Watch the video, and then respond to the following questions.

1. Describe three sociocultural nursing interventions described in the video that could be used to positively impact the health of maternal clients in any sociocultural population.
2. Now, connect these three nursing interventions to one of the five social determinants of health (SDOH).

Linguistically Responsive Interventions

A variety of interventions are available to provide linguistically responsive care, some of which are included in Culturally and Linguistically Responsive Nursing Care. Nurses can use the services of professional medical interpreters to ensure that the client can communicate with others effectively. Communication is essential when educating the client about prenatal care, labor and delivery, and postpartum care. Nurses should provide educational materials written in the client's preferred language that consider the client's sociocultural beliefs and practices. They can provide visual aids to explain more complex concepts to clients with limited English proficiency and use plain language to ensure clients understand the information being provided. Nurses should encourage clients to ask questions and clarify doubts regarding the pregnancy or other issues.

Nurses should also assess their clients' health literacy levels and communicate accordingly to allow clients to best understand their health conditions and improve their health outcomes. Health literacy skills such as "reading, listening, analyzing, decision-making, and using these skills in health situations" (Solhi et al., 2019, p. 3), regardless of the client's educational level or general reading ability, will have a definite impact on the health outcomes of a client and their child. The maternal client must be involved in health promotion and preventive care, but if they do not understand health concepts, they will have difficulty making informed decisions (Solhi et al., 2019). Even for those with health literacy skills, the first pregnancy may be full of surprises if their education is not specifically in this realm. Also, the maternal client's understanding of health information directly impacts their child's health. Solhi et al. (2019) determined that adopting interventions to increase health literacy in maternal clients, such as those previously described, promoted physical and mental self-care during pregnancy, particularly over time.

26.2 Newborn, Infant, and Toddler Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 26.2.1 Assess the global and national health status of the newborn, infant, and toddler.
- 26.2.2 Examine major risk factors influencing the health of the newborn, infant, and toddler.
- 26.2.3 Create evidence-based educational interventions to promote self-care for health promotion, illness prevention, and illness management of newborns, infants, and toddlers.
- 26.2.4 Identify Healthy People 2030 goals established for the newborn, infant, and toddler.
- 26.2.5 Describe health promotion and disease prevention actions applicable to the newborn, infant, and toddler.
- 26.2.6 Discuss evidence-based strategies for integrating sociocultural and linguistically responsive health promotion and disease prevention interventions in clinical practice of the newborn, infant, and toddler.

Newborns, infants, and toddlers (children aged 0 to 3 years) undergo rapid developmental changes in their first years of life. Addressing their health needs helps them reach critical developmental milestones, such as sitting, crawling, and walking. This age group is more susceptible to illnesses and infections than older children due to immature immune systems. Addressing their health needs can help prevent illness or its complications and ensure they receive appropriate medical care. Managing health needs early on can help prevent the later development of chronic health conditions. Additionally, when the nurse provides education that allows caregivers to feel confident in their ability to care for their child, they are better equipped to provide the necessary care and support. Finally, addressing this population's health needs can have broader social and economic benefits. Healthy children are more likely to become healthy adults, leading to a more productive and economically stable society (Office of Child Care, n.d.; Prenatal-to-3 Policy Impact Center, 2021)

National and Global Status of Newborn, Infant, and Toddler Health

Many statistics are gathered regarding newborn, infant, and toddler health. Beyond the infant mortality rate, the United States gathers other data that illustrate the health of this population. The CDC divides data into infants and children up to age 4. According to the National Center for Health Statistics (NCHS, 2023c), in 2022, 1.5 percent of children in the United States aged 0 to 4 years were in fair or poor health, and 97.5 percent of children in the United States aged 0 to 4 years had a usual place of health care. In 2021, 3,816 deaths occurred in children aged 1 to 4 years, which is 25 deaths per 100,000 (NCHS, 2023c). The leading causes of death in this population were accidents (unintentional injuries); congenital malformations, deformations, and chromosomal abnormalities; and assault (homicide) (NCHS, 2023c).

Globally, most data are provided for children aged 0 to 5, and various other statistics are used to provide a snapshot of the health of this population. These include (World Bank Group, 2023):

- Prevalence of anemia: 40 percent (2019)
- Prevalence of wasting (low weight for height): 6.8 percent (2021 and 2022)
- Prevalence of severe wasting (low weight for height more than 3 standard deviations below the median): 2.1 percent (2022)
- Prevalence of underweight (low weight for age): 12.3 percent (2022)
- Global mortality rate: 28 deaths per 1,000 live births (2021)
    - Males: 31 deaths per 1,000 live births
    - Females: 26 deaths per 1,000 live births

One outlier of the data collection is immunization rates, as this is reported in children aged 12 to 23 months. According to the World Bank Group (2023), 81 percent of this global population was immunized for diphtheria, pertussis, and tetanus (DPT) and 82 percent for measles in 2021.

According to the WHO (2023b), in 2018, 5.3 million children under age 5 died, nearly half of them in sub-Saharan Africa. Globally, this population's leading causes of death are preterm birth complications, pneumonia, birth asphyxia, diarrhea, and malaria (WHO, 2023b). More than half of deaths in this age group result from preventable diseases that are treatable through simple and affordable interventions, such as vaccines and adequate nutrition, particularly early and continued breastfeeding. Nutrition-related factors contribute to about 45 percent of deaths in

this population (WHO, 2023b). Data regarding immunizations and nutrition coverage worldwide can be viewed at the Maternal, Newborn, Child, and Adolescent Health and Ageing (https://openstax.org/r/platform) data portal.

Risk Factors Influencing the Health of Newborns, Infants, and Toddlers

Risk factors for this population are numerous, and the previous section discussed some of them. A lack of prenatal care, the lack of immunizations during pregnancy, and continuing to smoke or use alcohol are some behaviors of the childbearing client that will lead to an increased risk of health problems for their child. At the time of birth, if the delivery does not occur in a health facility with a skilled birth attendant, this is a risk factor. Other risks to child health include not breastfeeding, malnutrition, overcrowded conditions, unsafe drinking water and food, and poor hygiene practices. Finally, a lack of knowledge regarding safety and a lack of identifying and seeking appropriate care for illnesses in this population can lead to poor health outcomes (WHO, 2023b). While these may sound like risk factors for lower socioeconomic income regions, many are risk factors in the United States. Many risk factors for this population are often interconnected and can have cumulative effects on children's health and development. See Social Determinants Affecting Health Outcomes for more risk factors for this population.

Educational Interventions to Promote Care in Newborns, Infants, and Toddlers

Educational interventions focus on this population's parents or caregivers and target preventing their leading causes of death and morbidity and the risk factors previously identified. Nurses play a critical role by providing caregivers with education on preventing unintentional injuries or accidents in this population. Education may involve safe sleep, play, and medication administration; sibling interactions, family members, and other visitors; and motor vehicle safety. Other significant topics of education include:

- Immunizations
- Nutrition (including the promotion of breastfeeding and healthy foods and drinks in early feeding)
- Oral health care
- Avoidance of exposure to environmental hazards (including lead, secondhand smoke, access to drugs and alcohol, firearms, violence, and trauma)
- Importance of recognizing abnormalities or illness in newborns, infants, and toddlers
- Developmental milestones for the age group as well as developmental needs to promote the attainment of these milestones

LEARN THE SIGNS, ACT EARLY TOOLS, AND RESOURCES

Access multimedia content (http://openstax.org/books/population-health/pages/26-2-newborn-infant-and-toddler-health)

Visit the CDC webpage Learn the Signs. Act Early. (https://openstax.org/r/ncbddd) to learn more about the CDC's various milestone tools and resources for caregivers, early learning center providers, health care providers, and other population health professionals, and view the following videos:

- CDC's Milestone Tracker Promotional Video
- Milestones Matter for Families!
- "Learn the Signs. Act Early." One Director's Story
- "Learn the Signs. Act Early." One Doctor's Story

Watch the videos, and then respond to the following.

1. Describe one benefit of using the tools and resources for caregivers.
2. Describe one benefit of using the tools and resources for early learning center providers.
3. Describe one benefit of using the tools and resources for nurses and other health care providers.

At the toddler stage, nurses may provide some age-appropriate health education directly to the child. Education should focus on helping them develop healthy habits and understand basic health and wellness concepts. Table 26.5 provides some examples of age-appropriate health education topics for this population.

Topic	Education to Toddlers	Rationale
Personal Hygiene	Teach how to wash their hands, brush their teeth, and bathe properly	Good hygiene habits can help prevent the spread of germs and infections.
Nutrition	Encourage to eat a balanced diet including fruits, whole grains, and lean proteins; teach about healthy snacks and the importance of drinking plenty of water	Eating a balanced diet early can help develop a positive attitude toward food, recognize hunger and fullness cues, and build a strong foundation for healthy eating.
Physical Activity	Teach about the importance of active play, such as running, jumping, and climbing with supervision, as fun ways to stay active	Physical activity will help them develop strong bones and muscles and assist in the development of coordination and balance.
Safety	Teach basic safety rules, such as not touching hot stovetops or electrical outlets, wearing a helmet when riding a bike, being buckled into the car seat when riding in a vehicle, and looking both ways before crossing a street	Making safety a part of daily life will allow them to become aware of dangers to avoid and simple solutions for how to avoid them.
Emotional Wellness	Teach how to express their emotions in healthy ways, such as talking about their feelings, taking deep breaths when they feel upset, and going to a quiet space when overwhelmed; educate about the importance of getting enough sleep and rest	Those who are socially and emotionally healthy tend to demonstrate and continue to develop several important behaviors and skills they can use in social settings.

TABLE 26.5 Age-Appropriate Health Education for Toddler Clients

When developing education for toddlers, the nurse should consider their short attention spans and recognize that they cannot understand complex health concepts. Ways to provide simple and interactive education may include songs, games, role-play with dolls or stuffed animals, and storytelling. Separation from parents or caregivers may cause anxiety, so this should also be considered (UCSF Benioff Children's Hospital, 2023a).

Healthy People 2030 Goals for Newborns, Infants, and Toddlers

Childhood, particularly the early years, is a critical period for growth and development. Experiences, behaviors, and health problems can have long-term impacts during the infant and toddler years. Healthy People 2030 focuses on directly and indirectly improving health, safety, and well-being during this time. These include timely developmental screenings and recommended health services and the development of positive health behaviors, such as getting enough sleep and nutrition, to prevent diseases and injuries. Unfortunately, there are racial/ethnic and income disparities in the United States that impact these behaviors. To address these disparities, it is necessary to focus health promotion and prevention strategies on families, early childhood education programs, and neighborhoods.

HEALTHY PEOPLE 2030

Healthy People 2030 Objectives for Infants and Toddlers

Healthy People 2030 Infants Objectives (https://openstax.org/r/infants) seek to "improve the health and safety of infants" (ODPHP, n.d.-c, para. 1). The health of the childbearing client before, during, and after pregnancy impacts their child's health and well-being through their first year of life. After birth, many of the strategies to promote health focus on increasing breastfeeding rates, promoting vaccinations, promoting developmental screenings, encouraging safe sleep practice, and encouraging the correct use of car seats during transportation.

Healthy People 2030 Children Objectives (https://openstax.org/r/healthchildren) address outcomes for those aged 1 through 19. Some objectives are geared specifically toward the toddler years. These include objectives related to vision, hearing, and developmental screenings; reducing emergency department visits for medication overdoses or asthma; reducing blood lead levels; reducing iron deficiency; increasing service access to children with autism spectrum disorder; increasing physical activity; and increasing vaccination rates (ODPHP, n.d.-b).

Health Promotion and Disease Prevention Activities to Improve the Health of Newborns, Infants, and Toddlers

Health promotion activities are necessary to improve the health and well-being of this population. The nurse should encourage people to breastfeed their newborns exclusively for the first six months of life, as breast milk provides all the necessary nutrients and antibodies for optimal growth and development (U.S. Department of Agriculture, 2020). Nurses should also ensure that children in this age group receive all the recommended immunizations to protect against serious infectious diseases and all the recommended screenings to identify health issues early. Various genetic, endocrine, and metabolic disorders; hearing loss; and critical congenital heart defects screenings are provided to newborns before discharge home after a hospital or birthing-center birth (CDC, 2021n). Nurses should encourage caregivers to maintain regular checkups with a health care provider for their child throughout this time frame to monitor their growth and development and address any health concerns or developmental delays.

Nurses should promote safe infant sleep practices to prevent **sudden unexpected infant death** (SUID). SUID is the umbrella category that describes all sudden, unexpected infant deaths from known causes, such as injury or accident, and those from unknown causes (Eunice Kennedy Shriver NICHHD, n.d., para. 2). **Sudden infant death syndrome** (SIDS) is defined as the sudden death of a baby younger than 1 year of age that does not have a known cause even after full investigation (Eunice Kennedy Shriver NICHHD, n.d., para. 3). About 3,400 babies in the United States die from SUID annually, including those from SIDS, accidental suffocation in a sleeping environment, and other deaths from unknown causes (CDC, 2022h).

CLIENT TEACHING GUIDELINES

Prevention of SUID

The community health nurse should teach caregivers to do the following:

- Place the infant on their back for all sleep—naps and at night.
- Use a firm, flat (not angled or inclined) sleep surface, such as a mattress in a safety-approved crib, covered by a fitted sheet.
- Keep your baby's crib or bassinet in the same room where you sleep until the infant is at least 6 months old.
- Keep soft bedding such as blankets, pillows, bumper pads, and soft toys out of the infant's sleep area.
- Do not cover the infant's head or allow the infant to get too hot while sleeping.
- Do not smoke or use nicotine during pregnancy, and do not smoke or allow smoking around the infant.
- Do not drink alcohol or use illegal drugs during pregnancy.
- Feed the infant breast milk.
- Visit the infant's health care provider for regular checkups and immunizations.
- Offer your infant a pacifier at naptime and bedtime. If breastfeeding, consider waiting to use a pacifier until breastfeeding is well established.

(See CDC, 2022i.)

Once the child is older and eating solid foods, nurses should encourage caregivers to provide a nutritious diet to promote healthy growth and development. Encourage physical activity to promote motor skills development and reduce the risk of obesity. Promoting oral health includes brushing teeth twice a day and scheduling regular dental checkups. Finally, the nurse should support caregivers in positive mental health practices, such as providing a safe and nurturing environment, fostering positive relationships, and seeking help if needed (CDC, 2022j).

Injury prevention education is imperative to reduce the risk of accidents and injuries in the infant population (CDC, 2022a). The CDC has a variety of fact sheets on safety in the home and community (https://openstax.org/r/cdcinfants) for infants and toddlers. These include carbon monoxide poisoning prevention, child passenger safety, safe places for childcare, emergency preparedness, food safety, medicine safety, sun safety, and water safety.

Health promotion activities for this population should also include education on preventing physical, sexual, and emotional child abuse and neglect, incorporating the following strategies (CDC, 2022a):

- Interventions that can assist parents in strengthening household financial security
- Family engagement
- Referral to quality childcare agencies that are licensed or accredited
- Education regarding parenting skills and family relationships
- Behavioral parent training programs

Abusive head trauma (AHT), which includes shaken baby syndrome, is a preventable, life-threatening form of physical child abuse that injures an infant's or child's brain and can lead to serious brain injury or death (National Center for Chronic Disease Prevention and Health Promotion, 2022a). AHT typically occurs when a caregiver forcefully shakes or jerks an infant or young child. Infants' vulnerable neck muscles and large, heavy heads make them particularly susceptible to injury. AHT can happen in a matter of seconds, even with seemingly minor force. Injuries that can result from AHT include subdural hematomas (bleeding between the brain and its protective coverings), diffuse axonal injury (widespread damage to nerve fibers in the brain, disrupting communication between brain cells), retinal hemorrhages (bleeding in the retina, which lines the back of the eye), cerebral edema (swelling of the brain), and/or skull fractures. These injuries can lead to long-term consequences such as developmental delays, intellectual disabilities, seizures, and even death.

Preventing AHT requires a multifaceted approach involving education, awareness, and support. Nurses should identify at-risk families and provide appropriate intervention and support services, including information about the dangers of shaking infants and alternative strategies for soothing a crying baby. Offering resources and support for caregivers, including stress management techniques, counseling services, and parenting classes, can help reduce frustration and improve coping mechanisms. It is mandatory that any suspected case of child abuse is reported to the appropriate services (National Center for Chronic Disease Prevention and Health Promotion, 2022a).

A variety of information for caregivers of infants and toddlers (aged 0 to 3) can be found at the CDC (2022a) Parent Information website (https://openstax.org/r/cdcparents). This website discusses the above topics in greater detail and provides schedules for developmental milestones, growth charts, and immunizations.

In addition to the strategies to prevent congenital disorders and prenatal infections discussed in this section, other newborn concerns include jaundice and vitamin K deficiency. As the child moves out of the newborn stage, other diseases and conditions, such as developmental delays, developmental disabilities, and infections, are a concern. Nurses should educate caregivers on how to prevent or detect these diseases and conditions early to mitigate complications (CDC, 2022f).

A child with a developmental delay has not gained the skills or reached the milestones that experts expect of children their age. Most developmental delays resolve independently over time (Cleveland Clinic, 2023b). Examples include delays rolling over, sitting up, crawling, and walking; trouble with fine motor skills; difficulty understanding or communicating with others; or a lack of age-appropriate social skills. Nurses should encourage caregivers to speak to their pediatrician immediately if they suspect a developmental delay or deviation from expected milestones (CDC, 2022f). Developmental screening can detect delays early, ensuring the child has early intervention services and allowing them to catch up to their peers and reach their full potential. A referral to an appropriate health care provider, such as an audiologist, speech therapist, developmental pediatrician, neurologist, physical therapist, occupational therapist, or another provider of early intervention services, may also be necessary. Early intervention is the best way to prevent long-term developmental delays or disabilities. If the child is eligible, a care team will develop an Individualized Family Service Plan (IFSP) based on the child's and family's particular needs.

Developmental disabilities are "a group of conditions due to an impairment in physical, learning, language, or behavior areas, which begin during the developmental period, may impact day-to-day functioning, and usually last throughout the lifetime" (CDC, 2022f, para. 1). They often begin before birth, but some can occur after birth due to injury, infections, or other factors. The cause of some developmental disabilities is unknown. Still, they are believed to be caused by a combination of factors, including genetics, parental health and behaviors during pregnancy, complications during birth, maternal infections during pregnancy, infant infections early in life, and exposure of the pregnant person or child to environmental toxins (CDC, 2022f). About one in six, or 17 percent, of children aged 3 through 17 years have one or more developmental disabilities, according to the CDC (2022f). These occur among all racial, ethnic, and socioeconomic groups. Examples include attention deficit hyperactivity disorder (ADHD), autism spectrum disorder, cerebral palsy, fragile X syndrome, Tourette syndrome, hearing loss, intellectual disabilities,

learning disabilities, and vision impairment.

Infectious disease prevention in this population is very similar to any infectious disease prevention. Nurses should encourage caregivers to limit visitors during the newborn stage, especially those who are sick. Children younger than 2 are at especially high risk of developing complications from infections such as influenza, respiratory syncytial virus (RSV), or COVID-19 (CDC, 2022l). Anyone with cold-like symptoms should be taught to avoid close contact, follow cough etiquette, wash their hands often with soap and water for at least 20 seconds, and clean frequently touched surfaces. Avoiding infection can prevent complications such as pneumonia, myocarditis, and sepsis.

Primary Prevention

Primary prevention involves taking measures to prevent health problems or injuries. There are a variety of primary preventions that can be taken for newborns, infants, and toddlers. Some examples include:

- Immunizations per the recommended schedule (https://openstax.org/r/cdcvaccines) (CDC, 2023b)
- Breastfeeding exclusively through age 6 months
- Placing newborns and infants to sleep on their backs
- Proper car seat use for infants and toddlers until they are at least 2 years old or until they reach the highest weight or height permitted by the car seat manufacturer
- Good handwashing by the caregiver or toddler
- Regular medical checkups

Primary prevention as early as possible in infancy can also promote health and prevent the development of chronic diseases later in life (National Center for Chronic Disease Prevention and Health Promotion, 2022a).

Secondary Prevention

Secondary prevention measures identify problems as early as possible, usually before symptoms arise. Some examples of appropriate secondary prevention measures for newborns, infants, and toddlers include:

- Developmental screenings
- Hearing and vision screenings
- Early intervention services
- Violence screening aimed at protecting children who live in high-risk environments where overt abuse has not yet occurred but is likely to occur in the future
- Testing newborns for bilirubin levels

Tertiary Prevention

Tertiary prevention aims to minimize the negative impacts of an existing health condition or disability. For newborns, infants, and toddlers, tertiary prevention might include:

- Rehabilitation services, such as physical therapy, occupational therapy, and speech therapy, can assist in improving the function of those with developmental disabilities.
- Medical or surgical interventions, such as surgery, medication, and medical devices, may be needed to manage congenital heart defects, hyperbilirubinemia, or other conditions.
- Nutritional support, such as feeding tubes, special diets, or supplements, may be needed if the child has feeding difficulties or gastrointestinal issues.
- Behavioral interventions, such as parent training, behavior modification, or social skills training, can help with behavioral issues in toddlers.
- Supportive services, such as respite care, counseling, and support groups, can help families cope with the challenges of caring for a child with a disability.

Integration of Sociocultural and Linguistically Responsive Interventions for Newborns, Infants, and Toddlers

Ensuring that health promotion and disease prevention interventions are culturally and linguistically appropriate can positively impact the overall well-being of this population. Cultural and linguistic diversity itself impacts child development. Language and culture shape a child's cognitive, social, and emotional development. Because of this, the nurse should understand the importance of building relationships with the child and their caregivers, recognize cultural and linguistic diversity, and value family involvement.

The National Center on Parent, Family, and Community Engagement (2020), part of the HHS Administration for Children and Families, has recently focused on learning how understanding families' cultural perspectives can help build positive relationships. Nurses who work with families in this way can strengthen family engagement efforts. **Family engagement** is the process used to build genuine relationships with families to promote strong parent-child relationships, family well-being, and better outcomes. Understanding families' cultural beliefs, values, and priorities is the key to the family engagement process. The distinct family cultures provide meaning and direction to the lives of children. The various factors influencing families' cultural beliefs will inform decisions about the child and the family, including health care and education decisions.

THEORY IN ACTION

Partnerships for Change: Listening to the Voices of Families

Access multimedia content (http://openstax.org/books/population-health/pages/26-2-newborn-infant-and-toddler-health)

This video shows how one program effectively partnered with families and local organizations to build a strong community to contribute to community wellness, family well-being, and children's healthy development.

As you watch the video, look for examples of the following:

Strategies

- Community partnerships
- Family partnerships
- Committed program leadership
- Culturally responsive program environment

Outcomes

- Positive goal-oriented relationships with families
- Family well-being
- Families as advocates and leaders
- Family connections to peers and community

The Public Education Foundation (2015) video Literacy, Early Learning & Family Engagement (https://openstax.org/r/literacy) provides another glimpse of collaboration between families, educators, and health care professionals.

Sociocultural Interventions

Sociocultural interventions for this population should aim to create a safe, welcoming, and inclusive environment that recognizes and values the unique background of each child and their family. Before working with this population, nurses should benefit from training in recognizing and respecting applicable cultural differences. Family-centered care is a specific type of family engagement, described above. Family-centered care involves working collaboratively with families to understand their cultural preferences and needs to provide health care that is sensitive to their beliefs, values, and traditions. This approach may prove helpful when caring for newborns, infants, and toddlers as it promotes shared decision-making and respect between the family and the nurse.

When performing interventions with infants and toddlers, nurses should celebrate diversity. This may involve incorporating clients' cultures through books, music, art, or other activities. Nurses can adapt play-based interventions to various cultures to support children's cognitive, social, and emotional development. Golsäter et al. (2023) refer to this as "the ability to culturally adjust the health care" (p. 1431).

Linguistically Responsive Interventions

For families who speak languages other than the community's dominant language, providing bilingual education and language support can be useful in fostering the child's development. For example, a nurse could provide materials in the client's home language and then work with bilingual staff to support communication with the family. Once again, competence training for the nurse, focused on linguistic differences, may help the nurse provide care that is responsive to the unique needs of each child and their family.

Fibla et al. (2022) describe how babies begin to learn and develop language before birth, and for many children, this includes learning multiple languages. By the year 2060, it is estimated that Latino children will constitute one-third of the three-to-four-year-old population, many of whom are **dual language learners** (DLLs) (Unidos U.S., 2020). DLLs are children learning two or more languages simultaneously or learning a second language while still learning their first language (Head Start, 2023). The language one speaks is instrumental in forming one's identity, and many bilingual infants with high levels of support for both languages grow to become highly proficient in both (Fibla et al., 2022). Fibla et al. (2022) also described research that found DLLs positively contribute to reading and oral language skills across languages. They recommend the use of linguistically responsive practices to:

- promote the visible respect and value of all languages;
- encourage family members to support their child's continued home language development;
- accept all instances of communication from a child—especially when they mix two languages, known as **code-switching**, which should be recognized as a strength rather than a problem;
- support every child to develop secure and nurturing relationships regardless of their home language or prior experience with English; and
- support the continued development of a child's home language and the acquisition and development of English.

26.3 Preschool, School-Age, and Adolescent Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 26.3.1 Assess the global and national health status of preschool, school-age, and adolescent health.
- 26.3.2 Examine major risk factors influencing the health of the preschool, school-age, and adolescent population.
- 26.3.3 Create evidence-based educational interventions to promote self-care for health promotion, illness prevention, and illness management of preschool and school-age children and adolescents.
- 26.3.4 Identify Healthy People 2030 goals established for preschool, school-age, and adolescent health.
- 26.3.5 Describe health promotion and disease prevention actions applicable to preschool, school-age, and adolescent health.
- 26.3.6 Discuss evidence-based strategies for integrating sociocultural and linguistically responsive health promotion and disease prevention interventions in clinical practice of preschool, school-age, and adolescent health.

The preschool, school-age, and adolescent population includes children aged 4 to 17. Health promotion and disease prevention are important for children in this age range as this is a crucial period of growth and development when children form habits and behaviors that will impact their health and well-being throughout their lives. Children who learn healthy habits early are more likely to continue them into adulthood. Many chronic diseases, such as diabetes, heart disease, and obesity, begin in childhood. Helping children develop these healthy habits and behaviors may reduce their risk of such diseases occurring. Children are also building strong bones and muscles, which will reduce their risk of injury as they age. Finally, children in this age group are developing the social and emotional skills they will take into adulthood. For example, children build self-esteem and confidence by participating in physical activity such as sports. Learning good hygiene practices can help build social skills and respect for others (National Center for Chronic Disease Prevention and Health Promotion, 2022b).

National and Global Status of Preschool, School-Age, and Adolescent Health

There are wide differences between children aged 4 and children aged 17. As such, health data for this population are often divided into different groups. Table 26.6 presents some of the health data from the National Center for Health Statistics. Additional U.S. health data for children and adolescents can be seen at the Health, United States, 2020-2021 – Data Finder (https://openstax.org/r/cdcnchs).

	Children	Adolescents
Health Status		
Percent of children who are in fair or poor health (2022) as identified by asking adults "Would you say [child's name]'s health in general is excellent, very good, good, fair, or poor?"	2.2% Ages 5 to 11	3.8% Ages 12 to 17
Percent of children who missed 11 or more days of school in the past 12 months due to illness, injury, or disability (2022)	8% Ages 5 to 11	9.9% Ages 12 to 17
Obesity		
Percent of children who are obese (2017–March 2020)	20.7% Ages 6 to 11	22.2% Ages 12 to 19
Access to Care		
Percent of children with a usual place of health care (2022)	97.2% Ages 5 to 11	96.4% Ages 12 to 17
Mortality		
Number of deaths (2021)	5,975 Ages 5 to 14	13,407 Ages 15 to 19
Deaths per 100,000 population (2021)	14.3 Ages 5 to 14	62.2 Ages 15 to 19

TABLE 26.6 Selected U.S. Health Data for Children Aged 4 to 17 (See NCHS, 2023a, 2023b, 2023c.)

Immunization rates affect child and adolescent health. Rates for certain vaccinations (measles, mumps, and rubella; varicella; diphtheria; tetanus; and acellular pertussis) decreased by 1 percent from the 2020–2021 school year to the 2021–2022 school year in incoming kindergarteners (Seither et al., 2022). For 2021–2022, 2.6 percent of kindergarteners were exempted from at least one state-required vaccination per their caregivers' requests.

CHILD VACCINATION ACROSS AMERICA

The American Academy of Pediatrics interactive map, "Child Vaccination Across America (https://openstax.org/r/downloads)," allows viewers to compare state and national immunization rates.

Visit the map, and do the following:

1. Watch the video "How to explore the interactive map."

2. Hover over your state and learn about the percentage of children immunized by the various vaccines. How does your state compare with the national rates?
3. Hover over one area designated with a recent disease outbreak, and then click on the area to learn more about this specific disease and outbreak.
4. Click on the "Explore Data" button and learn more about vaccination gaps related to insurance, race and ethnicity, poverty, and geographic area.
5. Were you surprised by what you learned? Why or why not?

Global health data regarding immunizations is not promising. A 2022 systematic review confirmed a worldwide decline or delay in vaccination during the COVID-19 pandemic (SeyedAlinaghi et al., 2022). This followed indications that 13.5 million children were not vaccinated in 2018 (Vanderslott et al., 2022). Although there has been a global decline in vaccine-preventable diseases (VPDs), they are still responsible for 1.5 million deaths annually. Although studies have found that most people worldwide think that vaccines are important for children to have, support for vaccination varies (Vanderslott et al., 2022). This is described further in Pandemics and Infectious Disease Outbreaks.

Globally, obesity in children aged 5 to 19 is considered a major health concern as it is a significant risk factor for many noncommunicable diseases, including cardiovascular disease, diabetes, and some cancers (endometrial, breast, ovarian, prostate, liver, gallbladder, kidney, and colon) as well as for musculoskeletal disorders. In 2016, the WHO reported that the share of those aged 5 to 19 who are overweight or obese has increased from 4 percent in 1975 to around 18 percent in 2016. Also in 2016, over 340 million children and adolescents aged 5 to 19 were overweight or obese, while 39 million children under age 5 were overweight or obese in 2020 (WHO, 2021).

CHILDHOOD OBESITY GLOBALLY

Access multimedia content (http://openstax.org/books/population-health/pages/26-3-preschool-school-age-and-adolescent-health)

Once considered a high-income country problem, overweight and obesity are now increasing in low- and middle-income countries, particularly in urban areas. For example, "in Africa, the number of overweight children under age 5 has increased by nearly 24 percent since 2000, and almost half of the children under age 5 who were overweight or obese in 2019 lived in Asia" (WHO, 2021, para. 7). These low- and middle-income countries now face what the WHO refers to as a "double burden" of malnutrition. Children in these countries are more vulnerable to inadequate nutrition prenatally and as newborns and infants, and then they are introduced to "high-fat, high-sugar, high-salt, energy-dense, and micronutrient-poor foods, which tend to be lower in cost" (WHO, 2021, para. 12).

Watch the video, and then respond to the following questions.

1. What two lifestyle behaviors put children like Avoca at risk for obesity?
2. Children who are overweight or obese are at greater risk for developing which three diseases?
3. What is one solution that could decrease the consumption of cheap and unhealthy foods?

In 2020, the global mortality rate for those aged 5 to 14 was 7 per 1,000 children, and in 2021 the rate for those aged 15 to 19 was 4.6 per 1,000 (WHO, 2022b, 2022c). Infectious diseases have declined in the last decade for both groups. For those aged 5 to 14, injuries (including road traffic injuries and drowning) remain the leading causes of death and lifelong disability (WHO, 2022b). In those aged 15 to 19, accidents and injuries, self-harm, and interpersonal violence the leading causes of death (WHO, 2022b, 2022c).

Risk Factors Influencing Preschool, School-Age, and Adolescent Health

As children and adolescents grow and develop, numerous environmental, social, and physical risk factors can influence their health and well-being (see Table 26.7).

	Preschool	School Age	Adolescent
Environmental	• Exposure to lead and environmental toxins • Poor air quality • Inadequate access to clean water, sanitation, and healthy food • Poor housing conditions • Limited access to safe outdoor spaces	• Noise pollution • All the same risk factors listed for the preschool population	• Substance use and misuse • All the same risk factors listed for the preschool and school-age populations
Social	• Poverty and low socioeconomic status • Lack of access to quality early childhood education and care • Limited social support • Exposure to violence and crime • Family dysfunction • Discrimination and racism • Limited access to transportation and safe pedestrian infrastructure	• Limited access to educational opportunities • Peer pressure and social norms • All the same risk factors listed for the preschool population	• Stigma and discrimination related to sexual orientation, gender identity, and other aspects of identity • All the same risk factors listed for the preschool and school-age populations
Physical	• Prenatal and perinatal factors • Genetic factors • Infections and communicable diseases • Developmental delays and disabilities • Allergies and asthma • Chronic health conditions • Nutritional deficiencies or imbalances • Sleep disturbances	• Hormonal changes during puberty • All the same risk factors listed for the preschool population	• All the same risk factors listed for the preschool and school-age populations

TABLE 26.7 Risk Factors Influencing Health (See Centers for Disease Control and Prevention, 2021a, 2021b, 2021c, 2021d, 2021e.)

Environmental and social risk factors can have long-lasting effects on the health and development of this population (National Institute of Environmental Health Sciences [NIEHS], 2023). See Social Determinants Affecting Health Outcomes for more information. Physical or biological risk factors can also influence the health of the preschool, school-age, and adolescent population (Negussie et al., 2019). The same prenatal and perinatal factors and genetic factors mentioned previously can continue to affect children as they age. Any developmental delays or disabilities continue to impact cognitive, physical, and socio-emotional development. Infections and communicable diseases can adversely affect physical health acutely and can also lead to long-term health problems. Allergies and asthma have negative effects on respiratory health and quality of life. Other chronic health conditions have long-term health and development consequences. These may include diseases such as diabetes or congenital heart defects. Nutritional deficiencies or imbalances, including obesity, can impact growth, development, and overall health. Sleep disturbances may negatively influence cognitive and behavioral development (Negussie et al., 2019). Hormonal changes during puberty can impact physical, cognitive, and emotional development.

Lifestyle-related risk factors may play a huge role in a child's risk of developing some conditions, such as childhood cancers, ADHD, and asthma (American Cancer Society, 2019; Cleveland Clinic, 2023a; Mayo Clinic, 2019). As mentioned, childhood cancers are a leading cause of death for preschool and school-age children. Cancer prevention can begin prenatally and continue through early childhood. In addition to getting enough folic acid, avoiding alcohol and tobacco use prenatally, and breastfeeding postpartum, childbearing clients may lower a child's cancer risk through other behaviors (CDC, 2021k). Safe, stable, and nurturing relationships and environments can help protect children against many harms and ensure they reach their full potential. This includes keeping children away from exposures to secondhand smoke, traffic-related air pollution, carcinogens, and excessive radiation used during medical tests. However, many childhood cancers cannot be prevented (American Cancer Society, 2019).

ADHD and asthma are other common health concerns in this population. While there is no known cause for ADHD, prevention efforts involve addressing maternal substance use and misuse, premature birth, and exposure to environmental toxins (Mayo Clinic, 2019). Researchers have not determined the exact cause of childhood asthma, which often develops when the child's immune system is developing (Cleveland Clinic, 2023a). Asthma may have genetic components, and exposure to allergens, such as tobacco smoke, and viral infections, such as the common cold, at an early age have also been associated with its development in children (Cleveland Clinic, 2023a). Gender, racial, and geographic disparities also exist with individuals who are assigned male at birth, BIPOC children, and children who live in urban environments or around high amounts of air pollution at higher risk of developing asthma (Cleveland Clinic, 2023a).

Poor mental health can be a risk factor for substance misuse, sexual health issues, and suicide. Suicide is the second most common cause of death in those aged 10 to 14 years and the third most common cause of death in those aged 15 to 24 years (CDC, 2022r). Many factors can increase the risk for suicide or protect against it (Table 26.8). It is often connected to other forms of injury or violence. Those who have experienced violence such as child abuse, bullying, or sexual violence have a higher risk for a suicide attempt.

Circumstances That Increase Suicide Risk	
Individual Risk Factors	• Previous suicide attempt • History of depression and other mental illnesses • Serious illness such as chronic pain • Criminal/legal problems • Job/financial problems or loss • Impulsive or aggressive tendencies • Substance misuse • Current or prior history of adverse childhood experiences (ACEs) • Sense of hopelessness • Violence victimization and/or perpetration

TABLE 26.8 Child and Adolescent Suicide (See Centers for Disease Control and Prevention, 2022r.)

Relationship Risk Factors	• Bullying • Family/loved one's history of suicide • Loss of relationships • High-conflict or violent relationships • Social isolation
Community Risk Factors	• Lack of access to health care • Suicide cluster in the community • Stress of acculturation • Community violence • Historical trauma • Discrimination
Societal Risk Factors	• Stigma associated with help-seeking and mental illness • Easy access to lethal means of suicide among people at risk • Unsafe media portrayals of suicide
Circumstances That Protect Against Suicide Risk	
Individual Protective Factors	• Effective coping and problem-solving skills • Reasons for living (family, friends, pets, etc.) • Strong sense of cultural identity
Relationship Protective Factors	• Support from partners, friends, and family • Feeling connected to others
Community Protective Factors	• Feeling connected to school, community, and other social institutions • Availability of consistent, high-quality physical and behavioral health care
Societal Protective Factors	• Reduce access to lethal means of suicide among people at risk • Cultural, religious, or moral objections to suicide

TABLE 26.8 Child and Adolescent Suicide (See Centers for Disease Control and Prevention, 2022r.)

Adolescent girls and adolescents identifying as LGBTQIA+ experience high levels of violence, sadness, mental health challenges, and suicide risk (CDC, 2023k). In 2021, among adolescents, almost twice as many girls as boys reported persistent sadness or hopelessness (Figure 26.2), and nearly one in three girls reported that they had seriously considered attempting suicide (CDC, 2023c).

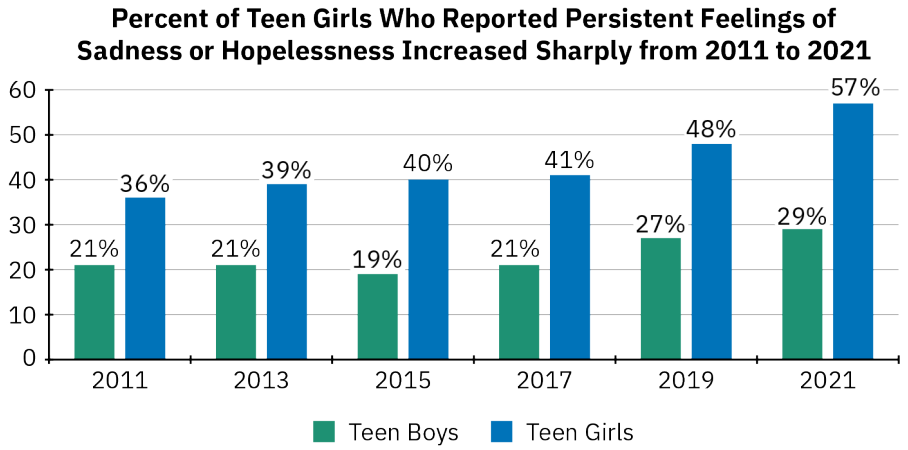


FIGURE 26.2 This graphic shows the increase in the percentage of adolescent boys and girls who persistently felt sad or hopeless over a 10-year period. (data source: CDC, 2023c; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Another area of health risk for this population is **concussion** or brain injury. Anyone who experiences a bump, blow, or jolt to the head or hit to the body that causes the head and brain to move rapidly back and forth could suffer a concussion, with youth athletes particularly at risk (CDC, 2022b). School and community health nurses may educate youth athletes, caregivers, coaches, and officials in preventing concussions, recognizing their signs and consequences, and identifying a safe return to activity following a concussion.

Risk factors for adolescents related to sexual health include activities that can lead to adverse health outcomes such as HIV infection, other STIs, or pregnancy. **Sexual risk behavior** is any behavior—typically condom-unprotected oral, vaginal, or anal intercourse—that puts one at risk for these adverse health outcomes (Senn, 2020).

Recognizing these many risk factors that can adversely impact this population's health and well-being is the first step in promoting health. Children and adolescents from marginalized or disadvantaged backgrounds may be at higher risk for experiencing risk factors. The HEADSS (Home, Education, Activities, Drug use and abuse, Sexual behavior, Suicidality, and depression) for Adolescents tool is a psychosocial risk assessment instrument that health care professionals may find useful in finding out about issues in adolescents' lives (Cohen et al., 1991).

Educational Interventions to Promote Self-Care in Preschool, School-Age, and Adolescent Populations

Educational interventions geared toward this population and their caregivers should focus on preventing their leading causes of death and morbidity, and the risk factors identified above. To promote self-care and the development of healthy habits, nurses should provide education directly to the child or adolescent. Educating adults on how to support their child's development can be an effective way of introducing and maintaining the child's health. Educational interventions may occur as individual instruction, group workshops, or classes (Table 26.9).

	Education for the Caregiver	Education for the Child/ Adolescent	Education Techniques for the Child/Adolescent
Preschool	• Regular health screenings and vaccinations • Child development • Safety and accident prevention • Nutrition • Positive discipline • Mental health • Encouragement to promote a healthy school environment	• Importance of physical activity • Importance of healthy eating habits • Proper hygiene practices • Safety to prevent accidents and injuries (fire, water, automobile, pedestrian, and environmental navigation safety)	• Use imagination • Explore through words, play, and fantasy • Storytelling • Music, movement, hands-on activities, and visual aids • Include caregivers in education
School Age	• All topics listed above • Sexual education	• All topics listed above • Nutrition (portion control, balanced diets) • Safety to prevent accidents and injuries (bike and technology safety) • Management of emotions • Healthy communication and conflict management • Substance misuse (risks and consequences and how to resist peer pressure) • Sexual education (puberty, reproduction, contraception)	• Hands-on learning • Role-play • Technology-based learning (interactive games, videos, and simulations) • Peer education (develops leadership skills and reinforces the importance of healthy behaviors) • Include caregivers in education
Adolescent	• All topics listed above	• All topics listed above • Safety to prevent accidents and injuries (driving safety) • Importance of healthy relationships to avoid dating violence • Sexual education (contraception, STI prevention, consent)	• Open and interactive discussions about health issues • Role-play • Personalized goal setting • Peer education • Education provided via social media and other forms of technology • Community involvement related to health issues that interest them • Must build trust between the nurse and the client

TABLE 26.9 Educational Interventions for Preschool, School-Age, and Adolescent Populations (See UCSF Benioff Children's Hospital, 2023b; Vaivada et al., 2022.)

School nurses and school health programs are ideal for health promotion and disease prevention for this population, as described in Caring Across Practice Settings. Schools have direct contact with 56 million students for at least six

hours daily during the most critical years of their development (CDC, 2020c). School health programs can decrease the prevalence of health risk behaviors by delivering quality sexual health education; increasing youth access to sexual health services; establishing healthy, safe, and supportive environments to promote positive mental health; and implementing policies that provide health promotion and disease prevention (CDC, 2020c).

Healthy People 2030 Goals for Preschool, School-Age, and Adolescent Health

Preschoolers and school-age children fall into the Healthy People 2030 overarching goal to "improve the health and safety of children" (ODPHP, n.d.-b, para. 1), as described in the section on toddlers. There are some additional Healthy People Objectives for preschoolers and even more for the school age and adolescent ranges.

HEALTHY PEOPLE 2030

Children

Healthy People 2030 children objectives (https://openstax.org/r/content) address outcomes for those aged 1 through 19. There are specific objectives geared toward the population in the preschool and school-age years. Some of these are related to vision and developmental screenings; trauma, literacy, early childhood education, nutrition, and other school programs; decreasing obesity; increasing physical activity and promotion of sports; mental health treatment; preventive dental care; and violence prevention.

The overarching goal of Healthy People 2030 related to adolescents is to "improve the health and well-being of adolescents" (ODPHP, n.d.-a, para. 1). Improving adolescent health can prevent some behaviors that can affect health later in life. Adolescents have many risk factors, many of which are preventable, including substance use disorders, STIs, and injuries from motor vehicle accidents. The physical and mental changes occurring during adolescence can also impact their safety and health. Encouragement of positive health behaviors is essential in this population. Therefore, there are many Healthy People 2030 objectives geared toward adolescents.

HEALTHY PEOPLE 2030

Adolescents

Healthy People 2030 addresses outcomes specifically for adolescents (https://openstax.org/r/adolescents). Some are related to school achievement, adult support, family planning, oral care, transition to adult health care, LGBTQIA+ health issues, mental health disease issues, sleep, and the prevention of chronic kidney disease, chronic school absence, infectious diseases, obesity, skin cancer, STIs, tobacco and other substance use, and violence.

Health Promotion and Disease Prevention Activities to Improve the Health of Preschool, School-Age, and Adolescent Populations

Improving the health of this population is an important public health goal. Health promotion activities, such as the education previously described, can play a crucial role in achieving this goal. Nurses can promote positive health outcomes by enabling this population to increase control over their health and its determinants as they age. Activities can include various interventions to promote healthy behaviors, prevent diseases and injuries, and improve health care access and may occur in various settings, including schools, health care facilities, community centers, and homes. Examples include education and awareness campaigns, nutrition and physical activity interventions, mental health interventions, and health care access initiatives. By implementing these interventions, nurses can help promote healthy behaviors and improve children's and adolescents' overall health and well-being.

The CDC (2021a, 2021b, 2021d, 2021e) website provides information for caregivers of children ages 4 to 11 (https://openstax.org/r/cdcchildren) and for teens (https://openstax.org/r/teens). These pages discuss the topics in greater detail and provide specific schedules for growth charts and immunizations.

Disease prevention promotes healthy growth and development by supporting children's and adolescents' physical and cognitive growth and development. By protecting this population from illnesses, the nurse can help them reach

their full potential (ODPHP, n.d.-a). Preventing diseases also helps reduce health care costs through a lesser need for medical treatment or hospitalizations. Healthy children and adolescents are more likely to have good academic performance with less absenteeism, positively influencing their academic lives and contributing to their future professional lives. By preventing certain diseases, nurses help to protect this population's long-term health and the wider community by reducing the spread of infectious diseases (ODPHP, n.d.-a).

Because some of the most common preventable diseases affecting this population include COVID-19, influenza, and obesity, health promotion and applicable prevention efforts should target them. Preventing accidents, homicides, and suicides is also imperative for this population. School-age children must also combat other infectious diseases, most notably chicken pox. Adolescents and their caregivers should receive preventive services related to anxiety and depression, substance misuse, violence, blood clots, cervical cancer, and STDs (CDC, 2021d).

Primary Prevention

Prevention of disease onset occurs through primary prevention. It is an essential way to promote the health and well-being of the preschool, school-age, and adolescent population. Some examples of primary prevention include:

- Immunizations per the recommended schedule (https://openstax.org/r/child) (CDC, 2023b). Additional information can be seen at the American Academy of Pediatrics' Childhood and Adolescent Vaccine Education Series (https://openstax.org/r/playlist) playlist on YouTube.
- Hand hygiene, such as washing hands frequently with soap and water to prevent the spread of germs.
- Healthy eating habits, such as eating plenty of fruits and vegetables to support their immune system and promote growth and development.
- Sun protection to prevent skin damage and cancer from sun exposure.
- Regular physical activity to promote overall health and well-being and prevent the development of obesity.
- Injury prevention, including providing safe play environments for preschoolers, bike safety for school-age children, and driving safety for adolescents.
- Sexual health education to prevent STDs and unintended pregnancies.
- Mental health promotion, including stress management and coping skills to prevent anxiety, depression, and suicide.
- Substance misuse prevention, including the risks and consequences.
- Violence prevention, including adverse childhood experiences (ACEs), child abuse and neglect, child sexual abuse, firearm violence, intimate partner violence, sexual violence, and youth violence prevention to prevent violence before it actually occurs or buffer people from violence.

THEORY IN ACTION

Adverse Childhood Experiences (ACEs)

The CDC's (2021m) VetoViolence® resources empower people to prevent violence and implement evidence-based prevention strategies in their communities. In particular, the CDC infographic, "We Can Prevent Childhood Adversity (https://openstax.org/r/acesinfographic)," addresses adverse childhood experiences, or ACEs.

Examine the infographic, and then respond to the following questions.

1. What are ACEs?
2. What groups are more likely to experience ACEs?
3. What are two ways to create positive childhood experiences?

Secondary Prevention

Secondary prevention measures identify problems as early as possible, usually before symptoms arise. Some examples of these for the preschool, school-age, and adolescent population include:

- Regular health checkups, including dental, vision and hearing as applicable, to help identify any health issues early and ensure appropriate medical care is received
- Recommended screenings (https://openstax.org/r/periodicity) for the age group as per the American Academy of Pediatrics or the U.S. Preventive Services Task Force guidelines (https://openstax.org/r/uspstftopic)
- Immediately after a violent event, addressing any short-term consequences and focusing on the immediate

needs such as emergency services or medical care

Tertiary Prevention

Tertiary prevention involves managing and treating health issues that have already developed to minimize their impact and prevent further complications. Here are some examples of tertiary prevention activities for preschoolers, school-age children, and adolescents:

- Provide early intervention services such as speech therapy or occupational therapy for preschoolers with developmental delays or disabilities
- Manage asthma symptoms and provide treatment to prevent attacks and minimize the impact of the disease
- Provide appropriate mental health treatment to help children or adolescents manage symptoms and improve their quality of life
- Provide emotional support or mental health services long-term following a violent event to decrease trauma to the victim

THEORY IN ACTION

Addressing Youth Violence

Access multimedia content (http://openstax.org/books/population-health/pages/26-3-preschool-school-age-and-adolescent-health)

Youth violence is a significant public health problem affecting thousands of young people each day, including their families, schools, and communities. Youth violence is widespread in the United States and is the third leading cause of death for young people between the ages of 10 and 24. Learn more about youth violence from the CDC's video "What Is Youth Violence?"

Watch the video, and then respond to the following questions.

1. Who experiences youth violence?
2. What are two risk factors for experiencing violence?

Access multimedia content (http://openstax.org/books/population-health/pages/26-3-preschool-school-age-and-adolescent-health)

Part of the CDC's commitment to injury and violence prevention includes efforts to change social norms about youth violence. Watch its video "Voices of Change: Engage Youth, Prevent Violence" to see how the University of Louisville Youth Violence Prevention Research Center (YVPRC) engages and empowers local youth as subject experts in their own community.

Watch the video, and then respond to the following question.

1. What are two strategies taught to prevent violence?

Integration of Sociocultural and Linguistically Responsive Interventions for Preschool, School-Age, and Adolescent Health

Promoting the health and well-being of this population requires consideration of sociocultural factors, such as race, ethnicity, culture, and language. Various challenges and considerations are involved in implementing sociocultural and linguistically responsive interventions in this population. This section provides examples of successful programs that effectively integrate responsiveness into health interventions. Nurses can improve health outcomes and reduce health disparities for children and adolescents from diverse backgrounds through integrations such as these.

Caregivers who identify as BIPOC are less likely than non-Hispanic White parents to report their children receive high-quality health care. Examples of structural inequities these clients experience include racism, xenophobia, and poverty. Okoniweski et al. (2022) reported that children whose caregivers' primary language is not English face additional disparities and are less likely to have a regular source of medical care. These indications strengthen the need for sociocultural and linguistic interventions to promote better pediatric outcomes.

Sociocultural Interventions

The cigarette smoking rate among Alaska Native adults was 36 percent from 2018 to 2020 (Alaska Department of Health, 2022). This provides Alaska with a unique challenge to protect children from the harmful effects of secondhand smoke exposure. The Alaska Tobacco Prevention and Control Program (TPC) has promoted smoke-free environments through various interventions geared toward the Alaska Native population. The Alaska Tobacco Quit Line provides resources for tobacco cessation. TPC has partnered with the American Lung Association and the Alaska Tobacco Control Alliance to promote smoke-free unit housing and promote policies to prohibit the use of tobacco products on school properties (ODPHP, 2021). Additional partnerships have occurred between TPC and the Alaska Native Tribal Health Consortium to coordinate outreach efforts in rural communities, where as many as 4 in 10 adults smoke (ODPHP, 2021). Rural community health workers, who may reach citizens via boat or snowmobile, provide adults with tobacco cessation education and describe the hazards of secondhand smoke in children.

The CDC's (2023f) Adolescent Health: What Works in Schools (https://openstax.org/r/whatworks) program is a school-based health approach to improve health behaviors and experiences, support mental health, and reduce suicidality. Children and adolescents who identify as LGBTQIA+ are particularly at risk for facing social stigma about their sexual choices or identities, which places their health at risk. Some specific interventions identified by this CDC program to help this population are establishing gender and sexuality alliances (GSA), identifying safe spaces, and implementing anti-harassment policies (CDC, 2023f).

Linguistically Responsive Interventions

The Centers for Medicare and Medicaid Services (CMS) released an updated framework to advance health equity, expand health coverage, and improve health outcomes for people covered by Medicare, Medicaid, CHIP, and the health insurance marketplaces. This framework identified the need to advance language access and health literacy and provide culturally tailored services to all groups. In particular, one priority in the CMS Framework for Health Equity 2022–2032 states, "Each person CMS serves should receive effective, understandable, and respectful care that is responsive to their preferred languages or dialects, health literacy, cultural health beliefs and practices, traditions, and other communication needs" (CMS, 2022, p. 25). The government's dedication to being linguistically responsive can also be seen regarding child and youth behavioral health crisis care. The Substance Abuse and Mental Health Services Administration's (SAMHSA, 2022) National Guidelines for Child and Youth Behavioral Health Crisis Care also requires incorporating linguistically responsive care as one of its core values for youth crisis care. This includes care regarding LGBTQIA+ youth who may be unable to access the mental health care they need to prevent suicide (SAMHSA, 2022).

Nurses may use several interventions to overcome language barriers with clients who do not speak English. These typically involve in-person interpreters or interpreter services via telephone. Jackson and Mixer (2017) described the difficulty Spanish-speaking caregivers of clients in acute care experienced and proposed using the UTalk app on an Apple iPad as a solution. The app's interface design included a split-screen layout with an English statement on one side of the device (facing the nurse) and the same statement in Spanish flipped 180° on the other side of the screen (facing the Spanish-speaking client or family member). The app included many statements or closed-ended questions that could be used for basic communication such as "The interpreter has been called," "Do you need anything to eat?" and "Are you having any pain?" Participants using the app reported facilitation of communication. They indicated that teaching the caregivers and clients how to use the app was an icebreaker and that it helped nurses develop relationships with the families (Jackson & Mixer, 2017).

26.4 Adult Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 26.4.1 Recognize major diseases affecting adults.
- 26.4.2 Compare health outcomes between adults.
- 26.4.3 Create evidence-based educational interventions to promote self-care for health promotion, illness prevention, and illness management of adults.
- 26.4.4 Examine major risk factors influencing the health of adults.
- 26.4.5 Identify Healthy People 2030 goals established for adults.
- 26.4.6 Describe health promotion and disease prevention actions applicable to adults.
- 26.4.7 Discuss evidence-based strategies for integrating sociocultural and linguistically responsive health promotion and disease prevention interventions in the clinical practice of adults.

The prevention of chronic diseases has become a major public health concern. Cardiovascular disease, diabetes, and cancer are leading causes of death and disability in adults globally; in the United States, one in three deaths each year occurs due to heart disease, stroke, or other cardiovascular diseases (National Center for Chronic Disease Prevention and Health Promotion, 2022c). The good news is that many of these chronic diseases are preventable through efforts that target lifestyle modification and appropriate health behaviors. Therefore, promoting and maintaining good health practices among adults is critical for preventing chronic diseases and improving quality of life. While chronic diseases are a significant concern for adults, communicable diseases also substantially threaten public health. Influenza, tuberculosis, and STIs are only some illnesses caused by infectious agents that may spread from person to person. The COVID-19 pandemic demonstrated the importance of preventing the spread of infection (National Foundation for Infectious Diseases, 2023).

This section discusses various aspects of adult health promotion and disease prevention, including healthy lifestyle habits, recommended screenings and immunizations, the impact of communicable and noncommunicable diseases on vulnerable populations, and the importance of cultural competence in addressing these health issues. By understanding and implementing these activities into their lives, adults can protect themselves and their communities while also improving their overall health and well-being.

Major Diseases Affecting Adults

In the United States, several major diseases affect adults, leading to significant mortality (see Table 26.10). These diseases cause physical limitations, significantly impact quality of life, and increase health care costs. Nurses must understand the causes, risk factors, and preventive measures associated with these diseases to help reduce their burden on the population and promote healthy living. Of these 13 diseases, 11 are noncommunicable diseases.

	Mortality		
	Cause of Death Rank	Number of Deaths	Deaths per 100,000 Population
Noncommunicable			
Diseases of heart	1	694,619	278.1
Malignant neoplasms	2	603,484	241.6
Accidents	4	215,485	86.3
Cerebrovascular disease	5	162,577	65.1
Chronic lower respiratory diseases	6	142,136	56.9
Alzheimer's disease	7	119,398	47.8
Diabetes	8	103,135	41.3
Chronic liver disease and cirrhosis	9	56,576	22.7

TABLE 26.10 Top Causes of Death for Adults in the United States, 2021 (See National Center for Health Statistics, 2021.)

	Mortality		
	Cause of Death Rank	Number of Deaths	Deaths per 100,000 Population
Nephritis, nephrotic syndrome, and nephrosis	10	54,283	21.7
Intentional self-harm (suicide)	11	45,229	18.1
Essential hypertension and hypertensive renal disease	12	42,806	17.1
Communicable			
COVID-19	3	416,252	166.7
Influenza and pneumonia	13	41,653	16.7

TABLE 26.10 Top Causes of Death for Adults in the United States, 2021 (See National Center for Health Statistics, 2021.)

Coronary Artery Disease

Coronary artery disease (CAD), also called coronary heart disease or ischemic heart disease (CDC, 2021j), occurs when plaque buildup in the wall of the coronary arteries (atherosclerosis) decreases blood supply to the heart. Risk factors for CAD include being overweight, eating poorly, and smoking tobacco. CAD also has genetic connections, particularly a family history of heart disease before age 50. For many, the first indicator of CAD is a heart attack.

Cancer

Cancer occurs when abnormal cells divide out of control and can invade other tissues (CDC, 2021f). Cancer cells can also spread to other body parts through the blood and lymph symptoms. There are more than 100 different types of cancer; some are preventable, and others are not. One of every five deaths in the United States is due to cancer (U.S. Cancer Statistics Working Group, 2022). One leading cause of cancer is smoking. In addition to lung cancer, smoking can cause cancer in the blood, bladder, cervix, colon and rectum, esophagus, kidney, larynx, liver, mouth and throat, pancreas, and stomach. Lowering one's cancer risk can occur through making healthier choices such as maintaining a healthy weight, limiting alcohol intake, and protecting the skin from UV exposure.

Cerebrovascular Disease

Cerebrovascular disease, or a stroke, is caused when something blocks the blood supply to a part of the brain or a blood vessel in the brain ruptures (CDC, 2023i). Regardless of the cause, parts of the brain become damaged or die, leading to problems with movements, memories, thoughts, emotions, language, or other body functions. Strokes can occur at any age, but some people are at greater risk. Those with a history of a previous stroke or transient ischemic attack (TIA), hypertension, high cholesterol, coronary artery disease, atrial fibrillation, diabetes, obesity, and sickle cell disease are at much higher risk of having a stroke. Some lifestyle choices that increase the risk of stroke include (CDC, 2023j):

- a diet high in saturated fats and cholesterol,
- a lack of enough physical activity,
- too much alcohol consumption, and
- tobacco use.

There are also genetic components to stroke risk and factors related to age, sex, race, and ethnicity. Individuals aged 55 and older are more likely to have a stroke, and strokes are more common in women than men. Those who are non-Hispanic Black or Pacific Islander are more likely to die from a stroke than non-Hispanic White people, Hispanic people, AIAN, and Asians. Black people have a higher risk of having a first stroke and are more likely to die from a stroke than White people (CDC, 2023j).

Chronic Obstructive Pulmonary Disease

Chronic obstructive pulmonary disease (COPD) is a group of diseases that block airflow and cause other breathing-related problems. COPD includes emphysema and chronic bronchitis. Tobacco smoking is the primary cause of COPD; other causes are related to exposure to air pollutants in the home and workplace, genetic factors, and a

history of respiratory infections. The CDC (2021h) reports that women; people aged 65 and older; AIAN and multiracial non-Hispanic people; those who are unemployed, retired, or unable to work; those with less than a high school education; those who are divorced, widowed, or separated; current or former smokers; and those with a history of asthma are more likely to develop COPD.

Alzheimer's Disease

Alzheimer's disease is the most common type of dementia. It begins with mild memory loss and then progresses to the inability to hold a conversation or respond to the environment appropriately, causing severe difficulties in performing activities of daily living (CDC, 2020d). Alzheimer's disease impacts the part of the brain that controls thoughts, memories, and language. Much remains to be learned about this disease. The best-known risk factor for developing Alzheimer's disease is age. Genetics may also play a role in its development. Findings suggest that a healthy lifestyle could decrease the risk of developing Alzheimer's disease (CDC, 2020d).

ALZHEIMER'S DISEASE—GENES DO NOT EQUAL DESTINY

In the Aging and Health Matters podcast episode "Alzheimer's Disease—Genes Do Not Equal Destiny (https://openstax.org/r/toolscdc)," host Montrece Ransom speaks with CDC's Scott Bowen about research that found a healthy lifestyle can help reduce the risk for Alzheimer's disease (CDC, 2022o).

Listen to the podcast or read the transcript (https://openstax.org/r/medialibrary), and then respond to the following questions.

1. What were the new findings from the research?
2. What were the four healthy lifestyles that helped to prevent dementias in the research?

Diabetes

Diabetes is a chronic health condition caused by the body either not making enough insulin or not using insulin effectively. When either of these occurs, too much blood sugar remains in the bloodstream (CDC, 2022e). Over time, the increased blood sugar can lead to serious health problems, including heart disease, vision difficulties, and kidney disease. More than one in three adults in the United States have prediabetes, with blood sugar levels higher than normal but not high enough to develop type 2 diabetes, and over 80 percent of adults do not know they have prediabetes (CDC, 2022j). Prediabetes can increase the risk of heart disease and stroke and can be viewed as an opportunity to prevent type 2 diabetes. See Figure 26.3 for more about prediabetes.

The three types of diabetes are type 1 diabetes, type 2 diabetes, and gestational diabetes. Gestational diabetes was discussed briefly earlier in this chapter. In type 1 diabetes, the body does not make enough insulin, perhaps due to an immune reaction. Risk factors for this type of diabetes are family history and age, as it usually develops in children, teens, or young adults. White people in the United States are more likely to develop type 1 diabetes than Black or Hispanic people (CDC, 2022j), and there is no known way to prevent it. In type 2 diabetes, the pancreas makes less insulin than previously, and the body becomes resistant to it. Type 2 diabetes can sometimes be prevented with healthy diet and activity. A variety of factors put a person at risk for type 2 diabetes, including:

- having prediabetes;
- being overweight;
- being age 45 or older;
- having a direct relative with type 2 diabetes;
- being physically active less than three times weekly;
- having gestational diabetes or giving birth to a baby weighing over 9 pounds; and
- being African American, Hispanic, or AIAN (CDC, 2022e).

Also, more than half of women with PCOS develop type 2 diabetes by age 40, likely related to insulin resistance that occurs with PCOS (CDC, 2022w). Diabetes is the primary cause of kidney failure, lower-limb amputations, and adult blindness. The number of adults diagnosed with diabetes has more than doubled over the last 20 years. Of the adult U.S. population, 38 percent have prediabetes (CDC, 2022j).

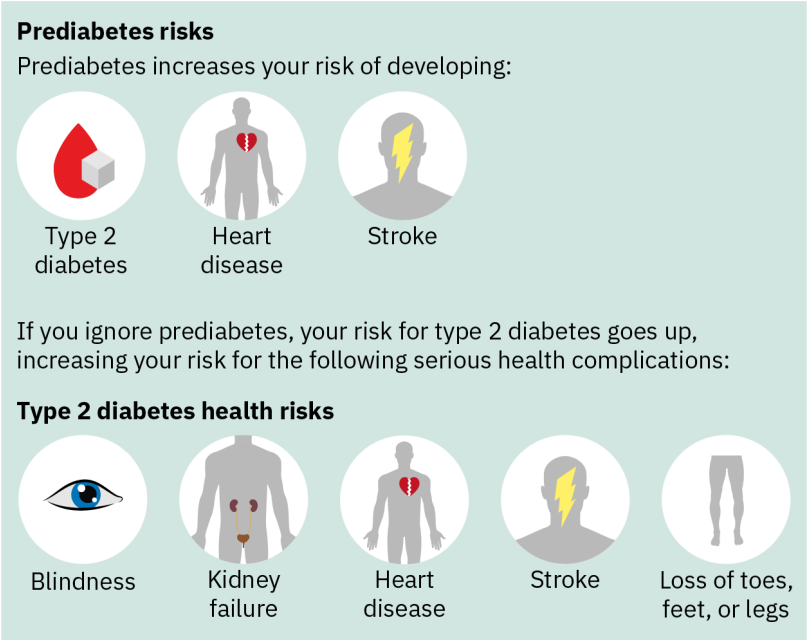


FIGURE 26.3 The Prediabetes: Could It Be You? infographic describes statistics, the definition of, risks for, and health risks of prediabetes. (See CDC, 2022e; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Chronic Liver Disease

Chronic liver disease is a progressive deterioration of liver function, which includes the production of clotting factors and other proteins, detoxification of harmful metabolism products, and bile excretion. Cirrhosis is the final stage of chronic liver disease. The most common causes of chronic liver disease are alcoholic liver disease, non-alcoholic fatty liver disease, chronic viral hepatitis, and certain genetic and autoimmune causes. Other causes include use of certain drugs (amiodarone, isoniazid, methotrexate, phenytoin, and nitrofurantoin) and the vascular Budd-Chiari syndrome (Sharma & Nagalli, 2022). Of the causes, it is possible to deter chronic liver disease by limiting the use of over-the-counter pain medications and consumption of high-fat foods and alcohol and reducing the risk of developing hepatitis through vaccination, safer sex practices, and good hygiene.

Chronic Kidney Disease

Chronic kidney disease involves the damage of kidneys such that they cannot filter blood to remove wastes, toxins, and excess fluid. This excess fluid and waste remain in the body, leading to heart disease and stroke. The kidneys also help control blood pressure, stimulate the production of red blood cells, keep the bones healthy, and regulate important chemicals such as sodium, potassium, and calcium (CDC, 2022c). Risk factors for chronic kidney disease include diabetes, high blood pressure, heart disease, a family history of chronic kidney disease, and obesity. Following a healthy lifestyle and addressing any of the conditions that are risk factors can help decrease the effects or prevent chronic kidney disease.

Communicable Diseases

Two of the 10 diseases in Table 26.10 are communicable diseases (influenza and COVID-19). Both are respiratory in nature, with similar symptoms, and are easily transmitted (CDC, 2022p). See Pandemics and Infectious Disease Outbreaks for more information.

Comparison of Health Outcomes Between Adults

When comparing health outcomes between adults, many factors must be considered. SDOH, discussed in Social Determinants Affecting Health Outcomes, including economic stability, education access and quality, health care access and quality, neighborhood and built environment, and social and community context, are only a few of these factors. Others include age, gender, race, and lifestyle behaviors.

The following key health outcomes are commonly compared in adults; see The Health of the Population for more information:

- Overall health status: An individual's self-perceived health status ranges from excellent to poor. In the United

States, in 2019, 11.2 percent of people reported fair or poor health status. Trends related to age group and economic stability can be viewed on the CDC Health Status page (https://openstax.org/r/cdcnchshustopics).

- Chronic disease prevalence: This refers to the proportion of a population with chronic disease at a point in time. Data from the 2018 National Health Interview Survey (NHIS) found that 51.8 percent of the U.S. adult population had been diagnosed with at least one of the 10 chronic conditions previously discussed, and 27.2 percent had more than one of them. Data broken down into categories of sex, race/ethnicity, age, health insurance coverage, and location of residence (urban versus rural) can be viewed at Prevalence of Multiple Chronic Conditions Among U.S. Adults, 2018 (https://openstax.org/r/cdcpcd) (Boersma et al., 2020).
- Mortality rates: These are the number of deaths in a population, typically measured as the number of deaths per 100,000 individuals. The provisional mortality data in the United States in 2022 indicated that overall death rates were highest among males, older adults, and Black persons. In 2022, the highest weekly numbers of overall deaths and COVID-19-associated deaths were in January and December. Overall death and COVID-19-associated death data by age group, sex, and race and ethnicity can be viewed at Provisional Mortality Data — United States, 2022 (https://openstax.org/r/cdcmmwr) (Ahmad et al., 2023).
- Quality of life: Health-related quality of life (HRQOL) is an individual's or a group's perceived physical and mental health over time. On the individual level, HRQOL involves perceptions of physical and mental health and their correlates, including health risks and conditions, functional status, social support, and socioeconomic status. On the community level, HRQOL includes community-level resources, conditions, policies, and practices that can influence a population's functional status and perceptions of health (CDC, 2018). The County Health Rankings (https://openstax.org/r/healthrankings) (University of Wisconsin Population Health Institute, 2023) model of health indicates measures that influence how well and how long people live. In this model, the following measures connect to quality of life:
  - Poor or fair health
  - Poor physical health days
  - Poor mental health days
  - LBW
  - Frequent physical distress
  - Frequent mental distress
  - Diabetes prevalence
  - HIV prevalence

In 2020, 12 percent of U.S. adults reported that they considered themselves in fair or poor health, that their physical health was not good on 3 of the previous 30 days, and that their mental health was not good on 4.4 of the previous 30 days. The percentage of live births with LBW (under 2,500 grams) was 8 percent. Also, 9 percent of adults were living with a diagnosis of diabetes, and 380 of every 100,000 residents aged 13 and over were living with a diagnosis of HIV (University of Wisconsin Population Health Institute, 2023).

Educational Interventions to Promote Self-Care in Adults

The WHO (2022d, para. 2) defines self-care as "the ability of individuals, families, and communities to promote their own health, prevent disease, maintain health, and to cope with illness and disability with or without the support of a health professional." The concept of self-care recognizes individuals as active participants in managing their health in various areas, including health promotion, disease prevention and control, self-medication, providing care to dependent persons, and rehabilitation, including palliative care. Self-care is not intended to replace the need for the formal health care system but allows a different option to receive health care.

Some examples of educational interventions that may be used to promote self-care in the adult population include:

- Health education classes: can provide individuals or groups with information on topics such as healthy eating, physical activity, stress management, and disease prevention. Classes can be offered in various settings, such as community centers, workplaces, or health care facilities.
- Self-help materials: brochures, pamphlets, and books can provide individuals with information to maintain good health and prevent illness and can be made available in waiting rooms, libraries, and other public spaces.
- Workshops: can focus on learning practical self-care skills, such yoga or healthy cooking; may be led by health care professionals, community leaders, or trained volunteers.
- Mobile health applications (apps): can provide individuals with personalized health information, reminders,

and tracking tools to help them maintain healthy habits. Apps are downloaded on smartphones and are available at any time.
- Social support groups: can provide individuals with the emotional support and encouragement needed to maintain healthy habits; can be led by trained facilitators and can meet in-person or virtually.

The WHO's Guideline on Self-Care Interventions for Health and Well-Being (https://openstax.org/r/ncbibooks) offers suggestions for many health situations for adults. These guidelines stress the importance of tailoring these interventions to the needs and preferences of the target population to ensure maximum effectiveness (WHO, 2022d). See Planning Community Health Education for more information.

Healthy People 2030 Goals for Adults

Several Healthy People 2030 goals specifically target the health of the adult population. Healthy People 2030 divides these into goals for males and females. The overarching goal is to "improve health and well-being" (ODPHP, n.d.-d, para. 1).

The difference in the wording of the Healthy People 2030 goals for each sex is likely because males die an average of 5 years earlier than females (ODPHP, n.d.-d). According to the NCHS (2022),

> Life expectancy at birth for females in the United States dropped 0.8 years from 79.9 years in 2020 to 79.1 in 2021, while life expectancy for males dropped one full year, from 74.2 years in 2020 to 73.2 in 2021. The report shows the disparity in life expectancy between males and females grew in 2021 from 5.7 years in 2020 to 5.9 years in 2021. From 2000 to 2010, this disparity had narrowed to 4.8 years, but gradually increased from 2010 to 2019 and is now the largest gap since 1996. (para. 4)

Males are also at higher risk for some serious health conditions, such as heart disease, lung cancer, and HIV (ODPHP, n.d.-d). Specific Healthy People 2030 objectives for males are related to prostate cancer (reduce the prostate cancer death rate) and sexually transmitted infections (reduce the syphilis rate in males who have sex with males and reduce gonorrhea rates in male adolescents and young males) (ODPHP, n.d.-d).

Females also have unique health issues, such as menopause, and some health issues that may affect both sexes can pose unique challenges for females (ODPHP, n.d.-i). Females are also at risk for breast cancer and cervical cancer. There are several specific Healthy People 2030 Objectives for females, including:

- Reduce iron deficiency in females aged 12 to 49 years
- Reduce the female breast cancer death rate
- Increase the proportion of females who get screened for breast cancer
- Increase the proportion of females who get screened for cervical cancer
- Increase the proportion of females at increased risk who get genetic counseling for breast and/or ovarian cancer
- Reduce infections cause by *Listeria*
- Reduce the proportion of adults with osteoporosis
- Reduce pelvic inflammatory disease in female adolescents and young females
- Increase the proportion of sexually active female adolescents and young females who get screened for chlamydia
- Reduce the syphilis rate in females

Other goals target adult health, even though Healthy People 2030 does not specifically group these into such a category. Table 26.11 provides some examples.

Category	Example of Healthy People 2030 Objective
Physical activity	Increase the proportion of adults who meet the guidelines for aerobic physical activity and muscle-strengthening activity from 25.2% in 2020 to 29.7% in 2030.
Nutrition and healthy eating	Reduce the proportion of adults with obesity from 41.8% between 2017 and 2020 to 36% in 2030.

TABLE 26.11 Examples of Healthy People 2030 Objectives Related to Adult Health (See ODPHP, n.d.-d, n.d.-i.)

Category	Example of Healthy People 2030 Objective
Tobacco use	Reduce current tobacco use in adults from 19.3% in 2021 to 17.4% in 2030.
Drug and alcohol use	Reduce the proportion of people who had alcohol use disorder in the past year from 5.3% in 2019 to 3.9% in 2030.
Mental health	Reduce the suicide rate from 14.2 suicides per 100,000 population in 2018 to 12.8 per 100,000 population in 2030.
Chronic diseases	Reduce the number of diabetes cases diagnosed yearly from 5.5 new cases of diabetes per 1,000 adults in 2019–2021 to 4.8 per 1,000 adults in 2030.

TABLE 26.11 Examples of Healthy People 2030 Objectives Related to Adult Health (See ODPHP, n.d.-d, n.d.-i.)

These Healthy People 2030 goals and objectives reflect the importance of promoting healthy behaviors, preventing chronic diseases, and improving mental health in adults. This can be achieved by addressing some of the SDOH, mentioned previously in this chapter and in Social Determinants Affecting Health Outcomes. For instance, increasing access to healthy, safe, and affordable food can improve the nutrition and health of adults (Figure 26.4). There are a variety of factors contributing to access of such foods (ODPHP, n.d.-e):

- Availability: The location, number, variety, and quality of grocery stores, food services, and farmers markets affects the availability of healthy foods in the community.
- Cost: The cost of foods affects which items adults purchase. The availability of produce and other healthier items can be limited, and they are often more expensive at convenience stores or smaller markets.
- Transportation: Access to reliable transportation can make it easier to travel for food and gives adults more choice in where they obtain food. Less access to reliable transportation can be a challenge for those living in rural communities.
- Community Programs: Local participation in community food support programs, such as farmers markets that accept payment using Supplemental Nutrition Assistance Program (SNAP) benefits, can encourage healthier food choices.



FIGURE 26.4 A USDA farmers market provides a sample of what $10 of SNAP benefits might purchase. (credit: Lance Cheung/USDA/Flickr, Public Domain)

Health Promotion and Disease Prevention Activities to Improve the Health of Adults

Many health promotion activities for adults focus on addressing the short list of risk behaviors that lead to chronic

illness; these include tobacco use, poor nutrition, physical inactivity, and excessive alcohol use. By engaging in health promotion activities, adults can improve their health, reduce their risk of chronic diseases, and create supportive environments that make healthy choices easier and more accessible. Mitigation of 7 of the 10 diseases shown in Table 26.10 can occur by addressing these behaviors. The CDC's National Center for Chronic Disease Prevention and Health Promotion (2022c) provides detailed approaches to address these behaviors, including:

- helping people who smoke quit,
- increasing access to healthy foods and physical activity,
- preventing excessive alcohol use,
- promoting lifestyle change and disease management,
- promoting community water fluoridation,
- promoting mental health and emotional well-being, and
- promoting better sleep.

Public health policies and programs can also play a critical role in promoting health and improving the overall well-being of adults. Many success stories have resulted from health promotion activities to address the risk behaviors connected to the United States' common chronic illnesses:

- Healthy Foods in Alabama Corner Stores Help Fight Food Deserts (https://openstax.org/r/nccdsuccessstories)
- Coeur d'Alene Tribe Gets More Native Americans Moving with Pow Wow Sweat (https://openstax.org/r/cdcnccdsuccessstories)
- Tiffany R.'s Story: Tips from Former Smokers® (https://openstax.org/r/tobaccotips)
- Check Your Drinking. Make a Plan to Drink Less (https://openstax.org/r/checkyourdrinking)
- Beth's Experience as a Breathe Well, Live Well Educator (https://openstax.org/r/experience)
- How Right Now (https://openstax.org/r/howrightnow)

Adulthood comes with many responsibilities and increased productivity. From the ages of 18 through 65 years, significant biological, physiological, social, and psychological changes occur (Mayo Clinic, 2023). During this time, adults develop relationships with significant others, marriages or partnerships, families, and careers while making lifelong decisions. All of this impacts the health of adults.

Nurses are integral to fostering health promotion and disease prevention in U.S. adults. Along with individual, client-centered care, the nurse may need to provide family-centered and workplace health promotion and disease prevention to best address the health of this population. Nurses often conduct health assessments to identify risk factors and develop individualized, family, and population plans. This may include assessing lifestyle factors or screening for chronic diseases. Nurses provide education to individual and adult populations on healthy lifestyle behaviors, disease prevention, and self-care management. Nurses perform preventative measures to detect and prevent diseases, such as administering immunizations, performing screenings, and providing counseling. Nurses coordinate care for adults with complex health needs through referrals to appropriate health care providers, community resources, or social services to assist in meeting their needs. Finally, nurses advocate for the adult population by promoting policies and environments that support health and prevent disease, such as working to address SDOH that contribute to health disparities (Melariri et al., 2022).

Primary Prevention

Primary prevention involves taking measures to prevent health problems or injuries before they happen. A variety of primary prevention strategies can be used in the adult population. Some of these include:

- Immunizations: Immunizations are a highly effective mechanism of preventing infectious diseases such as influenza, pneumonia, COVID-19, and hepatitis B. The HPV vaccine can prevent several different types of cancer (CDC, 2023e). See the CDC's 2023 Recommended Adult Immunization Schedule (https://openstax.org/r/cdcadult) for specific recommendations for adults (CDC, 2023a).
- Health education: Education can alter behaviors that could lead to disease or injury and can increase resistance to disease or injury should exposure occur. Some examples of health education for the adult population include nutrition, regular exercise, avoidance of smoking, workplace safety, safe sex practices, and sun safety (Figure 26.5).
- Advocacy: Nurses can advocate for legislation and enforcement to ban or control the use of hazardous products, such as asbestos, or to mandate safe and healthy practices, such as the use of seat belts.

Averting musculoskeletal disorders such as lower back pain, neck and shoulder pain, wrist strain, and tendonitis is one example of primary prevention. These disorders are among the leading causes of work-related disability associated with prescription opioid use that can progress into substance use disorder (Le & Rosen, 2021). Primary prevention can address musculoskeletal disorders and implement proper ergonomics in the workplace. For example, nurses can educate workers to lift with their arm and leg muscles rather than their back. Implementing a work site stretch and flex program can prepare the employee's body for the shift ahead (ResponsAble Safety Staffing, 2018). Personal protective equipment (PPE) designed to reduce the risk of injury, such as shoulder and knee pads, can prevent injury. These strategies can prevent the progression to a substance use disorder and reduce workers' compensation, health care, social security, and other disability costs associated with work-related injuries (Le & Rosen, 2021). Caring Across Practice Settings discusses occupational health in more detail.



FIGURE 26.5 This image illustrates an employee fitness center where a number of activities are provided for employees' health, including treadmills for aerobic exercise. (credit: Amanda Mills/CDC, Public Domain)

Secondary Prevention

Secondary prevention is critical for detecting and treating diseases, before they cause significant harm. Screening tests, diagnostic tests, and routine health exams are essential for early detection and treatment of diseases. The 2023 Adult Preventive Health Guidelines: Ages 19 through 64 Years (https://openstax.org/r/highmarkprc) provides specific information (Highmark, 2023a). Examples of secondary prevention strategies for adults include:

- Cancer screening: Screenings for cancer, such as mammograms, colonoscopies, and Pap tests, can detect cancers at its earliest stages, when treatment is most effective.
- Cardiovascular disease screenings: Regular blood pressure and cholesterol screenings can detect early signs of cardiovascular disease, allowing for early intervention and treatment.
- Diabetes screenings: Screening for diabetes with a simple blood test can detect the disease or prediabetes early, allowing for early intervention and treatment to prevent progression and complications.
- Routine health exams: Regular checkups with a health care provider can help identify health problems before they become serious.
- Skin cancer screenings: Routine skin cancer screenings can detect early signs of skin cancer.
- STI screenings: Regular STI screenings can detect early signs of infection, allowing for early treatment, prevention of spread, and prevention of complications
- Osteoporosis screenings: Regular bone density screenings can detect early signs of osteoporosis, allowing for early intervention and treatment to prevent fractures.

The HPV test, which looks for the virus that can cause cell changes on the cervix, and the Pap test, which looks for

precancers or cell changes on the cervix that, if untreated, might become cervical cancer, are the two tests that can help either prevent cervical cancer or find it early in adult women. Jasmine's Story: Preventing Cervical Cancer (https://openstax.org/r/swxzftsfstq) provides one person's experience with this screening.

The CDC has also developed an interactive experience, called Talk to Nathan (https://openstax.org/r/cdccancer), that provides a conversation with an avatar to help clients determine if they should be screened for prostate cancer. Another interactive experience is provided to health care providers to allow them to practice helping clients make decisions about prostate cancer screening and treatment (CDC, 2022m).

Tertiary Prevention

Tertiary prevention focuses on preventing further complications and improving the quality of life for adults who are living with a chronic disease or condition. Some examples of tertiary prevention strategies for adults include:

- Disease management programs: Disease management or disease self-management programs are designed to help adults with chronic diseases manage their condition and prevent progression or complications. They may include education, lifestyle changes, medication management, and support groups.
- Rehabilitation programs: Rehabilitation programs, such as physical therapy and occupational therapy, can help adults regain strength and function following an illness or injury.
- Chronic pain management: Chronic pain management programs can help adults manage their pain and improve their quality of life. These may include medication management, therapies, and psychological support.
- Palliative care: Palliative care is specialized medical care for those living with a serious illness, such as cancer or heart failure. It is meant to provide symptom care to allow them to focus on their quality of life. Palliative care can be provided along with curative treatment (National Institute on Aging, 2021).
- End-of-life care: End-of-life care is often also known as hospice care. It focuses on the care, comfort, and quality of life of a person with a serious illness who is approaching the end of life. Attempts to cure a person's illness are no longer used (National Institute on Aging, 2021).
- Mental health support: Mental health support may include therapy and support groups to assist adults and their families in coping with emotional and psychological effects of diseases.

The CDC's National Diabetes Prevention Program was created in 2010 to address the increasing burden of prediabetes and type 2 diabetes on adults in the United States. Partnerships between public and private organizations led to the development of evidence-based, cost-effective interventions to help prevent type 2 diabetes in communities. The Lifestyle Change Program (https://openstax.org/r/cdcdiabetes) is one result of this effort. It is designed for adults who are overweight, not yet diagnosed with type 1 or type 2 diabetes, and not currently pregnant but either are diagnosed with prediabetes, were previously diagnosed with gestational diabetes, or have high-risk results on the CDC's prediabetes risk test. The program involves a CDC-approved curriculum, a lifestyle coach, and a support group of people with similar goals and challenges (CDC, 2022u).

Integration of Sociocultural and Linguistically Responsive Interventions for Adults

A "one size fits all" approach to health promotion and disease prevention may not be effective for all clients. Sociocultural and linguistic factors such as language barriers, cultural beliefs, and SDOH can significantly influence an individual's health outcomes. Therefore, integrating sociocultural and linguistically responsive interventions into health care is crucial for promoting health equity and improving health outcomes for all individuals, including adults. This section explores the importance of integrating sociocultural and linguistically responsive interventions for adults and some examples of how nurses can effectively implement these interventions into practice.

Sociocultural Interventions

By incorporating socioculturally responsive components into the design of health promotion and disease prevention programs, nursing interventions can more effectively engage and promote healthy behaviors among the adult population. Immigrant adults are one specific population that may benefit from such integration. Immigrants face unique cultural barriers to participation in mainstream health promotion programs. These include a lack of access to health care for a variety of reasons, including ineligibility for certain programs, limited support for culturally appropriate health care services, lack of knowledge of the U.S. health care system, distrust of the U.S. health care system, and fears related to deportation with the use of public services (Ali et al., 2021). Other barriers may involve specific customs and unique cultural or religious understandings of health and disease. U.S. immigrants are more

likely to be unaware of a chronic disease, such as hypertension, and have lower treatment rates. Ali et al. (2021) determined that while modifiable lifestyle behavioral risk factors must be the common target for hypertension reduction interventions, additional factors should be considered in immigrant communities. These factors include:

- gender roles,
- perceptions about physical activity,
- demanding work schedules,
- neighborhood barriers to healthy living, and
- limited physical and financial accessibility to appropriate spaces for healthy activities.

For example, Oshunluyi et al. (2020) described group-based culturally adapted educational sessions on hypertension for African immigrants that incorporated culturally appropriate storytelling. Ma et al. (2020) described using local libraries, churches, and homes to provide group-based culturally adapted education sessions to Filipino Americans at risk of hypertension. Family members have been shown to have a very strong role in impacting sociocultural and economic factors related to immigrant health and behavior change (Ali et al., 2021). Therefore, family members have been successful as change agents in this population.

Linguistically Responsive Interventions

While sociocultural responsiveness as a whole is imperative in the design of health promotion and disease prevention programs for adults, there is a specific need for linguistic responsive interventions. Kling et al. (2018) described using open, multipurpose rooms inside park recreation centers for group-based multilingual fitness classes. In the classes, five instructors were Hispanic, and four were non-Hispanic Black. Six instructors led the class in English, one led in Spanish, and one led in a mixture of English and Spanish.

26.5 Older Adult Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 26.5.1 Recognize major diseases affecting older adults.
- 26.5.2 Examine major risk factors influencing the health of older adults.
- 26.5.3 Create educational interventions to promote self-care for health promotion, illness prevention, and illness management of older adults.
- 26.5.4 Identify Healthy People 2030 goals established for older adults.
- 26.5.5 Describe health promotion and disease prevention actions designed to improve the health of older adults.
- 26.5.6 Discuss strategies for integrating sociocultural and linguistically responsive health promotion and disease prevention interventions in clinical practice of older adults.

Thanks to advances in technology, improvements in health care services, interventions in public health, and research on the utilization of health services, people are living longer and healthier lives. Much improvement lies in reducing infectious diseases, which were major killers at the turn of the 20th century. U.S. life expectancy increased from 48.3 years for women and 46.3 years for men in 1900 to 79.3 years and 74.1 years, respectively, in 2000. In 2019, Americans' life expectancy at birth was 81.4 years for women and 76.3 years for men (NCHS, 2023a). Since 2020, however, drops in life expectancy have occurred in the United States. In 2020, life expectancy at birth for women was 79.9 years and dropped further to 79.1 years in 2021. In 2020, life expectancy at birth for men was 74.2 years and dropped to 73.2 years in 2021 (NCHS, 2022b). These declines are largely due to the COVID-19 pandemic and drug overdose (NCHS, 2022b). Despite this decrease, the country will see continued growth in the older adult population, comprising those aged 65 and over. In 2030, the projected population will be more than twice as large as it was in 2000, growing from 35 million to 73 million and representing 21 percent of the total U.S. population (Federal Interagency Forum on Aging-Related Statistics, 2020). Also of note, nearly one in four older adults in 2019 were members of racial or ethnic minority populations (Administration on Aging, 2021).

As this group lives longer, society must meet their needs. The NCHS (2023d) reported that in 2021, 22.6 percent of noninstitutionalized persons aged 65 and over were in fair or poor health. In 2019, 16.6 percent of people aged 65 and over had one or more hospital stays. According to the American Health Care Association and the National Center for Assisted Living (AHCA/NCAL, 2023), more than 800,000 Americans reside in assisted living communities. The Administration on Aging (2021) indicated that in 2019, only 1.2 million persons (1 percent of persons aged

65–74, 2 percent aged 75–84, and 8 percent aged 85 and over) lived in nursing homes. In 2022, 20.5 percent of men and 26.7 percent of women aged 65 to 74 lived alone, and 23.8 percent of men and 42.5 percent of women aged 75 and over lived alone (U.S. Census Bureau, 2022). Mechanisms of providing health insurance, supportive environments, healthy communities, and social safety nets, including health care provision, must be in place. Health promotion and disease prevention are essential parts of maintaining the older adult population's health and well-being. Older adults must stay informed about healthy lifestyle choices and work with nurses and other health care professionals to create personalized plans for maintaining good health (Figure 26.6).



FIGURE 26.6 Proper cleaning of fresh, uncooked produce is important when preparing a meal. The client in this photo is thoroughly cleaning carrots and radishes to prevent foodborne illness. (credit: Cade Martin/CDC, Public Domain)

Major Diseases Affecting Older Adults

A variety of diseases affect older adults.

- Heart disease, cancer, and COVID-19 were the leading causes of death among persons ages 65 and over in the United States in 2021.
- Obesity remains an issue for this population.
  - 41.9 percent of noninstitutionalized men aged 65 to 74 in 2015–2018
  - 31.8 percent of noninstitutionalized men aged 75 and over in 2015–2018
  - 45.9 percent of noninstitutionalized women aged 65 to 74 in 2015–2018
  - 36.1 percent of noninstitutionalized women aged 75 and over in 2015–2018
- Hypertension is an even larger issue.
  - 66.7 percent of men aged 65 to 74 in 2015–2018
  - 81.5 percent of men aged 75 and over in 2015–2018
  - 74.3 percent of women aged 65 to 74 in 2015–2018
  - 86 percent of women aged 75 and older in 2015–2018 (NCHS, 2023d)

In 2019, leading chronic conditions for noninstitutionalized older adults included (Administration on Aging, 2021):

- arthritis (48 percent);
- physician-diagnosed and undiagnosed diabetes (29 percent in 2015–2018);
- any cancer (25 percent);
- coronary heart disease (14 percent);
- COPD, emphysema, or chronic bronchitis (10 percent);
- myocardial infarction (9 percent);

- stroke (9 percent in 2017–2018); and
- angina (4 percent).

According to the Federal Interagency Forum on Aging-Related Statistics (2020), in 2015, 7.4 percent of older adult men and 7.5 percent of older adult women not living in nursing homes had dementia.

Arthritis affects about one in every four adults in the United States. Its prevalence increases with age, and it is more common in women than in men, more common among adults with fair/poor health compared to those with excellent/very good health, and less common among adults who meet physical activity recommendations compared to those who are insufficiently active or inactive (CDC, 2021l). The prevalence of this disease is expected to increase, with projections indicating that an estimated 78.4 million adults will have been diagnosed with arthritis by 2040 (Figure 26.7) (CDC, 2021l). U.S. adults with arthritis are more likely to be obese or have diabetes or heart disease than those who do not have arthritis. For instance, 28.8 percent of adults who had arthritis in 2016–2018 were also obese, 47 percent of adults who had arthritis in 2013–2015 also had diabetes, and 49 percent of adults who had arthritis in 2013–2015 also had heart disease (CDC, 2022k).

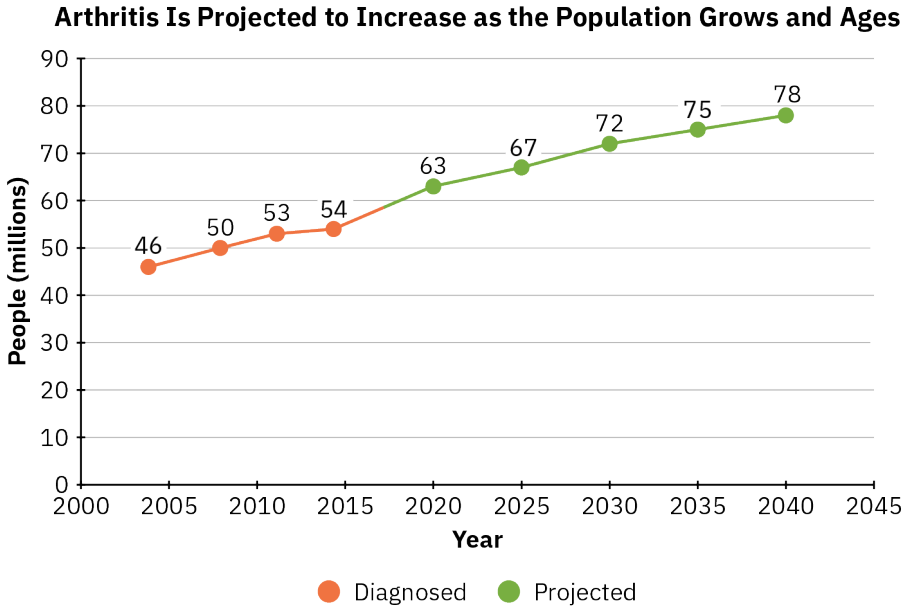


FIGURE 26.7 Estimated and projected number of adults with diagnosed arthritis in the United States. (data source: CDC, 2021l; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license).

While coronary heart disease and stroke were common in the adult population, diseases of the heart and circulatory vessels are also prevalent in the growing population of older adults. As people age, managing these diseases becomes more difficult for older adults with comorbidities related to cognition, sleep, physical balance, and strength factors (CDC, 2019a). Myocardial infarction, or a heart attack, occurs when the flow of oxygen-rich blood to a section of heart muscle becomes blocked, leading to a lack of oxygen, which may damage the heart muscle. Angina, a symptom of CAD, is chest pain or discomfort resulting from an area of heart muscle becoming starved of oxygen-rich blood (CDC, 2019a). The prevalence of coronary heart disease in 2019 was 11.4 percent of White people, 10 percent of Black people, 8.8 percent of Hispanic people, and 6.3 percent of Asians and Pacific Islanders. Prevalence was 16.5 percent for those with no high school diploma and 10.9 percent for those with some college or more.

Risk Factors Influencing the Health of Older Adults

The Federal Interagency Forum on Aging-Related Statistics (2020) considers the following six indicators as health behavior risks: lack of vaccinations, lack of colorectal cancer screenings, poor diet, physical inactivity, obesity, and cigarette smoking. In 2018, about 69 percent of older adults reported receiving an influenza vaccine in the past 12 months. This included 72 percent of non-Hispanic White people compared with only 60.4 percent of non-Hispanic Black people and 63 percent of Hispanic people. The percentage of people aged 50 to 75 who received colorectal cancer screenings increased over the last 8 years. Older adults completing the Healthy Eating Index—2015 had their highest component scores in Whole Fruits, Total Protein Foods, and Seafood and Plant Proteins. Their overall diet quality was 64 out of 100. In 2018, only 14 percent of older adults participated in leisure-time physical activity that

met the Physical Activity Guidelines for Americans. The percentage of older adults with obesity increased from 22 percent in 1988–1994 to 30 percent in 2003–2006 and 40 percent in 2015–2018. Finally, the percentage of older adults who were current cigarette smokers has declined, as in 2018, 10 percent of older adult men and 7 percent of older adult women were current smokers (Federal Interagency Forum on Aging-Related Statistics, 2020).

Polypharmacy, the use of five or more medications, is another risk factor that impacts the health of older adults (WHO, 2019). As the population ages, people are more likely to experience comorbidities that require multiple medications. Older adults are at risk for adverse drug events (ADE) and drug interactions between these multiple medications. The most common ADE in older adults is impaired mobility, which can lead to falls, injuries, or death. Older adults are especially vulnerable due to age-related physiologic changes resulting from the absorption, distribution, metabolism, and elimination of drugs. Polypharmacy, in addition to frailty or any other condition that impacts mobility, markedly increases the risk of mortality (Parulekar & Rogers, 2018).

Sensory loss issues are another important risk factor for older adults. Hearing, vision, and touch can affect one's enjoyment of activities and ability to communicate and stay involved with others (MedlinePlus, 2022). Sensory loss issues can also put the older adult at risk for falls, which can lead to injuries or death. Age-related changes in the ear can lead to balance difficulties. Reduced vision may also lead to injuries, and perception related to touch may be impaired, causing difficulties walking related to a reduced ability to perceive where the body is in relation to the floor (Medline Plus, 2022). Other difficulties related to touch include a reduced ability to detect pressure, which can lead to pressure ulcers, and a reduced sensitivity to pain, including temperature, which could lead to burns.

A fall risk assessment may benefit older adults in the population health setting. The assessment typically includes an initial screening with questions about overall health, history of previous falls, and current issues with balance, standing, and/or walking. It should also include a set of tasks or fall assessment tools to test the older adult's strength, balance, and gait (MedlinePlus, 2021). One common approach to fall assessment is the use of the CDC's (2021i) Stopping Elderly Accidents, Deaths, and Injuries (STEADI) approach. STEADI provides screening, assessment, and intervention guidelines. Particular assessments included in STEADI are:

- Timed Up-and-Go (Tug) test to assess gait,
- 30-Second Chair Stand test to assess strength and balance, and
- 4-Stage Balance test to assess balance.

STEADI Resource Algorithm (https://openstax.org/r/steadi) assessment results illustrate the degree to which an older adult is at risk of falling and may indicate areas (gait, strength, and/or balance) to address.

Ageism, discrimination against older people because of negative and inaccurate stereotyping, is a risk factor for the mental heath of older adults (Weir, 2023). It is so deeply rooted in American societies that it is largely ignored. The negative effects of ageism on older adults' physical and mental well-being include:

- earlier death;
- poorer physical health, affecting sexual/reproductive health and the ability to recover from disabiity;
- increased risky health behaviors;
- poorer mental health, including the onset of depression, increases in depressive symptoms over time, and lifetime depression; and
- lower quality of life, social isolation, and loneliness (WHO, 2023a).

Educational Interventions to Promote Self-Care in Older Adults

Self-care is crucial for the well-being of older adults. Aging-related physical and cognitive changes can make it more difficult to take care of oneself. However, practicing self-care can help older adults maintain their independence, prevent or manage health problems, and improve their overall quality of life (Marques et al., 2019). Exercise, healthy eating, and proper medication management can help older adults maintain their physical health. Regular physical activity can help prevent chronic diseases, while a healthy diet can provide the nutrients needed to support overall health. Meditation, socializing, and hobbies can promote mental well-being and reduce the risk of depression and anxiety. Participating in social activities or volunteering can increase social engagement and reduce feelings of isolation or loneliness. Older adults who practice self-care may experience less stress and greater emotional resilience. Self-care practices such as getting enough sleep and managing chronic health conditions can improve cognitive function in older adults. These can help prevent or delay the onset of cognitive decline and dementia.

Finally, self-care promotes independence for older adults. By taking care of themselves, they can maintain their independence and avoid relying on others for assistance with daily activities.

As with other age groups, health education classes can cover various topics useful for self-care of older adults, including nutrition, exercise, medication management, and stress management. Older adults can also benefit from one-on-one counseling sessions focusing on their self-care needs and goals. During such sessions, a nurse can provide guidance and support on healthy habits, medication adherence, and chronic disease management. Group support programs may also be beneficial, as they provide a sense of community and encouragement. The group may focus on a specific condition or a specific health behavior. Technology-based educational interventions may also be beneficial with older adult populations. Applications used on smartphones or websites may provide information on healthy living or assist in tracking of activities such as sleep or medication management. Finally, nurses may make home visits to older adults to provide education and support regarding self-care practices. This may be particularly useful for those who have limited mobility or live in rural areas.

Healthy People 2030 Goals for Older Adults

The overarching Healthy People 2030 goal for older adults is to "improve health and well-being for older adults" (ODPHP, n.d.-f, para. 1). Their prediction is that by 2060, almost a quarter of the U.S. population will be older adults. As such, the focus is on the issues this population experiences related to their health and SDOH.

HEALTHY PEOPLE 2030

Older Adults

Healthy People 2030 older adult objectives (https://openstax.org/r/olderadults) are in a variety of categories and address topics such as physical activity, dementias, foodborne illness, infectious diseases, reduction of hospital admissions (for pressure ulcers, diabetes, urinary tract infections, pneumonia, and asthma), injury prevention related to falls or the use of inappropriate medications, oral conditions, osteoporosis, and age-related macular degeneration vision loss.

One focus area of Healthy People 2030 is falls in older adults. One in three fall annually, and falls are a leading cause of injury for this population. ODPHP (n.d.-h) has recognized that physical activity can help older adults prevent chronic diseases and fall-related injuries. Objectives related to increasing the proportion of older adults with physical or cognitive health problems who get physical activity, reducing the proportion of older adults who use inappropriate medications, reducing hip fractures among older adults, and increasing the proportion of older adults who get screened for osteoporosis can help to address falls. Unfortunately, fall-related deaths among older adults is getting worse. In 2018, there were 64.4 deaths per 100,000 caused by unintentional falls and 78 deaths per 100,000 in 2021. The target is a decrease to 63.4 per 100,000 (ODPHP, n.d.-h).

Health Promotion and Disease Prevention Activities to Improve the Health of Older Adults

Heath promotion for older adults often requires a multidisciplinary approach that includes nurses, other health care professionals, community organizations, and caregivers. Health promotion activities to improve the health of older adults should be geared toward the major diseases that impact them. Regular physical activity can help older adults maintain a healthy weight, increase their strength and flexibility, reduce their risk of falls, and improve their overall health and well-being. Activities promoting a balanced and healthy diet can help with healthy weight maintenance, reduce the risk of chronic diseases, and improve overall health. Other health promotion activities that can improve the health of older adults include:

- Promoting clients to remain active, independent, and involved in their communities as long as possible
- Providing resources to help caregivers of older adults stay healthy and deliver quality care
- Providing resources for senior centers in communities
- Promoting fall prevention programs in the home and in the community
- Promoting maintenance of appointments with providers for medical management of chronic conditions

One example of a national health promotion activity is SilverSneakers (https://openstax.org/r/silversneakers) (Tivity Health, 2023). This fitness program is available for older adults enrolled in Medicare Advantage Plans (Part C) at

over 17,000 locations, including national gym franchises, community centers, and senior centers. SilverSneakers also offers online workout videos for those who prefer to work out at home or are homebound. Classes range from balance and stability lessons and gentle stretches to Pilates, cardio and strength, line dancing, and kickboxing. Yoga, mindfulness, meditation sessions, and a fitness application for smartphone use are also offered. Daily tips on the SilverSneakers blog provide information on nutrition, diseases and conditions, and physical activity tips.

Caregivers who assist older adults are essential members of public health care. While some caregivers are hired, informal or unpaid caregivers provide a substantial portion of long-term care in homes across the United States. These unpaid family members or friends are typically middle-aged or older adults who may perform a range of tasks, such as assisting with activities of daily living, helping to manage a chronic disease or disability, paying bills, shopping, providing transportation, or providing emotional support. Caregivers may initially have few responsibilities, but as the recipient's care needs increase, additional responsibilities may increase, leading to a strain on the caregiver.

The need for caregivers is an important public health issue. In 2019, the CDC indicated that there were seven potential family caregivers per older adult, but by 2030, there will only be four potential family caregivers per older adult. According to the CDC (2019b), 22.3 percent of adults reported providing care or assistance to a friend or family member in the past 30 days. Among adults aged 45 to 64 years, 24.4 percent were caregivers, compared to 18.8 percent of adults aged 65 years and over. One in four (25.4 percent) women were caregivers, compared to one in five (18.9 percent) men. Black people comprised the largest percentage of caregivers (24.3 percent), followed closely by White people (23.1 percent), then 17.9 percent of Hispanic people and 10.2 percent of Asians/Pacific Islanders. One in three caregivers provided 20 or more hours per week of care, and over half provided care or assistance for 2 years or longer.

Caregiving can provide great satisfaction and strengthen relationships between families and friends. It can also negatively affect the caregiver's ability to work, engage in social interactions and relationships, and maintain good physical and mental health (CDC, 2019b). Therefore, health promotion and disease prevention of older adults must be geared to the recipient of care and the caregiver. The CDC (2019b) recommends the following for health care professionals engaging in health promotion and disease prevention of the older adult population:

- Increase messaging regarding the importance of caregivers and of maintaining their health and well-being
- Educate about the importance of caregiving before caregivers begin
- Provide caregivers with resources and supports
- Be mindful of the health risks for caregivers, encourage them to use available information and tools, and make referrals to supportive programs and services as applicable
- Assist with caregiver training and support programs
- Advocate for awareness of and access to evidence-based programs and services that can help caregivers and care recipients
- Encourage caregivers to get regular checkups, use preventive services, and engage in self-care to maintain their physical and mental health
- Ensure that caregivers with a disability and/or chronic disease have access to self-management programs to maintain their health (para. 13)

Along with providing education and support for caregivers, population health nurses must be aware of potential elder abuse. **Elder abuse** is an intentional act or failure to act that causes or creates a risk of harm to an older adult and occurs in about 1 in 10 people aged 60 and older who live at home (CDC, 2021g). The abuse occurs at the hands of a caregiver or a person the elder trusts, and it can involve physical, sexual, emotional or psychological, or financial abuse; neglect; or a combination of these (see Table 26.12). Prevention of elder abuse can begin by understanding and addressing the factors that put them at risk for or protect them from violence. See Caring for Families for more information on preventing elder abuse.

Risk Factors for Perpetration of Elder Abuse	
Individual Risk Factors	• Current diagnosis of mental illness • Current or past misuse of drugs or alcohol • Current physical health problem • Past experience of disruptive behavior • Past experience of traumatic events • High levels of stress • Poor or inadequate preparation or training for caregiving responsibilities • Inadequate coping skills • Exposure to or witnessing abuse as a child • Social isolation
Relationship Risk Factors	• High financial and emotional dependence on a vulnerable elder • Past family conflict • Inability to establish or maintain positive prosocial relationships • Lack of social support
Societal Risk Factors	Specific characteristics of institutional settings, such as nursing homes and residential facilities, including: • Staffing problems and lack of qualified staff • Staff burnout and stressful working conditions
Protective Factors for Victimization	
Individual Protective Factors	• Emotional intelligence
Relationship Protective Factors	• Having social support
Community Protective Factors	• Sense of community, meaning, residents feeling connected to each other and being involved in the community
Mechanisms Nurses Can Use to Prevent Elder Abuse	
• Listen to older adults and their caregivers to understand their challenges and provide support. • Report abuse or suspected abuse to local adult protective services, long-term care ombudsmen, or the police. Use the National Center on Elder Abuse (https://openstax.org/r/ncea) to find your state's reporting numbers, government agencies, state laws, and other resources. • Educate about how to recognize and report elder abuse. • Educate on how the signs of elder abuse differ from the normal aging process. • Check in on older adults who may have few friends and family members. • Provide overburdened caregivers with support options.	

TABLE 26.12 Elder Abuse (See CDC, 2020b; 2021g.)

THEORY IN ACTION

IHI's Age-Friendly Health Systems

Access multimedia content (http://openstax.org/books/population-health/pages/26-5-older-adult-health)

Evidence-based practice is important to health promotion and disease prevention for older adults. While the Institute for Healthcare Improvement's (IHI, n.d.) Age-Friendly Health System initiative was designed originally for hospital and clinical settings, population health nurses can also use the concepts. In this video, Dr. Mary Tinetti, Chief of Geriatrics at the Yale School of Medicine and Yale-New Haven Hospital, describes the components of an age-friendly health system.

Watch the video, and then respond to the following questions.

1. What does it mean that older adults become more heterogeneous as they age?
2. Why were the 4Ms chosen as concepts in the age-friendly health system?
3. What are the 4Ms in the age-friendly health system?
4. What nursing interventions could be implemented to address each 4M?

Primary Prevention

Primary prevention strategies typically focus on maintaining the health of healthy older adults and preventing the development of chronic diseases and frailty. Examples of primary prevention (Lenartowicz, 2022) include:

- Immunizations, such as the influenza, pneumococcal, tetanus, and zoster vaccines
- Chemoprevention using aspirin for the prevention of coronary heart disease and stroke, if applicable
- Lifestyle changes, such as smoking cessation, avoidance of trans fats, increased intake of fruits and vegetables, moderate physical activity, adequate calcium and vitamin D intake, and limited caffeine and alcohol intake
- Specific recommendations for prevention of frailty including exercise and a low-fat, reduced sodium, high-calcium, high-fiber diet with calcium and vitamin D supplements

Secondary Prevention

Secondary prevention of disease in the older adult population aims to detect and treat disease or its complications before symptoms or functional losses occur. An older adult may have minimal or no chronic disease but require secondary prevention. The primary method of secondary prevention is screening. Multiple organizations publish screening guidelines, which can differ. The following are Medicare-covered preventive service guidelines for older adults (Highmark, 2023b):

- Weight, height, and BMI monitoring annually
- Blood pressure screening annually
- Lipid panel every 5 years or as clinically indicated
- Fasting plasma glucose in those who are overweight or obese annually
- Mammography every 1 to 2 years until age 75
- Chlamydia and gonorrhea screening for older women who are at increased risk for infection
- Syphilis, HIV, and hepatitis B screening for those at increased risk for infection
- Hepatitis C screening
- Colorectal cancer screening until age 75
- Bone mineral density screening of women aged 65 to 69 years and men aged 70 years and over every 2 years
- Prostate cancer screening for men aged 55 to 69 years, if clinically indicated
- Lung cancer screening for those aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years

Another secondary prevention important for older adults is screening for fall risk. As mentioned, the CDC's (2023h) STEADI (https://openstax.org/r/cdcsteadi) provides a coordinated approach for nurses and other health care providers to implement the practice guideline for fall prevention. Videos for health care providers and older adults can be viewed on the CDC website.

CLIENT TEACHING GUIDELINES

Environmental Safety for Older Adults

The community health nurse should teach older adults or their caregivers to do the following:

- Keep emergency numbers at hand, including 911, poison control, a family member or friend's number to call in case of emergency, and the health care provider's office number.
- Consider a special alarm that can be worn as a bracelet or necklace. The button can be pushed in case of a fall, and emergency services will be notified.
- Try not to rush to answer the phone. Carry a cordless or cell phone when moving around the home, or let an answering machine pick up messages.

- Wear nonslip footwear, such as slippers with rubber/no-slip bottoms or flat, thin-soled shoes that fit well.
- Use a cane or walker, if needed, rather than relying on holding on to walls or furniture.
- Make sure all hallways, stairs, and paths are well-lit and clear of any objects such as books or shoes.
- Use rails and banisters when going up and down stairs. Never place scatter rugs at the bottom or top of stairs.
- Tape all area rugs to the floor so they do not move when walking on them.
- If there is a fire in the home, leave immediately and call 911. Do not attempt to put a fire out.
- Do not wear loose clothes or long sleeves when cooking.
- Replace appliances with frayed or damaged electrical cords.
- Do not put too many electrical cords into one socket or extension cord.
- Ensure smoke detectors are installed and batteries are changed twice a year.
- Never smoke in bed or leave candles burning, even for a short time, in an empty room.
- Make sure heaters are at least three feet away from anything that can burn, such as curtains, bedding, or furniture. Turn off space heaters when leaving a room.
- Set the water heater thermostat no higher than 120°F to prevent scalding.
- Have grab bars installed in the shower and near the toilet.
- Put rubber mats in the bathtub to prevent slipping.
- Consider a special tub/shower chair or raised toilet seat if there are difficulties with getting in and out of the tub, standing for long periods in the shower, or getting on or off the toilet.
- Never try to heat the home with the stove, oven, or grill.
- Place a carbon monoxide detector near all bedrooms, and test and replace the battery twice a year.
- Keep all medications in their original containers to prevent mix-ups.
- Ask the pharmacist to put large-print labels on medications to make them easier to read.
- Take medications in a well-lit room so that labels can be easily seen.
- Never mix bleach, ammonia, or other cleaning liquids together when cleaning.
- Keep windows and doors locked at all times.
- Never let a stranger into the home when they're alone.
- Talk over offers made by telephone salespeople with a friend or family member.
- Do not share personal information, including Social Security number, credit card or bank information, or account passwords, when contacted by unknown individuals.
- Always ask for written information about offers, prizes, or charities and wait to respond until the information has been thoroughly reviewed.
- Do not feel pressured into making purchases, signing contracts, or making donations before discussing with a family member or friend.

(See Health in Aging Foundation, 2019.)

Depression screening is important in identifying social isolation in older adults. If clients feel lonely or isolated, they may benefit from assistance in increasing social contacts to prevent morbidity. Those who are depressed warrant appropriate intervention. Older adults should be encouraged to remain as productive as possible, engage in leisure activities, and maintain a sense of social connectedness in order to help prevent psychosocial problems and physical disability (Lenartowicz, 2022).

Tertiary Prevention

Tertiary prevention is designed to manage an existing, symptomatic, and typically chronic disease to prevent further functional loss. Older adults with the following chronic disorders can potentially benefit from tertiary prevention:

- Arthritis to prevent progression or falls
- Osteoporosis to prevent progression or fractures
- Diabetes to prevent retinopathy, neuropathy, nephropathy, coronary artery disease, and foot ulcers or amputation
- Vascular disorders to prevent disabling events such as myocardial infarction or stroke
- Heart failure to reduce functional decline, hospitalization, and mortality
- COPD to decrease the number and severity of exacerbations and the need for hospitalization (Lenartowicz,

2022)

As with the adult population, disease-specific care management programs are useful in addressing these disorders. Chronic care clinics and specialists may also be used with older adults. Interventions to address polypharmacy, mentioned earlier, are also considered tertiary prevention. Medication reconciliation is an excellent mechanism for preventing difficulties resulting from polypharmacy (Coppard et al., 2019).

Integration of Sociocultural and Linguistically Responsive Interventions for Older Adults

Integrating sociocultural and linguistically responsive interventions for older adults promotes health equity and improves health outcomes. This section has described the older adult population's diverse ethnic backgrounds and recognized that health disparities exist among older adults, such as high rates of chronic diseases, particularly among older adults from certain racial and ethnic backgrounds. Access to care is often also impacted. While social isolation may be a significant concern for many older adults, it is particularly difficult for those from cultural minority groups. Additionally, older adults or their caregivers may have unique health needs related to their cultural backgrounds. By integrating sociocultural and linguistically responsive interventions, nurses can better address the needs of this population, improving their health outcomes and quality of life.

Sociocultural Interventions

Social connections and supports are essential for healthy aging, but these may be affected by the sociocultural environment, particularly a community's values and beliefs. Howell (2020) performed a study to examine the relationship between the sociocultural factors that shape diet, physical activity, and nutritional status outcomes among Alaska Native and African American Alaskan older adults. The study found that participants' diet and physical activity practices did not meet national recommendations. Howell (2020) also found that incorporating friends in interventions led to increased energy expenditure in participants, and family members influenced increased fruit consumption. Participation in cultural social events increased participants' intake of fats and sweets. The media was also found to be a strong influencer of participants' behavior, as 85.4 percent reported daily television watching, and was recommended as a way to reach older adults with socioculturally responsive programs to alleviate some of the barriers to healthy diet and exercise (Howell, 2020).

Older adults also frequently experience pain. Reis et al. (2022) described the importance of recognizing cultural factors' influence on how individuals perceive, respond to, communicate, and manage pain. Pain education should be provided using different culturally appropriate examples, metaphors, images, and delivery methods. Reis et al. found that a culturally sensitive educational session require a good communicator who will listen to client concerns, recognize the legitimacy of their pain, and respect their culture, values, and preferences. Failure to do this negatively impacts the educational session. The nurse should assess a client's beliefs about pain, as these may range from pain being a normal part of aging to being a punishment from a higher power for bad deeds. Reis et al. (2022) recommend using several different audiovisual aids, including those the client can take home to share with friends and family.

Linguistically Responsive Interventions

Language barriers can limit access to health care in any population. Older adults who speak a language other than English may face language barriers that limit their ability to understand their disease or even access health care services. The National Council on Aging (2022) spotlighted a senior center in Nebraska that served seniors with language barriers. The members of the Intercultural Senior Center (ISC) spoke over 15 languages, including Spanish, Korean, Nepali, Karenni, and Burmese, and ISC staff included individuals from at least 10 different countries who spoke a variety of languages. Specific services offered by ISC included linguistic and cultural accessibility, access to and navigation of legal and health services, transportation, and social engagement (National Council on Aging, 2022).

Chapter Summary

26.1 Maternal Health

Health promotion and disease prevention related to maternal health focuses on the well-being of the pregnant client during pregnancy, childbirth, and the postpartum period, with an emphasis on prenatal care, commom complications and risk factors, strategies for the promotion of healthy pregnancies, and interventions to address health disparities and the population health nurse's role in promoting self-care among pregnant people. Taking a holistic approach considers sociocultural and linguistic factors to best impact the health of the childbearing client and their infant.

26.2 Newborn, Infant, and Toddler Health

The early years of a child's life are crucial for their development. Nurses must understand the risk factors, common health issues, educational needs for caregivers, and age-appropriate education for this population. Strategies to support optimal growth and development include immunizations, regular checkups, and nutritional guidance. Early intervention addresses potential health issues, promotes healthy behaviors in caregivers, and provides a foundation for lifelong well-being to increase the likelihood of children becoming productive and economically stable adults.

26.3 Preschool, School-Age, and Adolescent Health

Promoting health and preventing disease in children from preschool through adolescents is necessary for their lifelong well-being. Clients in this age group form habits and behaviors during this time frame that will impact their health for years. By fostering healthy habits and behaviors during these formative years, nurses can help establish a foundation of health for the rest of these children's lives. Prevention strategies include immunization and education to empower this population to make informed decisions about every aspect of their health. Using health promotion and disease prevention, this age group can develop healthy lifestyles and reduce their risk of developing chronic diseases.

26.4 Adult Health

Through a focus on the top causes of death in adults, health promotion and disease prevention address both chronic, noncommunicable diseases and communicable diseases. Adult health topics include healthy habits, screenings, immunizations, the effects of diseases on vulnerable populations, and the impact of sociocultural and linguistic factors on health. These strategies can provide adults with the ability to best safeguard themselves, their communities, and their overall health.

26.5 Older Adult Health

As the older adult population continues to grow and many live independently, it is imperative that population health nurses implement health promotion and disease prevention interventions to address their health care needs. This includes establishing supportive environments, healthy communities, and social safety nets. Health promotion and disease prevention impact the well-being and quality of life for older adults. Older adults must stay informed about healthy lifestyle choices in conjunction with any disease processes and collaborate with nurses and other health care professionals to develop personalized plans for maintaining good health.

Key Terms

abusive head trauma (AHT) a preventable, severe form of physical child abuse that results in injury to the brain of an infant or child; includes shaken baby syndrome

ageism discrimination against older people because of negative and inaccurate stereotyping

alcohol-related birth defects (ARBD) congenital disorders due to FASD in which the infant may have problems with the heart, kidneys, bones, and/or hearing

alcohol-related neurodevelopmental disorder (ARND) an FASD in which the infant may experience intellectual disabilities and/or problems with behavior and learning; may have difficulties in school, particularly with math, memory, attention, and judgment, as well as poor impulse control

code-switching the mixing of two languages during a conversation that often occurs in dual language learners

concussion a traumatic brain injury caused by a bump, blow, or jolt to the head or body, which causes the person to experience any of a defined set of signs or symptoms

developmental disabilities a group of conditions due to an impairment in physical, learning, language, or behavior areas, which begin during the developmental period, may impact day-to-day functioning, and usually last throughout the lifetime

dual language learners (DLLs) children who are learning two or more languages simultaneously or learning a second language while still learning their first language

elder abuse an intentional act or failure to act that causes or creates a risk of harm to an older adult

family engagement the process used to build genuine relationships with families to promote strong parent-child relationships, family well-being, and better outcomes for children and families

fetal alcohol spectrum disorders (FASDs) a group of conditions that can occur in a person who was exposed to alcohol before birth

fetal alcohol syndrome (FAS) an FASD in which the infant exhibits central nervous system (CNS) problems, minor facial features, growth problems, or problems with learning, memory, attention span, communication, vision, and/or hearing; may have difficulties in school and trouble getting along with others

gestational diabetes diabetes that can develop during pregnancy; caused when the body cannot make enough insulin to meet its needs during pregnancy

infant mortality rate the number of children dying under 1 year of age divided by the number of live births that year

low birth weight (LBW) a newborn weighing less than 2,500 grams at birth

multiple gestation the term for pregnancy with twins, triplets, or more fetuses

neonatal abstinence syndrome (NAS) a treatable condition that occurs in newborns exposed to certain drugs, particularly opioids, in utero

neonatal opioid withdrawal syndrome (NOWS) a term used specifically to describe the symptoms experienced by infants exposed to opioids in utero

neurobehavioral disorder associated with prenatal alcohol exposure (ND-PAE) an FASD in which the delivering client must have consumed more than 13 alcoholic drinks per month of pregnancy (that is, any 30-day period of pregnancy) or more than two alcoholic drinks in one setting, and the child must have problems in three defined areas

obesity adult body mass index (BMI) of 30 or higher

preeclampsia a sudden spike in a pregnant client's high blood pressure

preterm birth when a baby is born before 37 weeks of pregnancy

sexual risk behavior any sexual behavior (typically condom-unprotected oral, vaginal, or anal intercourse) that puts one at risk for one or more defined adverse health outcomes

sudden infant death syndrome (SIDS) the sudden, unexpected death of a baby less than 1 year old that does not have a known cause even after full investigation

sudden unexpected infant death (SUID) umbrella category for all sudden, unexpected infant deaths from known causes, such as injury or accident, and those from unknown causes

Review Questions

1. A community health clinic provides care to clients during the prenatal, perinatal, and postnatal periods. What is an example of a primary prevention intervention the community nurse at the clinic might implement?
   a. Administering Rhogam to clients who are Rh-negative
   b. Screening clients for gestational diabetes during pregnancy
   c. Providing education on prenatal nutrition and exercise to clients
   d. Administering antibiotics to prevent group B streptococcus transmission

2. Which educational intervention by the nurse would be most effective in promoting self-care for a childbearing client in their second trimester who is diagnosed with gestational diabetes?
   a. Providing a list of local support groups for pregnant clients with gestational diabetes
   b. Teaching the client how to monitor blood glucose levels at home
   c. Giving the client a strict diet plan to follow that limits sugars
   d. Scheduling weekly checkups to closely monitor their condition

3. Which health promotion intervention should the community health nurse teach to new parents to reduce the risk of sudden unexpected infant death (SUID)?
   a. Place the baby on a firm sleep surface
   b. Put the baby in the same bed as the parents
   c. Use extra blankets in the crib during sleep
   d. Position the baby on the stomach

4. Which action should the nurse take to promote family engagement during a community class on healthy toddler nutrition?
    a. Provide standardized healthy food guidelines to all families
    b. Learn about each family's cultural practices and beliefs related to food and health
    c. Implement interventions related to food choices based on the nurse's personal beliefs
    d. Encourage the family to only provide the healthy food options suggested

5. The community health nurse is teaching caregivers with children between 5 and 9 years of age about causes of injury in this age group. Which cause of death will the nurse include?
    a. Suicide
    b. Choking
    c. Drowning
    d. Illegal drugs

6. Which condition would the school nurse tell caregivers of adolescents is a protective relationship factor that can protect against suicide?
    a. Social media
    b. Family support
    c. Peer pressure
    d. Community suicide cluster

7. Which health disparity would the public health nurse apply when developing community adult health education programs?
    a. Men have a higher life expectancy compared to women.
    b. Women experience higher rates of cerebrovascular disease compared to men.
    c. Women have a higher mortality rate compared to men.
    d. Men experience higher rates of COPD compared to women.

8. The community health nurse is developing a primary prevention program for children. Which intervention would the nurse promote?
    a. Immunizations according to recommended schedules
    b. Regular vision screenings
    c. Speech therapy for children with developmental delays
    d. Medical care for health problems

9. Which intervention would the public health nurse implement in the community to address the Healthy People 2030 goal of reducing falls in older adults?
    a. Provide assistive ambulation devices
    b. Encourage sedentary activity
    c. Reduce inappropriate medications
    d. Ambulate only with a caregiver

10. The public health nurse is providing education to families of older adults in the community about risk factors for elder abuse. Which factor would the nurse include in this teaching?
    a. The older adult's level of physical activity
    b. The frequency of visits from family and friends
    c. The presence of chronic health conditions in the older adult
    d. The presence of mental illness in the older adult

CHAPTER 27

Caring for Vulnerable Populations and Communities



FIGURE 27.1 Two individuals who are homeless sit on a sidewalk in Toronto despite the weather. One of the roles of community and public health nurses is assisting these clients in finding shelter. (credit: modification of work "Two men on sidewalk" by Ivaan Kotulsky/ City of Toronto Archives/Flickr, CC BY 2.0)

CHAPTER OUTLINE

27.1 People Who Are Experiencing Homelessness
27.2 Veterans
27.3 The LGBTQIA+ Community
27.4 Migrant Workers
27.5 People with Disabilities
27.6 Impact of Adverse Childhood Experiences

INTRODUCTION At age 35, Melissa is without a home and a regular place to sleep at night. She was raised by a single mother who worked multiple waitressing jobs. Melissa worked hard in high school, earned a scholarship to a state college, and took a part-time job to pay for books, fees, and living expenses. One night she was hit by a car and suffered a traumatic back injury that propelled her into a downward spiral of trauma, chronic pain, and medical debt. The medical expenses forced her to drop out of school, and the pain made it impossible for her to keep a full-time job, without which she lacked sufficient income to pay rent. Melissa felt that the health care system stigmatized her because of her medical debt. When she sought relief from her chronic pain, she faced accusations of being a "drug seeker." Eventually, she gave up on health care and ended up homeless and in despair.

Caring for vulnerable populations and communities, such as individuals like Melissa who are experiencing homelessness, is a key role of the nurse as these populations have multiple risk factors for negative health

outcomes. Structural barriers within society and in the health care system place vulnerable populations, also known as disadvantaged groups, at higher risk for poor health. These groups have poor access to care, receive poor-quality care, and experience poor outcomes related to race, ethnicity, socioeconomic status, gender, sexual orientation, age, primary language, ability, or mental health conditions (Commonwealth Fund, 2023). Multiple social factors, such as living in unsafe neighborhoods, being unable to access quality education, and working in low-wage occupations, put vulnerable populations and communities at a disadvantage, perpetuating their low socioeconomic position. Nurses can meaningfully intervene and improve health outcomes by assessing these populations through the lens of the social determinants of health (SDOH).

This chapter discusses six primary types of disadvantaged populations: individuals experiencing homelessness, veterans, LGBTQIA+ populations, migrant workers, individuals with disabilities, and those who have had adverse childhood experiences. Older adults, immigrants, and refugees are also often considered vulnerable populations; Older adults are discussed in Health Promotion and Maintenance Across the Lifespan, and immigrants and refugees are discussed in Caring for Populations and Communities in Crisis. While no defined set of factors exists to determine whether a population or a community is disadvantaged, one or more of the following characteristics are often used to identify vulnerability (Bhatt & Bathija, 2018):

- Income and education
- Access to primary health care services
- Age
- Gender and sexual orientation
- Social, cultural, and linguistic needs
- Race and ethnicity
- Chronic illness or disability
- Alcohol or substance misuse
- Homelessness
- Human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS)
- Veteran status
- Migrant status
- Rural residency

Nurses have a duty to ensure equitable and culturally competent care. Disadvantaged populations are often subject to significant health disparities. Recall from Social Determinants Affecting Health Outcomes that health disparities are preventable differences in health between groups of individuals, usually as a result of social or economic factors, geographic location, and environment (Centers for Disease Control and Prevention [CDC], 2022c). Health disparities often result in health inequities, "differences in health status or health resources between different population groups, arising from ... social conditions" (World Health Organization [WHO], 2018, para 2). Health inequities are a result of an unjust system. Since nursing is founded on the principle of social justice, nurses are well positioned to care for vulnerable populations and advocate for systemic changes. Ensuring access to essential health care services, advocating for culturally and linguistically appropriate care, and educating community partners on health needs are steps toward improving the health outcomes of vulnerable populations (Bhatt & Bathija, 2018).

27.1 People Who Are Experiencing Homelessness

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 27.1.1 Define homelessness.
- 27.1.2 Discuss the extent of homelessness in the United States.
- 27.1.3 Identify demographic trends of individuals experiencing homelessness.
- 27.1.4 Describe factors that contribute to homelessness.
- 27.1.5 Explain the health challenges of individuals experiencing homelessness.
- 27.1.6 Describe the role of the nurse in caring for individuals experiencing homelessness.

Nurses need specialized knowledge, skills, and appropriate attitudes to provide effective care for marginalized populations like individuals experiencing **homelessness**. The McKinney-Vento Homeless Assistance Act of 1987 defines homelessness as a situation in which an individual or family lacks a regular, fixed, and adequate nighttime

residence. This includes individuals or families living in shelters or in public or private locations not designed for regular sleeping, such as cars, parks, abandoned buildings, stations, and campgrounds. Homelessness also refers to individuals or families who will be losing their housing within a short timeframe and for whom no new residence has been identified. Incarcerated individuals are not considered homeless. The terms houseless, unsheltered, and unhoused are also used to describe individuals who lack housing (LA Community Alliance [LACA], n.d.).

The challenges of gathering accurate data make it difficult to ascertain the full scope of homelessness in the United States. **Point-in-time counts** provide a snapshot of the number of homeless individuals, both sheltered and unsheltered, on a given night in a given place (Figure 27.2) (HUD, 2022). The U.S. Department of Housing and Urban Development (HUD) Annual Homelessness Assessment Report to Congress (https://openstax.org/r/huduser) estimates that 582,500 individuals were experiencing homelessness on a single night in 2022 (HUD, 2022). This figure equates to 18 of every 10,000 individuals in the United States. Of the population experiencing homelessness, 4 in 10 were unsheltered. The latest data demonstrates a small increase, less than 1 percent, in homelessness nationally between 2020 and 2022.



FIGURE 27.2 Volunteers search for people sleeping in makeshift outdoor beds to complete a point-in-time count of individuals experiencing unsheltered homelessness. (credit: "Point in time homeless count 2015-Jan" by Milwaukee VA Medical Center/Flickr, Public Domain)

Demographic Data on Homelessness

Homelessness affects every state in the United States, but more than half of all individuals experiencing homelessness are in four states: California (30 percent), New York (13 percent), Florida (5 percent), and Washington (4 percent). In 2022, more than 70 percent of the homeless population in California and Hawaii were unsheltered, while 90 percent or more of the individuals experiencing homelessness in Vermont, Maine, Wisconsin, and New York had shelter (HUD, 2022). Half of all individuals experiencing homelessness were located in major cities. The demographic characteristics of homeless individuals vary greatly by geographic location.

In the United States, Black, Indigenous, and people of color (BIPOC) communities are disproportionately represented among those experiencing homelessness (HUD, 2022). White, non-Hispanic/non-Latino adult men constituted the most individuals experiencing homelessness in 2022, but relative to the total U.S. population, individuals experiencing homelessness were disproportionately from Hispanic or Latina and BIPOC communities. Among individuals experiencing homelessness, 30 percent were women, while among families experiencing homelessness, 60 percent were women. Homelessness in women increased by 6 percent compared with a 1 percent increase in men between 2020 and 2022. Individuals identifying as Native Hawaiians and Pacific Islanders experienced a 23 percent increase in individual homelessness and a 31 percent increase in unsheltered homelessness. Homelessness among children and families is growing. According to the National Alliance to End Homelessness (NAEH), adults and children in families make up 30 percent of the population experiencing homelessness (2023a). Families experiencing homelessness are often headed by a single woman with limited

education who has young children and struggles with poverty (NAEH, 2023a).

Factors that Contribute to Homelessness

Factors contributing to homelessness include poverty, lack of affordable housing, lack of affordable health care, domestic violence, substance use disorders, and mental illness.

Poverty

Individuals experiencing homelessness are often considered to live in poverty (National Coalition for the Homeless [NCH], 2022a). **Poverty** is when an individual lacks the economic resources to pay for basic needs (Agency for Healthcare Research and Quality, 2022). In the United States, poverty is measured by comparing an individual's or family's income to a set poverty threshold, the minimum income required to cover basic needs. Those who fall under this threshold are considered poor (Institute for Research on Poverty, n.d.), have limited financial resources, and find it challenging to afford housing, food, health care, and childcare, often leading to difficult choices (NCH, 2022a). A common sentiment among individuals living in poverty or near poverty is that "if you are poor, you are one illness, accident, or paycheck away from living on the streets" (NCH, 2022a, para 3). Individuals living in poverty are at high risk of becoming homeless, and demographic groups that are more likely to experience poverty are also more likely to experience homelessness (NCH, 2022a). See Social Determinants Affecting Health Outcomes for more information on poverty.

In 2021, the official U.S. poverty rate was 11.6 percent, with almost 40 million individuals living in poverty, a little over 15 percent of whom were children (under age 18) (Creamer et al., 2022). The 2020 official poverty threshold for a family of four, consisting of two adults and two children, was a total annual income of $26,246 or less (U.S. Census Bureau, 2022). The demographic data of individuals living in poverty are consistent with the demographic data of individuals experiencing homelessness, further demonstrating the link between the two. Of the total U.S. population living in poverty:

- 20 percent self-identify as Black;
- 17 percent self-identify as Hispanic (any race);
- 10 percent self-identify as White;
- 9 percent self-identify as Asian; and
- 24 percent self-identify as American Indian or Alaska Native (AIAN). (This is disproportionate; in 2020, AIAN individuals accounted for only 1.1 percent of the U.S. population [U.S. Department of Health and Human Services, 2023a].)

Housing

The shortage of low-income housing in the United States contributes to homelessness. The National Low Income Housing Coalition (NLIHC) reports a shortage of 7 million affordable homes for the nation's almost 11 million extremely low-income families (2023). The NLHIC (2023) also estimates that more than two-thirds of all extremely low-income families spend more than half their income on rent, placing them at risk for homelessness. This problem affects every state.

The NLIHC measures income against what it calls a **housing wage**, an estimate of the hourly wage that full-time workers must earn to afford a rental home at fair market value without spending more than 30 percent of their income on housing. In 2022, the national per-hour housing wage for a modest two-bedroom rental home ($25) was more than three times the federal minimum wage ($7.25 per hour) (NLIHC, 2022; U.S. Bureau of Labor Statistics, 2021). Most low-income families facing severe housing problems are working (NCH, 2022b). The lack of affordable housing and limited housing assistance programs contribute to the housing crisis and homelessness (NCH, 2022b). Of all the households eligible for federal housing assistance, only one in four receives assistance due to insufficient funding (NCH, 2022b; Fischer et al., 2021). With the lack of affordable housing, many individuals and families experience high rents, overcrowding, or substandard housing, further placing them at risk of homelessness (NCH, 2022b). Homelessness endures as the income of low-income households has declined, rents have continued to rise, and the demand for assisted housing exceeds supply (NCH, 2022b). Assisted housing is housing for which people receive financial support under governmental programs such as public housing.

Lack of Affordable Health Care

A lack of affordable health care contributes to homelessness, as individuals who cannot afford health insurance are

at risk of financial difficulties and subsequent homelessness if a serious injury or illness arises (NCH, 2022a). It also negatively impacts the overall health of low-income individuals who may not seek needed health care due to cost concerns. Though the percentage of Americans lacking health insurance has fallen to record lows due to expanded Medicaid eligibility, the Patient Protection and Affordable Care Act (ACA), and policy changes that occurred during the COVID-19 pandemic, a significant portion of U.S. residents remain uninsured or underinsured (Collins et al., 2022), and as of 2021, racial and ethnic disparities in coverage persisted (Cha & Cohen, 2022).

According to a Commonwealth Fund survey, in 2022, 43 percent of working adults were inadequately insured, and 46 percent of respondents reported skipping or delaying care due to cost concerns (Collins et al., 2022). The Commonwealth Fund defines underinsurance as having out-of-pocket costs that are 10 percent or more of income in a one-year period (5 percent for individuals living under 200 percent of the federal poverty level) or a deductible that represents 5 percent or more of household income (Collins et al., 2022). According to the CDC National Health Statistics Report, over 28 million individuals, including almost 3 million children, were uninsured in 2021 (Cha & Cohen, 2022). Evidence that health insurance coverage is linked to improved health outcomes was one of the drivers for the passage of the ACA in 2010, which was intended to increase access to health care to decrease disparities and improve health for everyone (Cha & Cohen, 2022).

Domestic Violence

Individuals living in poverty who experience domestic violence may be forced to choose between staying in an abusive relationship or experiencing homelessness. **Domestic violence** refers to violent or aggressive behavior in the home, usually involving abuse of a spouse or partner. In the United States, an estimated 20 individuals per minute are physically abused by an intimate partner, equating to more than 10 million women and men in a one-year period (National Coalition Against Domestic Violence [NCADV], 2020). In 2020, one in four women and one in nine men reported experiencing severe intimate partner physical violence, and one in five reported experiencing sexual violence by an intimate partner in their lifetimes (NCADV, 2020). Domestic violence and homelessness are directly connected, with national estimates that 80 percent of homeless mothers with children have experienced domestic violence (Institute for Children, Poverty & Homelessness [ICPH], 2018). Experiences of domestic violence are common in individuals who become homeless (NAEH, 2023b), and in 2022, roughly 11 percent of beds were set aside for domestic violence survivors and their families (NAEH, 2023b). See Caring for Families for more information on domestic violence.

Substance Use Disorder

Substance misuse and homelessness are linked, but there is no consensus on whether substance misuse is a precursor to or a result of homelessness (Moxley et al., 2020; NCH, 2022a). Individuals who are experiencing homelessness are much more likely to experience substance misuse than housed individuals, but many individuals begin using drugs or alcohol to cope with the challenges of being homeless (Mosel, 2023; NCH, 2022a). Individuals have unique experiences that may lead to differences in health behaviors. The Substance Abuse and Mental Health Services Administration report that 38 percent of individuals experiencing homelessness misuse alcohol, and 26 percent misuse other substances (Magwood et al., 2020; Mosel, 2023). Individuals experiencing homelessness often lack social support and access to health care, have experienced trauma, and often struggle with untreated mental health illnesses that contribute to the substance misuse in this population (Magwood et al., 2020; Mosel, 2023). See Caring for Populations and Communities in Crisis for more information on substance use disorder.

Mental Illness

Mental illness does not cause homelessness, but an estimated 25 percent of the adult homeless population experiences persistent mental illness (Vohra et al., 2022). Individual mental health is formed and influenced by the SDOH (Alegria et al., 2018; Knifton & Inglis, 2020; Macintyre et al., 2018). Poverty can be both a cause of mental health problems and a consequence of it (Knifton & Inglis, 2020; Macintyre et al., 2018), and because poverty is directly tied to homelessness, mental illness is considered a risk factor for homelessness. The poverty–mental illness link can create a cycle wherein the stress, stigma, and trauma of poverty may result in poor mental health that may then result in loss of employment or underemployment, which may then result in individuals with mental illness living precariously, in and out of poverty (Macintyre et al., 2018).

How Homelessness Intersects with the Social Determinants of Health

Homelessness intersects with the SDOH at every level. Recall from Social Determinants Affecting Health Outcomes

that the SDOH are grouped into five domains: economic stability, education access and quality, health care access and quality, neighborhood and built environment, and social and community context. These determinants of health are driven by social status and have a major impact on an individual's health and well-being. Individuals and families experiencing homelessness lack economic stability and cannot access the resources and care necessary for healthy living. This has a domino effect on the other determinants of health, as a lack of economic stability and housing can result in an unstable educational environment, an unsafe or unstable community, and the inability to access clean air, water, transportation, and healthy food options. As noted, BIPOC communities are disproportionately affected by homelessness, which is rooted in generational poverty and structural racism. Generational poverty is persistent poverty and disadvantage, where children who grow up poor are more likely to be poor as adults (Wagmiller & Adelman, 2009). In many cases, the foundation of generational poverty can be traced to the structural discrimination and racism that contribute to inequitable social and economic opportunities (Office of Disease Prevention and Health Promotion [ODPHP], 2020c). Structural discrimination refers to institutional policies, systems, laws, and practices that limit individuals' and populations' opportunities, resources, and power based on race, ethnicity, gender, ability, socioeconomic status, sexual orientation, gender identity, and religion. These deeply rooted practices and beliefs propagate pervasive unjust treatment and oppression of vulnerable individuals (Braveman et al., 2022). See Structural Racism and Systemic Inequities for more information.

HOMELESS WITHOUT LEGS

Access multimedia content (http://openstax.org/books/population-health/pages/27-1-people-who-are-experiencing-homelessness)

The website Invisible People (https://openstax.org/r/invisiblepeople) presents several video interviews with individuals experiencing homelessness.

Watch the video about Monica's story, and then respond to the following questions.

1. The National Health Care for the Homeless Council (https://openstax.org/r/nhchc) (NHCHC) has stated that housing is a part of health care (2019, p.1). Do you agree with this statement? Why or why not?
2. What are some actions a nurse can take to address the issues discussed in this video?

Health Barriers Experienced by Individuals Experiencing Homelessness

The National Health Care for the Homeless Council (NHCHC) states that "housing is health care" as health and homelessness are interlinked (2019, p. 1). Statistically, individuals experiencing homelessness have higher rates of illness and have an estimated life expectancy of 30 years below the U.S. average (Watts, 2021). Diabetes, hypertension, and myocardial infarction are estimated to be twice as prevalent in groups experiencing homelessness as they are in the general population, and groups experiencing homelessness have even higher rates of substance use disorders, depression, and hepatitis C (Watts, 2021). Other conditions prevalent among this population include behavioral health concerns; communicable diseases such as HIV, tuberculosis (TB), or hepatitis; and conditions affecting dentition and the feet (Mcenroe-Petitte, 2020). Figure 27.3 depicts the downward spiral that can occur when a person lacks health care and becomes homeless (NHCHC, 2019, p.1).

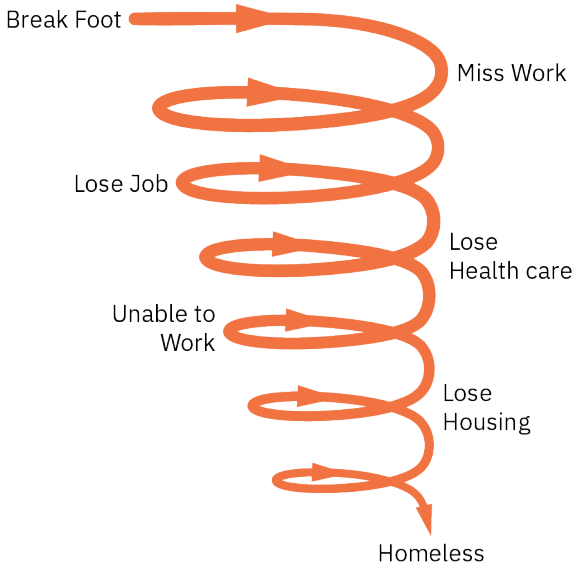


FIGURE 27.3 An individual may quickly spiral into homelessness. Injuries or illnesses may result in unemployment, creating a cycle wherein the individual cannot afford health care and the initial health condition prevents them from regaining employment. Loss of income causes housing instability. Without effective safety nets, poor health may lead to unemployment, leading to poverty and, ultimately, to homelessness (NHCHC, 2019, p.1). (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Being homeless creates new health issues and intensifies existing ones. Living on the street or in a crowded shelter places an individual under stress and exposes them to communicable disease, violence, malnutrition, and weather. Individuals with chronic health problems such as hypertension, diabetes, and asthma may have no place to store medications properly, thereby worsening their underlying disease process. Maintaining a heart-healthy or diabetes diet is challenging as food pantries and shelters cannot cater to special diets. These situations can exacerbate behavioral and mental health issues such as substance use disorders, alcoholism, depression, and anxiety (NHCHC, 2019). Even minor issues such as a mild cut may develop into more serious problems, as maintaining proper rest and hygiene and keeping bandages clean may be impossible when living in a shelter or on the street. Stable housing provides safety and a place to recuperate from illness or injury. Even the highest-quality clinical services are ineffective if the client's health is "compromised by the street or shelter conditions as no amount of health care can substitute for stable housing" (NHCHC, 2019, p. 2).

BOSTON HEALTH CARE FOR THE HOMELESS

Access multimedia content (http://openstax.org/books/population-health/pages/27-1-people-who-are-experiencing-homelessness)

In 1985, the Robert Wood Johnson Foundation and the Pew Memorial Trust began the Health Care for the Homeless (HCH) program, funding 19 health clinics around the United States to coordinate medical treatment for individuals experiencing homelessness. HCH funded new respite care programs and provided continuity of care from the streets and shelters to the hospital. There are now 300 federally qualified health centers (FQHCs) and 100 medical respite programs (Watts, 2021). This video features an HCH in Boston.

Watch the video, and then respond to the following questions.

1. What different client needs do the HCH health care professionals address?
2. How is HCH addressing the barriers to accessing health care that individuals experiencing homelessness often face?
3. In your view, is this a sustainable model of health care for individuals experiencing homelessness? Is it replicable in other cities around the country? Why or why not?

Children and Families Experiencing Homelessness

Each year, 1.2 million children ages 5 and under experience homelessness in the United States (U.S. Department of Health & Human Services [USDHHS], 2023b). The McKinney-Vento Act requires school districts to assist students

who are experiencing homelessness in receiving needed services and enrolling them immediately even if they lack the typical paperwork. These students are required to be given transportation and uniforms if necessary to get them into school immediately (Beiner, 2022). Homelessness negatively impacts children's education, health, development, and sense of safety (NAEH, 2023a). Children experiencing homelessness have increased levels of emotional and behavioral problems and increased risk of health problems; are more likely to repeat a grade, be expelled, or drop out of school; and have lower overall academic performance (NAEH, 2023a). They may have a variety of health challenges related to the difficulty in accessing regular health and dental care or nutritious foods, education interruptions, trauma, and overall disruption in family dynamics (USDHHS, 2023b). In comparison to children who are housed, this population is twice as likely to be ill, goes hungry twice as often, has twice the rate of learning disabilities, and is three times as likely to have emotional and behavioral problems (USDHHS, 2023b). Additionally, children experiencing homelessness face social isolation from their peers, increased anxiety levels, disrupted sleep, loss of a sense of place, and an increased risk of adolescent drug misuse (Phillips, 2019). School nurses and other community and public health nurses can assist these families and children in accessing case management services and connecting them with primary health care. They can advocate getting these children the resources they need such as food, clothing, and school supply assistance.

The Nurse's Role in Caring for People Experiencing Homelessness

Nurses interface with individuals experiencing homelessness in many different settings, from the acute bedside to the emergency department (ED) to the outpatient clinic or in community health settings such as schools, shelters, food pantries, churches, community centers, social service agencies, and even in the street. Nurses need to be sensitive to the different needs of these clients.

This population often faces barriers to primary care and, therefore, may seek treatment in the ED, resulting in fragmented care and further stigma and discrimination in health care settings (Mcenroe-Petitte, 2020; Vohra et al., 2022). Many of the conditions common to individuals experiencing homelessness, including chronic diseases, do not lend themselves to treatment in the ED as they often require specific longer-term treatment plans (Mcenroe-Petitte, 2020).

This population needs holistic care with a focus on access to care. The first step in providing care is to ask the client about their living situation; access to food, support, and medication; and what type of work they engage in. Nurses need collaborative working relationships with community-based primary care and psychiatric care providers so that, after identifying client needs, they can tap into that network to assist the client in accessing health services. Additionally, nurses must individualize care for these clients when reviewing discharge paperwork. Advising a client to rest and elevate their leg is not a feasible plan of care for an individual experiencing homelessness. Involving the care team of social workers and case management can assist these clients in obtaining appropriate community-based services to facilitate healing. Nurses have a role in primary, secondary, and tertiary prevention for caring for individuals experiencing homelessness (Table 27.1).

Primary Prevention	
Prevent individuals and families from becoming homeless by addressing contributing factors.	
• Advocate for affordable housing • Advocate for a living wage • Advocate for affordable, accessible health care • Refer those with mental health disorders to appropriate counseling and therapy • Provide parenting workshops to help families deal with conflict and develop resilience in order to decrease the number of adolescent runaways	• Advocate for affordable and high-quality childcare • Provide violence prevention and anger management classes • Advocate for substance use disorder services management and treatment in every community
Secondary Prevention	

TABLE 27.1 Nurses' Role in Primary, Secondary, and Tertiary Prevention for Clients Experiencing Homelessness

Decrease existing homelessness.	Screen for early detection and treatment of adverse health conditions in the homeless population.
• Refer to social support agencies to assist in applying for aid • Assist in locating an available shelter • Advocate for more short-term residences for families experiencing homelessness • Advocate at the state level for more funding for single-room occupancy (SRO) options • Advocate for more medical respite facilities • Advocate for local social services in every community	• Screen for communicable diseases such as HIV, TB, hepatitis, sexually transmitted infections, hypertension, and diabetes • Advocate for more community-based health centers that focus on serving disadvantaged populations • Advocate for mobile health vans to take clinical medicine to the streets
Tertiary Prevention	
Prevent recurrence of poverty and homelessness.	
• Advocate for changes at the state and federal level to provide needed services to address chronic homelessness such as providing housing stability and support for those in need. An example is Housing First, a program that prioritizes permanent housing for individuals experiencing homelessness (NAEH, 2022a). It provides permanent housing without prerequisites or conditions beyond those that are typically expected of a renter.	• All steps included within primary prevention

TABLE 27.1 Nurses' Role in Primary, Secondary, and Tertiary Prevention for Clients Experiencing Homelessness

27.2 Veterans

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 27.2.1 Discuss health barriers experienced by veterans.
- 27.2.2 Describe veterans' health needs.
- 27.2.3 Explain the nurse's role in caring for veteran populations.

The U.S. Census Bureau estimated that in 2018, 18 million American veterans lived in the United States, approximately 9 percent of whom were women (Vespa, 2020). The largest cohort of veterans alive today served during the Vietnam era and have a median age of 65. Currently, approximately 1.4 million individuals are on active duty across the branches of military (Vespa, 2020).

The **Veterans Health Administration**, a part of the Department of Veterans Affairs (VA), is an integrated health care system that provides care to 9 million veterans. A **veteran** is an individual who is serving or has served in the active military, naval, or air service and who, if they are no longer in the active military, was discharged under conditions other than dishonorable (U.S. Department of Veterans Affairs, 2019). Most veterans are eligible for VA health coverage, yet more than half instead receive care from providers in the community (Yedlinsky et al., 2019; Zychowicz et al., 2022). Reasons cited for receiving care outside the VA health system include more choices, better satisfaction, easier geographic location, and less administrative hassle (Yedlinsky et al., 2019; Zychowicz et al., 2022). Veterans seeking health care outside of the VA are at greater risk for suicide than those who receive their care within the VA. Therefore, community health providers must ask clients about prior military service and understand veterans' health needs (Zychowicz et al., 2022).

Health Barriers Experienced by Veterans

Veterans face many barriers when accessing health care. Studies have demonstrated that nurses and other health care professionals at non-VA health centers have a limited capacity to provide culturally competent care to veterans as they lack an understanding of the life experiences of these individuals (Bonzanto et al., 2019). Veterans also tend to be older and at greater risk for many conditions, some of which are not often seen in the general population. Other barriers include access to care, especially in rural areas, and logistical concerns of transportation and social support (Crowley et al., 2021; Inderstrodt et al., 2022). Veterans are at increased risk for homelessness, often due to unresolved or untreated mental health issues (Elliott et al., 2021; Inderstrodt et al., 2022). According to HUD's Annual Homelessness Assessment Report to Congress (https://openstax.org/r/hudusergovportal), approximately 7 percent of all adults experiencing homelessness in the United States are veterans. These veterans have health needs similar to those of the general population experiencing homelessness, but these needs may be compounded by their prior service. The community health nurse must understand the dynamics of providing care for clients with these combined needs.

Health Needs of Veterans

Veterans have unique health needs related to their military service. They are more likely than other individuals to experience trauma-related injuries, substance misuse, and mental health disorders, and approximately one-quarter of all veterans have a service-related disability (Vespa, 2020). Veterans are twice as likely as the general population to have musculoskeletal injuries, sometimes resulting in disability, and more than 40 percent experience chronic pain (Zychowicz et al., 2022). Figure 27.4 illustrates one of many common musculoskeletal injuries requiring a prosthesis that affect veterans at higher rates than the general population. Chronic pain and disability further increase the risk for obesity, diabetes, and heart disease secondary to a sedentary lifestyle.



FIGURE 27.4 A veteran with a prosthesis continues to train. (credit: Matt Hecht/Flickr, Public Domain)

Military veterans experience mental health illness at a higher rate than the general population (Yedlinsky et al., 2019; Zychowicz et al., 2022). Depression is linked to many conditions, such as cardiovascular disease, diabetes, and chronic pain. An estimated 11 percent of veterans experience major depressive disorder compared to 7 percent of the general population, and they are at increased risk for suicide. Screening veterans for depression and assessing their suicide risk is extremely important (Zychowicz et al., 2022). Factors impacting suicide risk include combat exposure, traumatic injury, sexual trauma, and substance use (Zychowicz et al., 2022). Post-traumatic stress disorder (PTSD) can develop from events occurring during service, and up to 25 percent of those who served in the military from the Vietnam era through the war in Afghanistan experience PTSD (Zychowicz et al., 2022). Substance use disorders (SUD) are also common among this population, with risk factors being combat exposure, PTSD, traumatic brain injury (TBI), frequent deployments, and frequent family separations. The most-used substances are alcohol, cannabis, and nicotine.

The time period of military service is relevant to veterans' health needs. Many Vietnam veterans were exposed to Agent Orange, a tactical herbicide used to clear vegetation that is now linked to many forms of cancer (U.S. Department of Veterans Affairs, 2022). Agent Orange exposure places these veterans at higher risk for ischemic heart disease, diabetes, Parkinson's disease, and peripheral neuropathy (D'Aoust & Rossiter, 2021). In addition, Vietnam veterans have high rates of hepatitis C, PTSD, and homelessness. They experience psychological distress from the war atrocities they experienced, and many who returned home to antiwar protests in the 1960s may feel shame and guilt related to societal attitudes about the Vietnam War. Veterans from the wars in Iraq (2003–2011) and Afghanistan (2001–2014) are at increased risk for TBI and PTSD. With TBI, the impact of multiple blast exposures may result in sleep disorders, hearing loss, chronic pain, and gastrointestinal conditions (D'Aoust & Rossiter, 2021). Additionally, exposure to burn pits of incinerated waste, chemicals, weapons, plastics, and more is common in veterans from Iraq and Afghanistan, resulting in potential respiratory diseases (D'Aoust & Rossiter, 2021).

Over the next 15 years, the number of women in the military is projected to increase to approximately 17 percent (D'Aoust & Rossiter, 2021). A woman's military experience presents unique health care challenges. Thirty-three percent of women (one in three) and 1 percent of men (one in 100) report experiencing **military sexual trauma** (MST), sexual assault or harassment that occurs during military service (D'Aoust & Rossiter, 2021). MST is associated with mental health issues such as PTSD, eating disorders, dissociative disorders, and personality disorders. These veterans are also at higher risk for suicide and self-harm than those without a history of MST (D'Aoust & Rossiter, 2021). Women veterans who experienced MST are less likely to seek care promptly due to general distrust of the health care system and associated mental health issues (Inderstrodt et al., 2022).

How Veteran Status Intersects with the Social Determinants of Health

Veterans are at increased risk for homelessness, often due to unresolved or untreated mental health issues, many related to their time in service (Elliott et al., 2021; Inderstrodt et al., 2022). The SDOH intersect with veterans' health in a bidirectional manner throughout the lifespan. For example, education can affect those who initially choose to enter the military, and military training and college education benefits for veterans impact overall educational attainment (Duan-Porter et al., 2018). Some studies have found that the SDOH significantly impact who volunteers to enter the military, as evidence shows that veterans have experienced greater childhood adversity than non-veterans (Duan-Porter et al., 2018). Other determinants of health, such as gambling, substance use, depression, and PTSD, also disproportionately affect veterans.

The Nurse's Role in Caring for Veterans

Community and public health nurses interface with veterans regularly, as they live in the community, and many veterans seek care in community-based or private health care centers. Familiarity with this population's health needs and challenges is key to providing culturally appropriate care. Nurses can affect positive changes in care for veterans by seeking and advocating for appropriate training on military separation issues, how clients' military history may affect health risks, and how to address emotional health concerns (Crowley et al., 2021).

When nurses are aware of veteran health needs, they can screen these clients more holistically and spot subtle signs of physical or mental illness. From appropriate screening to advocating for unmet health needs or issues with access to care, nurses can positively impact the health of this vulnerable population. Studies have found that veterans often feel invisible, forgotten, or undervalued and struggle to access the care they need. This results in veterans, like individuals experiencing homelessness, overutilizing the emergency department (Weber et al., 2020). Nurses can advocate for better access to care while also appropriately referring veterans to health services in the community, a case management role. Nurses have the requisite knowledge and skills to translate this case management need into action. An acute awareness of this population's mental health challenges and needs enables nurses to assist veterans in accessing necessary mental health services.

Veterans with PTSD and other mental health conditions have higher rates of tobacco use, hypertension, hyperlipidemia, and obesity than veterans without mental health diagnoses, underscoring the need for primary and secondary prevention (Reisinger et al., 2012). Primary prevention aims to block the onset of conditions or diseases for which this population is at higher risk, and secondary prevention focuses on screening to detect disease onset early to provide immediate treatment to decrease the risk of adverse health outcomes (Table 27.2).

Primary Prevention	
Prevent veterans from developing substance use disorders	Prevent the onset of chronic diseases such as hypertension, hyperlipidemia, and obesity
• Provide health promotion sessions on the adverse effects of tobacco use • Provide health promotion sessions on alcohol and drug misuse	• Provide health promotion sessions on a heart-healthy diet and exercise to promote cardiovascular health
Secondary Prevention	
Substance use	Chronic health conditions
• Screen veterans for tobacco use • Screen veterans for alcohol and cannabis misuse • Screen veterans for general substance use	• Screen veterans at each visit for hypertension • Each year, screen veterans for hyperlipidemia and for obesity with a body mass index reading • Screen veterans at each visit for depression, PTSD, and suicide risk
Tertiary Prevention	
• Provide appropriate resources for the management of mental health conditions • Provide appropriate referrals for the management of traumatic brain injuries, musculoskeletal issues, and pain management • Provide support for military families living with and caring for veterans with chronic health needs	

TABLE 27.2 Nurses' Role in Primary, Secondary, and Tertiary Prevention for Veterans

27.3 The LGBTQIA+ Community

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 27.3.1 Discuss health barriers experienced by the LGBTQIA+ community.
- 27.3.2 Identify the health needs of the LGBTQIA+ community.
- 27.3.3 Describe the nurse's role in caring for LGBTQIA+ individuals.

Lesbian, gay, bisexual, transgender, queer, intersex, and asexual (LGBTQIA+) individuals live in every community, hail from all walks of life, and represent every racial, ethnic, socioeconomic, and geographic group (CDC, 2019c). Both LGBTQIA+ individuals and **sexual minority youth** (SMY)—young individuals who identify as lesbian, gay, or bisexual; who are not sure of their sexual identity; or who have had same-sex partners—experience many health disparities and challenges. In particular, LGBTQIA+ adolescents are at high risk of experiencing bullying, dying from suicide, and using illegal substances. Many Health People 2030 objectives relate to these three major concerns (ODPHP, 2022b). Sexual and gender minority groups are subjected to harassment, discrimination, and violence due to unjust practices, policies, and social conditions (CDC, 2022b). Individuals who identify as transgender experience higher rates of discrimination and higher rates of interpersonal violence (Medina-Martinez et al., 2021). See Table 27.3 for examples of the many terms commonly used to describe gender and sexual identity.

HEALTHY PEOPLE 2030

LGBTQIA+

Many Healthy People 2030 objectives relate to improving the health, safety, and well-being of LGBTQIA+ individuals (https://openstax.org/r/healthdatabrowse). These objectives highlight the importance of collecting population-level health data on LGBTQIA+ health issues and improving the health and safety of LGBTQIA+ individuals with an emphasis on the adolescent population.

What is LGBTQIA+?*	
L – Lesbian	A woman whose physical and romantic attraction is to other women. Some may prefer to identify as gay or as gay women.
G – Gay	An individual whose physical and romantic attraction is to people of the same sex. Most often refers to men, but some women prefer to identify as gay.
B – Bisexual	A person who forms physical and romantic attractions both to those of the same gender and to those of another gender. Bisexual people do not need to have had specific sexual experiences to be bisexual.
T – Transgender	An umbrella term for people whose gender identity and/or gender expression differs from what is typically associated with the sex they were assigned at birth. People under the transgender umbrella may describe themselves as transgender or nonbinary. Some transgender people undergo treatment to bring their bodies into alignment with their gender identity.
Q – Queer/Questioning	An adjective used by some people whose sexual orientation is not exclusively heterosexual or straight. This umbrella term includes people who have nonbinary, gender-fluid, or gender-nonconforming identities. Once considered a pejorative term, some LGBTQIA+ people have reclaimed *queer* to describe themselves; however, it is not a universally accepted term even within the LGBTQIA+ community. Sometimes, the Q in LGBTQ can also describe someone questioning their sexual orientation or gender identity.
I – Intersex	An adjective used to describe a person with one or more innate sex characteristics, including genitals, internal reproductive organs, and chromosomes, that fall outside of traditional conceptions of male or female bodies. Having an intersex trait is different from being transgender. Medical providers and parents assign an intersex person a sex at birth, either male or female — and that assignation may not match the gender identity of the child. Not all intersex individuals identify as being part of the LGBTQIA+ community.
A – Asexual	This adjective describes a person who does not experience sexual attraction.
+ – Plus	The "plus" is used to signify all the gender identities and sexual orientations that letters and words do not yet fully describe.
Other Terms Commonly Used	
Cisgender	Used to describe a person whose gender identity aligns with the sex assigned at birth.
Gender identity	One's self-concept as male, female, a blend of both, or neither. How individuals perceive themselves and what they call themselves.
Gender non-conforming	Individuals who do not behave in a way that conforms to traditional expectations of their gender or whose gender expression does not fit into a category.

TABLE 27.3 Terms Commonly Used to Describe Gender and Sexual Identity (See Human Rights Campaign, 2023; Lesbian & Gay Community Services Center, Inc., 2023.) *Note: Throughout this section, a variety of acronyms are used based on the source material where the information was retrieved.

Gender fluid	A person who does not identify with a single fixed gender or who has a fluid or unfixed gender identity.
Nonbinary	Describes an individual who does not identify exclusively as a man or a woman. Nonbinary individuals may identify as both a man and a woman, somewhere between, or outside of these categories.

TABLE 27.3 Terms Commonly Used to Describe Gender and Sexual Identity (See Human Rights Campaign, 2023; Lesbian & Gay Community Services Center, Inc., 2023.) *Note: Throughout this section, a variety of acronyms are used based on the source material where the information was retrieved.

Health Barriers Experienced by the LGBTQIA+ Population

Throughout U.S. history, many policies and practices have discriminated against and stigmatized the LGBTQIA+ population. Same-sex sexual activity only became legal in every state in 2003 with the Supreme Court's ruling in *Lawrence v. Texas* (CDC, 2022b). LGBTQIA+ individuals have faced discrimination in finding housing and jobs and in family court (CDC, 2022b). Similarly, until the 2015 Supreme Court ruling in *Obergefell v. Hodges*, many states did not recognize same-sex marriages. This impacted health insurance coverage and job protections for family leave (CDC, 2022b). Same-sex marriage bans further stigmatized this population and made same-sex couples unequal in the eyes of the justice system.

LGBTQIA+ individuals also experience significant harm due to structural discrimination, threats, verbal abuse, or violence (CDC, 2022b). In 2022, 17 U.S. states lacked state laws against discrimination based on sexual orientation or gender identity in employment, housing, and public accommodations (Movement Advancement Project, 2023). The medical community and health care system have also discriminated against LGBTQIA+ populations. Until 1973, the American Psychiatric Association classified homosexuality as a mental disorder (CDC, 2022b). From 1923 to 1981, individuals in Oregon who participated in same-sex sexual activity were sterilized without their consent (CDC, 2022b). These historical injustices have impacted accessing and seeking care for LGBTQIA+ populations. In many studies, LGBTQIA+ individuals report avoiding necessary health care because they feel uncomfortable and unsafe due to discriminatory attitudes and behaviors in health care systems (Medina-Martinez et al., 2021).

In 2022, anti-LGBTQ legislation took effect across several U.S. states. In Florida, South Dakota, and Alabama, bills passed restricting classroom discussions of gender and sexuality (Rummler, 2022; USA Facts, 2023), creating a stigmatized atmosphere of constraint and silence around LGBTQIA+ individuals. As of the 2023 legislative session, the American Civil Liberties Union (ACLU) was tracking 492 anti-LGBTQ bills advancing through state legislatures. These bills were attempting to:

- weaken nondiscrimination laws,
- allow businesses and hospitals to turn away LGBTQ individuals,
- limit access to books about LGBTQ individuals,
- limit discussion and education on LGBTQ individuals and issues,
- ban drag show performances,
- ban affirming health care for transgender youth,
- block funding to medical centers that offer gender-affirming care,
- prevent transgender students from participating in sports, and
- prevent transgender individuals from using public bathrooms and locker rooms (ACLU, 2023).

Both implicit and explicit discrimination result in the unfair treatment of individuals or groups based on certain characteristics such as sexual orientation or gender identity (ODPHP, 2020b). **Implicit discrimination** is considered unconscious, shaped by previous experiences and learned associations of certain qualities and social categories. This can result in inequitable care when professionals communicate bias or make biased clinical decisions (National LGBT Health Education Center, 2018). Physical or verbal expressions of bias may determine whether LGBTQIA+ clients follow prescribed health advice or return for care (National LGBT Health Education Center, 2018). Examples of biased communication include referring to same-sex partners as "friends" or excluding same-sex partners from health conversations. Heteronormativity, the belief that heterosexuality is the normal, better, or only sexual orientation (Ferrari et al., 2021), can result in **heteronormative** behaviors, such as discussing oral contraception with all women of childbearing age regardless of their sexual orientation, that reflect implicit bias.

Explicit bias is a consciously held negative attitude or belief about a specific individual or group based on certain

characteristics, such as sexual orientation or gender identity. Explicit biases are easily identified and communicated and result in the inequitable treatment of individuals or groups (Vela et al., 2022). Examples of explicit bias include health professionals refusing treatment to LGBTQIA+ individuals on the basis of their sexual or gender orientation or displaying open hostility and rudeness toward these individuals, such as not respecting their preferred name or pronouns (Medina-Martinez et al., 2021).

CASE REFLECTION

Addressing Implicit Bias

The National LGBTQIA+ Health Education Center offers a series of cases exploring scenarios clients encounter frequently in health care settings to provide strategies for nurses and other health care staff to move past bias and provide holistic, culturally congruent care.

Access the Case Studies (https://openstax.org/r/lgbtqia) and scroll to page 3; read through the 10 short case scenarios, and then respond to the following questions.

1. In what ways did the scenarios challenge or confirm your ideas about bias toward LGBTQIA+ clients in the health care system? Did one scenario resonate with you more than others? Why?
2. Have you ever experienced these types of situations in health care, either as a client, an observer, or in the role of health care staff? If you could revisit a past experience, what, if anything, would you do differently?
3. The scenarios emphasize that no one is an expert, regardless of their personal experience, and that learning and training benefits all health care professionals. As a future nurse, how prepared do you feel to address such biases in health care? What are some ways you might learn more?

Health Needs of the LGBTQIA+ Population

LGBTQIA+ individuals have poorer overall physical and mental health than their cisgender, heterosexual counterparts. This population has higher rates of anxiety and depression, many types of substance use, and suicide (Medina-Martinez et al., 2021). Lesbian and bisexual women have higher rates of obesity, osteoporosis, and cancers of the colon, liver, breast, ovaries, and cervix (Medina-Martinez et al., 2021). Gay and bisexual men have higher rates of HIV, viral hepatitis, sexually transmitted infections (STI), and cancers of the anus, prostate, testicle, and colon. Transgender people have higher rates of self-harm and suicide (Medina-Martinez et al., 2021).

SMY experience significantly higher levels of violence, harassment, bullying, and sexual violence in school, resulting in a greater risk of suicide, depression, and substance use than in heterosexual youth (CDC, 2020h). LGBTQIA+ youth face social stigma, discrimination, and social rejection regarding their sexual choices or identities. Given these factors, LGBTQIA+ students are at much higher risk for adverse health outcomes related to sexual behaviors, experiences with violence, substance use, mental health, and poor academic performance (CDC, 2020h). The CDC's 2017 Youth Risk Behavior Survey found that, compared with their heterosexual peers, SMY were more likely to have experienced the following (CDC, 2019d):

- Been bullied at school (32 percent of LGB students vs. 17.1 percent of heterosexual students)
- Seriously considered suicide (46.8 percent of LGB students vs. 14.5 percent of heterosexual students)
- Felt sad or hopeless (66.3 percent of LGB students vs. 32.2 percent of heterosexual students)
- Used select illicit drugs (27.8 percent of LGB students vs. 12.7 percent of heterosexual students)
- Been forced to have sex (19.4 percent of LGB students vs. 5.5 percent of heterosexual students)
- Misused prescription opioids (12 percent of LGB students vs. 6.4 percent of heterosexual students)

LGBTQIA+ youth are also at increased risk for many negative health outcomes. Adolescent gay and bisexual males have high rates of HIV, syphilis, and other STIs, and adolescent lesbian and bisexual females are more likely to have been pregnant than their heterosexual counterparts. Transgender youth are more likely to have attempted suicide than their heterosexual peers (CDC, 2019c).

How LGBTQIA+ Experiences Intersect with the Social Determinants of Health

The experiences of LGBTQIA+ individuals intersect with the SDOH at the individual and community levels related to

income, education, social cohesion, and the structural factors of community characteristics and government policies. **Minority stress**—the stigma, prejudice, and discrimination experienced by individuals and groups due to marginalized or vulnerable identities—is a key SDOH for sexual minority individuals (Schuler et al., 2021). Health disparities are driven by unequal distribution of health determinants, and this remains true in the LGBTQIA+ population (Schuler et al., 2021). Research has documented key economic disparities among LGB individuals (Schuler et al., 2021). Gay and bisexual males earn anywhere from 11 to 27 percent less than heterosexual males with the same occupation, education, and experience, and bisexual women have significantly higher rates of poverty than their heterosexual counterparts, even after adjusting for demographic factors (Schuler et al., 2021).

Social connectedness is another SDOH that has an impact on LGBTQIA+ individuals. Social isolation is associated with elevated mortality risks, and LGB individuals experience lower social connectedness than their heterosexual counterparts, as LGB adults are significantly less likely to be married, and older gay and bisexual men are more likely than heterosexual men to live alone. As discussed in Social Determinants Affecting Health Outcomes, incarceration contributes to poor health in many ways. National data indicate that females who identify as a sexual minority are disproportionately overrepresented in correctional facilities, with 42 percent of women and 39 percent of girls who are incarcerated identifying as a sexual minority (Schuler et al., 2021). In addition to the health risks of incarceration, such as isolation, communicable diseases, and limited economic opportunities upon release, sexual minority status is the largest risk factor for victimization while incarcerated (Schuler et al., 2021).

The Nurse's Role in Caring for the LGBTQIA+ Population

Achieving health equity for LGBTQIA+ clients requires nurses and other health professionals to view current health inequities through the lens of structural discrimination. Using that lens, community and public health nurses can look for ways to address and decrease this discrimination and its effects (Medina-Martinez et al., 2021).

Protective factors that promote sexual health and positive outcomes among LGBTQ youth include acceptance and support from caregivers and peers, particularly regarding sexual orientation and gender identity, and school-based gay–straight alliances (Figure 27.5). Gay–straight alliances are student-led clubs that provide a safe place for students to support each other on issues related to sexual orientation and gender identity (CDC, 2019e). Community and public health nurses can assist transgender and other gender-diverse youth by offering quality sexual health education, assisting youth in accessing quality health care services, and providing a safe and supportive environment for these at-risk individuals (CDC, 2019f).

The transgender population faces particular stigma, health disparities, and challenges. Adolescent transgender individuals are at increased risk for experiencing violence, poor mental health and suicide, substance use, and risky sexual behaviors (CDC, 2019f). Despite these risks, adolescents are often resilient, capable of withstanding or recovering quickly from adversity. This resilience acts as a protective factor against stigma and discrimination. By connecting transgender individuals with quality sexual health education, access to health services, and supportive environments, community health nurses can help these adolescents to overcome adversity and flourish (CDC, 2019f). Understanding the experiences of the transgender youth population enables community and public health nurses to create more supportive environments for them. Nurses and other health professionals should take part in transgender cultural competency trainings and participate in the establishment of clinic protocols regarding confidentiality, chosen name, and chosen pronoun (CDC, 2019f).

The community health nurse is well-positioned to impact the health and wellness of the LBGTQIA+ population, especially LBGTQIA+ youth. School nurses can foster a sense of support, safety, belonging, and inclusion for these students. These nurses can support and conduct programs on inclusive sexual education, gender and sexual diversity, and bullying and suicide prevention topics (Medina-Martinez et al., 2021). The school nurse can help administrators review policies and practices to ensure inclusivity and provide or refer students to comprehensive, affirming sexual health services (CDC, 2019f). In the community outside of school, the community health nurse can foster social bonds among peers, teachers, community groups, and organizations that support LGBTQIA+ issues. By creating a community that fosters this environment, community health nurses can collaborate with other community leaders to address health risk behaviors within the LGBTQIA+ population and to provide appropriate sexual health education and services (CDC, 2020h).



FIGURE 27.5 LGBTQIA+ groups can advocate for equity and inclusion in the community and beyond. (credit: Kevin Bacher/NPS/Flickr, CC BY 2.0)

Nurses can also play a role in reducing health inequities in the LGBTQIA+ population by being aware of implicit biases and actively working against them. Nurses can take implicit association tests (IATs) to help identify implicit biases and then learn strategies to minimize their impact. Mindfulness meditation and individuation training that focuses on individual characteristics and traits rather than group membership have successfully reduced implicit bias (Morris et al., 2019). Nurses should also participate in training related to LGBTQIA+ cultural competence among health professionals (Medina-Martinez et al., 2021). By using appropriate pronouns, actively listening to clients, avoiding assumptions based on gender or appearance, and advocating for a culturally appropriate health care environment, nurses can help counteract health inequities. Nurses play a role in primary, secondary, and tertiary prevention for caring for the LGBTQIA+ population (Table 27.4).

Primary Prevention
• The school nurse should emphasize bullying prevention with educational sessions and posters and encourage administrators to adopt a zero-tolerance policy for bullying behaviors. • The school nurse can develop and implement policies to promote a positive school environment of safety and belonging for all students. • The school nurse can promote acceptance of LGBTQIA+ individuals by educating students and school staff about gender identity and sexual orientation. • The school nurse can encourage teachers to include age-appropriate information about LGBTQIA+ individuals in their lesson plans. Examples include discussions on different kinds of families or studying the civil rights movements for sexual minority individuals. • The community and public health nurse can advocate for laws and policies that specifically protect the rights of LGBTQIA+ individuals, such as anti-bullying laws to protect all students.
Secondary Prevention
• Screen students who are at risk for being bullied or at risk for academic or emotional problems. • Encourage support groups for sexual minority students such as gay–straight alliances as means for these students to talk about their experiences at school and in the community. • Screen LGBTQIA+ individuals for depression, anxiety, suicide risk, and victimization.
Tertiary Prevention
• Refer individuals who are experiencing social and emotional challenges to appropriate community services.

TABLE 27.4 Nurses' Role in Primary, Secondary, and Tertiary Prevention for the LGBTQIA+ Population

27.4 Migrant Workers

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 27.4.1 Define the term migrant workers.
- 27.4.2 Discuss the health barriers migrant workers face.
- 27.4.3 Describe the health needs of the migrant worker population.
- 27.4.4 Identify the nurse's role in caring for migrant workers.

According to the World Health Organization (WHO) (2022), millions of migrants worldwide work dangerous, low-skilled jobs and live and work in substandard conditions. **Migrant workers** are often mobile, moving frequently to locations that offer work, most often in a seasonal pattern. A **migrant farmworker**, also commonly called a **migratory seasonal agricultural worker** (MSAW) or mobile worker, is an individual who is required to be absent from a permanent residence to seek paid employment in agricultural work (Migrant Clinicians Network [MCN], 2023b, para 1). In contrast, immigrants lawfully move to another country to live there permanently.

Globally, migration has evolved and changed. Migrants are now working in industries and communities that never before relied on migrant workers, such as Alaskan salmon fisheries or Wisconsin industrial dairy farms (MCN, 2023c). A few migration patterns have emerged: migrants moving back and forth between their home country and country of migrant work; agricultural workers moving frequently within one country following seasonal changes in work opportunities; and new immigrants searching for opportunity and more stable conditions (MCN, 2023c). In 2020, 281 million people were living outside of their country of birth, and in the United States, over 51 million people were born outside of the country (MCN, 2023c).

An estimated 2.9 million farmworkers reside in the United States, a large majority of whom are immigrants. Sixty-three percent of all U.S. agricultural workers were born in Mexico, and 36 percent lack authorized work status (Farmworker Justice, 2023). Education and literacy are limited among farmworkers, who often have an average formal education ending at ninth grade (Farmworker Justice, 2023). Approximately 15 percent of farmworkers travel long distances to find work, some traveling across the U.S.–Mexico border and some in the United States, especially to Florida, Texas, Arizona, and California. Communities of farmworkers have high levels of poverty as few have benefits such as sick leave, paid vacation, unemployment insurance, or health insurance. Despite this poverty, most farmworkers do not receive federal benefits such as food stamps, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), or Medicaid. Women comprise 34 percent of the agricultural workforce and face additional obstacles such as sexual harassment, fear of reporting sexual harassment, and lack of appropriate health care (Farmworker Justice, 2023; National Center for Farmworker Health [NCFH], 2022).

Health Barriers Experienced by Migrant Workers

Migrants are among the most susceptible and overlooked members of society (WHO, 2022). For many reasons, migrant workers have poorer health outcomes than typical individuals in their host communities (WHO, 2022). They often lack access to health and dental care due to economic instability, lack of health insurance, migratory lifestyle, language barriers, cultural differences, geographic location, and a lack of familiarity with the health care system (MCN, 2023a). Because this population tends to move frequently, they often cannot establish a primary care home or develop relationships with providers and nurses, inhibiting their ability to receive appropriate health screenings, education, and follow-up care. Language and cultural differences are also barriers to overall health and dental care. The complexities of navigating unfamiliar health care facilities, policies, and insurance requirements lead some migrant workers to delay care or avoid the system altogether.

Migrant farmworkers in the United States legally can receive health insurance under the ACA and Medicaid if their annual income is below 138 percent of the federal poverty line. Due to farm labor shortages, the United States created the H-2A guest worker program to bring in temporary agricultural workers. In 2021, the U.S. Department of Labor approved 317,619 H-2A visas (NCFH, 2022). Workers with an H-2A visa can receive health insurance under the ACA, but due to their temporary status, employers are not required to provide them with health insurance, so they may need to pay for it themselves. Co-pays and deductibles often present barriers to low-income migratory workers seeking medical care. In 2021, almost 80 percent of MSAWs were considered low-income, with an income at 200 percent of the federal poverty level, and nearly half had no insurance (NCFH, 2021c). Farmworkers in the United States illegally cannot receive health insurance either privately or through the ACA.

The Migrant Health Act of 1962 authorized primary and supplemental health services to migrant and seasonal farmworkers. Today, 177 federally funded Migrant Health Centers (MHCs) are run by either community-based organizations or by governmental entities such as state and local health departments, serving MSAWs and their families. In 2021, there were nine migrant health–only programs in Maine, Massachusetts, North Carolina, South Carolina, Georgia, Minnesota, Kansas, Iowa, and Montana, providing care irrespective of ability to pay (NCFH, 2021c). Despite the availability of MHCs in some geographic regions, economic instability remains a health barrier due to a lack of transportation and the inability to afford to take a day off from work.

CASE REFLECTION

Stories from the Field

Stories from the Field is a collaboration between the nonprofit Farmworker Justice and photojournalist David Bacon that gives farmworkers and their families a voice to talk about their experiences and the challenges they face.

Read Teresa's story (https://openstax.org/r/farmworkerjustice) and Ramona's story (https://openstax.org/r/fieldramona), and then respond to the following questions.

1. What health conditions do Teresa and Ramona experience? How are these conditions related to their work?
2. In your view, do communities have an ethical duty to do more to protect the rights of these individuals? Why or why not?

Health Needs of Migrant Workers

Hazardous work and living conditions place migrants at risk for adverse health outcomes. In the legal and occupational regulatory systems, a history of agricultural exclusions has resulted in inadequate job protections for farmworkers (MCN, 2023a). The Migrant and Seasonal Agricultural Worker Protection Act (MSPA) of 1983 established employment standards regarding wages, housing, and transportation, among others, but exclusions remain (MCN, 2023a). Health issues occurring more frequently in this population include diabetes, heart disease, arthritis, and TB (MCN, 2023a). Dangerous working conditions often result in musculoskeletal strains, falls, trauma, lacerations, and illnesses related to chemical, pesticide, extreme temperature, and allergen exposures (Figure 27.6) (MCN, 2023b). Workers' families who travel with them are at increased risk for similar adverse health outcomes. For these reasons, migrant farmworkers have higher morbidity and mortality rates than the majority of the U.S. population (MCN, 2023b).



FIGURE 27.6 These migrant farmworkers harvest sweet potatoes in the fields. Exposure to the hot sun, strenuous manual labor, and pesticides are just a few health risks they face. (credit: Lance Cheung/USDA/Flickr, Public Domain)

Maternal child health care among this population is a considerable health need. Of the estimated 2.5 to 3 million migrant and agricultural workers in the United States, more than 25 percent are women, and more than 50 percent

are parents. Studies have found that fewer than half of pregnant agricultural workers accessed prenatal care within the first 3 months of pregnancy compared to 76 percent of women who access prenatal care early nationally. Half of the agricultural worker women monitored gained less weight than recommended during their pregnancies, and close to 24 percent had undesirable birth outcomes (NCFH, 2018).

Barriers to oral health include lack of dental insurance, the cost of dental repair, long travel times to receive dental care, and cultural and linguistic barriers. This has both physical and psychosocial effects. Oral disease is very visible, marking individuals as "second-class citizens" and increasing social exclusion (NCFH, 2018c).

THEORY IN ACTION

How Building a Community of Care Can Improve Farmworkers' Health

Access multimedia content (http://openstax.org/books/population-health/pages/27-4-migrant-workers)
This short video highlights the Community of Care program in Southeast Arizona as a way to improve farmworkers' health.

Watch the video, and then respond to the following questions.

1. What barriers to accessing health care do the farmworkers experience?
2. What is the role of the *promotoras de salud* described in the video? Why are they effective?
3. In your view, will building this "community of care" improve the health outcomes of farmworkers and their families? Why or why not?

Social Determinants of Health Affecting Migrant Workers

Structural factors, including political, commercial, economic, and social factors, directly impact migrant workers' health and well-being globally. Lack of migrant worker rights and protections negatively affect the health of these individuals and their families. Because employers can pay migrant workers minimal compensation for difficult labor performed under suboptimal conditions, these individuals cannot seek appropriate care for their illnesses or injuries or leave their jobs due to their precarious economic situation.

The health inequities migrant workers experience are a direct result of individual and structural SDOH (Evagora-Campbell et al., 2022). The WHO's World Report on the Health of Refugees and Migrants (https://openstax.org/r/whoint) reports that migrants' ill health compared to their host communities is the result of suboptimal individual determinants such as income, education, housing, and access to services, exacerbated by linguistic, cultural, legal, and other barriers (WHO, 2022). According to this report, compared with non-migrant workers, migrant workers are more likely to have occupational-related injuries and less likely to use health services. Limited or restricted access to health services exacerbates these health problems (WHO, 2022). Table 27.5 demonstrates how the SDOH are directly related to migrant workers' health concerns.

SDOH	How It Occurs	Negative Outcomes
Economic insecurity		
Poverty	• Performing low-wage work • Being born into generational poverty • Lack of social or political influence • Lack of legal status in the host country, in some cases • Beginning migrant work at an early age	• Limited access to reliable, safe housing and neighborhoods • Limited access to health or dental care • Limited access to an adequate variety of healthy foods • Limited access to transportation • Limited access to educational opportunities

TABLE 27.5 Intersectionality of Migrant Workers with the SDOH (See MCN, 2023a; NCFH, 2018a; NCFH, 2021a.)

SDOH	How It Occurs	Negative Outcomes
Neighborhood and Built Environment		
Food insecurity	• Lack of access to an adequate variety of healthy foods because of economic circumstances • Lack of transportation to grocery stores • Consumption of highly processed, easily stored foods related to a lack of a means to store and cook fresh food appropriately	• Food insecurity leads to poor nutritional status and potential adverse health outcomes like obesity, diabetes, hyperlipidemia, and hypertension. • Food insecurity is linked to learning disorders in children, and symptoms of depression in children and adults.
Substandard housing	• Using unsafe drinking water for drinking, cooking, bathing, and cleaning • Living in an overcrowded environment • Experiencing inadequate sanitation • Living in an unheated or inadequately heated structure • Living in an unsafe substandard structure with a substandard electrical system • Inhaling or absorbing pesticides in the home via application drift	• Contaminated drinking water and inadequate sanitation are associated with many negative health outcomes, including infectious diseases. • Overcrowding is associated with increased communicable diseases, food insecurity, and poorer mental health. • Substandard heating and electrical systems are associated with hypertension and respiratory issues. • The unsafe conditions in substandard buildings and structures create health hazards.

TABLE 27.5 Intersectionality of Migrant Workers with the SDOH (See MCN, 2023a; NCFH, 2018a; NCFH, 2021a.)

SDOH	How It Occurs	Negative Outcomes
Environmental conditions	• Inhaling or absorbing pesticides through their skin while on the job • Inhaling or absorbing pesticides in the home via application drift • Inhaling or absorbing toxic household and industrial cleaners and industrial chemicals • Working outdoors in extreme weather, poor air quality related to wildfires or high humidity, and disease-carrying vectors • Working outdoors without an adequate supply of drinking water	• Pesticides may affect the nervous and endocrine systems, act as carcinogens, or cause skin or eye irritation. • Children exposed to pesticides are at increased risk for learning delays and long-term disabilities. • Extreme heat may lead to heat exhaustion, sunburn, and dehydration. • Accumulated sun exposure places individuals at higher risk for skin cancer. • Poor indoor and outdoor air quality puts individuals at increased risk for respiratory illnesses.
Educational environment	• Migrating between May and November interrupts schooling. • Children working in agriculture can work an unlimited number of hours outside of school hours, starting at ages 10 to 11. • Children 12 and older can work on tobacco farms, a practice banned in many other countries due to the work's toxic nature.	• This population's high school dropout rate is four times the national rate. • Children exposed to pesticides are at increased risk for learning delays and long-term disabilities.

TABLE 27.5 Intersectionality of Migrant Workers with the SDOH (See MCN, 2023a; NCFH, 2018a; NCFH, 2021a.)

The Nurse's Role in Caring for Migrant Workers

Migrant health needs are often managed in community settings where community health nurses can make a lasting positive impact. To ensure better health outcomes, nurses need to advocate for the health of migrant workers, who have very little economic or political power. Nurses can help these individuals navigate the complex health system and push for more access and affordable care options. To address transportation barriers, public health nurses can advocate for mobile health units to visit migrant housing centers, a great upstream intervention. School and community nurses have a duty to advocate for the health and welfare of the children in the community. These nurses can advocate for fair labor laws and policies that govern other nonagricultural work, free school breakfasts and lunches, and appropriate health screenings and care.

MSAW clients frequently experience chronic diseases such as hypertension, diabetes, asthma, and eczema, being overweight or obese, and mental health disorders like anxiety and depression (NCFH, 2021c). Community and public health nurses can tailor nursing interventions to address these health issues. For example, education and advocacy efforts can target improving policies, providing healthy food options at little to no cost, and funding accessible telehealth mental health services. Community nurses can work with local businesses, officials, and community food programs to address food insecurity. Nurses can also partner with migrant and seasonal head start programs or farm-to-preschool programs to help provide children with appropriate education, health resources, and food (NCFH, 2021a).

Community health centers (CHC) are a resource for populations with limited access to health care, such as migrant workers. These community-based organizations are classified as CHCs rather than MHCs because they do not receive federal migrant health funding. Community health workers (CHWs) often play a key role in promoting migrant health by facilitating health promotion and disease prevention activities and programs to increase access to services, provide translators, and enhance the cultural competency of health programs (Emery et al., 2022).

Community and public health nurses should become familiar with local migrant and community health centers, especially in rural areas, to spread awareness of their services and help migrant workers access and coordinate care. Nurses have a role in primary, secondary, and tertiary prevention for caring for migrant workers (Table 27.6).

Primary Prevention
• Educate migrant workers on measures to reduce pesticide exposure • Educate clients on the benefits of immunizations and administer them as appropriate • Teach migrant farmworkers how to stay hydrated and avoid heatstroke • Educate clients to wear sunblock while working outdoors in addition to hats and clothing that covers skin • Provide prenatal care as necessary for pregnant clients
Secondary Prevention
• Screen for TB • Screen for skin cancer • Screen children for anemia • Screen for pesticide exposure • Screen for communicable diseases
Tertiary Prevention
• Treat for pesticide exposure and TB • Promote rehabilitation following occupational-related musculoskeletal injuries • Provide referrals as appropriate for obstetric care, mental health care, or other specialty care areas

TABLE 27.6 Nurses' Role in Primary, Secondary, and Tertiary Prevention for Migrant Workers

THEORY IN ACTION

Migrant Clinicians Network

Access multimedia content (http://openstax.org/books/population-health/pages/27-4-migrant-workers)
In this video, a community outreach nurse discusses what it is like to care for migrant farmworkers in Maine.

Watch the video, and then respond to the following questions.

1. What different roles does Beth Russet, the nurse in the video, play?
2. In your view, is this type of health care effective in managing the health needs of migrant workers? Why or why not?
3. What alternatives to this type of nurse-led health care for migrants could reach more individuals?

27.5 People with Disabilities

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 27.5.1 Define disability.
- 27.5.2 Describe the health barriers individuals with disabilities face.
- 27.5.3 Discuss the health needs of the population of individuals with disabilities.
- 27.5.4 Examine how the health needs of individuals with disabilities intersect with the social determinants of health.
- 27.5.5 Identify the nurse's role in caring for individuals with disabilities.

Individuals with disabilities make up a large minority group in the United States, with over 61 million individuals (approximately one in four people) affected (CDC, 2020g). Disabilities occur across all ages, genders, and racial, ethnic, and social groups. The WHO describes **disability** as an "interaction between an individual's functional impairments or chronic health conditions and the physical and social environment" (Mitra et al., 2022, p. 1380). In contrast, the medical model often defines disability as an impairment in a person's body or mind that results in difficulty doing certain activities and interacting with the environment around them (CDC, 2020e). There are many

types of disabilities affecting vision, movement, thinking, remembering, learning, communicating, hearing, mental health, and social relationships (CDC, 2020e).

Institutional discrimination, lack of disability cultural competency in health professional curricula, and systemic barriers in the health care system result in significant health disparities between individuals experiencing disabilities and those who are not (National Council on Disability [NCD], n.d.). Health disparities for individuals with disabilities who are BIPOC or living in rural areas are even more significant (Crankshaw, 2023; Steinweg, 2023). Despite the Americans with Disabilities Act (ADA) of 1990 and the Amendments Act of 2008, which mandate equal access to health care services, disparities result from physical inaccessibility of health care settings, inadequate accommodations for communication, ableist discrimination, and implicit and explicit biases among health care staff (Lagu et al., 2022). **Ableism** is the intentional or unintentional discrimination against individuals with disabilities (National Conference for Community and Justice [NCCJ], 2021). This population often experiences unaccommodating health care settings and substandard care. Discriminatory attitudes among health care staff perpetuate health disparities and discourage individuals with disabilities from seeking care (Lagu et al., 2022).

HEALTHY PEOPLE 2030

People with Disabilities

Many Healthy People 2030 objectives relate to improving the health and well-being of individuals with disabilities (https://openstax.org/r/disabilities). These objectives highlight the importance of promoting the health and well-being of all individuals, regardless of ability, to reduce health disparities and achieve health equity. Recall that health disparities are *preventable* differences in health between groups of individuals, usually due to social or economic factors, geographic location, environment, or ability.

Health Barriers Experienced by Individuals with Disabilities

Individuals with disabilities face frequent barriers to optimal and equitable care, including an inaccessible physical environment, a lack of assistive technology for communication, a lack of understanding, and negative attitudes.

Many physical barriers may prevent individuals from obtaining health care. Individuals with mobility disorders may have difficulty accessing health care facilities due to unaccommodating sidewalks, curbs, and stairs. Inside the building, stairs, small rooms, immobile exam tables, and standing scales that do not accommodate wheelchairs are additional barriers. ADA regulations for equitable or accessible physical spaces relate only to fixed structures and do not include medical equipment, furnishings, or diagnostic equipment (Iezonni et al., 2022). For example, a lack of accessible equipment for routine Pap smear screening and mammography screening is common (CDC, 2020a). While hospitals may be more likely to have appropriate equipment for individuals with disabilities, most private health care professional offices and outpatient facilities do not (Iezonni et al., 2022).

Negative attitudes toward individuals with disabilities impact health care encounters and contribute to disparities in health outcomes. Data from implicit attitude testing among health care professionals across all disciplines has revealed a pervasive ableist bias (Iezonni et al., 2022). In a 2019–2020 national survey, more than 80 percent of outpatient physicians felt that individuals with significant disability have worse quality of life than nondisabled individuals, and only 40 percent thought they could provide the same quality of care to clients with disability as they do to those without (Iezonni et al., 2022). These assumptions affect the quality of care this population receives. Health professionals often fail to ask appropriate health screening questions or to actively listen to these clients (CDC, 2020a). For example, in one study health care providers did not ask clients with disabilities about sexual activity and therefore failed to screen them appropriately for human papillomavirus and cervical cancer (Iezonni et al., 2022). By stereotyping individuals with disabilities as being unhealthy or having a poor quality of life, nurses and other health care professionals perpetuate stigma and health care disparities.

Another barrier experienced by individuals with disabilities is the lack of person-first language. Instead, the language focuses on the disability versus ability. **Person-first language** refers to people first to separate the person from a diagnosis or impairment (Crocker & Smith, 2019). An example is referring to a group of children as "children with intellectual disabilities" versus "intellectually disabled children" or referring to "clients with sensory disorders" rather than "sensory disorder clients". The goal is to focus more on the person rather than the diagnosis to decrease

the stigma of a disability or condition. It also contradicts the mindset that everyone with a certain diagnosis is the same (Crocker & Smith, 2019). There is also a push toward identity-first language that views the individual's disability as a large part of that person's identity. For example, the Deaf community is opposed to person-first language as they view deafness as a medical condition that should not be stigmatized (Crocker & Smith, 2019). While person-first language is often taught in health care programs, it is often not used in the clinical setting, creating another barrier for clients with disabilities (Crocker & Smith, 2019).

IMPROVING HEALTHCARE ACCESS FOR PEOPLE WITH DISABILITIES

Access multimedia content (http://openstax.org/books/population-health/pages/27-5-people-with-disabilities)
If nurses and other health care providers do not receive adequate training to practice culturally sensitive care to clients with disabilities, this creates a barrier to care. In this video, Melissa Crisp-Cooper shares her health care experiences as an individual with a disability.

Watch the video, and then respond to the following questions.

1. What are some barriers to receiving quality health care Melissa experienced?
2. What are some potential strategies to mitigate these barriers?
3. How can the community health nurse address disparities in caring for individuals with disabilities?

The CDC describes communication, programmatic, social, and transportation as other common barriers making it difficult for individuals with disabilities to function.

Communication Barriers

The ADA requires local and state governments, businesses, and nonprofits serving the public to communicate effectively with individuals who have communication disabilities (ADA.gov, 2020). Although it is an ADA violation for businesses to require clients to bring another person to interpret or assist in communication (ADA.gov, 2020), many health care providers do not accommodate alternative communication styles. In a large study, physicians reported relying on clients' caregivers to overcome communication barriers and often communicating solely with the caregiver, leaving the client with the disability out of the conversation completely (Lagu et al., 2022). These physicians reported cost and time commitment as challenges to accommodating this population's communication needs (Lagu et al., 2022). Many outpatient providers allot 15 minutes for a client visit, but they may need more time to accommodate alternate means of communication, including working with interpreters and providing health promotion education materials in large print, Braille, or versions made for screen readers (CDC, 2020a). Some auditory messages, such as oral communication or videos, can be inaccessible for individuals with hearing impairments without American Sign Language interpretation or captioning (CDC, 2020a).

Programmatic Barriers

Programmatic barriers include a lack of accessible equipment or adequate time for medical examinations, inopportune scheduling, and providers' attitudes, knowledge, and understanding of people with disabilities (CDC, 2020a). As discussed previously, there are many physical barriers to accessing quality care, including access to equipment. Clients with disabilities that affect mobility, hearing, seeing, or cognition may require more time for a quality health encounter. Given current reimbursement models and the push to see a certain number of clients per hour, the lack of adequate time for examination is burdensome to many providers (Lagu et al., 2022).

Social and Transportation Barriers

Social barriers to care refer to those SDOH that adversely affect health outcomes. Individuals with disabilities are less likely to have completed high school or be employed and are more likely to have low income levels (CDC, 2020a), placing them at increased risk for economic insecurity, greater adversity, higher levels of chronic stress, and ultimately poorer health outcomes. Additionally, children with disabilities are four times more likely to experience violence, another factor impacting overall poor health (CDC, 2020a). This population may face transportation barriers, including a lack of access to transportation for individuals who cannot drive due to vision, cognitive, or mobility impairments (Figure 27.7) (CDC, 2020a). Economic insecurity may limit access to a private vehicle for those who can drive. Health visits can become less of a priority without easy access to transportation.



FIGURE 27.7 Transportation can be a barrier to accessing health care for some clients with disabilities. However, there are ways to ensure public transportation is accessible to all. (credit: "MTA Celebrates 31st Anniversary of ADA" by Marc A. Hermann/MTA/Flickr, CC BY 2.0).

Health Needs of Individuals with Disabilities

In the United States, individuals with disabilities are three times as likely as individuals without disabilities to have arthritis, diabetes, and a heart attack and five times as likely to report a stroke, chronic obstructive pulmonary disease (COPD), and depression (NCD, 2023). Individuals living with disabilities are more likely to be obese and have unmet medical and dental needs. Women with disabilities often are not referred for routine pap smears and mammography, and pregnant clients with disabilities have 11 times the risk of maternal death of those without disabilities (NCD, 2023).

This population is at greater risk for **victimization**—purposely perpetrated violence and abuse—than nondisabled individuals. Victimization commonly occurs at home and in hospitals and includes physical and sexual violence, emotional abuse, and neglect of personal needs, medical care, or equipment. Almost 12 percent of adults with a disability were victims of sexual assault compared to 4 percent of adults without a disability (CDC, 2020f). Children with disabilities are more than twice as likely to be physically or sexually abused as children without disabilities (CDC, 2020d). At every health care encounter, these individuals should be screened appropriately for abuse and treated with a trauma-informed lens. **Trauma-informed care** is an approach to providing clinical care that encourages a culture of safety, empowerment, and healing for clients (Rittenberg, 2018). For individuals who have experienced sexual assault, victimization, or any other trauma, experiences in a health care facility where they are asked sensitive questions, told to remove clothing, undergo invasive testing, or perceive an overall differential in power can be frightening (Rittenberg, 2018). Using a trauma-informed lens means the nurse and health care provider work together to explain why they are asking certain questions or performing certain exams, taking the time to build a rapport with the client. See Caring for Populations and Communities in Crisis for more information on trauma-informed care.

Individuals with disabilities are more likely to report having overall poorer health and engaging in risky health behaviors such as smoking and physical inactivity than individuals without disabilities (CDC, 2020c). Obesity is more common in children and adults with mobility limitations and intellectual disabilities, resulting in potentially serious health consequences of metabolic syndrome, heart disease, and diabetes (CDC, 2019b). This population may be more vulnerable to preventable health problems and may experience secondary conditions such as pain and fatigue because of their disabling condition.

In addition to poorer physical health, individuals with disabilities report much higher rates of stress and depression than nondisabled individuals (CDC, 2020d). The good news is that many of this population's health needs are preventable, so health care providers and nurses can intervene at a primary prevention level to effect meaningful change for these clients. With this high-risk group, nurses must consistently apply the many evidence-based strategies to combat smoking and physical inactivity.

How Individuals with Disabilities Intersect with the Social Determinants of Health

The health needs of individuals with disabilities intersect with the SDOH, as other forms of marginalization affect the

health disparities among this population (Mitra et al., 2022). Transgender adults have much higher rates of disability compared with cisgender men and women, leading some to consider disability from an intersectionality lens—that is, to consider the intersection of disability with other categories of disadvantage such as gender identity, age, and racial and ethnic status (Smith-Johnson, 2022).

In 2018, more than a quarter of individuals with disabilities in the United States lived below the federal poverty level, compared with 10 percent of the nondisabled population (Semega et al., 2021). Poverty is often the result of unemployment, poor educational access, and discrimination (Engelman et al., 2022). Engaging in meaningful work is an essential aspect of a healthy, economically stable adulthood. Unemployment or inability to work is often associated with economic insecurity and poverty, resulting in direct adverse determinants of health. Across all age groups, individuals with a disability are much less likely to be employed, with an unemployment rate twice as high in this population as in that of their nondisabled counterparts (U.S. Bureau of Labor Statistics, 2023).

A person's neighborhood can positively or negatively impact their health. For example, a neighborhood's "walkability" affects the physical mobility of walkers and those with mobility difficulties who are at increased risk for many chronic diseases for which inactivity is a risk factor. Adults with disabilities perceive fewer neighborhood environmental supports and more barriers to walking than their nondisabled counterparts (Omura et al., 2020). Barriers to walkability include a lack of sidewalks, safe walking paths, and curb outlets for wheelchairs.

Like other historically marginalized populations with lower socioeconomic positions, this population is disproportionately affected by environmental conditions like climate change and extreme weather. For example, heat waves adversely impact individuals with spinal cord injuries, diabetes, heart disease, and other neurological conditions (Engelman et al., 2022). While air conditioning helps, not everyone can afford it or the electricity associated with its use. Cooling centers may be inaccessible due to distance, transportation issues, medical conditions, and facility barriers. This is the intersection between disability, lack of employment, and poverty (Engelman et al., 2022).

The Nurse's Role in Caring for Individuals with Disabilities

The role of the community and public health nurse in caring for individuals with disabilities spans the three core functions of public health nursing: assessment, policy development, and assurance. The public health nurse should assess their community's health needs and collect and trend data on the health outcomes of vulnerable populations. Using this data, nurses can appropriately educate health care professionals, organizations, businesses, and clients and devise effective policies to address health care issues and gaps. The public health nurse should then follow up to ensure policies are being implemented.

The inclusion of individuals with disabilities in society involves removing barriers that inhibit their full participation and requires a multifaceted approach that includes (CDC, 2020b):

- Addressing discrimination to allow all individuals to access fair treatment
- Using universal design to make the physical environment and communication space accessible to as many people as possible
- Working to eliminate stigma and stereotypes associated with disabilities
- Providing reasonable accommodations

Additionally, nurses should market community health programs to everyone, including individuals with disabilities. These individuals need these programs, just like everyone else, to engage with and be a part of the community.

27.6 Impact of Adverse Childhood Experiences

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 27.6.1 Define adverse childhood experiences (ACEs).
- 27.6.2 Describe the health needs of individuals who have experienced ACEs.
- 27.6.3 Examine how the health needs of individuals with ACEs intersect with the social determinants of health.
- 27.6.4 Identify the nurse's role in preventing ACEs and caring for those who have experienced ACEs.

Adverse childhood experiences (ACEs) are traumatic childhood events that can have a lifelong negative impact on

health (CDC, 2021a; CDC 2022a). Traumatic events may include experiencing violence or neglect, witnessing violence in the home or community, or having a family member attempt or die by suicide. Growing up in an environment that undermines a sense of safety, stability, or bonding—for example, in a household with substance use or mental health problems, instability due to parental separation, or a family member being incarcerated—also contributes to ACEs (CDC, 2022a). ACEs create **toxic stress**, or the prolonged activation of the stress response system, which disrupts the development of brain architecture and increases the risk for stress-related disease and cognitive impairment (Figure 27.8) (Harvard University Center on the Developing Child [HUCDC], 2023). A normal positive stress response is characterized by short increases in heart rate and mild elevation in hormone levels, as occurs commonly when receiving an injection. A tolerable stress response results in a greater degree of activation of the body's stress response due to a more severe obstacle, such as the loss of a loved one or a natural disaster. If the duration of activation is limited and supported by caring relationships with adults, the brain can recover. The toxic stress response occurs when the child experiences frequent and prolonged adversity such as abuse, neglect, caregiver mental illness, or the accrued burden of economic hardship without adequate caregiver support.

Toxic stress from ACEs negatively affects children's developing brains, immune systems, and stress-response systems, in turn affecting their attention, decision-making, and learning abilities (CDC, 2022a). ACEs' effects increase over time, impacting lifelong health and opportunities (CDC, 2021b). The more ACEs an individual experiences, the higher their ACE score, and the more at risk they become for various poor health outcomes. Associated with chronic health problems, mental illness, and substance use in adulthood, ACEs are entirely preventable. In the United States, 61 percent of adults have at least one ACE, and 16 percent, one out of every six adults, have four or more ACEs (CDC, 2021b). Females and racial and ethnic minority groups are at greater risk for experiencing four or more ACEs (CDC, 2021b).

The Effects of ACEs May Be Cumulative, Affecting Individuals Throughout Their Lives

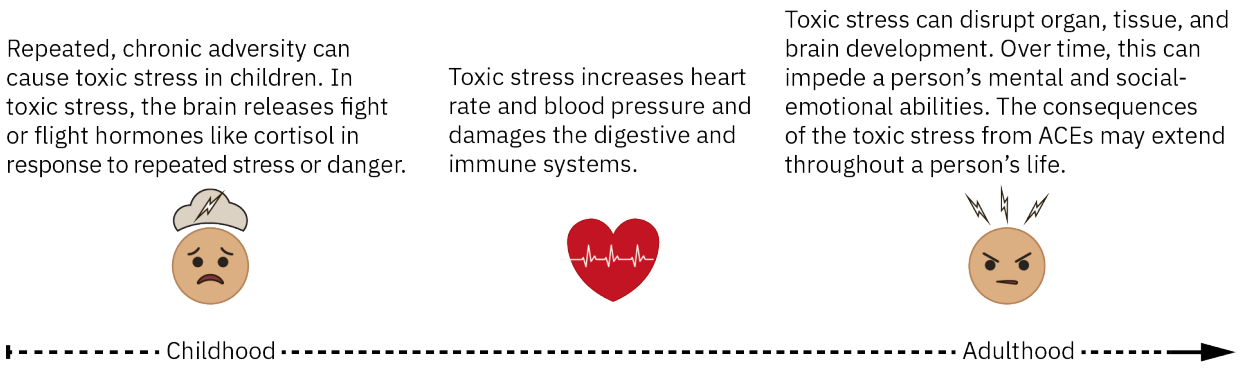


FIGURE 27.8 This infographic demonstrates the lasting impact of ACEs. (See CDC, 2023a; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Health Needs of Children Experiencing ACEs

ACEs are linked to chronic health problems such as heart disease, diabetes, COPD, asthma, cancer, depression, and substance use problems (CDC, 2022a). Five of the leading causes of death (https://openstax.org/r/fastats) are associated with ACEs, with higher numbers correlated with higher risks for poor health outcomes (CDC, 2019a). Preventing ACEs could reduce many adverse health conditions. The CDC estimates that preventing ACEs could help alleviate up to 21 million cases of depression and almost 2 million cases of heart disease; a 10 percent reduction in ACEs could save 56 billion dollars (CDC, 2022a; CDC, 2023b). Evidence shows that preventing ACEs could also positively impact socioeconomic challenges, such as reducing the number of adults who are unemployed or who do not graduate high school (CDC, 2021b). Data suggest that the best way to address these health care needs is to prevent ACEs from occurring in the first place. For those who have already experienced ACEs, many interventions can help the individual recover from the trauma caused by the toxic stress (HUCDC, 2023a).

How ACEs Intersect with the Social Determinants of Health

ACEs intersect with the social determinants of health related to economic stability, education, neighborhood and built environment, and social and community context. Individuals living with economic insecurity or poverty are at increased risk of experiencing ACEs or exposing their children to ACEs. Child maltreatment is more common among

families experiencing poverty (Hargreaves et al., 2019). Experiencing food insecurity, moving residences frequently, and generally living in under-resourced neighborhoods all contribute to ACEs and cause toxic stress. ACEs negatively impact education, job opportunities, and income potential, resulting in increased risks of injury, sexually transmitted infections, maternal and child health problems, and involvement in sex trafficking (CDC, 2022a). Children who grow up with toxic stress face many struggles throughout life, such as difficulty forming stable relationships, maintaining a job, and staying financially secure. Adults can pass these effects on to their children, who may face additional exposure to toxic stress from poverty resulting from limited opportunities (CDC, 2022a).

The Nurse's Role in Caring for Children Experiencing ACEs

To prevent ACEs, nurses must understand and address factors that put individuals at risk for violence (CDC, 2022a). Creating a safe and stable environment for children and families, with healthy relationships, is essential to helping children reach their full potential. The CDC encourages communities to adopt and utilize their six strategies for preventing ACES (CDC, 2022a):

- Strengthen economic supports to families
- Promote social norms that protect against violence and adversity
- Ensure a strong start for children
- Teach skills
- Connect youth to caring adults and activities
- Intervene to lessen immediate and long-term harms

The CDC also recommends raising awareness of ACEs to help change their perception and shift the focus from individual responsibility to broader solutions. Reducing the stigma around seeking help for parenting challenges, substance misuse, depression, and suicidal thoughts is another community-level strategy. These steps help create safe and stable neighborhoods and communities where each child can thrive (CDC, 2022a). Primary prevention is best, but when this is not possible, community and public health nurses can work with clients to assist them in accessing mental health counseling and treatment specific to trauma. Nurses can also utilize a trauma-informed approach grounded in trust and building rapport with the client, acknowledging that trauma and harm have occurred and finding ways to engage these clients in necessary health care. Some studies have demonstrated that meditation and breathing exercises can assist clients in reducing the effects of toxic stress (HUCDC, 2023a). Nurses have a role in primary, secondary, and tertiary prevention of ACEs (Table 27.7).

Primary prevention	
Prevent early trauma to improve adult health by reducing sources of stress (CDC, 2021b)	
• Advocate for affordable housing • Advocate for a living wage • Advocate for more food assistance programs • Advocate for quality early childhood education programs that are accessible and affordable • Refer those with mental health disorders to appropriate counseling and therapy	• Provide violence prevention and anger management classes • Provide parenting classes on how to build healthy, responsive relationships with children • Advocate for substance use disorder services management and treatment in every community
Secondary prevention	
Identify clients with ACEs	
• Advocate for universal adoption of trauma-informed care in health care practice • Screen with a standardized ACEs-based tool to assign clients an ACE score based on a brief survey of their personal history • Assess clients for protective factors against ACEs	• Refer clients to resources such as social work, school agencies, care coordination, and community health workers as appropriate • Screen for substance use issues and mental health illnesses annually, with referrals as necessary
Tertiary prevention	

TABLE 27.7 Nurses' Role in Primary, Secondary, and Tertiary Prevention of ACEs

Reduce the impact ACEs have on health and promoting rehabilitation	
• Assist clients in creating their "own village" of social supports in their neighborhood • Educate clients on how to meditate and participate in breathing exercises	• Encourage clients to participate in physical exercise • Advocate for more community-based health centers that focus on serving vulnerable populations

TABLE 27.7 Nurses' Role in Primary, Secondary, and Tertiary Prevention of ACEs

Caring for vulnerable and disadvantaged populations and communities requires an interprofessional approach involving many community partners. It will take a concerted effort by health care professionals, government bodies, community organizations, school districts, and local and state policymakers to address the inequitable policies and discriminatory behaviors that affect disadvantaged populations. Nurses and other health care professionals have a major role to play in reducing health inequities in these populations. These professionals can work to change negative attitudes toward the disadvantaged, remove stigma, and advocate for more equitable policies to achieve health equity and social justice. Each of the six disadvantaged populations discussed in this chapter requires nurses who are caring, empathetic, and understanding of their unique lived experiences. Just as nurses should assess for the SDOH at every health encounter, nurses need to assess the lived experience of their clients and recognize that certain risk factors or characteristics place some individuals at inherent disadvantage.

Chapter Summary

27.1 People Who Are Experiencing Homelessness

Homelessness occurs when an individual lacks a regular, fixed nighttime residence. Poverty, lack of affordable housing and health care, domestic violence, and mental illness contribute to homelessness. Groups experiencing homelessness are twice as likely to experience many chronic diseases and disorders and are often exposed to communicable diseases, violence, malnutrition, and weather-related exposures. Overall, the health outcomes of individuals experiencing homelessness are far worse than their housed counterparts.

27.2 Veterans

Veterans living in the United States have unique health needs and are more likely to experience trauma-related injuries, substance misuse, and mental health disorders than those who have not served in the military. Musculoskeletal injuries, chronic pain, and disability are common among veterans, along with depression, PTSD, and SUD, placing them at increased risk for suicide. Every veteran should be screened for depression and assessed for suicide risk. MST is associated with PTSD, eating disorders, dissociative disorders, and personality disorders. MST increases the risk for suicide and self-harm.

27.3 The LGBTQIA+ Community

LGBTQIA+ individuals experience many health disparities and challenges. LGBTQIA+ adolescents are at high risk of experiencing bullying, dying from suicide, and using illegal substances. Sexual and gender minority groups, including individuals who identify as transgender, experience harassment, discrimination, and violence. LGBTQIA+ individuals have poorer overall physical and mental health, with higher rates of anxiety and depression, substance use, and suicide than their cis-heterosexual counterparts.

27.4 Migrant Workers

Migrant populations frequently experience poor continuity of care. Environmental and work stressors cause frequent bouts of illness and long-term debilitating health effects. Migrant families often face limited access to health care, language barriers, low education levels, and few economic or political resources. Communities of migrant farmworkers have high levels of poverty; very few have employment benefits. Migrant farmworkers have higher morbidity and mortality rates than the majority of the American population due to poverty, limited health care access, hazardous working conditions, and a lack of regulations.

27.5 People with Disabilities

Institutional discrimination, ableism, lack of disability cultural competency in health professional curricula, and systemic barriers in the health care system result in significant health disparities between individuals experiencing disabilities and those who are not. Individuals with disabilities face frequent barriers to care, such as an inaccessible physical environment, a lack of assistive communication technology, and negative attitudes. This population reports much higher rates of stress and depression than nondisabled individuals.

27.6 Impact of Adverse Childhood Experiences

ACEs refer to traumatic childhood events, such as experiencing violence or neglect, that can have a lifelong negative impact on health. ACEs create toxic stress that disrupts the development of brain architecture and increases the risk for stress-related disease and cognitive impairment. The more ACEs an individual experiences, the higher their ACE score, and the more at risk they become for a variety of poor health outcomes.

Key Terms

ableism the intentional or unintentional discrimination against individuals with disabilities

adverse childhood experience (ACE) traumatic event occurring in childhood that can have a lifelong negative impact on health

disability an impairment in the body or mind that results in difficulty doing certain activities and interacting with the environment

domestic violence violent or aggressive behavior within the home, usually involving abuse of a spouse or partner

explicit bias a conscious negative attitude or belief against a specific individual or group based on certain characteristics, such as sexual orientation or gender identity

heteronormative a belief that heterosexuality is the normal, better, or only sexual orientation

homelessness a condition where individuals or families lack a regular, fixed, and adequate nighttime residence; includes individuals or families

living in shelters or living in public or private locations not designed for regular sleeping such as in cars, parks, abandoned buildings, transportation stations, and campgrounds

housing wage the required hourly wage needed to afford a modest two-bedroom rental home without spending more than 30 percent of income on rent

implicit discrimination a form of implicit bias or unconscious bias; a negative attitude against a specific individual or group based on certain characteristics such as sexual orientation or gender identity

migrant farmworker an individual who is required to be absent from a permanent residence to seek paid employment in agricultural work

migrant workers workers that are mobile, moving frequently to locations that offer work, most often in a seasonal pattern

migratory seasonal agricultural worker another term for a migrant farmworker; this term does not specify that the farmworker has to be absent from a permanent residence

military sexual trauma (MST) sexual assault or harassment that occurs during military service

minority stress stigma, prejudice, and discrimination experienced by individuals and groups due to marginalized or vulnerable identities

person-first language referring to people first as a means to separate the person from a diagnosis or impairment

point-in-time counts counts of the number of homeless individuals, both sheltered and unsheltered, on a given night

poverty a state in which an individual lacks a socially acceptable amount of money or possessions

sexual minority youth (SMY) young individuals who identify as lesbian, gay, or bisexual; who are not sure of their sexual identity; or who have had same-sex partners

toxic stress type of stress that occurs when a child experiences frequent and prolonged adversity such as abuse, neglect, caregiver mental illness, or the accrued burden of economic hardship without adequate caregiver support

trauma-informed care an approach to providing clinical care that encourages a culture of safety, empowerment, and healing for clients

veteran an individual who is serving or has served in the active military, naval, or air service and if they are no longer in the active military, they were discharged under conditions other than dishonorable

Veterans Health Administration (VHA) an integrated health care system providing care to veterans

victimization violence and abuse that is perpetrated purposely

Review Questions

1. Which of the following individuals is experiencing homelessness?
   a. 17-year-old staying at friend's house due to a disagreement with their parents
   b. 30-year-old incarcerated following an arrest for drug possession
   c. 55-year-old sleeping in a car after losing their job
   d. 40-year-old spending 40 percent of their income on rent

2. Which of the following is considered a primary prevention measure to address homelessness?
   a. Taking clinical medicine to the streets using mobile health vans
   b. Advocating for affordable health care
   c. Referring to social support agencies for housing assistance
   d. Assisting with locating available shelters

3. Agent Orange is associated with which of the following health outcomes?
   a. Traumatic brain injuries
   b. Cancer
   c. Respiratory diseases
   d. Hepatitis C

4. Which of the following is an example of heteronormativity in health care?
   a. Discussing oral contraception with all women of childbearing age regardless of sexual orientation
   b. Refusing care to a client based on sexual orientation or gender identity
   c. Using birth-assigned pronouns rather than client-identified pronouns
   d. Asking the client if they would like their same-sex partner included in the medical discussion

5. A community nurse is caring for migrant workers and their families. Which intervention by the nurse is an example of a secondary prevention measure?
   a. Educating clients on measures to reduce pesticide exposure
   b. Providing prenatal care for pregnant clients
   c. Screening children for anemia
   d. Providing referrals for mental health care

6. A community nurse has just started working at a migrant health center. When preparing to work with this population, what information is important for the nurse to remember?
   a. Only the men work in the fields around pesticides.
   b. Migrant workers are paid the federal minimum wage.
   c. Since they often live in employer-paid housing, housing and food insecurity is not an issue.
   d. Many children of migrant workers are forced to work alongside their parents.

7. Which of the following scenarios contains a barrier to care for individuals with disabilities at a clinic?
   a. The practice is very busy, and 15 minutes are allotted per client encounter.
   b. Sidewalks with curb outlets and ramps with automated door openers are available.
   c. A web-based interpreter service that is closed-captioned with large print is used.
   d. The clinic has large examination rooms with mobile medical equipment.

8. The nurse recognizes that the concept of universal design emphasizes which component?
   a. Disability needs
   b. Adaptation
   c. Access
   d. Security

9. Which of the following is considered an adverse childhood experience?
   a. Having a family member with a disability
   b. Witnessing gang violence in the community
   c. Arguing with parents over subpar schoolwork
   d. Living in an area with low socioeconomic status

10. The community health nurse preceptor is discussing vulnerable populations with a student. How does the nurse define a vulnerable or disadvantaged population?
   a. Groups of people with higher mortality rates
   b. Groups with a lower life expectancy
   c. Groups of people who are at increased risk for adverse health outcomes
   d. Groups experiencing homelessness and mental illness

CHAPTER 28
Caring for Families



FIGURE 28.1 Caring for families requires community health nurses to take a holistic perspective that considers the characteristics and beliefs of the individuals within a family and the family's cultural and socioeconomic context. (credit: modification of work "Family Walking in Medano Creek" by Patrick Myers/Great Sand Dunes National Park and Preserve/Flickr, Public Domain)

CHAPTER OUTLINE

28.1 Family as Client
28.2 Frameworks of Practice
28.3 Family Health Nursing
28.4 Conducting a Family Nursing Assessment
28.5 Family Violence

INTRODUCTION Dianah, a community health nurse employed by the district health department, is preparing for a home visit with her client, Serjay, who is on a ventilator and has a poor prognosis. Serjay has a large family consisting of his parents, three brothers, one sister, and extended family. The family must make end-of-life decisions. However, the family dynamics are strained. Some family members believe the client should be placed on comfort care, and others want more time. Dianah can see that each side loves Serjay and only wants the best for him, but she frequently ends up mediating family discussions. Nurses often work with complex client family dynamics, especially when clients are nearing the end of their lives.

Dianah's work is typical of community health nursing. Nurses in this field must care for both the individual and the family. Families come in all shapes and sizes, with different risk factors, economic backgrounds, and resources. Nurses must apply a holistic perspective for health promotion, illness prevention, and illness management to individuals, families, and the population. With a focus on the family as client, this chapter describes the functions of the family, frameworks of practice nurses use when caring for the family, conducting a family assessment, and family violence.

28.1 Family as Client

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 28.1.1 Compare definitions of family.
- 28.1.2 Describe common characteristics shared by families.
- 28.1.3 Discuss evolving trends in family structure.
- 28.1.4 Identify the functions of the family.

Working with families can be challenging because of the complex interaction of individual and group values and beliefs within a family. Understanding a family's structure, characteristics, and function is fundamental when working with families to meet their health-related needs.

Definitions of a Family

The definition of family is somewhat elusive (Seltzer, 2019). Definitions of what or who constitutes a family may be based on cultural, national, or religious views. The U.S. Census Bureau (2021b) conceptualizes the family using three distinct terms: **family**, **family group**, and **family household**. Table 28.1 defines each of these terms.

Term	Definition
Family	A group of two or more people (one of whom is the householder, i.e., the person who owns or rents the home) related by birth, marriage, or adoption and residing together (including related subfamily members) are considered as members of one family
Family group	Any two or more people (not necessarily including a householder) residing together and related by birth, marriage, or adoption
Family household	A household maintained by a householder who is in a family (as defined above) and includes any unrelated people (unrelated subfamily members and/or secondary individuals) who may be residing there

TABLE 28.1 U.S. Census Bureau Definitions of a Family

Legal definitions of family may vary based on local, state, and federal laws. For example, same-sex marriage is legally recognized under the 14th Amendment following the 2015 *Obergefell v. Hodges* Supreme Court decision. While U.S. states must uphold this federal ruling, more than 30 states continue to have statutes banning same-sex marriage, although these are unenforceable. If the Supreme Court overturned *Obergefell v. Hodges* in the future, individual states could regulate same-sex marriage, and some states would likely reinstitute prior bans (Mueller, 2022), changing the legal definition of family in these states. Such actions may affect families' access to resources or certain benefits such as the Family and Medical Leave Act (FMLA), a benefit that allows a family member to be absent from work to care for a sick child or spouse (U.S. Department of Labor, n.d.).

In addition to legal definitions, everyone defines family differently based on their own experiences. One person may consider a family only biological parents and siblings, but another person may extend their definition to also include close friends. Families may consist of a single parent, a married couple, grandparents as caregivers, or neither parent as the caregiver. Families may or may not have children. Couples may be married or unmarried, heterosexual, gay, lesbian, bisexual, or transgender.

In some cases, caregivers may not be related biologically to the children, as in families with adopted children, fostered children, or stepchildren. Nurses should recognize the variability among families and not assume family members are biologically related. When working with families, the nurse should clarify a caregiver's connection with a child and not assume the caregiver is the biological parent. The nurse should work nonjudgmentally with all families regardless of their structure.

DIFFERENT KINDS OF FAMILIES

Access multimedia content (http://openstax.org/books/population-health/pages/28-1-family-as-client)
This video provides an overview of the many different types of families.

Watch the video, and then respond to the following questions.

1. Why is it important for nurses to understand different types of families?
2. In what ways can you use this knowledge in your nursing practice?

Common Characteristics of a Family

Researchers in sociology, psychology, and other disciplines have developed theories to explain family characteristics and development. Popular family theories from the mid-20th century focused on stages and developmental tasks a family goes through over time. One frequently referenced theory identifies six stages in a family's life cycle: Leaving Home (Single Adult), The Joining of Families through Marriage (New Couple), Families with Young Children, Families with Adolescents, Launching Children and Moving On, and Families in Later Life (Berge et al., 2012). This theory is based on a nuclear, traditional **family unit**, assuming the family moves through these life cycle stages progressively over time. Families today may go through these stages at their own pace and in their own way. Some families may skip certain stages—for example, marriage or child-rearing.

Duvall's Family Development Theory offers a similar perspective on the growth and development of families (Martin, 2018). According to Duvall, a family must progress sequentially through certain stages and accomplish certain developmental tasks at each stage (see Table 28.2). Nurses can use these theories as guides to understand the stages of a family, but again, the theories will not apply to all families as not all couples have children and therefore do not experience stages related to child-rearing.

Stage	Tasks
Married couple without children	• Navigating how to live together • Adjusting relationships with families of origin and social networks to include a partner
Childbearing families with the oldest child between birth and 30 months	• Preparing and adjusting the family system to accommodate children • Developing roles as parents • Redefining roles with extended families
Families with preschool children	• Socializing, educating, and guiding children • Assessing and adjusting parenting roles as children age and more children join the family
Families with school-age children	• Guiding children while collaborating with outside resources
Families with adolescents	• Adjusting parent-child relationships with adolescents to provide more independence with safe limits • Tending to parents' midlife relationship and career issues
Launching families (first to last child leaving home)	• Adjusting to being a couple without children living at home • Caring for aging family members
Aging families (retirement to death of both spouses)	• Learning new roles related to retirement, becoming grandparents, losing a partner, and health-related changes

TABLE 28.2 Duvall's Family Development Theory

While the concept of a family going through a developmental process over time is still widely accepted, these developmental theories have been criticized for their limited applicability to today's more diverse family structures. These theories assume that all families develop similarly, with the same features and cultural norms (Crapo & Bradford, 2021). However, families today are more diverse. For example, over the past decade, the number of LGBTQIA+ families has increased significantly. In an overview of recent research on LGBTQIA+ parents and their children, Carone et al. (2021) found that children in these families tend to thrive and have as good mental health as those in traditional families. In terms of the family life cycle and developmental tasks, these families may be different with respect to socializing their children to the family's diversity. However, Carone et al. (2021) also note

that these diverse families are understudied.

Trends in Family Structure

Regardless of a family's size or composition, all families share some common characteristics. Some family members live within the home, and others live outside of the home. Family members living in the home may be limited to children and parents or may include grandparents, aunts, uncles, and even those with no biological connection.

Families with One Caregiver

According to the U.S. Census Bureau (2022c), in 2022 there were 10.9 million one-parent family groups in the United States with children who were under the age of 18. In 80 percent of single-parent family groups, the parent was a mother; 51 percent of these mothers were never married, and 29 percent were divorced. In single-parent homes where the parent was a father, 41 percent of fathers were never married, and 38 percent were divorced. Sometimes single-parent households are created by choice. Some people prefer to have a child and parent without a partner. Single-parent pregnancy and adoption are becoming more common (Glazer, 2022).

Among single-parent households, a father's involvement varies. Frequently after a marriage ends, a father's involvement decreases or ceases completely (Steinbach et al., 2021). Custody arrangements may be joint or sole. The impact of these arrangements on children largely depends on social and cultural factors of one or both parents (Steinbach et al., 2022). Statistics show that children tend to stay with a mother, which puts the primary responsibility on the mother to provide for the children (Steinbach et al., 2022). On the other hand, excluding a father may have psychosocial effects on both the father and the children (Steinbach et al., 2022). According to Steinbach et al., the involvement of both parents decreases the burden of a single-parent household. However, this may be less true if there is constant conflict between the two parties.

Families with Teenage Caregivers

U.S. teen birth rates have decreased since 1991 (CDC, 2021a), with 17.4 per 1,000 females in 2018 to 16.7 per 1,000 in 2019 (births per 1,000 females aged 15 to 19 years). More teenagers either abstain from sexual activity or use birth control. Regardless, the rates in the United States are higher than in other western, industrialized nations, and ethnic/racial disparities persist (CDC, 2021a). According to the CDC (2021a), in 2021, birth rates among Hispanic and non-Hispanic Black teens were two times higher than among non-Hispanic White teens. The birth rate of American Indian/Alaska Native teens was the highest among all racial/ethnic groups.

Nurses can support teen parents in various ways. The nurse should encourage and facilitate prenatal care by the client's obstetrical provider and subsequent contraceptive counseling and use after delivery. The nurse can provide anticipatory guidance on the child's growth and development and corresponding parenting skills. The nurse can work with the client to identify sources of social support and make relevant referrals for financial resources as needed. The nurse should support and encourage the teen father or partner to be involved if able. Finally, the nurse can counsel the client on the importance of completing high school and identify resources that can support the client in this goal.

Unmarried Couples

Cohabitation, or an unmarried couple that shares a residence, has increased significantly in the United States; in the 1970s, fewer than 1 million couples cohabited, compared to 8 million in 2017 (Seltzer, 2019). More couples live together and are in long-term relationships without getting married than in the past. Seltzer (2019) writes that cohabiting unions are more common among women with less than a high school education. In some states, nonmarried couples may not be eligible for joint health care benefits. These individuals may face more barriers to accessing health care due to a lack of health insurance coverage. Community nurses can help connect these families to community clinics or reduced-priced clinics.

Foster Families

In foster families, caregivers take care of children who are not related to them biologically, either short-term, long-term, or during a crisis. Foster families may need extra support and understanding from nurses. Although foster parents are responsible for providing care, the state has legal responsibility for the children. This can cause confusion in legal matters such as who signs health care consent forms and who makes final health care decisions. Nurses working with foster families can assist them with navigating the health care system.

LGBTQIA+ Families

LGBTQIA+ families represent another family demographic. In 2021, there were about 1.2 million same-sex couple households in the United States (U.S. Census Bureau, 2022c). This same survey completed by the U.S. Census Bureau (2022c, 2022b) found the following statistics:

- 710,000 of these same-sex couples were married, and 500,000 were unmarried.
- Among same-sex couples, 31.6 percent were interracial couples, compared with 18.4 percent of opposite-sex married couples.
- Same-sex unmarried couples had higher education rates where both held at least a bachelor's degree (29.6 percent) compared to opposite-sex (18.1 percent) unmarried couples.
- In the United States, 0.5 percent of children live in a household with adults who are in a same-sex relationship.
- Children in these households are more likely to be non-Hispanic Black than children living with adults who are in an opposite-sex relationship.
- Marriage status of same-sex households differs between male/male (8 out of 10 have a married father) and female/female (7 out of 10 have a married mother).

Nurses working with LGBTQIA+ families should work to provide gender-affirming, family-centered interventions to help these families meet their health-related needs (Medina-Martinez et al., 2021).

Multiracial Families

Between 2010 and 2020, the number of people in the United States who identify as multiracial has increased by 276 percent (Roy et al., 2022). Multiracial families may combine two cultures, two religions, or different traditions/beliefs. The most unique challenges for multiracial couples/families may develop during critical life changes, such as the transition to parenthood (Roy et al., 2022). Multiracial families may experience challenges when a child is born. For example, a child in an interracial family may struggle to develop their identity. They may feel pressure from friends or other family members to identify with one race or the other. Yet, studies have shown that multiracial families show more resilience and may also have more positive health outcomes than monoracial families (Roy et al., 2022). Nursing interventions for these clients should be inclusive and incorporate all of the family's relevant racial and cultural characteristics.

Functions of a Family

A family unit provides socialization, emotional support, and practical (economic) support, and it meets both societal and individual needs. The family socializes and develops members of the society within its family unit. Parents and caregivers influence children's social growth to help them acquire socially acceptable behaviors, learn self-reliance, and develop skills they will need for adulthood (Martinez-Escudero et al., 2020). Families share values that give members a perspective on how to view the world and their situation. Values give hope and meaning to a family and can guide their actions during difficult times (Gronewald, 2013).

As Maslow's hierarchy of needs suggests, family is an integral part of meeting an individual's needs (Figure 28.2) (McLeod, 2023). According to Maslow's hierarchy, one cannot achieve self-actualization if they do not have or have not met the other more basic needs. Families usually help meet basic human needs for their members. For example, families provide food, shelter, and clothing. Families frequently work to meet safety needs. For example, parents and caregivers use child safety seats and keep household chemicals out of reach of children. Families spend time together and provide emotional support and connection to meet the individual's need for love and belonging. This includes friendship, intimacy, and sense of connection or belonging (Mcleod, 2023). Esteem, the next need identified by Maslow, is the need for respect, self-esteem, status, recognition, strength, and freedom. One way families help an individual's self-esteem is to support members in educational activities that promote their growth and intellectual development. The last need is self-actualization, or one's desire to become the most that they can be. Families can help their members seek out new experiences and determine their life goals.

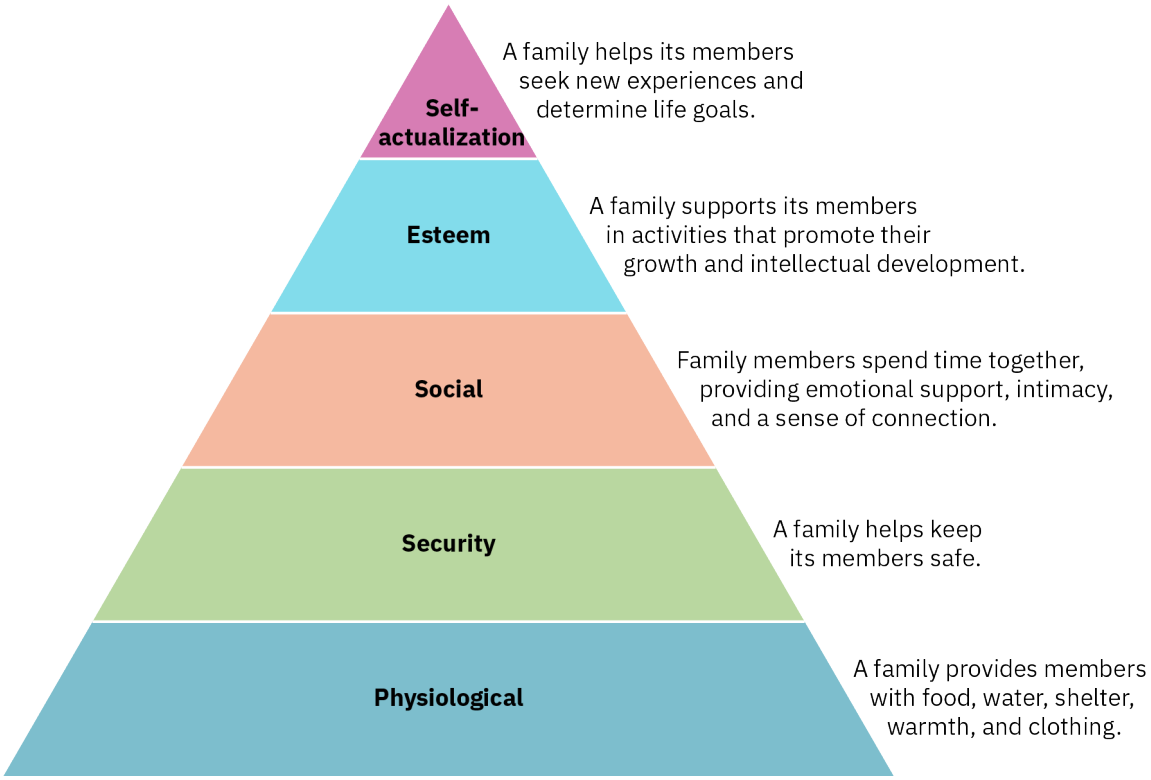


FIGURE 28.2 Maslow's hierarchy of needs can be applied to families. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

28.2 Frameworks of Practice

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 28.2.1 Describe how the socioecological framework applies to families.
- 28.2.2 Describe how the transactional model applies to families.
- 28.2.3 Explain how general systems theory offers insight into how families operate as social systems.
- 28.2.4 Discuss how the Calgary Family Assessment and Intervention Models can be utilized to assess family health.

Conceptual frameworks can help nurses understand and organize key concepts as they relate to an area of practice. Family nursing conceptual frameworks include the socioecological framework, the transactional model, general systems theory, the Calgary Family Assessment Model, and the Calgary Family Intervention Model.

Socioecological Framework

The social-ecological framework explores a range of social and environmental factors and intimate relationships that affect the family unit (Davidson et al., 2020). Social networks can include work relationships, school affiliations, religious affiliations, and connections to other community organizations. The environment includes neighborhoods, schools, and communities. This framework can help nurses better understand the relationships among the family, social networks, and the environment. See Socio-Ecological Perspectives and Health for a more detailed discussion.

The social-ecological framework can help community nurses provide health promotion and prevention to families (Figure 28.3). For example, a nurse working with a family to address alcohol abuse would implement interventions that target the individual, their relationships, their community, and society. At the individual level, the nurse would assess the person's risk for alcohol abuse and provide appropriate education for the client related to life skills and decision-making. At the relationship level, the nurse would assess the effects of relationships on the client's alcohol use and implement strategies to promote positive relationships with others to minimize or abstain from consuming alcohol. At the community level, the nurse would assess for factors that promote or facilitate alcohol use. Community interventions can include marketing campaigns promoting safe alcohol consumption and creating

opportunities for alternate activities. Finally, at the societal level, the nurse can assess laws and regulations relevant to alcohol use and lobby for policies that limit the negative effects of alcohol on society.



FIGURE 28.3 Providing nutrition education and information on where to obtain healthy food in the community is an example of using the social-ecological framework to promote health. (credit: U.S. Department of Agriculture/Flickr, Public Domain)

Transactional Model

The **transactional model** considers relationships between family members and between families and outside organizations as reciprocal. Members of the family both influence and are influenced by others. Within the family, nurses can use the transactional model to examine relations between caregiver's and children's behaviors (Cherry et al., 2019). For example, the child of a caregiver with a substance use disorder who sleeps a lot during the day may learn that they must get themselves ready for school independently at a young age. Conversely, that caregiver acclimates to the child's ability to manage their schooling and stops trying to be involved in the child's education.

As discussed previously, families go through different life cycles or stages. At each stage, the family will interact with institutions outside of the family. For example, as the child grows, the parents or caregivers will interact with different teachers, coaches, and mentors who have relationships with the child throughout their development. A community nurse can utilize the transactional model to see how the family "transacts," or interacts, with other people or groups. This observation can help the nurse understand whether the family can build healthy and meaningful relationships with people and organizations outside of the family.

General Systems Theory

The American Psychological Association (APA) (2023) describes **general systems theory** as an interdisciplinary conceptual framework that focuses on how individual entities or systems relate to and are organized with other systems. In other words, the individual is a system that exists within and among other systems that influence it. The family is considered a system comprised of various members whose thoughts, beliefs, and actions influence it. The family system is in turn influenced by other systems—including environmental systems, economic systems, educational systems, and so on. General systems theory helps nurses view families from a holistic perspective. Nursing care based on systems theory views the family as a unit in the context of the larger environment and seeks to effect change at the family level (Looman, 2019).

The family is a system with subsystems where family members tend to be connected by strong emotional bonds. For example, in families with two adult caregivers, the caregivers form a subsystem with a bond that differs from the bonds with any other individual in the family. The caregivers' relationship with their children is another subsystem or bond. Siblings, if present, also form a subsystem that is different from the bond they individually share with their

caregivers. Each of these levels or subsystems interacts within the whole system. Life events can affect these interactions and these subsystems. For example, when caregivers divorce and get remarried, these bonds change and alter the subsystems.

Systems theory can be useful to understand how families' health is affected by outside sources. A family's health is influenced by outside systems including the economic system and their environment. Accordingly, population health interventions recognize the interaction of these different systems to influence health. Healthy People 2030, the United States' plan for public health promotion, sets health-related goals and objectives for families and communities—not just for individuals (Office of Disease Prevention and Health Promotion [ODPHP], n.d.). For example, some of Healthy People's objectives relate to housing, homes, workplace, transportation, and other community needs that directly affect or influence families in those communities (ODPHP, n.d.).

Calgary Family Assessment and Calgary Family Intervention Models

Nurses use the Calgary Family Assessment Model (CAFM) and the Calgary Family Intervention Model (CFIM) to promote family health and functioning and address family illness concerns (Zimansky et al., 2020). These models were developed from clinical work and are readily applicable to nursing practice (Leahey & Wright, 2016). The **Calgary Family Assessment Model** studies a family's structure, development, and function to assess its strengths, resources, problems, and illness (Zimansky et al., 2020). The assessment incorporates targeted questions as well as a genogram and ecomap to assess the family's interactions within the environment. Genograms and ecomaps will be discussed later in this chapter.

The **Calgary Family Intervention Model**, derived from the CFAM, provides a framework for nurses to use in therapeutic conversations that target the family's functioning as a system (Zimansky et al., 2020). The framework is based on three domains of family function: cognitive, behavioral, and affective (Mileski et al., 2022). Effective interventions incorporate all three domains. Nurses explain rationales (cognitive domain) when teaching new activities that lead to behavior change (behavioral domain). Families who implement the behavior change incorporate it into their family functioning (affective domain). For example, a nurse working with a family to develop healthier eating habits to decrease the family's risk of diabetes can explain the benefits of eating fewer fast-food meals and incorporating more home-cooked meals into their week. Along with explaining the nutritional benefits, the nurse can work with the family to identify behavior changes that will allow them to meet this goal, like creating a schedule of favorite home-prepared dinners the family can use as a weekly menu plan. If this is successful, the family implements this suggestion and realizes a positive emotional benefit to their family, which can help reinforce the behavior. Perhaps the family realizes they enjoy picking out their favorite meals and preparing them together.

Leahey and Wright proposed a 15-minute family interview based on the CFAM and CFIM that nurses can use in various settings with time constraints (Wright & Leahey, 1999). They identify five parts of an effective interview: manners, therapeutic conversations, family genograms and ecomaps, therapeutic questions, and commending family and individual strengths.

THEORY IN ACTION

Family Systems Theory and Family Sub-Systems

Access multimedia content (http://openstax.org/books/population-health/pages/28-2-frameworks-of-practice)
In this video, Dr. Elizabeth Dorrance Hall discusses the systems theory and how it relates to the family.

Watch the video, and then respond to the following questions.

1. What are some of the subsystems in your family? How do they interact with and relate to one another?
2. How can systems theory guide nurses who provide care to families?

28.3 Family Health Nursing

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 28.3.1 Examine how family health affects individual health.
- 28.3.2 Identify health-promoting characteristics of families.
- 28.3.3 Educate families regarding self-care for health promotion, illness prevention, and illness management.
- 28.3.4 Explore the role of a community nurse during a home visit.

Family nursing involves caring for the family as "one client" in the community. Within this specialty, the nurse's focus moves away from caring for one individual as a client to caring for one unit or group of people as a client. Family health nurses may work in various settings, such as in home care, local government, or hospitals. Family health nurses may work for organizations that focus on family health including the National Partnership for Women and Families (2023), which works to improve the lives of families by achieving equality for all women, or Families USA (2023), which advocates for high-quality, affordable health care for everyone.

Working with families is complex but rewarding. Nurses provide families with support and education to achieve desired outcomes. Family health nursing is an integral part of health care delivery. The International Family Nursing Association (IFNA) works to build a community of nurses and other health care professionals focused on improving families' health worldwide (IFNA, 2023). Its goal is to transform family health by uniting family nurses across the globe to facilitate networking and knowledge sharing and to provide family nursing leadership through scholarship and research. Recent work by its members includes research on the effects of caregiver-clinician communication on health outcomes and managing family caregiver burden for clients with chronic disease.

Family Health Affects Individual Health

Family health reflects the family's ability to meet each of the individual family members' needs. Families are expected to help individuals meet their most basic needs for survival, as well as their psychological, spiritual, safety, economic, emotional, and intellectual needs. Many external factors influence the health and well-being of families. Economic stability, access to quality health care and education, safe neighborhoods, and social connections are all conditions that affect families' ability to function. See Social Determinants Affecting Health Outcomes for more information on how social determinants affect individual and family health.

Characteristics of Healthy Families

Families can positively or negatively influence one's health. From a physical perspective, some health conditions are inherited or have risk factors that can be passed from one generation to another. From a social perspective, family relationships become more important as individuals age and may need more assistance with managing health issues. Social support and social connectedness, which can be found in families, positively influence health (CDC, 2023). Marriage is associated with better health and increased likelihood of couples practicing healthy behaviors (Guner et al., 2018). Happily married individuals are healthier and live longer than those who never married or are divorced or widowed, while unhappily married individuals experience fewer benefits and could be considered a vulnerable population (Lawrence et al., 2018).

Researchers who study families have identified characteristics that can reflect the strength and health of a family (Clark-Jones, 2018):

- Affection—Strong families show affection or appreciation among members, keep promises to one another, and help others in the family.
- Commitment—Family members who demonstrate loyalty to the family and one another, trust one another, make decisions together, and share responsibilities have strong family ties.
- Positive communication—Family members who communicate regularly and openly in a supportive manner strengthen the family unit.
- Strong coping skills—Strong families are resilient and able to respond effectively to adverse situations.
- Healthy spiritual well-being—Families with strong connections are easily able to share values and beliefs and maintain an overall positive attitude.

- Spending time together—Families who enjoy common interests together including spontaneous activities enjoy a strong family connection.

When working with families, nurses should assess which family attributes can support the families' health goals. Michaelson et al. (2021) found that family stability and positive parent relationships were health-promoting, while interparental conflict and having an unsupportive family were health-threatening characteristics. Other positive characteristics include having healthy intra-family relationships and communication and encouraging healthy behaviors. The researchers recognized the importance of social determinants of health, specifically socioeconomic background and education. They acknowledged that the research they reviewed incorporated more diverse families than in the past and focused more on how the family functioned instead of what the family looked like. Finally, they concluded children are more likely to be portrayed as passive recipients of health-related behaviors than as active participants in managing their own health.

THEORY IN ACTION

What If Our Health Care System Kept Us Healthy?

Access multimedia content (http://openstax.org/books/population-health/pages/28-3-family-health-nursing)
In this TED-Ed Talk, Rebecca Onie, cofounder of The Health Initiative (THI), a national campaign to catalyze a new conversation about and increased investments in health, including access to healthy food, safe and affordable housing, and well-paying jobs, highlights how basic needs such as heating, food, and safe housing affect the overall health of families.

Watch the video, and then respond to the following questions.

1. How might housing, food, and other environmental factors affect a family's health?
2. How can nurses use this knowledge to help provide housing, food, and heat for families?

HEALTHY PEOPLE 2030

Reduce the Proportion of Families That Spend More Than 30 Percent of Income on Housing

A goal of Healthy People 2030 is to expand policies that make housing more affordable to help reduce the proportion of families (https://openstax.org/r/healthypeopled) that spend more than 30 percent of their income on housing. When families must spend a large part of their income on housing, they may not have enough money to pay for things like healthy food or health care. Studies have linked this dilemma to increased stress, mental health problems, and an increased risk of disease.

Family and Health Promotion

Community and public health nurses are important providers of health promotion interventions. As discussed in Health Promotion and Disease Prevention Strategies, health promotion is the process of empowering people to increase control over, and to improve, their health (World Health Organization [WHO], 1986). The Health Belief Model (HBM), explored in further detail in Health Promotion and Disease Prevention Strategies, is a framework nurses can use to help clients recognize their need to modify their health-related behaviors. It is not enough for nurses to provide health-related education to clients. They need to work with clients to get them to take steps toward improving their health.

Nurses should take a collaborative approach when educating families to help them understand and navigate health issues (Barnes et al., 2020). Nurses can help them improve their decision-making abilities and connect them with community resources including other families that could serve as mentors. Nurses provide education on diseases and disorders, medications, therapies, and a variety of other topics. Incorporating appropriate health promotion strategies into this instruction when working with clients can be beneficial (Figure 28.4). Nurses can work to strengthen the family's ability to model positive health practices. This will help children adopt healthy habits and carry that forward through their adult lives (Barnes et al., 2020).



FIGURE 28.4 Nurses provide health education and prevention strategies to families in community settings such as community health fairs. (credit: "6th Annual Allies in Health Community & Patient Fair - Wednesday 29 Oct 2014 (Community Engagement Network, VCH stall)" by Brianne Nettelfield/Centre for Teaching, Learning and Technology/Flickr, CC BY 2.0)

Education on health promotion, illness prevention, and illness management can occur in various settings—hospitals, clinics, other community locations, or through home visits. Educating families can be challenging, frequently requiring the nurse to accommodate a variety of ages and abilities. An assessment of the clients' baseline knowledge and any barriers to learning is essential. For a more detailed discussion on health literacy, see Assessment, Analysis, and Diagnosis. To learn more about developing an education plan, go to Planning Community Health Education.

Regardless of the setting, the family is key to health promotion (Michaelson et al., 2021). There are four levels of health promotion. The aim of health promotion at the population (family) level is to improve health inequities and overall quality of life and to ensure access to health care (Melariri et al., 2022). Table 28.3 describes the different levels of health promotion in which the community health nurse is involved.

Health Promotion Level	Goal	Examples of Interventions
Primordial Prevention	Improve social and environmental conditions to reduce a population's risk factors for disease	Offer sports and recreation activities to promote physical activity, which will in turn decrease the risk of obesity and other conditions
Primary Prevention	Implement measures to prevent disease development	Administer COVID-19 and flu vaccines during immunization clinics
Secondary Prevention	Screen for early disease detection	Hold a blood pressure screening to identify individuals with hypertension
Tertiary Prevention	Provide interventions to reduce the severity of disease and associated sequelae	Conduct home visits with clients recently discharged from the hospital

TABLE 28.3 Community Health Nurses' Interventions Targeting Different Levels of Health Promotion (See Kisling & Das, 2023.)

Role of the Community Health Nurse Conducting Home Visits

Home nursing involves providing care in the client's home rather than in a health care setting. Home health visits can be challenging as the nurse is working alone in a home environment rather than a facility. They must have a variety of expertise to deal with complex situations and must work in unpredictable conditions (Brenne et al., 2022). Nurses conducting home visits may face health and safety hazards. They may encounter bloodborne pathogens and ergonomic hazards while moving and lifting clients. Additionally, nurses making home visits may face violence, hostile animals, unhygienic and dangerous conditions, and risks associated with driving from home to home (Occupational Safety and Health Administration, n.d.). Nurses making home health visits need to remain vigilant of their surroundings and recognize potential safety concerns. OSHA has compiled resources for identifying and preventing hazards in home health care; visit Home Healthcare (https://openstax.org/r/oshagovh) to learn more about recognizing and addressing the risks associated with home visits.

When preparing for the visit, the nurse should review the client's information and create a plan. Nurses typically make multiple visits during the day, so they must make the most effective use of the short time they spend at each house. Visits consist of an admission visit, usually within 48 hours of discharge from a health care facility, regular visits at prescribed intervals, and a discharge visit. Each visit must have an identified intervention that only a nurse is qualified to perform. Nurses should ensure they take all necessary supplies and understand the directions to the home. Once at the home, the nurse should survey for potential hazards before entering. Nurses should always carry a cell phone and make sure their organization knows their location throughout the day.

During the visit, the nurse will be in the unique position of being able to assess the client's home environment. Nurses caring for clients in health care facilities do not have this opportunity, which makes it harder for them to identify factors that can promote or hinder the client's health and recovery. Next, the nurse will perform the interventions for the visit including education, medication or treatment administration, and wound care. Finally, they will conclude the visit and schedule the next one based on the prescribed frequency and client need or discharge the client. Documentation must be completed either during the visit or soon after.

28.4 Conducting a Family Nursing Assessment

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 28.4.1 Differentiate between a genogram and an ecomap.
- 28.4.2 Develop an ecomap.
- 28.4.3 Construct a genogram.
- 28.4.4 Apply the nursing process to gain a holistic perspective of the family and formulate a nursing plan of care.

Community nurses working with families perform family assessments to help guide health promotion, illness prevention, and illness management strategies. This section introduces tools nurses may use during a family assessment and then applies the nursing process to an assessment of a family.

Genograms and Ecomaps

Genograms and **ecomaps** are two tools a nurse may use during an assessment to establish a nursing care plan and gain a holistic perspective on the family and their needs. Both are visual depictions of families with lines drawn to show connections and relationships among members (genogram) and between families and their social network (ecomap). These tools can help the community nurse gain a better understanding of various relationships between the family members and the community.

Tobias (2018) defines a genogram as a diagram showing birth and marriage relationships among family members, typically over at least three generations. In addition to showing the genealogical makeup of the family, a genogram may include additional health-related information. For example, lines that depict the status of emotional connections among individuals can be added to reflect family dynamics. Health conditions present among family members are shown using colored shading. This can help the nurse identify health conditions present in a client's family. Nurses can use this tool to educate family members regarding their risks for certain disorders and diseases. Figure 28.5 provides an example of a genogram.

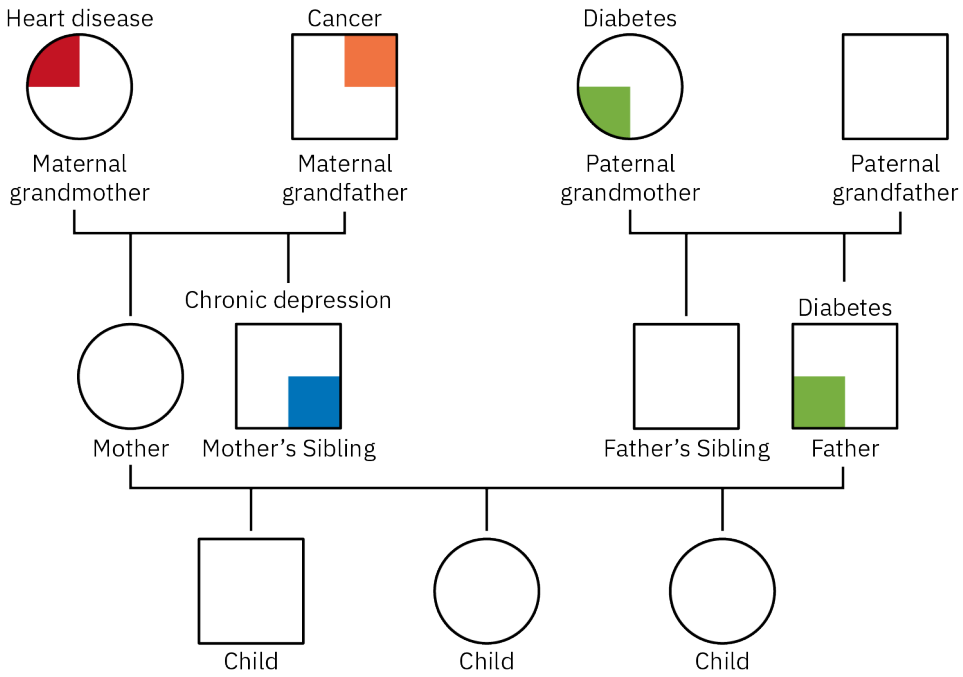


FIGURE 28.5 A family genogram shows birth and marriage ties. Shaded areas indicate health conditions present in family members. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

An ecomap, also known as an ecological map, is a visual assessment tool that illustrates the relationships between the family and its social network. The ecomap can identify sources of stress and support for the family (Kuhn et al., 2018). The ecomap helps nurses and other health care providers to identify areas of conflict and potential challenges within a family and can depict affiliations, such as where family members work, ties to religious communities, community-based organizations, social support resources, health care access, school options, and ties to friends in the community. Nurses use ecomaps to identify areas that negatively or positively affect an individual or family. For example, is the family connected to a religious organization? If so, that can be a source of support for the family. Nurses can use this tool when working with families of children with disabilities. They can target intervention needs for these families by connecting them to community resources such as respite care, food pantries, community activities for children with autism, support groups, and programs specific to their needs. Figure 28.6 shows an example of an ecomap.

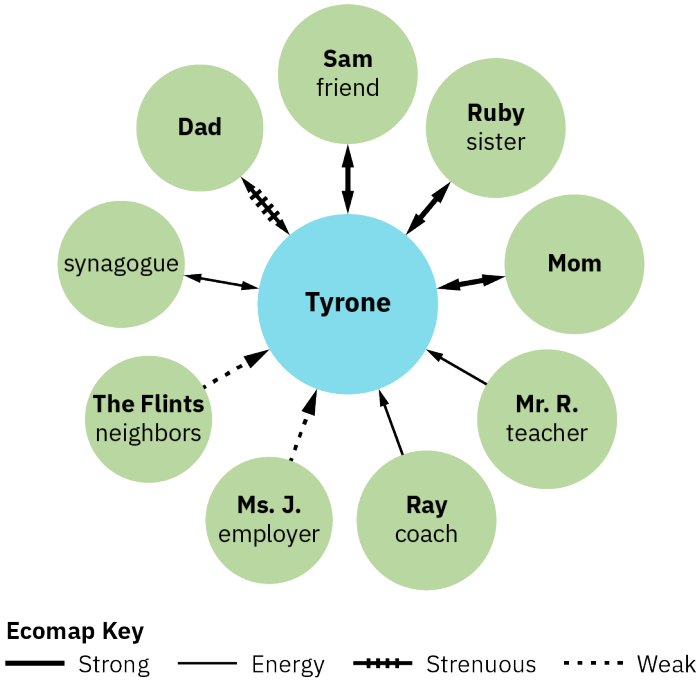


FIGURE 28.6 A family ecomap depicts the family's relationship to the community and resources. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

HOW TO MAKE AN ECOMAP

Access multimedia content (http://openstax.org/books/population-health/pages/28-4-conducting-a-family-nursing-assessment)

This video shows how to construct an ecomap.

Watch the video, and then respond to the following questions.

1. What is the goal of an ecomap?
2. How can ecomaps help nurses provide care to families?

Family Assessment

A **family health assessment** is a systemized process of collecting and organizing data. Nurses perform these assessments to determine a family's strengths and areas of concern. Nurses gather information through interviews with the family and observation of the family's environment and by collecting community data. As mentioned, the nurse may use a genogram and ecomap as part of the family assessment.

Interviewing the family is an essential part of gathering data. During this conversation, family members can discuss personal family information, such as where they work or attend school and their individual health status, both physical and mental (Broekema et al., 2020). This is also a time when the family may voice their concerns or needs. It may take more than one interview to collect the necessary data. The nurse can then assess the family continuously as data are obtained. Once the nurse conducts the family health assessment, they must formulate a nursing care plan. The nursing care plan consists of the assessment, diagnosis, planning, and evaluation.

To illustrate the family nursing care plan process, let's return to Dianah, the community health nurse employed by the district health department introduced at the beginning of this chapter. Dianah has received a referral from one of the schools in the district with concerns regarding a student (Sophia) missing too many days of school. The school counselor questioned Sophia and is concerned because Sophia was just diagnosed with asthma. With this concern, Dianah plans to go to the home and assess the student and family.

Assessment

During the assessment stage, the nurse gathers data about the family. The neighborhood and community resources

can be assessed before the home visit.

To prepare for her visit to Sophia's home, Dianah obtains her address and does some preliminary research about her neighborhood. The school and home are located within the city limits, with over 75 percent of families at or near the federal poverty limit. This area is ethnically diverse, and approximately 50 percent of families speak English as a second language. Dianah arrives at Sophia's home and notices that it needs external repairs. Inside, the home has very few furnishings, but it is relatively clean. Sophia's mom (Ana) greets Dianah with a smile and a handshake. She appears to be anxious. To decrease Ana's anxiety, Dianah states that she is there to help Ana and Sophia.

Dianah starts the assessment by explaining the purpose of her visit: the school is concerned with Dianah's absenteeism and her recent diagnosis of asthma. She asks Ana if she has any concerns. Ana says Sophia has had several visits to the emergency department (ED) for asthma attacks. Sophia has an inhaler she is supposed to use during an asthma attack but does not always carry it with her. Sophia's pediatrician prescribed some medications that are supposed to minimize the frequency of asthma attacks, but they are very expensive.

After hearing Ana's primary concerns about Sophia's asthma, Dianah questions the family further. Sophia reports she loves going to school. Ana reports Sophia has been missing school because of her asthma and because her work schedule sometimes makes it hard to get Sophia to school. The school is too close for the school bus to pick Sophia up, but the neighborhood is not safe for Sophia to walk to school by herself. Ana emphasizes her concern for her daughter's safety, explaining that there was a recent shooting several blocks away, near the school.

Ana requires two jobs to meet the family's needs, and their rent keeps increasing. Additionally, she worries about losing her jobs. Through her primary job she gets health insurance, which is very expensive. Ana has been unable to pay all the bills associated with Sophia's ED visits and medications, and she frequently runs out of money for food. Ana states that she is exhausted. She feels alone and has no friends to talk to. Dianah considers this information and recognizes that multiple factors in addition to her recent asthma diagnosis contribute to Sophia's absenteeism. Asking more questions to assess the family's background, Dianah learns that Ana was incarcerated for drug use several years ago and has since successfully completed rehab, attained a job, and regained custody of Sophia. She is worried about losing custody of Sophia again if she is unable to provide for her.

Dianah completes a health history and physical assessment of Sophia. Next, Dianah creates an ecomap describing the family's relationships with others. It appears they have no other family members living nearby. They want to attend the local church, but Ana's work schedule has made attending church and forming outside friendships difficult. Throughout the interview process, Dianah asks Ana and Sophia about their needs and what resources may help their situation. They answer that they are unsure since they do not know what is available to them.

Analysis

After the assessment, the nurse analyzes the data gathered. The nurse can identify and prioritize the family's needs based on this analysis. Nurses in other settings frequently must address individual physiological needs. In community settings, nurses identify and address the family unit's needs.

Dianah analyzes all the information and recognizes some patterns. First, Sophia is experiencing acute exacerbations of a chronic health condition. There appear to be opportunities to decrease the frequency and severity of her acute asthma attacks if she can consistently obtain and use her prescribed medications. This will help reduce Sophia's absenteeism rate. Additionally, obtaining reliable transportation for Sophia to attend school is another priority. The family's environment—living in a neighborhood that experiences violence and their limited income—hinders their ability to meet their health goals. Ana does not appear to know what community resources are available to meet her food and housing needs. Additionally, she does not appear to have any social support. Based on this analysis, the nurse works with Ana and Sophia to prioritize the following needs:

- Sophia needs consistent access to her medications and regular follow-up for her asthma.
- Sophia needs a safe mode of transportation to and from school.
- They both need access to affordable, nutritious food.
- They both need access to affordable housing in a safe neighborhood.
- They may benefit from additional community support.

Planning and Implementation

After the analysis, the next stages are planning and implementation. During the planning stage, the nurse and the

family set realistic goals and identify feasible interventions. During the implementation phase, the nurse carries out the plan that was developed collaboratively with the client.

By the end of the month, Dianah, Ana, and Sophia agree they would like to see the following outcomes achieved:

- Sophia will experience fewer trips to the ED for asthma attacks.
- Sophia will take her medications consistently as prescribed.
- Sophia will have fewer missed days at school.
- Ana will have met with the social worker and submitted applications for applicable assistance programs for which she is eligible.
- Ana will have connected with the local support group for single parents.
- They both will have attended at least one church activity or connected with another family at the church.

Based on these goals, Dianah works with Ana and Sophia to develop the action steps they can take:

- Dianah will educate Ana and Sophia on Sophia's recent diagnosis and new medications.
- Dianah will work with the family and the school to develop a feasible transportation plan for Sophia.
- Dianah will arrange for a visit with a social worker who can help them apply for Medicaid or other assistance with medical costs and apply for supplemental food programs and affordable housing in a safer neighborhood.
- Dianah will connect Ana to a local support group for single parents.
- Dianah will help them reach out to their church to identify ways to become more involved and supported by the church family.

Together they set a schedule for weekly follow-up visits for the next month to monitor their progress as these interventions are implemented.

Evaluation

Evaluation is the last step in the family assessment. However, when working with families, this process is typically more cyclical than linear. During the evaluation, the nurse reviews the family's progress. Sometimes, when progress or needs are not met, the interventions may be modified or changed altogether.

Each week Dianah visits, she evaluates Ana's and Sophia's progress.

- During the month, Sophia only had one ED visit for asthma.
- The social worker connected the family to resources for obtaining medications at a reduced cost, giving Sophia access to the necessary medications.
- Both feel that Dianah's instruction gave them a better understanding of asthma and how to manage it.
- Ana has connected with the social worker and has filled out the necessary paperwork for affordable housing and supplemental food program benefits.
- Ana went to the community support group and enjoyed meeting the other members, stating she didn't realize that other moms are struggling with the same things. She has several budding friendships within the support group and no longer feels that she is alone.
- The social worker connected Ana to the local employment office, where she was able to research new job opportunities. She is starting a new job next month. The job is in a safer neighborhood with subsidized housing near the middle school that Sophia will be attending next year. She hopes that her application will be processed soon and they can move to the new place before Sophia starts school.
- Sophia says she has not missed any school and feels much safer using the bus program.

Ana and Sophia are satisfied with their progress and are excited about their future. Dianah plans a follow-up visit in three months.

28.5 Family Violence

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 28.5.1 Distinguish between development and situational crises.
- 28.5.2 Describe the cycle of violence observed in intimate partner abuse.
- 28.5.3 Differentiate between neglect and abuse.
- 28.5.4 Identify strategies to identify abuse against children, pregnant and postpartum clients, and older adults to improve outcomes and safety.
- 28.5.5 Explain the nurse's role in abuse and neglect prevention.

A crisis occurs when two or more issues coincide (Early Childhood Learning and Knowledge Center, 2022). Families may go through different types of crises, and the magnitude of a crisis depends on the family's ability to function and the environment of the crisis. A stressful situation becomes a crisis when a family lacks resources or support and/or necessary coping skills. A crisis may be developmental or situational. A **developmental crisis** results from predictable change and is due to the normal growth and development changes that occur within a family, such as adolescence. **Situational crises** are typically events that are out of a person's control, such as a natural disaster or a family death. Crises can promote growth; they can leave a family even stronger and more resilient. Alternatively, crises can negatively affect families and create a crisis reaction. How families deal with these crises is directly connected to their access to social networks and their cultural backgrounds (Bray, 2022). It is pertinent that community nurses assess the family's access to these support networks because they can be key players in connecting families with various resources during a crisis.

Cycle of Violence: Intimate Partner Violence

Intimate partner violence (IPV) is abuse that is caused by someone who is or has been romantically involved with the victim to some degree. The abuser could be a current or former spouse and/or a dating partner (CDC, 2022b). The abuse can be a one-time occurrence or occur multiple times over years. IPV can include any of the following types of violence (CDC, 2022b):

- Physical/contact violence: using a physical form of violence that includes hitting, kicking, or any other type of physical force
- Sexual violence: forcing or attempting to force a partner into a sex act, touching, or a nonphysical sexual event (e.g., sexting) without the other's consent
- Stalking: a pattern of unwanted attention that causes fear
- Psychological aggression: use of verbal and nonverbal communication with the intent to harm

IPV is common, affecting millions of people in the United States every year (CDC, 2022b). According to the data from the CDC's National Intimate Partner and Sexual Violence Survey (NISVS), about 41 percent of women and 26 percent of men have experienced physical/contact, sexual violence, and/or any form of IPV (CDC, 2022b). Furthermore, this data shows 61 million women and 53 million men have experienced psychological aggression as a form of IPV in their lifetime. In a small number of cases, IPV can lead to homicide (Messing, 2019).

Pregnant clients are at an increased risk for IPV during pregnancy and the postpartum period (Hasselle et al., 2020). Negative health consequences of IPV during pregnancy can lead to fetal health problems, labor and delivery complications, and negative long-term developmental outcomes for the child. The American College of Obstetricians and Gynecologists (ACOG) recommends that all women be assessed for IPV during prenatal visits (Huecker et al., 2023). Domestic violence is more common in pregnant women than gestational diabetes and preeclampsia.

IPV typically follows a predictable cycle (Figure 28.7) that involves tension building, a violent incident, and a honeymoon phase (World Bank Group Family Network, 2023). During the first phase, the victim is usually in denial and believes they have more control over the incident than they do, while the abuser recognizes their behavior is wrong and fears the victim will leave. The second phase involves violence and can be dangerous for others who try to interfere, although it is important for the victim to have a safe place to retreat to. The victim is most likely to seek help in the third phase; however, many victims do not recognize that the third phase is temporary, and the cycle will repeat.

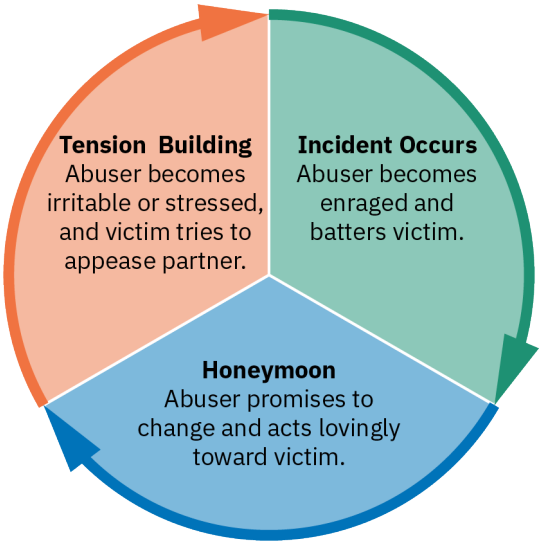


FIGURE 28.7 The cycle of intimate partner violence has three phases. (See World Bank Group Family Network, 2023; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

IPV is recurrent at the individual level and can continue across generations. Individuals who have experienced IPV in their childhood or teen years are more likely to continue to experience it in adulthood (CDC, 2022b). Children in families where IPV is prevalent are more likely to experience it themselves or become perpetrators in the future. The consequences of IPV are profound. These include depression, post-traumatic stress disorder (PTSD), heart problems, musculoskeletal problems, reproductive disorders, many of which are chronic conditions, and in some cases death by homicide as one in five homicide victims are killed by an intimate partner (CDC, 2022b). The financial cost of IPV to society is estimated at $3.6 trillion (CDC, 2022b). This includes medical services, lost work time, criminal justice costs, and other costs. The CDC (2022b) provides resources and tools (https://openstax.org/r/violencepreventiona) to stop or prevent IPV (Table 28.4). Nurses can use and teach these strategies to clients.

Teach safe and healthy relationships	• Social-emotional learning programs for youth • Healthy relationship programs for couples
Engage influential adults and peers	• Men and boys as allies in prevention • Bystander empowerment and education • Family-based programs
Disrupt the developmental pathways toward partner violence	• Early childhood home visitation • Preschool enrichment with family engagement • Parenting skill and family relationship programs • Treatment for at-risk children, youth, and families
Create protective environments	• Improve school climate and safety • Improve organizational polices and workplace climate • Modify the physical and social environments of neighborhoods
Strengthen economic supports for families	• Strengthen household financial security • Strengthen work-family supports
Support survivors to increase safety and lessen harms	• Victim-centered services • Housing programs • First responder and civil legal protections • Patient-centered approaches • Treatment and support for survivors of IPV, including teen dating violence

TABLE 28.4 CDC Strategies for Addressing and Preventing IPV (See CDC, 2022b.)

CDC: IPV STATISTICS AND PREVENTION STRATEGIES

Access multimedia content (http://openstax.org/books/population-health/pages/28-5-family-violence)
This video describes the prevalence of IPV and offers prevention strategies.

Watch the video, and then respond to the following questions.

1. Why is it important for community nurses to be aware of the statistics of IPV?
2. What are some prevention strategies for IPV?

Community nurses are in a key position to assess families for IPV. These nurses have clinical knowledge or practitioner expertise they can apply to risk assessment. Nurses can choose from among 11 evidence-based risk assessment instruments when assessing families for IPV risk (Messing, 2019). These risk assessment tools are also used in other specialties, such as social services, and in criminal justice settings. When administering one of these tools, the nurse should make sure the client is alone and able to speak freely. If the assessment reveals the client is at risk, the nurse should be prepared to counsel the client on the available resources and next steps.

Neglect Versus Abuse

According to the CDC, one in seven children experience some form of child abuse or neglect. Children who live in poverty are five times more likely to experience neglect and abuse than children who do not (CDC, 2022a).

Neglect is the failure to meet the basic physical and emotional needs of children and vulnerable adults. Basic needs may include housing, food, clothing, education, access to medical care, and emotional validation (CDC, 2022a). **Abuse** can be classified as physical, sexual, or emotional. **Physical abuse** is the use of physical force to cause physical injury (CDC, 2022a). For example, hitting, kicking, shaking, and burning are forms of physical abuse. **Sexual abuse** includes pressuring or forcing an individual to engage in sexual acts. This includes fondling, penetration, and/or exposing the individual to other sexual activities (CDC, 2022a). **Emotional abuse** is a behavior that harms the individual's self-worth or emotional well-being (CDC, 2022a). This may include name calling, shaming, rejecting, withholding love, manipulation, guilt tripping, and gas-lighting (undermining another person's perception of reality). While neglect and abuse occur frequently in the treatment of children, they can also occur with vulnerable adults. The federal government defines "vulnerable adult" as an individual age 18 or older who is unable to meet their own needs without assistance. This may be related to incapacity, mental illness, physical illness or disability, cognitive disability, advanced age, chronic use of drugs, chronic intoxication, and confinement (U.S. Department of Justice, n.d.). Though nurses may be wary of wrongfully accusing someone of child abuse or neglect, most states require nurses to report suspected cases. Nurses can play an important role in preventing abuse and neglect of children and vulnerable adults in their communities. Table 28.5 depicts prevention strategies.

Strengthen economic supports to families	• Strengthen household financial security • Family-friendly work policies
Change social norms to support parents and positive parenting	• Public engagement and enhancement campaigns • Legislative approaches to reduce corporal punishment
Provide quality care and education early in life	• Preschool enrichment with family engagement • Improved quality of child care through licensing and accreditation
Enhance parenting skills to promote healthy child development	• Early childhood home visitation • Parenting skill and family relationship programs
Intervene to lessen harms and prevent future risk	• Enhanced primary care • Behavioral parent training programs • Treatment to lessen harms of abuse and neglect exposure • Treatment to prevent problem behavior and later involvement in violence

TABLE 28.5 CDC's Strategies to Prevent Child Abuse and Neglect (See CDC, 2022a.)

As introduced in Health Promotion and Maintenance Across the Lifespan, elder abuse and neglect are defined as the intentional act or failure to act that causes harm or risk of harm in the adult who is age 60 or greater (CDC, 2021b). Some vulnerable adults are also at risk for abuse and neglect because of mental conditions or disabilities. Common types of abuse include physical, sexual, or emotional abuse or neglect. The abuser is typically someone the older adult knows and trusts, such as a family member, friend, or caregiver. Abuse may occur in the older adult's home or in an institutional setting, such as a long-term care facility or nursing home. An estimated one in ten U.S. adults experience some form of abuse or neglect (CDC, 2021b). According to the WHO, global rates of elder abuse in professional settings are high, with two out of three staff indicating they have committed some form of elder abuse (WHO, 2022). Risk factors for abuse and neglect in residential settings include staff burnout, lack of qualified staff, and stressful working conditions (CDC, 2020). The box below lists abuse prevention strategies.

CDC ELDER ABUSE PREVENTION STRATEGIES

- Listen to older adults and their caregivers to understand their challenges and provide support.
- Report abuse or suspected abuse to local adult protective services, long-term care ombudsman, or the police.
- Educate oneself and others about how to recognize and report elder abuse.
- Learn how the signs of elder abuse differ from the normal aging process.
- Check in on older adults who may have few friends and family members.
- Provide overburdened caregivers with support such as help from friends, family, or local relief care groups; adult day care programs; counseling; or outlets intended to promote emotional well-being.
- Encourage and assist people (either caregivers or older adults) having problems with drug or alcohol abuse in getting help.

(See CDC, 2021b.)

Identifying Abuse

Because abuse may be difficult to identify, a thorough history of present illness is necessary to make a correct diagnosis (Gonzalez et al., 2022). The community nurse must be able to identify different types of abuse and how they manifest in different age groups.

Identifying Abuse in Children

When working with children, the caregiver is the primary spokesperson. Getting a full history of events from the caregiver is one of the first screening steps. For example, when explaining the cause of a child's injury, the parent or caregiver should be able to easily give the history of the events. If the parent or caregiver stops to think or keeps changing the story, this should raise the suspicion of abuse and should be thoroughly investigated. Depending on the age and developmental status of the child, they may or may not be able to tell the nurse what happened. Some children are nonverbal, and others may be too frightened to say anything. In addition to the history of the present illness, a thorough medical history is needed. The nurse should assess for risk factors for abuse as well as medical conditions that can mimic signs of abuse, such as clotting or bleeding disorders, that would increase the chances of a child having explained bruising. Other relevant diagnoses include diseases that affect bone integrity, vitamin D deficiency, and genetic disorders that may increase the child's risk of fractures.

During the history, the nurse should observe the family's behavior. Does the child seem fearful? Do they avoid either parent or caregiver? How do the parent(s) or caregiver(s) act with the child? The nurse must thoroughly assess any injury. Signs and symptoms of possible physical abuse in children include the following:

- A nonambulatory infant with any injury
- Injury in a nonverbal child
- Injury inconsistent with child's physical abilities and a statement of harm from a verbal child
- Mechanism of injury not plausible or multiple injuries, particularly at varying ages
- Bruises on the torso, ear, or neck in a child younger than 4 years of age
- Burns to genitalia
- Stocking or glove distributions or patterns

- Caregiver being unconcerned about the injury
- An unexplained delay in seeking care or inconsistencies or discrepancies in the histories provided

The most common sign of physical abuse, bruising, is easy to miss since ambulatory children are prone to falling. Burns are also a common form of abuse and should be thoroughly assessed. Head, skeletal, and abdominal trauma must always be thoroughly assessed for abuse as these are common causes of mortality in children (Gonzalez et al., 2022). Nurses have a legal and moral obligation to identify and report child abuse. Most often, child abuse is first seen in the ER, and nurses are usually the first ones to notice it.

Identifying abuse among infants and toddlers can be challenging because they are nonverbal. The nurse must perform a thorough physical assessment and carefully question the parent or caregiver. The main difference when assessing for possible abuse in a school-age child or adolescent is that they are verbal and can tell you what happened during the event. Signs and symptoms, which may be the same, include unexplained bruising, burn marks, and/or nonspecific symptoms such as abdominal pain, anxiety, and generalized pain.

Evidence of abuse among adolescents and particularly teenagers can appear in a variety of ways. Clients in this age group who are victims of abuse are likely to develop eating disorders, dress younger/older than their age, struggle academically in school, experience depression, abuse substances, or run away (Stanford Medicine, 2023). When screening this age group for potential abuse, it is important to ensure the client understands that the nurse is required to report certain findings of abuse and may not be able to keep everything confidential.

Identifying Abuse in Pregnant or Postpartum Clients

Signs and symptoms of abuse in pregnant clients or postpartum clients may include injuries to the body, breasts, genitals, rectum, and buttocks (Huecker et al., 2023). Defensive injuries may be present on the forearms and hands. Additionally, these clients may exhibit nonspecific signs and symptoms, such as headaches, palpitations, chest pain, painful intercourse, chronic pain, and chronic fatigue. Psychological signs and symptoms may include anxiety and depression (Huecker et al., 2023). These clients may wear clothing to cover up the abuse and may make up reasons for their injuries. Since most clients who are pregnant receive prenatal care, community nurses can use this time to identify at-risk populations and prevent abuse by providing resources to these families.

HOW TO SPOT INTIMATE PARTNER VIOLENCE IN A MEDICAL SETTING

Access multimedia content (http://openstax.org/books/population-health/pages/28-5-family-violence)
This video from the Maryland Health Care Coalition Against Domestic Violence describes how health care providers can identify IPV.

Watch the video, and then respond to the following questions.

1. What are cues nurses should look for to identify IPV?
2. During what types of interactions in health care settings are nurses likely to observe signs of IPV?
3. If a nurse suspects IPV, what should the nurse do to address the situation?

Identifying Abuse in Older Adults

Identifying abuse in older adults can be difficult due to the declining cognitive and mental status of this population. Certain mental health disorders such as dementia, Alzheimer's disease, and traumatic brain injuries make effective communication difficult and these clients poor historians. This makes it difficult for the nurse to establish a sequence of events leading up to the injury. Behavioral manifestations of abuse in older adults may include agitation, inappropriate behavior, and losing bowel and/or bladder control (Lin, 2020). Minor signs or symptoms of abuse in older adults may include cuts, scratches, bruises, and welts. More serious signs or symptoms may include head injuries, broken bones, constant physical pain, soreness, and fatigue (CDC, 2021b). Table 28.6 provides some tools for assessing abuse or IVP in vulnerable populations.

Abuse of Children
• The Whole Child: How to Identify Abuse Ages 0–5 (https://openstax.org/r/thewholech) • The National Child Traumatic Stress Network: Screening and Assessment (https://openstax.org/r/nctsnor) • Child Welfare Information Gateway (https://openstax.org/r/childwelfareg)
Abuse of Older Adults and Vulnerable Populations
• American Academy of Family Physicians: Elder Abuse Suspicion Index (https://openstax.org/r/aafporga) • University of Iowa: Elder Mistreatment and Elder Abuse Screening Instruments (https://openstax.org/r/medicineuiowa)
Intimate Partner Violence Risk Assessment Tools
• Idaho State Domestic Violence Evaluation: Screening/Assessment Tools (https://openstax.org/r/iscidahogo) • Agency for Healthcare Research and Quality: EHR-Based Screening and Intervention for Intimate Partner Violence (https://openstax.org/r/digitalahrqgov) • Child Welfare Information Gateway: Assessing Safety, Risk, and Alleged Perpetrator of Domestic Violence (https://openstax.org/r/childwelfarego)

TABLE 28.6 Assessment Tools for Abuse or IVP in Adults, Children, and Vulnerable or Older Adults

Abuse and Neglect Prevention

As discussed in Foundations of Public/Community Health, levels of prevention include primary, secondary, and tertiary. Nurses can implement strategies at all levels to help families in crisis and prevent abuse and neglect. However, nurses must carefully select feasible interventions that maintain client privacy and autonomy.

- Primary prevention strategy: strengthening household resources. Community nurses can strengthen household resources by connecting them to community resources such as SNAP benefits, health insurance, and affordable housing and educating them on healthy relationships, coping skills, and communication skills.
- Secondary prevention strategy: screening families at risk for crisis events. This includes utilizing resources/screening tools listed in Table 28.6.
- Tertiary prevention strategy: preventing further risk or damage after an event. For example, if a woman and her children have experienced or are experiencing abuse, providing them with a safe shelter or housing.

CASE REFLECTION

Working with Client Families Who Are At Risk of Abuse or Neglect

Read the scenario, and then respond to the questions that follow.

Linda is a home health nurse who visits clients who have recently had babies. Linda partners with her local community services board to provide these families with resources; she also conducts risk assessments, such as screenings for postpartum depression and IPV.

Linda visits Elena in the suburban home Elena shares with her husband outside a major city. Elena recently delivered her first child. Elena is on maternity leave and has good benefits from her job as a marketing consultant for a major firm. She states that she is happy and feels good following the birth of her child.

Linda and Elena discuss the baby's feeding schedule, weight, and sleep. Linda asks about Elena's health—her sleep patterns, eating habits, and weight loss postpartum—and screens her for postpartum depression.

As they talk, Linda notices that Elena is wearing a long-sleeve sweater despite the room's warm temperature. She also notices bruises on Elena's face covered with makeup. Linda asks Elena if she is being hit, kicked, or slapped. She asks Elena if she feels safe in her home and if she is concerned for the baby's safety. Elena looks at her hands and says she is safe. She explains that the bruise on her face came from running into the door at night when getting up to feed the baby. Linda examines the baby thoroughly for any evidence of trauma or failure to thrive.

Linda shares with Elena that it is okay to ask for help and gives her IPV resources (hotline numbers) Elena can use if needed. Linda asks Elena if she can visit again in a couple of weeks. Elena agrees, and they schedule the next visit.

1. In this scenario, what subjective and objective cues are concerning for abuse?
2. What risk factors for IPV does this client have?
3. What steps should Linda take to ensure clients are in a safe environment?
4. Why is it important for Linda to follow up with another visit?

Chapter Summary

28.1 Family as Client

Everyone has their own definition of family. Whatever that definition, the nurse must work with the family and their dynamics. Regardless of the structure, families share certain common functions and characteristics. The functions and characteristics of the family can and will affect the health of the individual. Nurses must educate families on self-care, health promotion, and disease prevention.

28.2 Frameworks of Practice

Families go through life cycles, from starting a family to growing old. Each family may go through certain developmental tasks at their own pace. Nurses need to differentiate these tasks to formulate a holistic perspective on the family. Certain frameworks and theories help guide nurses in caring for families and help nurses understand how these familes operate as a social system. These include the socioecological framework, the transactional model, general systems theory, the Calgary Family Assessment model, and the Calgary Family Intervention model.

28.3 Family Health Nursing

In family health nursing, the nurse focuses on viewing the "client" as one unit or group of people. Family health nurses work in a variety of settings such as home care agencies; local, state, or national agencies or organization; or hospital systems. Family health reflects the family's ability to meet each family member's physical, psychological, spiritual, safety, economic, emotional, and intellectual needs. A family's ability to meet these needs is affected by the SDOH.

28.4 Conducting a Family Nursing Assessment

A family health assessment is a systemized process of collecting and organizing data nurses may use to determine a family's strengths and areas of concern. Nurses gather information through interviews with the family and observation of the family's environment and by collecting community data. Specific tools, including ecomaps and genograms, can help nurses conduct family assessments, and it may take more than one interview to collect the necessary data. Once the nurse conducts the family health assessment, they must formulate a nursing care plan that includes assessment, diagnosis, planning, and evaluation.

28.5 Family Violence

Families may experience developmental or situational crises. Families may also experience IPV, abuse, and/or neglect. Nurses must understand the different types of abuse (physical, sexual, or psychological) and their signs and symptoms. Nurses have an ethical role in preventing and intervening in any abuse. Nurses can implement strategies at all levels to help families that are in crisis and prevent abuse and neglect.

Key Terms

abuse physical, sexual, or emotional harm inflicted on others

Calgary Family Assessment Model (CFAM) model used to assess a family's strengths, resources, problems, and illness suffering by studying the family's structure, development, and function

Calgary Family Intervention Model model based on CFAM; provides a framework for nurses to use to have therapeutic conversations that target the family's functioning as a system using three domains of family function: cognitive, behavioral, and affective

developmental crisis a crisis resulting from predictable change due to normal growth and development

Duvall's Family Development Theory a theory of family development that asserts that families must move through certain stages, in order, and in each stage attain certain developmental tasks

ecomap visual assessment tool that illustrates the relationships between a family and its social network

emotional abuse a behavior that harms a person's self-worth or emotional well-being

family a group of two or more people (one of whom is the householder) related by birth, marriage, or adoption and residing together (including related subfamily members)

family group any two or more people (not necessarily including a householder) residing together and related by birth, marriage, or adoption

family health assessment a process of collecting data from family members and organizing this data

family household a group of two or more people (one of whom is the householder) related by birth, marriage, or adoption, including any unrelated people (unrelated subfamily members and/or secondary individuals) who may reside with them

family nursing a nursing discipline that involves caring for the family as one unit or group of people

family unit a household maintained by a householder who is in a family; includes any unrelated people (unrelated subfamily members and/or secondary individuals) who may reside together

general systems theory an interdisciplinary conceptual framework focusing on wholeness, patterns, relationship, hierarchical order, integration, and organization of phenomena

genogram a diagram that depicts family ties through birth and marriage

intimate partner violence (IVP) abuse that is caused by someone who is or has been romantically involved with the victim

neglect the failure to meet the basic physiological and emotional needs of children and vulnerable adults

physical abuse the use of physical force to cause physical injury

sexual abuse pressuring or forcing a person to engage in sexual acts

situational crisis a crisis that can either be predictable, such as a divorce, or unpredictable, such as a natural disaster or family death

transactional model a family nursing model that looks at family processes and the family's relationships or its transactions with other institutions

Review Questions

1. The nurse is assessing a family that includes an adult and a school-aged child named Jackson. Which of the following questions should the nurse prioritize to ask the adult?
   a. Do you have any concerns about your son's health?
   b. What is your relationship to Jackson?
   c. Is Jackson's other parent a source of support for you?
   d. How many other children do you have?

2. The nurse observes the interaction between a father and his school-age child during which the father tells the child that he needs to "shut up and leave him alone." According to Maslow's hierarchy, which of the following needs are most likely threatened in this interaction?
   a. Self-actualization
   b. Esteem
   c. Social
   d. Security

3. According to general systems theory, which of the following events represents a change in a family's subsystem?
   a. Two parents divorce.
   b. One parent loses their job.
   c. The family moves to another home.
   d. The children start school.

4. A nurse is teaching family members how to read food labels. According to the Calgary Family Intervention Model, which of the following actions by the family incorporates all three functional domains?
   a. The family groups the low-sodium foods together in the cabinets.
   b. The family explains back to the nurse how to read a nutrition label.
   c. The family practices reading labels at home to reinforce what they learned.
   d. The family reads nutrition labels when shopping and selects low-sodium foods for their meals.

5. The nurse is working with a group of older adult couples to help them learn more about fall prevention and how to make modifications in their home to decrease their risk of falls. This is an example of which level of health promotion?
   a. Primary
   b. Secondary
   c. Tertiary
   d. Primordial

6. Which of the following actions by a home health nurse can decrease the risk of experiencing unsafe conditions while in a family's home?
    a. Research and learn more about the surrounding neighborhood before the visit.
    b. Maintain situational awareness of other people and pets in the home.
    c. Make the visit as brief as possible to minimize time spent in the home.
    d. Maintain an updated visit schedule with the main office.

7. The community nurse is working with a family and determines one of the family members is repeatedly telling another family member who has a disability that "he needs to stop being lazy and get a job." This is an example of what type of abuse?
    a. Sexual abuse
    b. Physical abuse
    c. Emotional abuse
    d. Neglect

8. Which of the following would be included on a genogram?
    a. Occupations
    b. Religious affiliations
    c. Sources of health care
    d. Health conditions

9. A community nurse is making a home visit to a client who has recently had a baby and has a history of experiencing IPV. During the visit, the nurse observes an interaction between the client and the baby's father. The father seems very loving and attentive to the client. Which of the following is the most appropriate conclusion by the nurse?
    a. The client's history must be inaccurately documented.
    b. The IPV has been resolved and is no longer an issue for the couple.
    c. The couple appears to be in the honeymoon phase of the IPV cycle.
    d. The couple appears to be in the tension-building phase of the IPV cycle.

10. A community nurse is making a visit to an older adult client. The nurse identifies which of the following strategies that can be used in prevention of abuse in this client population?
    a. Take the time to listen to the client and the family to offer resources and support.
    b. Talk to the caregiver or family member only since older adults are often confused.
    c. Talk to the older client alone without involving family members.
    d. Because it is likely that older adult clients are abused, provide resources to other housing options.

CHAPTER 29

Caring Across Practice Settings



FIGURE 29.1 Community health nurses practice across a variety of settings. In this photo, an occupational health nurse assesses a client who is on the job. (credit: modification of work "Naval Branch Health Clinic Albany Occupational Health" by Deidre Smith/Naval Hospital Jacksonville/Flickr, Public Domain)

CHAPTER OUTLINE

29.1 Occupational Health

29.2 School Health

29.3 Correctional Nursing

29.4 Public Health Nursing and Public Health Departments

INTRODUCTION A community health nursing student, Noah is interested in working in community and public health nursing upon graduation. He has had a wide variety of clinical experiences in the community. As a part of his program, he has experienced multiple community nursing settings, including a public school-based clinic, a maximum-security prison, and occupational health nursing at a large biotechnology firm. Noah recognizes that these practice settings focus on health promotion, disease prevention, and education. Noah tells his professor that in these roles, he sees the nurses making a difference in the lives of clients. In his next rotation at a local health department, Noah will help the nurse conduct a vaccine clinic and participate in emergency preparedness drills.

Community and population health nurses can work across a variety of practice settings caring for diverse clients and communities. This chapter will highlight common practice settings for community and population health nurses, such as occupational health, school health, correctional nursing, and public health departments.

29.1 Occupational Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 29.1.1 Describe the history of occupational health nursing.
- 29.1.2 Examine competencies in occupational health nursing.
- 29.1.3 Describe the scope of practice in occupational health nursing.
- 29.1.4 Define the role of the Occupational Safety and Health Administration and the National Institute for Occupational Safety and Health.
- 29.1.5 Differentiate between various occupational health risks to promote safety.
- 29.1.6 Describe occupational health practice settings and nursing roles.
- 29.1.7 Explain how to conduct an incident investigation to ensure continuous improvement in safety.

Occupational and environmental health nursing focuses on providing preventive health care, health promotion, and health restoration in work environments. With origins in public health, this specialty focuses on integrating occupational safety and health protection efforts with health promotion activities to protect workers, promote health, and prevent disease, illness, and injury (Topcu & Ardahan, 2019; American Board for Occupational Health Nurses [ABOHN], n.d.; Topcu & Ardahan, 2019). Occupational health nursing is research-based with a conceptual framework reflecting an interprofessional background of nursing science, medical science, public health science, occupational health science, social and behavioral sciences, and principles of business management and administration (American Association of Occupational Health Nursing [AAOHN], 2012). Occupational health nurses (OHNs) help clients make informed decisions regarding health care concerns, advocate for clients by fostering equitable and quality health care, and ensure the environments in which clients work and live are healthy (AAOHN, 2012).

In 2022, the U.S. workforce numbered approximately 160 million (U.S. Bureau of Labor Statistics [USBLS], 2023c). These numbers support the need for OHNs to ensure a safe and healthy work environment.

- In 2021, private industry reported 2.6 million nonfatal workplace injuries and illnesses (USBLS, 2022b).
- In 2021, private industry reported 5,190 fatal work injuries, an 8.9 percent increase from 2020 (USBLS, 2022a).
- In 2021, transportation incidents were the largest cause of fatalities, accounting for almost 40 percent of all work-related fatalities (USBLS, 2022a).
- Black workers bore a disproportionate burden of work-related deaths in 2021, accounting for 12.6 percent of total fatalities, a 20.7 percent increase from 2020 (USBLS, 2022a).
- In 2022, more than 25 percent of Black worker fatalities resulted from violence and other injuries by people or animals (USBLS, 2022a).

History of Occupational Health Nursing

Occupational health nursing, first called **industrial health nursing**, arose in the United States in the late 1800s when companies in Pennsylvania and Vermont hired Betty Moulder and Ada Mayo Stewart, respectively, to care for their employees and families. Since little is known about Moulder, Stewart is often credited with being the first industrial nurse (Thompson & Wachs, 2012; Topcu & Ardahan, 2019). Stewart's primary duties included health promotion, disease prevention, home visits, and maternity care.

The industrial health nursing profession continued to evolve with the second industrial revolution. Around the beginning of the twentieth century, factories employed OHNs to assist in stopping communicable disease spread—such as tuberculosis—and to prevent injuries to reduce costs (Thompson & Wachs, 2012). In addition to industrial settings, retail stores, hotels, and insurance companies also employed nurses who practiced from a preventive and public health perspective, frequently providing health and childcare education to the community and employee families. They were expected to care for workers injured on the job, assist physicians in company-provided clinical sites, and visit ill or injured workers in their homes (Thompson & Wachs, 2012). Industrial health nursing thrived during this period; the first book on the topic was published in 1919, and the American Industrial Nurses Association (AINA) was formed in 1942 to develop training for industrial nursing (Topcu & Ardahan, 2019).

More changes to this nursing specialty occurred in the latter half of the twentieth century. The Coal Mine Safety and

Health Act of 1969 and the Occupational Safety and Health Act of 1970 contributed to the growth of industrial health nursing, driven by concerns for workers' health and welfare, costs associated with injuries, and public health considerations. The Coal Mine Safety Act was passed in response to a 1968 underground coal mine explosion that killed 78 miners in West Virginia, becoming a turning point for reform after decades of mine fatalities and increasing awareness of lung disease related to working in the coal mines (U.S. Department of Labor [USDL], n.d.-c). This act was the most stringent health and safety law of its time. It required regular federal inspections of all coal mines and added health protections against lung disease (USDL, n.d.-c).

On the heels of this act, the Occupational Safety and Health Act of 1970 created two federal agencies, the National Institute for Occupational Safety and Health (NIOSH) and the Occupational Safety and Health Administration (OSHA) (Centers for Disease Control and Prevention [CDC], 2020b; USDL, n.d.-b). In 1971, AINA established a certification organization for industrial health nursing that later became known as the American Board for Occupational Health Nurses, founded officially in 1972, and is now the sole certification body for occupational health nursing. In 1977, AINA renamed itself the American Association of Occupational Health Nursing to reflect the growing diversity of workplaces and the roles of the occupational health nurse (Topcu & Ardahan, 2019). The AAOHN is the professional association for OHNs.

In 1988, OSHA hired its first nurse to provide consultation and support; in 1993, OSHA established a nursing office (Topcu & Ardahan, 2019). As discussed in the next section, OSHA has made progress in decreasing work-related injury and death by setting and enforcing standards for safe and healthy working conditions and providing training, outreach, and education (USDL, n.d.-b). In 1998, the AAOHN adopted environmental health as an essential component of occupational health nursing application; occupational health nursing became known as occupational and environmental health nursing. Environmental health focuses on the connections between people and their surrounding environments (American Public Health Association, n.d.). The AAOHN published the first standards of occupational and environmental health nursing in 1999, and they have been updated periodically, with the last update in 2019 (AAOHN, 2019; Topcu & Ardahan, 2019).

Competencies in Occupational and Environmental Health Nursing

The AAOHN provides four overarching categories and 22 competencies that define the foundation for scope and standard of practice, knowledge, and skills and a legal and ethical framework for this specialty (AAOHN, 2015). The four categories include:

- Manage Total Worker Health® (TWH)
- Adhere to professional nursing practice principles
- Demonstrate an understanding of the business climate and its impact on a community's health
- Practice culturally appropriate and evidence-based nursing care within the scope of practice

Total Worker Health® (**TWH**) refers to policies, programs, and practices focused on work-related safety and protection, promoting illness and injury prevention endeavors to advance worker well-being (CDC, 2020b). The TWH approach builds on the idea of a hazard-free work environment and views where an individual works as a social determinant of health (SDOH). Wages, hours, workload, health benefits, and access to paid leave impact the overall well-being of workers, families, and communities. The long-term vision is to protect safety and health and to advance workers' well-being by creating safer and healthier work (CDC, 2020b).

Workplace risk factors—such as sitting at a desk, performing shift work, or driving for long periods of time—can contribute to long-term health problems. There are work-related risk factors for obesity, sleep disorders, cardiovascular disease, and depression, among others (CDC, 2020b). The TWH approach aims to advance health and well-being by targeting work conditions.

OHNs work in various settings and roles where they may need additional competencies depending on the chosen industry. Focusing on identifying health hazards and implementing control measures to manage the risk of exposure are key roles and required competencies of the OHN. Identifying workers' exposure to health hazards can be challenging as certain chemicals, vapors, and gases may be invisible without any obvious signs (USDL, 2016b).

Table 29.1 lists common chemical, physical, biological, and ergonomic hazards in the occupational setting.

Chemical Hazards	Physical Hazards	Biological Hazards	Ergonomic Hazards
• Solvents • Adhesives • Toxic dusts • Paints • Substances in cleaning solutions • Diesel exhaust	• Noise • Radiation • Heat • Electric and magnetic fields • Cold • Unsafe machinery and equipment • Transportation accidents • Fires or blasting	• Infectious agents • Contaminated bodily fluids • Certain insects, spiders, scorpions • Venomous snakes	• Heavy lifting • Repetitive motions • Vibration

TABLE 29.1 Common Workplace Hazards by Practice Setting

WORKPLACE ERGONOMICS

Access multimedia content (http://openstax.org/books/population-health/pages/29-1-occupational-health)

Ergonomics refers to a set of practices in workplaces—such as adjustable desk heights and keyboards that more naturally fit the wrist's contours—that increase worker efficiency and productivity while reducing injuries and discomfort (Mayo Clinic, 2023). The goal is to fit the workplace to the worker, as described in this video.

Watch the video, and then respond to the following questions.

1. Why is ergonomics in the workplace such an important concept?
2. What is the relationship between ergonomics and health?
3. How can the occupational health nurse incorporate ergonomics principles into various workplace settings?

Scope of Practice in Occupational and Environmental Health Nursing

The AAOHN (2012) Scope of Practice for the OHN highlights the necessary collaboration among workers, employers, and members of the occupational health team and safety team and includes:

- Identify health and safety needs.
- Prioritize interventions.
- Develop and implement interventions and programs.
- Evaluate care and service delivery.
- Provide comprehensive clinical and primary care, including assessment, diagnosis, management, and documentation of occupational and non-occupational illness and injury.
- Provide comprehensive case management for occupational and non-occupational illnesses and injuries.
- Provide holistic hazard assessment and surveillance of worker populations, workplaces, and community groups.
- Investigate, monitor, and analyze illness and injury episodes, trends, and methods to promote and protect worker health and safety.
- Comply with laws, regulations, and standards governing health and safety for workers and the environment.
- Coordinate and provide management and administration of occupational and environmental health services.
- Deliver health promotion and disease prevention strategies using primary, secondary, and tertiary principles.
- Provide counseling, health education, and training programs using adult learning approaches.
- Utilize and participate in research related to occupational and environmental health.

The scope of practice for OHNs is broad and will vary depending on the work site. Overarching concepts of community health, law, economy, politics, policy, and regulatory issues are evident within the scope of practice as OHNs are responsible for responding to legislative mandates governing worker health and safety.

AAOHN (2012) establishes standards of care for OHNs based on the scope of practice. Eleven professional practice

standards describe a competent level of performance by the OHN (AAOHN, 2012).

Occupational Safety and Health Administration

In 1970, the Occupational Health and Safety Act created OSHA to develop and enforce standards of safety that employers must follow. A **standard**, also known as a regulation, is a requirement the agency uses to evaluate whether employers follow OSHA laws (USDL, n.d.-a). OSHA organizes the standards based on the following workplace sectors: general industry; construction; agriculture; and maritime (USDL, n.d.-a). The OSHA rulemaking process (https://openstax.org/r/oshagov) describes how the agency creates standards. OSHA also provides training, education, and assistance with implementing these standards (USDL, n.d.-a). OSHA educational topics include agriculture, construction, federal agencies, health care, maritime, oil and gas, and warehousing (USDL, n.d.-a).

The formation of OSHA stimulated the growth of occupational health nursing to help employers create safe and healthy work environments. Since the 1970s, the specialty has grown as OHNs can monitor workers' health status, ensure employers meet OSHA standards, implement evidence-based interventions to prevent or mitigate adverse health effects from the work environment, and develop workplace prevention programs. OSHA describes OHNs as RNs who use specialized experience and education to recognize and prevent adverse health effects from hazardous exposures in the workplace (ABOHN, n.d.).

National Institute for Occupational Safety and Health

Part of the CDC, the NIOSH is the research agency tasked with studying worker safety and health (CDC, 2023k). NIOSH was established in collaboration with OSHA from the Occupational Safety and Health Act of 1970. While OSHA creates and enforces safety standards in the workplace, NIOSH conducts research and makes recommendations for the prevention of occupational illness and injury (CDC, 2023k). NIOSH provides evidence for many of the standards that OSHA enforces. It covers workplace safety and health topics, such as hazards and exposures, chemicals, Total Worker Health®, industries and occupations, diseases and injuries, safety and prevention, and emergency preparedness and response (CDC, 2023k).

Occupational Health Nursing Practice Settings

OHNs practice in a wide variety of sites. Wherever there are employees, there may be OHNs working with employers to design health and safety programs. OHNs use an interprofessional approach to advocate for employee rights to health and safety programs. They assist employers by decreasing work-related injuries, absenteeism, and disability claims and by ensuring compliance with local, state, and federal laws and regulations on workplace health and safety. Depending on the employment site, OHNs build expertise by incorporating knowledge of chemical hazards, biological hazards, ergonomic considerations, industrial safety issues, disease management, and business management concepts. Figure 29.2 lists the most common industries that employ certified OHNs. Hospitals, medical centers, and manufacturing are the most cited work settings for certified OHNs. Within manufacturing and production, OHNs may work in textiles, oil refining, machinery, the metal industry, rubber, and plastics (ABOHN, 2018). Other smaller industries where OHNs have an impact are food production, retail trade, amusement and recreational services, construction, communications, biotechnology, agriculture, forestry, fishing, and consulting.

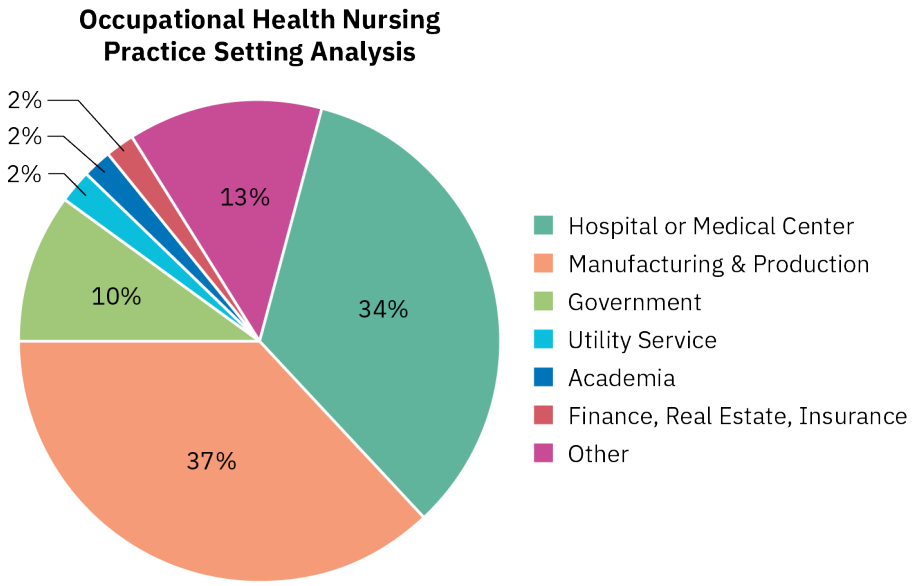


FIGURE 29.2 According to the ABOHN 2018 Practice Analysis, more than two-thirds of certified OHNs work in manufacturing and production or hospital or medical center settings. (data source: American Board for Occupational Health Nurses, Inc., 2018; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Occupational Health Nursing Practice Roles

Many OHNs enter the field with a baccalaureate degree in nursing and experience in community health or ambulatory care. Many pursue master's degrees in public health, business, or advanced practice nursing to further develop their professional competencies. Certification in occupational health nursing is recommended but not required. OHNs combine knowledge of health and business to provide a safe and healthy work environment while maintaining fiscal responsibility to the employer (AAOHN, n.d.). The roles and responsibilities of OHNs include:

- Case management
- Counseling and crisis intervention
- Health promotion and risk reduction
- Legal and regulatory compliance
- Worker and workplace hazard detection

Clinician

The OHN is a skilled nurse clinician primarily responsible for preventing work-related health problems and restoring health after an injury or illness. The OHN assesses workplace hazards, monitors the workers and workplace for potential issues or patterns of illness or injury, and investigates illness or injury. Fundamental to the practice, OHNs usually take an occupational health history of every worker for information on work history, on potential occupational exposures, and on the worker's current health status. The OHN can provide appropriate education and preventive steps during these assessments to eliminate or reduce potential adverse exposures.

Assessing workplace hazards is another foundational role of the OHN. This may take the form of a workplace walk-through to understand workflow, job requirements, materials utilized, presence of hazards, and employee work practices. A complete workplace survey enables the OHN to compile information about factors that support or impede employee health. It includes looking at building plans, exits and entrances, availability of emergency equipment, alarm and detection devices, and personal protective equipment (CDC, 2015; USDL, 2016b). The box below provides information on performing a workplace safety hazard evaluation (USDL, 2016b, pp. 13–15).

WORKPLACE SAFETY HAZARD EVALUATION

- Regularly inspect all operations, equipment, work areas, and facilities. Include workers on the inspection walk-through.
- Document the inspections and be sure to verify any hazardous conditions that are found are corrected.

Take photos or videos of problem areas to facilitate later discussion and brainstorming about controlling them.
- Include all areas and activities in these inspections, such as storage and warehousing, facility and equipment maintenance, purchasing and office functions, and the activities of on-site contractors, subcontractors, and temporary employees.
- Regularly inspect occupational vehicles such as forklifts, trucks, cars, etc.
- Use checklists that highlight typical hazards, such as:
  - General housekeeping
  - Slip, trip, and fall hazards
  - Electrical hazards
  - Equipment operation
  - Equipment maintenance
  - Fire protection
  - Work organization and process flow
  - Work practices
  - Workplace violence
  - Ergonomic problems
  - Lack of emergency procedures

(See USDL, 2016.)

After a work-related injury or illness, the OHN should complete an initial physical assessment and provide care and treatment of any injuries per agency protocol. Treatment may include first aid measures followed by referrals depending on the severity of the injury or illness. For legal and ethical reasons, proper documentation of occupational-related injuries is necessary. OSHA must be notified within 8 hours of a work-related fatality and within 24 hours of serious injury such as an amputation, loss of an eye, or inpatient hospitalization (USDL, 2016). Reported incidents and concerns indicate to OHN that occupational hazards exist. The OHN should have a plan and procedure for conducting incident investigations that covers who will be involved, how information will be communicated, materials or supplies needed, and reporting forms to be used. An investigation aims to identify the cause or causes of the incident or the concern to prevent further injury or illness (USDL, 2016b). A **root cause analysis** (RCA) is used to identify, evaluate, and correct the origins of accidents (USDL, 2016a). The box below provides more information on conducting an incident investigation and RCA.

CONDUCTING AN INCIDENT INVESTIGATION AND ROOT CAUSE ANALYSIS

- Begin the investigation immediately when an incident occurs.
- Conduct investigations with a trained team that includes management and workers' representatives.
- Investigate close calls/near misses.
- Ask several questions to identify all factors involved in order to determine how the incident could have been prevented.
- Identify and analyze root causes to address underlying program shortcomings that allowed the incidents to happen. The five steps in an RCA include (USDL, 2016a):
  - The Five Whys. In response to each explanation of how an incident occurred, ask between two and five why questions.
  - Build a detailed timeline around the event and analyze it.
  - Perform a change analysis, looking at all the changes in the organization that preceded the change in safety or the event, and try to define the relationship between possible causes and effects.
  - Use a cause-and-effect diagram, known as a fishbone diagram or an Ishikawa diagram, to brainstorm, categorize, and map all possible causes.
  - Avoid focusing on a single cause; identify and address all root causes for an incident.
- Communicate the results of the investigation to managers, supervisors, and workers to prevent recurrence.

(See USDL, 2016b.)

Case Manager

OHN case managers coordinate and manage the comprehensive health care services of ill or injured workers (Figure 29.3) to provide or ensure cost-effective, quality care that facilitates a safe and timely return-to-work with cost savings (ABOHN, 2021). This can involve managing issues related to health insurance, workers' compensation, and federal regulations such as the Family Medical Leave Act (FMLA). OHN case managers integrate the nursing process into their care while coordinating other necessary services. The case manager follows the worker after any incident, beginning immediately after the onset and continuing through the return-to-work phase. Case management includes mobilizing necessary resources during an injury or illness, developing preventive systems, and delivering care aligned to return the worker to pre-injury function if possible (ABOHN, 2021).

Counselor/Consultant

OHNs act as counselors or consultants to prevent work-related health problems. OHNs develop, implement, and evaluate occupational health and safety services within organizations and the community. OHNs investigate all potential material and chemical exposures that could result in adverse health outcomes in workers. Workers have a legal right to know the substances they may be exposed to at work and can request this information from the OHN. The OHN should use safety data sheets (SDS), which provide information from the manufacturers of chemicals or materials, when designing preventive educational materials on potential exposures. OHNs counsel workers about work-related illnesses, injuries, and wellness and health promotion concerns.



FIGURE 29.3 An OHN administers an influenza immunization to a city employee during a flu shot clinic, highlighting health promotion efforts to keep workers healthy. (credit: "Duggan at Speed Bump- Flu Shot N-Conf.-2111" by City of Detroit/Flickr, Public Domain)

Educator

OHNs are educators in all their roles in occupational and environmental health. The OHN participates in developing and implementing health promotion programs that support business objectives while promoting wellness and injury prevention. Health promotion objectives include creating environments that provide work-life balance for workers and prevention programs related to potentially hazardous exposures in the workplace. Health promotion programs require the OHN to effectively teach and motivate workers on a topic. Common topics include hearing protection, eye protection, nutrition, exercise, and smoking cessation. See Health Promotion and Disease Prevention Strategies for health promotion models that could be used in the occupational health setting.

Administrator/Corporate Director

OHNs often participate in the development, management, and evaluation of the health and safety program of the

organization. This requires the OHN to act in a leadership role as an administrator or corporate director. To maintain compliance with legal and regulatory requirements, organizations need written policies and procedures, and it often falls on the OHN administrator to ensure these policies are up-to-date and in full compliance with the law. Businesses must maintain compliance with OSHA standards, and this requires the OHN administrator to give the USDL data on occupational injuries, illnesses, and deaths. OSHA distributes the record-keeping forms, and the OHN administrator completes them throughout the year, submitting them to OSHA at the year-end. In addition, the OHN administrator works on compliance with other laws and regulations, such as FMLA and tracking workers who use it.

If the OHN administrator or director would like to increase the occupational health services offered to the workers or increase the availability of personal protective equipment (PPE) based on a recent incident or RCA, the administrator is expected to write up a proposal justifying the expanded services or increased PPE request. This often requires documentation of surveillance and monitoring efforts along with audits of safety conditions in the workplace. Employers must keep health records on all workers separate from their other employment records, and the OHN administrator is often the person involved in maintaining these records and adhering to strict privacy requirements. The OHN administrator also often oversees a workers' compensation claim on behalf of the employee to ensure the worker receives appropriate benefits.

Researcher

OHNs can be researchers, identifying, analyzing, measuring, and evaluating the effects of workplace exposures and hazards for workers and community members. They can use the data they gather to implement appropriate preventive and control measures. OHNs use the data they gather on worker surveillance to identify patterns, trends, changes, and concerning issues. Utilizing this information and the identified trends, the OHN can then create targeted interventions to address the issue. Just as the NIOSH participates in occupational health-related research to arm OSHA with evidence for its standards, OHNs act as the epidemiologist or event investigator to recommend evidence-based changes to the employer to avoid future illness or injury.

The National Occupational Research Agenda (NORA (https://openstax.org/r/cdcgovc)) is a program to stimulate innovative occupational health research and improve workplace practices. Established in 1996, NORA has grown to cover 10 industry sectors—such as construction and manufacturing—and seven health and safety cross-sectors—such as hearing loss prevention and respiratory health—that are organized according to major health and safety issues affecting U.S. workers (CDC, 2022i). Each sector and cross-sector council develops a national agenda for improvements in occupational health and safety. NORA provides a research framework for the NIOSH as diverse groups, OHNs included, collaborate to identify the most pressing health and safety issues in the workplace. The number of workers at risk for a particular injury or illness, the severity of the hazard or issue, and the probability that new information can make a difference all inform NORA's priority-setting process (CDC, 2022i).

29.2 School Health

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 29.2.1 Discuss the history of school nursing.
- 29.2.2 Explain the scope and standards of practice of the school nurse.
- 29.2.3 Describe the role of the school nurse.
- 29.2.4 Examine two frameworks for school nursing practice.
- 29.2.5 Identify common health problems of children and adolescents in the school setting.
- 29.2.6 Explain the nurse's role in planning, implementing, and evaluating evidence-based interventions (primary, secondary, and tertiary) to improve outcomes and safety for school community members.

School nursing focuses on protecting and promoting student health by facilitating optimal development and promoting academic success. School nurses are health care and education leaders who advocate for student-centered care, provide care coordination, and collaborate with school administrators, staff, teachers, caregivers, and the interprofessional health care team (National Association of School Nurses [NASN], 2023). Over 40 percent of school-aged children in the United States have at least one long-term health condition, such as food allergies, seizure disorders, asthma, diabetes, and oral health challenges. The school nurse is often the only health care provider in a school and plays an integral part in the daily management of these conditions (CDC, 2022k).

History of School Nursing

The school nursing role changed dramatically in 1975 after Congress passed the Education for All Handicapped Children Act, known as EHA (U.S. Department of Education [USDE], 2023). Before the passage of this act, children with disabilities and complex or long-term medical issues were not allowed to attend public school and were often institutionalized, even against a family's wishes (Nighswander & Blair, 2022). After years of court battles, the early 1970s brought forward two national court cases and an exposé on Willowbrook State School, one of the institutions where children with intellectual disabilities were sent, setting the stage for the EHA to be signed into law (Nighswander & Blair, 2022). In 1990, EHA was renamed the Individuals with Disabilities Education Act (IDEA) (USDE, 2023). School nurses then began caring for children with seizure disorders, cardiac conditions, cystic fibrosis, quadriplegia, asthma, life-threatening allergies, sensory deficits, and intellectual disabilities, among many others. An increase in complex medical conditions has resulted in an increased need for school nurses to perform specialized skills, such as tube feedings, urinary catheterizations, tracheostomy care, and suctioning. Students with long-term conditions comprise a quarter of student caseloads (Bergren, 2017).

GERALDO RIVERA – THE P&A SYSTEM

Access multimedia content (http://openstax.org/books/population-health/pages/29-2-school-health)

In 1972, investigative reporter Geraldo Rivera published an exposé documentary, "Willowbrook: The Last Disgrace," revealing the gruesome conditions at Willowbrook State School in New York. The school housed children with intellectual disabilities, many of whom were forced to live in these institutions for their entire lives due to perceived or actual intellectual disabilities, along with some physical disabilities such as sensory deficits or cerebral palsy. This short video illustrates how Rivera's television broadcasts led to the development of the P&A Systems in 1975. Note that the video contains graphic images and nudity, portrays profound suffering and abuse, and uses language that is now considered offensive. In the past, the term "mentally retarded" was used to describe individuals with a wide range of developmental disabilities. As society has gained a greater understanding of disabilities, the language surrounding them has evolved.

Watch the video, and then respond to the following questions.

1. How did the passage of the EHA affect views about and treatment of children and adults with disabilities?
2. Why is it important for you, as a future nurse, to be aware of how institutions like Willowbrook State School treated clients with intellectual or physical disabilities?

Scope and Standards of Practice for the School Nurse

In 1983, the American Nurses Association (ANA) and the NASN published the first edition of the standards of school nursing practice (Yonkaitis & Reiner, 2022), and in 2001, the ANA and NASN recognized school nursing as a specialty practice, requiring a different manual than the general nursing scope and standards of practice. Every five years, the scope and standards of practice are reviewed and updated by a diverse workgroup of practicing school nurses, school nurse supervisors, independent school nurse consultants, and nurse educators, all from a variety of educational backgrounds, representing different regions of the country (Yonkaitis & Reiner, 2022).

The scope of school nursing practice describes what school nursing means to school nurses, administrators, families, school board members, and the public. This includes who school nurses are, what they do, where they do it, and when, why, and how they do it. The scope of practice includes concepts of social justice, an updated ethical code for school nurses, emergency and disaster preparedness, and utilization of the Framework for 21st Century School Nursing Practice (Yonkaitis & Reiner, 2022).

The Standards of School Nursing Practice include 18 practice standards that provide the professional expectations to guide school nursing practice that align with the broader nursing profession. These standards are divided into two groups, the Standards of Practice and the Standards of Professional Performance (Yonkaitis & Reiner, 2022). The first six standards are the nursing process in action: assessment, diagnosis, outcome identification, planning, implementation, and evaluation. The implementation standard has two subcategories specific to school nursing: care coordination, and health teaching and health promotion (Yonkaitis & Reiner, 2022). Within the nursing process, school nurses collaborate with families and school staff when caring for students. The remaining 12 standards fall

under the category of Standards of Professional Performance and include the following: ethics, advocacy, equitable practices, communication, collaboration, leadership, education, scholarly inquiry, quality of practice, professional practice evaluation, resource stewardship, and environmental health (Yonkaitis & Reiner, 2022).

Role of the School Nurse

School nursing has evolved from screening for infectious diseases to managing various chronic conditions, complex medical needs, and comprehensive care coordination. The student population has changed over the last 20 years, with more children affected by food insecurity, lower socioeconomic status, homelessness, language and cultural barriers, discrimination, and challenging long-term health issues (Center for American Progress, 2022) (Figure 29.4). School nursing involves issues of social justice and advocacy, incorporating the SDOH into the needs assessment of the children. The dual focus on individual and population health means the school nurse is often a child's only consistent contact with the health care system (Willgerodt et al., 2018). School nurses engage in population health practices of health promotion, screening, injury, illness, and disease prevention to promote health through advocacy efforts, education, and connecting children and families to needed resources (Bergren, 2017). School nurses are change agents, improving the health of children, families, and communities.



FIGURE 29.4 A school nurse has many roles, such as coordinating on-site vision screenings for students. (credit: "1-14 Soldiers Give Vision Screenings at Nanaikapano Elementary School" by 2nd Stryker Brigade Combat Team, 25th Infantry Div/Flickr, CC BY 2.0)

SCHOOL-BASED HEALTH CENTERS: HERE FOR THE KIDS

Access multimedia content (http://openstax.org/books/population-health/pages/29-2-school-health)

This video from the Massachusetts Department of Public Health highlights how School-Based Health Centers are making a difference in the health and well-being of students across the state.

Watch the video, and then respond to the following questions.

1. What is the nurse's role in a school-based health center?
2. What do you think the CEO of Lynn Community Health Center meant when she said that "school-based health centers are the perfect integrated primary care and behavioral health program"?

Clinical Care Provider

A school nurse's primary role is to use the nursing process to provide direct care to students with long-term and acute medical conditions. For students with chronic medical conditions, school nurses work with the student's primary care provider to develop an **individual health plan** (IHP) to guide a plan of care.

In addition to providing direct nursing care to students, school nurses are also involved in health screenings. Each state has different requirements for school health screenings. In general, these screenings may include:

- Hearing
- Vision
- Dental
- Scoliosis
- Postural screening
- Body mass index
- Screening, brief intervention, and referral for treatment (SBIRT) to identify substance use risk behaviors

Health Educator

School nurses are responsible for educating school staff on common health conditions in classrooms and what to do in the case of an emergency such as an allergic reaction. They educate children, school staff, families, and communities on healthy behaviors and healthy environments for optimal wellness.

Advocate

School nurses advocate for students, families, school staff, and the communities they serve. At the individual level, school nurses are a part of the individual education plans (IEPs) that students may need to promote academic success. They advocate at the local, state, and federal levels. School nurses are involved with national initiatives to provide nutritious school food, universal breakfast, and increased access to free school lunches; to increase physical education and physical activity in classrooms; and to establish longer recess times. These initiatives allow school nurses to champion healthier choices and healthier school environments with the support of other like-minded educators and community health leaders (Bergren, 2017).

The roles described above are at the foundation of the two current frameworks for school nursing practice, the *Framework for 21st Century School Nursing Practice* and the *Whole School, Whole Community, Whole Child Model*.

Framework for 21st Century School Nursing Practice

NASN developed the Framework for 21st Century School Nursing Practice (https://openstax.org/r/nasnorg) to guide school nursing practice. This framework aligns with the CDC's Whole School, Whole Community, Whole Child (WSCC) model for addressing health in schools (2016), which is discussed later in this chapter. The student is in the center of the framework, encircled by family and the school community. Within the framework, five interconnected principles—care coordination, community and public health, leadership, quality improvement, and standards of practice—highlight related practice components, actions, and activities that align with each principle. These principles are not hierarchical; they are interrelated practice components of school nursing (NASN, 2016).

Care Coordination

Care coordination brings together student-centered activities to deliver health services. It includes case management, long-term disease management, interprofessional collaboration and communication, direct care, education, student-centered care plans, student self-empowerment, and transition planning (NASN, 2016). Case management provides collaborative care among the child, family, health care providers, and the school. Long-term disease management involves tertiary prevention, student disease self-management, and helping students and families access needed resources. Collaborative interpersonal communication ensures continuity of care (NASN, 2016). Direct care interventions address acute, urgent, or long-term health needs based on standard protocols, routine treatments, and medication administration. School nurses instruct individual students and families on topics supporting student self-care and self-management and address student and family health literacy and health care decision-making. Student-centered care plans, such as IHPs and emergency action plans (ECPs), involve individualized nursing care, based on a specific student, after a thorough nursing assessment (NASN, 2016). Student-centered care fosters student involvement in the change process to encourage autonomy. Transition planning supports student health and learning when transitioning between grade levels or moving in between school and health settings (NASN, 2016).

Community and Public Health

Using community and public health knowledge and skills, the school nurse delivers the following components of nursing care across school populations (NASN, 2016):

- Access to care: ensuring student access to quality care, a school nurse, insurance coverage, transportation, and timeliness of care
- Cultural competency: culturally responsive care where health services are appropriate and respectful of the needs of diverse populations
- Disease prevention: primary, secondary, and tertiary
- Environmental health: all aspects of the natural and built environment, including the building, classrooms, pest management, heating, cooling, and outdoor spaces, among others
- Health education: developmentally appropriate instruction that targets a specific learning need

The school nurse strives for health equity, the state in which everyone has an opportunity to achieve their health potential. Utilizing health promotion interventions and population-based care interventions means improving health by shifting the focus beyond individual behavior to social and environmental interventions to improve populations—such as school children—in the context of their everyday life (NASN, 2016). Risk reductions are strategies to decrease the likelihood of experiencing an adverse health outcome and require the nurse to consider the hazards of disease (NASN, 2016). Screenings, referrals, and follow-up refer to secondary prevention activities to detect and treat health conditions early to promote better health outcomes. Referral and follow-up are a means to connect students with resources and health professionals. SDOH, in the context of school nursing, are described as social needs that nurses can address and advocate for changes in the infrastructure causing the inequities that create these social needs. Surveillance is the ongoing collection and interpretation of health-related data to plan, implement, and evaluate public health practice (NASN, 2016).

Leadership

Leadership incorporates the value of change, leading education and health care reform through advocacy. This includes acting as change agents, engaging in lifelong learning, embracing models of practice and professionalism, promoting policy development, and leading at a systems level (NASN, 2016). Being a change agent requires the nurse to communicate clearly and advocate when confronted with a concern or an issue. Leadership traits include a commitment to lifelong learning and engaging in professional behaviors of accountability, collaboration, professional speech, positivity, and evidence-based, student-focused activities that align with current practice (NASN, 2016).

Quality Improvement

Quality improvement (QI) refers to an ongoing assessment and data collection process to promote continuous improvement and growth. QI includes documentation, data collection, evaluation, and research (NASN, 2016). The Plan-Do-Study-Act tool is often used in QI because it is circular, illustrating the continuous process. It has also been described as the nursing process in action (NASN, 2016). School nurse notes describe daily activities and health events while including progress in meeting set goals on a student's health plan. Documentation highlights the myriad of roles and activities the school nurse participates in and outlines how time is spent (NASN, 2016).

Standards of Practice

The standards of practice outline school nursing practice components. These require competent nursing care that applies critical thinking to the nursing process. Standards of practice include clinical competence, clinical guidelines, code of ethics, critical thinking, evidence-based practice, NASN position statements, and Nurse Practice Acts (NASN, 2016). Clinical competence is the expected level of clinical performance for a professional nurse maintained through continuing education and collaboration. The NASN code of ethics, based on the ANA's code of ethics, is grounded in the core values of child well-being, diversity, excellence, innovation, integrity, leadership, and scholarship for school nurses. A **Nurse Practice Act** is a state law that determines the scope of practice of nursing that school nurses must follow (NASN, 2016). The Scope and Standards of Practice outline expectations for school nursing practice where the scope is influenced by state law and regulations and the standards describe the level of competency expected for each step of the nursing process (NASN, 2016).

Whole School, Whole Community, Whole Child Model

The CDC and the Association for Supervision and Curriculum (ASCD) created the WSCC Model (https://openstax.org/r/cdchealthyschools) to address health in schools (CDC, 2023n). This model focuses on the student, emphasizing the role of the community in supporting the student and the school and highlightling the relationship between health and academic achievement (CDC, 2023n). The WSCC Model has 10 components: physical education and activity; nutrition environment and services; health education; social and emotional climate; physical environment;

health services; counseling, psychological, and social services; employee wellness; community involvement; and family engagement (CDC, 2019b). The model aims to improve learning and health in school systems nationwide by strengthening collaborative approaches to wellness, recognizing that it is more effective to establish healthy behaviors in childhood than to change unhealthy behaviors in adulthood (CDC, 2023n).

THEORY IN ACTION

The WSCC Model

Access multimedia content (http://openstax.org/books/population-health/pages/29-2-school-health)
This video from the CDC describes how the WSCC Model provides educational funding for HIV, sexually transmitted diseases, and pregnancy prevention. It also illustrates how the Division of Adolescent and School Health (DASH) works closely with youth-serving education and health organizations to ensure programs, policies, practices, and research integrate the WSCC Model's school components.

Watch the video, and then respond to the following questions.

1. Why is an image of a student at the center of the graphic depicting the WSCC Model?
2. What is the purpose of the coordination ring?
3. Where does "community" fit into the WSCC Model?

Health Education

Health education aims to help students develop the knowledge, attitudes, and skills necessary to make health-promoting choices, become health literate, and engage in health-enhancing behaviors (CDC, 2021a). A comprehensive health education curriculum includes drug use, alcohol use, nutrition, healthy eating habits, emotional health, personal health, physical activity, safety, injury prevention, sexual health, tobacco use, and violence prevention. Health education curricula should adhere to the National Health Education Standards (NHES (https://openstax.org/r/shapeamerica)).

Nutrition Environment and Services

School nutrition is an essential building block in a child's academic foundation. Healthy eating is linked to improved learning outcomes—helping to ensure students can reach their potential (CDC, 2021a). The school nutrition environment should model healthy eating through the availability of foods, beverages, and nutritional education. Foods and beverages that students can access in the cafeteria, vending machines, concession stands, school stores, etc. must meet federal nutrition standards and the needs of students. All individuals in the school and the community are responsible for promoting healthier foods and beverages, modeling healthy behaviors, and ensuring access to free drinking water throughout the day (CDC, 2021a).

Employee Wellness

Fostering the well-being of school employees helps to support student health and success. Healthy school employees, teachers, administrators, custodial staff, and bus drivers, among others, are more productive and serve as role models for students (CDC, 2021a). Comprehensive school employee wellness programs address health conditions and multiple risk factors, such as tobacco use, eating habits, alcohol use, and physical activity levels, through programming, policies, benefits, and support (CDC, 2021a). Wellness programs can help to decrease health costs overall, reduce employee turnover, and increase stability in the school (CDC, 2021a).

Social and Emotional Climate

A school's social and emotional environment may impact student engagement in school activities and overall academic performance. Positive social and emotional climates encourage engagement in learning and in maintaining relationships with other students, staff, family, and community members. This promotes overall health and growth and development through a safe and supportive learning environment.

Physical Environment

The physical environment of a school includes the school building, its contents, the land it is located on, and the area surrounding it. Healthy physical environments promote learning by ensuring students' and staff's health and safety. A healthy physical environment also protects students and staff from crime, violence, and injuries; from

biological and chemical threats in the air, water, or soil; and from air pollution, mold, pesticides, and cleaning agents.

Health Services

School health services address actual and potential health problems: providing first aid, emergency care, and assessment; planning for chronic conditions like asthma and diabetes; and offering wellness promotion and preventive services. Health services are interprofessional—engaging school staff, students, families, the community, and health care providers to work collaboratively to promote healthy students and healthy school environments. This includes appropriate referrals to qualified health professionals in the community. Recognizing the impact of SDOH and supporting students and families in adapting to social stressors and economic barriers to health are additional important pieces of school health services (CDC, 2021a).

Counseling, Psychological, and Social Services

Supporting students' mental, behavioral, and social-emotional health in the school setting is vital to promote health, wellness, and learning. Counseling, psychological, and social services include prevention activities such as psychological and psychoeducational assessments and interventions to address psychological and social barriers to learning, such as counseling and referrals to community services. School-employed mental health professionals, such as school counselors, school psychologists, and school social workers, can bridge services provided in school to those provided in the community and align interventions appropriately (CDC, 2021a).

Community Involvement

Schools, students, and families benefit from partnerships with local community-based organizations, groups, and businesses. Students and families benefit when school staff obtain and coordinate information on resources and services available from community organizations and groups. Community groups benefit when schools promote service-learning and volunteering in the community and when schools share facilities with community members.

Family Engagement

Families play an integral role in student academic success. School staff and families must engage with each other as student success is a shared responsibility. Staff must be committed to making families feel welcomed, and families must be willing to spend time actively engaged. Having a supportive and engaged school and home environment promotes health, well-being, and learning.

Physical Education and Physical Activity

Schools need to create an environment that fosters physical activity throughout the day. As part of the WSCC Model, the comprehensive school physical activity program (CSPAP) is a national physical education and activity framework with five components: physical education, physical activity during school, physical activity before and after school, staff involvement, and family and community engagement. The building block of this framework is physical education within the school curriculum, which provides instruction in developing motor skills, knowledge, and behaviors for healthy and active living. Providing opportunities for students to learn key concepts and practice skills needed to maintain physically active lifestyles is central to a solid physical education.

Health Promotion

The school nurse engages in health promotion activities to encourage healthy behaviors, prevent illness or disease, and promote overall wellness. These health promotion activities can be at the individual, family, or community level, encompassing students, families, school staff, and the community, and can be at the primary, secondary, or tertiary levels. See Table 29.2 for some examples.

Primary Health Promotion
Primary health promotion activities focus on education to prevent disease by limiting risk exposure or through immunizations. Examples of primary prevention activities the school nurse may participate in include:

TABLE 29.2 Levels of Health Promotion

- Administer immunizations
- Teach/educate on health promotion practices:
  - Hand hygiene
  - Dental hygiene with daily flossing and twice-daily brushing with fluoride toothpaste
  - Healthy food choices
  - Injury prevention with seatbelt use in motor vehicles and the use of helmets with bicycle riding, skateboarding, rollerblading, and similar activities
  - Water safety in pools, lakes, and oceans
  - Substance use prevention, including tobacco, vaping products, alcohol, marijuana, and other drugs
  - Importance of yearly flu vaccinations
  - Importance of regular physical activity
  - Sexual health and prevention of sexually transmitted diseases

Secondary Health Promotion

Secondary health promotion activities involve screenings to identify diseases before the onset of signs or symptoms and to detect diseases early to avoid complications from the disease. Examples of secondary prevention activities include:

- Assess students who become ill or injured at school
  - Provide first aid and care to students with acute injuries or illnesses at school to mitigate complications from the injury or illness
- Assess emergency plans for students and staff
  - Create emergency plans for students with life-threatening allergies
  - Maintain an inventory of emergency supply equipment and medications
- Perform screening for early detection of disease and referrals as appropriate
  - Vision and hearing
  - Height and weight
  - Oral health
  - Postural health: scoliosis and kyphosis
  - General physical examination
  - SBIRT
- Assess children for evidence of neglect or other forms of abuse
  State and federal law mandates school nurses to report all suspected cases of abuse and neglect
- Assess students' mental health illness, crisis, suicidality, and violence
  - Identify students at risk

Tertiary Health Promotion

TABLE 29.2 Levels of Health Promotion

Tertiary prevention activities target the outcomes of a disease—aiming to reduce the severity or effects of the disease and associated sequelae—and often focus on rehabilitation (Kisling & Das, 2023). Examples include:

- Assess children with complex medical care needs or disabilities
  - Participate in developing the IEP and IHP
  - Work with the student and family to develop long-term outcomes
  - Provide nursing care for students with chronic medical conditions, such as asthma, diabetes, and cystic fibrosis
  - Administer medications according to health care provider prescription and with written caregiver consent
  - Provide care to students with specific health needs such as urinary catheterizations, dressing changes, intravenous (IV) line monitoring, tracheostomy suctioning, tube feeding administration, and blood glucose monitoring
- Provide ongoing care for adolescents who are pregnant or who are already parents
  - Assist in pregnancy identification
  - Provide parenting education
  - Educate on the prevention of future pregnancies

TABLE 29.2 Levels of Health Promotion

Common Health Concerns

Within the school setting, certain health problems occur among students. This section will outline the most common health concerns in elementary, middle, and high school students.

Asthma

Asthma is one of the leading chronic illnesses among children in the United States and a leading cause of school absenteeism (CDC, 2022a). This long-term respiratory condition results in inflamed airways during an exacerbation causing wheezing, chest tightness, and shortness of breath. Exacerbations result from asthma triggers such as pollen, mold, tobacco smoke, exercise, infections, or cold air. When asthma symptoms worsen, it is referred to as an asthma attack. Asthma has no cure, but effective treatments exist to manage its symptoms.

School nurses are heavily involved in creating safe and supportive learning environments for students with asthma. They can help students understand and use asthma medications correctly and refer them to medical care. Nurses and other school staff work together to ensure the school environment is free from common asthma triggers. Every student diagnosed with asthma must have an asthma action plan in place with the school nurse that is updated annually by the student's primary care provider in conjunction with the school nurse and the student's family. This plan provides the information and directions necessary for the school nurse to ensure the safety of the student and helps to control the symptoms to prevent or minimize the danger of acute asthma attacks.

Diabetes

Diabetes is a chronic disease characterized by high levels of glucose in the blood, resulting in many symptoms; over time, diabetes can cause serious health problems affecting the heart, brain, kidneys, eyes, and feet. Among school-age children, type 1 diabetes is more common than type 2 (National Institute of Diabetes and Digestive and Kidney Disease [NIDDKD], 2020). With type 1 diabetes, the pancreas does not make insulin, a necessary hormone to transport glucose into the cells for use as energy. Therefore, students with type 1 diabetes require insulin injections multiple times daily to survive. Diabetes is managed by checking blood glucose levels throughout the day to ensure they stay within a target range. Generally, eating food increases glucose levels, although physical activity, insulin, and other diabetes medications will cause glucose levels to decrease (NIDDKD, 2020).

In the school setting, managing diabetes is most effective when the student, family, school nurses, teachers, counselors, coaches, food service employees, administrators, and health care providers all work together to ensure the student has what they need to stay healthy and prepared to learn (CDC, 2022d). The school nurse is integral in caring for these students and ensuring a plan exists to handle any diabetes-related emergencies. In collaboration with the student's caregivers, provider, and school staff, the nurse ensures there is a Diabetes Medical Management Plan (DMMP) that outlines services the school will provide and how to recognize and treat signs of high and low blood sugar levels (CDC, 2022d). Depending on the student's age, the nurse either checks their blood glucose levels

or provides support to help a student monitor it themselves. Additionally, the nurse will be involved with all medication administered, as outlined in the DMMP. The school nutrition staff and nurse encourage healthy eating behaviors and should involve the caregivers in reviewing school menus to help them make informed choices. School nurses are often in charge of ensuring glucagon emergency kits are up to date and available, along with glucose tablets or other fast-acting carbohydrates in the case of hypoglycemia (CDC, 2022d).

Epilepsy

Epilepsy refers to conditions affecting the brain resulting in recurring seizures—it is not always known why some people develop them. Many individuals with epilepsy can control their seizures with medications. Some seizures appear as daydreaming or staring spells, although others are more dramatic, causing a person to collapse, stiffen, shake, and become unaware of what is happening around them (CDC, 2022e). Seizure triggers include sleep deprivation, illness, flashing bright lights or patterns, alcohol, drug use, stress, hormonal changes, poor eating habits, dehydration, specific foods, and missed medications.

Without the right support, epilepsy can negatively affect a student's ability to succeed in school. Students with epilepsy are more likely to miss 11 or more days of school and are more likely to have difficulties in school, use special education services, and have activity limitations in comparison to students with other medical conditions (CDC, 2022e). It is estimated that for every 1,000 students, six will have epilepsy (CDC, 2022e). Managing epilepsy at school involves the school nurse, teachers, staff, and coaches, requiring them to understand what it is, how to provide seizure first aid, helping students avoid seizure triggers, and monitoring for and addressing any related medical conditions like mental health concerns. The nurse should educate teachers and school staff on epilepsy care and first aid and be involved in educating other students on the stigma associated with epilepsy to promote the overall wellness of all students. The nurse collaborates with the student's health care provider to implement a seizure action plan, including administering rescue medications (CDC, 2022e). Case management services are integral to the nursing care plan for students with any medical condition that disrupts school attendance or academic performance. Many training programs (https://openstax.org/r/epilepsya) to educate nurses, school staff, and other public health professionals about epilepsy exist. The CDC (2017) found that compared to children without epilepsy, a large percentage of those with epilepsy lived in very low-income households, suggesting they may have unmet health needs that could potentially be addressed within the school and community.

Food Allergies and Anaphylaxis

Food allergies affect approximately 8 percent of children, appearing at any age and even causing reactions to foods eaten for years without issue (American College of Allergy, Asthma, & Immunology [ACAAI], 2023; CDC, 2022f). A food allergy occurs when the immune system reacts to a food or a substance in the food, identifies it as dangerous, and triggers a response. Symptoms can range from mild to severe, with anaphylaxis being the most severe allergic reaction. This results in a life-threatening whole-body allergic reaction that may impair breathing, drop blood pressure, and result in shock. Anaphylaxis may occur within minutes of exposure to a triggering food and can be fatal, requiring immediate treatment with epinephrine. The following nine types of food account for 90 percent of all allergic reactions: eggs, dairy, peanuts, tree nuts, fish, shellfish, wheat, soy, and sesame (ACAAI, 2023). The foods most associated with allergic reactions in children are milk, eggs, and peanuts. Symptoms of an allergic reaction can involve the skin, gastrointestinal tract, cardiovascular system, and respiratory system. They can present with vomiting, hives, shortness of breath, wheezing, cough, shock, hoarse throat, difficulty swallowing, tongue edema, angioedema, dizziness, and anaphylaxis. Most food-related allergy symptoms occur within two hours of ingestion (ACAAI, 2023). Once the food allergy is diagnosed, the most effective treatment is to avoid the food, as there is no cure (CDC, 2022f). Evidence has shown that children may outgrow allergic reactions to milk and eggs, but peanut and tree nut allergies most often persist (ACAAI, 2023).

School nurses play a role in caring for and preventing allergic reactions in children with severe food allergies. Strict avoidance is the only way to prevent a reaction, but this may not always be possible with cross-contamination issues. School nurses are responsible for participating in the school's plan for managing food allergies; supervising the daily management of food allergies in individual students; preparing for and responding to food allergy emergencies; providing food allergy education to students, parents, and school staff; and creating and maintaining a healthy and safe school environment (CDC, 2022f). School nurses often meet with the families of young students with severe food allergies before the school year begins to ensure an individual health plan, a food allergy action plan, and a prescribed epinephrine injector pen for the student.

School staff must be educated on preventing and responding to a food allergy emergency. The school nurse is often responsible for educating school staff on how food allergies occur, cross-contamination, signs and symptoms, and emergency management, including the administration of epinephrine (CDC, 2022f). Additionally, school nurses should be a part of the team that develops the school's plan for preventing allergic reactions and the protocol for management of these emergencies. The CDC and the USDE, in collaboration with several federal agencies and partners, developed Voluntary Guidelines (https://openstax.org/r/cdcgovhealthyschools) for the Management of Food Allergies in Schools and Early Care Education Programs to provide practical information and recommendations on five priority areas that should be addressed in each school's Food Allergy Management Prevention Plan. Studies have demonstrated that one-third of children with food allergies have been bullied because of them; therefore, the psychosocial impact of having a food allergy needs to be discussed with all school staff, and plans must be in place to prevent and/or address these behaviors if they were to occur (Massachusetts Department of Elementary and Secondary Education, 2016).

Obesity

Obesity is defined as a weight higher than what is considered healthy and is dependent on height (CDC, 2022c). Body mass index (BMI) is a tool utilized to screen for obesity. BMI is calculated by dividing an individual's weight by their height (CDC, 2022c). Because children and teenagers are still growing, their BMI ranges vary based on their age and sex and are expressed relative to other children of the same age and sex. The BMI range for obesity in children ages 2 to 19 is a BMI that is in the 95th percentile or greater for age and sex (CDC, 2023e). In the United States, childhood obesity levels have reached epidemic levels and have become a public health concern for children and adolescents (Sanyaolu et al., 2019). Body mass index does not fully account for differences in body type, ethnicity, or activity. So, it should not be used as the sole determinant of health; however, it is widely used as a key indicator and is an element of many diagnostic and treatment paradigms.

In 2017–2018, one in five school-aged children were obese, with an even higher prevalence rate among children who are Hispanic or Black (CDC, 2022i). Obesity negatively impacts physical and psychological health and is associated with several comorbid conditions, such as hypertension, hyperlipidemia, diabetes, sleep apnea, poor self-esteem, and depression (Sanyaolu et al., 2019). Although all risk factors associated with obesity may not be known, several are known to contribute to childhood obesity (CDC, 2022i):

- Physiologic factors of metabolism and lifestyle
- Social factors related to sleep habits, eating patterns, and physical activity
- Presence of negative childhood events
- Design and safety of the neighborhood and community where one lives

Although one's metabolism and genetic makeup cannot be changed, the environment where children spend time can positively impact their health by making it easier to access nutritious foods and be physically active. The environment can be home, school, places for after-school activities, and community settings. The school nurse can advocate for policies and practices encouraging children to eat more fruit and vegetables, consume fewer foods or beverages with high sugar content, and increase daily physical activity (CDC, 2022i). Leading the school community to influence policy changes reinforcing these concepts of healthy eating and healthy movement—before, during, and after school—is an integral part of how school nurses can help address obesity. Researchers and public health professionals agree that prevention is the key strategy for controlling the obesity epidemic, with primary health promotion education aimed at children and families (Sanyaolu et al., 2019).

The COVID-19 pandemic thoroughly disrupted students' access to normal school environments and routines. According to the CDC, children gained weight at a faster rate during the pandemic, with elementary school-aged children experiencing a BMI change that was 2.5 times higher than pre-pandemic times (CDC, 2022i; Lange et al., 2021). These data demonstrate how schools can be a primary setting for obesity prevention efforts by providing regularly scheduled opportunities for physical activity, offering nutritious foods through school meal programs, providing access to a school nurse, and providing consistency and routine (CDC, 2022i). A comprehensive school approach to addressing childhood obesity is key, directing attention to nutrition and physical activity in the schools and involving nurses, caregivers, school staff, and other community members. The goal is to support the health and well-being of all students. These efforts are not meant to single out or stigmatize children who are obese, but rather to support healthy lifestyle choices from a young age.

Oral Health

Dental caries, also known as cavities or tooth decay, are common chronic diseases in childhood in the United States (CDC, 2023h). When untreated, they may result in pain and infections that can lead to problems with eating, speaking, and learning (CDC, 2022b). Studies have demonstrated that children with poor oral health miss more school and receive lower grades than those who do not have caries (Griffin et al., 2016). Children from low-income families have two times the risk of children from higher-income families of having dental caries, which results in a detrimental effect on quality of life, performance in school, and success in later life (CDC, 2022b; Singh et al., 2020).

Dental sealants are thin coatings made from resin or glass ionomers (Sikka & Brizuela, 2023) that can prevent caries for years and, when applied to the chewing surface of back teeth, have been shown to prevent 80 percent of caries (CDC, 2022b). Elementary-aged children without sealants have three times more caries than children with sealants (CDC, 2023h). School sealant programs effectively reach children in school settings; they have demonstrated an increase in the number of children who receive sealants, especially those at greater risk for developing caries (CDC, 2023h). School nurses should use leadership and advocacy skills to advocate for these programs using evidence-based guidelines and recommendations. Additionally, school nurses can advocate for community clinics to provide fluoride supplements for students living in communities without fluoridated water, as fluoridated tap water is associated with fewer dental caries than water that is not fluoridated (CDC, 2022b).

HEALTHY PEOPLE 2030

Oral Conditions

Healthy People 2030 features many objectives related to oral health (https://openstax.org/r/healthgovh). These objectives reflect the importance of preventing tooth decay and other oral health conditions with interventions targeted at the individual, community, and population health levels.

Behavioral Problems and Learning Difficulties

Behavioral problems and learning difficulties are common concerns in schools. One in every six school-age children and adolescents experience a mental health disorder each year, and half of all mental health conditions begin by age 14 (National Alliance on Mental Illness [NAMI], 2023). Children's mental disorders may include anxiety, depression, oppositional defiant disorder, conduct disorder, attention-deficit/hyperactivity disorder (ADHD), Tourette syndrome, obsessive-compulsive disorder, and post-traumatic stress disorders (CDC, 2023m). From 2013 to 2019, the most common mental health disorders diagnosed in children ages 3 to 17 in the United States were ADHD and anxiety, affecting more than one in 11 children. In older children and teens, 12 to 17 years of age, depression and suicide were more of a risk, with one in three high school students reporting sadness or hopelessness and almost one in five high school students self-reporting having seriously considered suicide (Bitsko et al., 2022).

Mental disorders can begin in early childhood and can affect any community, although certain populations are more affected due in part to the SDOH of poverty, education access, and geographic area (Bitsko et al., 2022). Half of all children and adolescents with mental health conditions do not receive appropriate treatment. Undiagnosed, untreated, or inadequately treated mental illness interferes with learning and development (NAMI, 2023). Early treatment has been shown to help children and adolescents stay in school, stay on track to meet life goals, and have overall better health outcomes (NAMI, 2023). Inadequately treated or untreated mental illness is associated with higher school dropout rates, unemployment, substance use, incarceration, and early death, with suicide being the second leading cause of death in children and young adults, ages 10–34 (NAMI, 2023).

STUDENTS OPEN UP ABOUT THEIR STRUGGLES WITH MENTAL HEALTH

Access multimedia content (http://openstax.org/books/population-health/pages/29-2-school-health)
This video discusses the mental health crisis among school-age children in the United States. Newsperson Stacey Sager speaks with a group of middle school students about the mental health issues they face.

Watch the video, and then respond to the following questions.

1. What are the primary mental health issues adolescents face?

2. What strategies could the community health nurse or school nurse implement to address these issues?

School systems are well suited to provide early identification, prevention, and interventions to serve children and adolescents with mental health conditions since children spend almost a third of their day in school. School-based mental health services should be delivered by trained mental health professionals such as school psychologists, counselors, social workers, and nurses (NAMI, 2023). Schools can also connect children and families to community mental health services. Care provided in school reduces transportation barriers and scheduling conflicts and helps students access needed services throughout the school day. School nurses need to advocate for appropriate mental health services in school to ensure equitable access. This reduces the inequities and barriers for children and families in underserved communities (BIPOC) to get needed treatment (NAMI, 2023). Treating a child's mental health problems as early as possible may decrease problems in the home, in school, and in forming friendships (CDC, 2023f; 2023l). A public health approach is necessary, promoting mental health for all children, providing interventions to children at risk, and providing treatment for those with diagnosed disorders (CDC, 2023l).

Learning, language, and developmental disabilities; autism spectrum disorders; and substance use disorders can also affect how children learn and behave in school and how they handle their emotions (CDC, 2023m). Although not considered mental health illnesses, these disorders affect the child's overall mental health. Mental health is more than just the absence of a mental health disorder; it is a continuum where mentally healthy children can function well at home, at school, and in the community and have a positive quality of life (CDC, 2023m). Reaching developmental and emotional milestones, learning social skills, and coping with problems are all part of being mentally healthy (CDC, 2023m). Grappling with heightened emotions and behavior is a typical part of growing up. Supporting children's mental health involves assessments to ensure they are meeting developmental milestones, referring them when they are not, supporting positive parenting strategies, and improving access to care (CDC, 2023m).

Teen Pregnancy and Sexually Transmitted Diseases

Between 1991 and 2019, the teen birth rate in the United States declined to 16.7 per 1,000 females (CDC, 2021b). This decline has been attributed to increased use of birth control and abstinence among teens (CDC, 2021b). Among teens who become pregnant, disparities exist along racial and ethnic lines. In 2019, the birth rates for Hispanic adolescents (25.3), Black adolescents (25.8), and Indigenous adolescents (29.2) were more than twice the rate for non-Hispanic White adolescents (11.4) (CDC, 2021b).

The SDOH impact the teen birth rate on many fronts. Adolescents from families with lower income and education levels have higher rates of teen births than adolescents from families with average income and education levels (CDC, 2021b). Adolescents in foster care are twice as likely to become pregnant as adolescents who are not in foster care (CDC, 2021b). Teen pregnancy and birth directly correlate to high school dropout rates among pregnant girls—only half of teen mothers achieve a high school diploma by age 22 (CDC, 2021b).

The CDC, through its Division of Adolescent and School Health (DASH), encourages school environments where adolescents can access foundational health knowledge and skills, establish healthy behaviors, and connect to health services to prevent HIV, sexually transmitted infections (STIs), and unintended pregnancy (CDC, 2023g). DASH funds and supports school-based health promotion and disease prevention efforts related to adolescent health by building strategic partnerships and working to prepare adolescents for success in health and life (CDC, 2023a). DASH-funded state education and health agencies (https://openstax.org/r/cdcgovyouth) conduct school-based surveillance on youth risk behaviors. The CDC has demonstrated that school health programs effectively increase quality sexual health education, provide increased access to youth-friendly health services, and increase safe and supportive environments through student-led inclusive clubs (CDC, 2019a). These interventions have resulted in a population-level reduction in sexual risk behaviors. CDC-funded school districts reported declines in the percentage of students who have had sex, were currently sexually active, and had four or more lifetime sexual partners (CDC, 2019a). The CDC's reach is limited to about 8 percent of the nation's 26 million middle and high school students. Most schools do not teach key HIV, STI, and pregnancy prevention topics or provide students with on-site services or referrals to health care providers for sexual health services (CDC, 2019a).

School health programs can reduce risky health behaviors and positively affect academic performance (CDC, 2020a). Many preventable risky healthy behaviors are formed during adolescence, contributing to suboptimal or

poor sexual health. Adolescents need to be taught early about HIV, STI, and pregnancy prevention with easy-to-understand information, including health risks and skills to help delay sexual activities. School nurses and administrators can collaborate with the CDC to bring school-based programs to schools (CDC, 2020a).

A 2021 survey of high school students in the United States found that (CDC, 2023j):

- 30 percent were sexually active.
- 48 percent had not used a condom the last time they had sex.
- 8 percent had been physically forced to have sexual intercourse when they did not want to.
- 9 percent of students had ever been tested for HIV.
- 5 percent had been tested for STIs during the past year.

Sexual risk behaviors place adolescents at risk for HIV infection, STIs, and unintended pregnancy. In 2020, 20 percent of all new HIV diagnoses were in adolescents and young adults ages 13 to 24 (CDC, 2023j). STIs affect individuals across the lifespan, but adolescents account for half of all new STI infections (CDC, 2021c). HIV, STIs, and teen pregnancy prevention programs in school should provide basic health information that can contribute to health-promoting behaviors; address the needs of adolescents who are sexually active and those who are not having sex; ensure the education provided includes skills to protect themselves and others from HIV, STIs, and unintended pregnancy; and be developed with the input of students and parents to be consistent with community values and policies (CDC, 2023j). STIs include chlamydia, gonorrhea, hepatitis, herpes, HIV, human papillomavirus, syphilis, trichomoniasis, and mycoplasm genitalium (CDC, 2021c). See Pandemics and Infectious Disease Outbreaks for more information on STIs.

Substance Misuse

Substance misuse includes harmful patterns of alcohol, tobacco, and illegal drug use that undermine a student's ability to succeed in school (National Center on Safe Supportive Learning Environments [NCSSLE], 2023). Most students do not misuse substances, but a minority do, especially students disengaged in school. Alcohol is the substance students most often misuse, and those who drink are more likely to "binge," quickly consuming large quantities of alcohol for the sole purpose of becoming inebriated (NCSSLE, 2023). Binge drinking is associated with poor school performance, involvement in other health risk behaviors such as riding in a car with someone who has been drinking, cigarette smoking, risky sexual behaviors, using illegal drugs, and being a victim of dating violence (NCSSLE, 2023). Marijuana is one of the other drugs young people misuse most often (NCSSLE, 2023).

Most adults diagnosed with substance use disorder (SUD) started using substances in their teen and young adult years (CDC, 2022h). Adolescents with SUDs have higher rates of physical and mental illness and diminished overall health and well-being (CDC, 2022h). High-risk substance use is the use of substances with a high risk of adverse outcomes, including misuse of prescription drugs; use of illicit drugs such as cocaine, heroin, methamphetamine, inhalants, hallucinogens, or ecstasy; and use of injection drugs that have a high risk of infection of blood-borne disease such as HIV and hepatitis (CDC, 2022h). In 2019, 15 percent of high school students reported using illicit or injection drugs, and 14 percent reported misusing prescription opioids (CDC, 2022h). Injection drug use places adolescents at risk for HIV and overdose. Adolescent opioid use is directly linked to risky sexual behaviors, and these students are more likely to be victims of physical or sexual dating violence. Drug use in general is associated with violence, risky sexual behaviors, mental health illness, and increased suicide risk (CDC, 2022h).

Risk factors for high-risk substance misuse in adolescents include:

- Family history of substance use
- Favorable parental attitudes toward the behavior
- Poor parental monitoring
- Parental substance use
- Family rejection of sexual orientation or gender identity
- Association with peers using substances
- Lack of school connectedness
- Low academic achievement
- Childhood sexual abuse
- Mental health issues

NASN (2022) recognizes the need for school nurses to be involved in health promotion activities related to substance use and supports using the WSCC model by providing students with education about their bodies, emotions, behaviors, and relationships with others. Advocating for evidence-based health curriculums incorporating education on drugs and alcohol empowers students to make healthy and appropriate decisions.

WHAT DO YOU DO? SCHOOL NURSES

Access multimedia content (http://openstax.org/books/population-health/pages/29-2-school-health)
In this video, school nurses in Spokane Public Schools discuss their role and what it is like to be a school nurse.

Watch the video, and then respond to the following questions.

1. In addition to helping students with cuts, bruises, and seasonal illnesses, what issues do school nurses work with regularly?
2. Thinking broadly, what different groups do school nurses serve?
3. Based on the nurses in this video, what is rewarding about working as a school nurse?

29.3 Correctional Nursing

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 29.3.1 Discuss the history of correctional nursing.
- 29.3.2 Explain the scope and standards of practice of the correctional nurse.
- 29.3.3 Describe the role of the correctional nurse.
- 29.3.4 Examine settings for correctional nursing.
- 29.3.5 Identify common health problems of individuals who are incarcerated.
- 29.3.6 Explain the nurse's role in planning, implementing, and evaluating interventions (primary, secondary, and tertiary) to improve outcomes and safety for incarcerated individuals.

Correctional nursing is defined as providing nursing care to clients within the criminal justice system. Settings where correctional nurses may work include (Schoenly & Knox, 2012):

- Locked correctional settings: local jails, state prisons, federal prisons
- Local police departments
- Immigration detention centers
- Forensic hospital units
- Department of Corrections (DOC) hospitals
- DOC-managed nursing homes
- Mental health institutions
- In the general hospital caring for patients transferred from correctional settings

In the nursing and health literature, these individuals are often referred to as **justice-involved** (ANA, 2021; CDC, 2023b). The incarcerated population is very different from the general population regarding gender, race, education, and age because most people incarcerated in the United States are men, although the number of women in prison has increased dramatically (CDC, 2023d; National Commission on Correctional Health Care [NCCHC], 2020).

- Incarcerated females have reproductive health needs and are more likely to have custody of their children and to have been a victim of sexual abuse or domestic violence (American Academy of Family Physicians [AAFP], 2021; American College of Obstetricians and Gynecologists [ACOG], 2021).
- Incarcerated Black and Hispanic people are disproportionately represented in the incarcerated population (CDC, 2023d; Pew Charitable Trusts, 2023).
- White men have a rate of one out of 106 men imprisoned, whereas one out of 15 Black men are imprisoned and one out of 36 Hispanic men are incarcerated (Nellis, 2021).
- Education levels of the inmate population are lower than the general population: some sources report that less than half of the incarcerated population have a high school diploma, which is well under 20 percent for the general U.S. population (Center for American Progress, 2018; CDC, 2023d).
- At midyear 2020, inmates ages 18 to 34 accounted for 53 percent of the jail population, although inmates

aged 55 or older comprised 7 percent (Minton & Zeng, 2021).

Given the unique client population of inmates and detainees, the nurse must defer to correctional officers and safety protocols before embracing the health-promoter and care-provider role. Many layers of ethical issues are at play in correctional nursing. Correctional nurses need to develop a therapeutic relationship with individuals convicted of crimes, some of them violent and disturbing. Nurses must be able to critically evaluate and make treatment decisions for clients who may be seeking secondary gain (seeking a privileged status, a more comfortable cell or situation, or special creams or lotions) from their medical visit. This can further cloud the nurse's view of these encounters. Other ethical issues may relate to the very real limitations of being in a locked facility. For example, education plans for clients with diabetes often require fresh fruits and vegetables and cardiovascular exercise routines, but this may not be feasible in a prison setting. Other ethical issues may arise when correctional nurses are evaluating clients who are in solitary confinement where the incarcerated individual lacks meaningful contact with other individuals. The boundaries set by the corrections system can prove to be an ethical issue for nurses desiring to show compassion for clients. Another common ethical issue is the lack of privacy as corrections officers oversee all aspects of correctional centers' health care delivery system. Balancing the conflicting roles of public safety and security by the corrections department and the professional nursing mission to promote the well-being of all clients is at the heart of corrections nursing (Schoenly & Knox, 2012).

History of Correctional Nursing

The correctional setting for professional nursing practice emerged in the 1970s as prison riots and the civil rights movement shed light on barely existent prison health care services. The 1976 Supreme Court Case of *Estelle v. Gamble* established the constitutional obligation to provide health care to any individual in the government's custody, guaranteeing health care for incarcerated individuals. Before this ruling, no organized or regulated health care was provided to inmates (ANA, 2021). However, currently there are no mandatory health care standards or required health care accreditations within correctional health facilities, resulting in minimal oversight and substantial variability in access to and quality of care (ACOG, 2021). In 1985, the ANA recognized correctional nursing as a specialty and published the first Standards of Nursing Practice in Correctional Facilities. Currently two groups offer certification in correctional nursing, the American Corrections Association (ACA) and the NCCHC. In 2017, an estimated nearly 30,000 registered nurses and 20,000 licensed practical nurses worked in correctional facilities in the United States (ANA, 2021). These two organizations have published health care standards and offer accreditation of correctional health care systems, but accreditation is entirely voluntary (ACOG, 2021).

Scope and Standards of Practice of Correctional Nursing

Correctional nursing requires devotion and advocacy to care for an underserved, disenfranchised, and often-forgotten population (ANA, 2021). The scope and standard of practice for correctional nursing follows the nursing process with the addition of 11 standards reflecting culturally and ethically appropriate care that is evidence based. The 11 standards are ethics, culturally and congruent practice, communication, collaboration, leadership, education, evidence-based practice and research, quality of practice, professional practice evaluation, resource utilization, and environmental health (ANA, 2021). Within each standard, there are several competencies that can be used to demonstrate evidence of compliance with the standard (ANA, 2021).

INTRODUCTION TO FORENSIC NURSING

Access multimedia content (http://openstax.org/books/population-health/pages/29-3-correctional-nursing)
Forensic nursing is a specialty of nursing providing focused care for clients who are experiencing or have experienced victimization and violence. These nurses practice with a trauma-informed approach when caring for the acute and long-term health consequences associated with victimization (International Association of Forensic Nurses, 2023).

Watch the video, and then respond to the following questions.

1. What are your impressions of forensic nursing?
2. What is the relationship between forensic nursing and caring for underserved populations?
3. What additional competencies do you think a forensic nurse needs to have to address the needs of victims

of violence and abuse?

Role of the Nurse in the Correctional Nursing

Correctional nurses use a broad range of nursing skills caring for individuals across the justice system, including incarceration, probation, parole, treatment programs, individuals housed in immigration and customs facilities, and those transitioning between settings. At the end of 2018, an estimated 6.7 million individuals were under correctional supervision, including 2.2 million individuals detained in jails and prisons and approximately 4.5 million individuals supervised under probation and parole, known as community corrections (ANA, 2021). Probation is community supervision in place of incarceration, whereas parole is a form of conditional supervised release allowing individuals to complete prison sentences in the community (ANA, 2021). Counties or cities often manage local jails and are responsible for holding individuals awaiting court hearings, trials, or sentencing, but they may also house individuals who have been sentenced to less than 12 months of detention. Prison often houses individuals convicted of a crime with sentences longer than a year. The Federal Bureau of Prisons (FBOP) manages a prison system of 130 facilities housing people whose sentences are related to federal crimes (n.d.). These facilities are dispersed throughout the United States but have consistent standards of practice and centralized management. State prison systems are under the authority of the state's government, and each state may have different practice standards. Both the FBOP and 27 state prison systems use private prisons as contractors to house some of the incarcerated population. In 2021, almost 100,000 incarcerated individuals were being detained in private prisons, representing 8 percent of the total state and federal prison population (Budd & Monazzam, 2023). States' use of private prisons varies. For example, Montana incarcerates close to half of its prison population in privately-run facilities, whereas in 23 states, private prisons are not used at all (Budd & Monazzam, 2023).

Since correctional nurses care for a broad spectrum of clients across the justice system, they need to possess strong assessment and clinical decision-making skills. This role requires flexibility, attention to detail, a solid understanding of the standards of professional nursing practice, and strong advocacy skills to be champions for access to quality health care. Correctional nurses occupy a multitude of roles while providing care and often find themselves practicing in a variety of settings with justice-involved clients, such as caring for justice-involved individuals in restricted housing, primary care clinics, urgent care clinics, inpatient infirmaries, community-based facilities, and palliative and hospice care. In addition to these practice settings, the correctional nurse provides care related to substance misuse, sexual abuse, mental health, and transitional care along with providing services like medication management, health promotion screening, and teaching. The practice of correctional nursing is more than bedside care; it is community and public health care, addressing the needs of an underserved population.

Restricted Housing

Restricted housing is a type of detention that includes voluntary or involuntary removal from the general incarcerated population with placement into a locked cell or room for most of the day (ANA, 2021). This is known as segregation, solitary confinement, special housing, enhanced security units, or isolation units, among other names. Since correctional agencies are tasked with housing justice-involved individuals in safe facilities, they need to maintain safety of the incarcerated individuals and the staff. At times, it is deemed necessary to place certain individuals who may be a threat to others, a target of violence from the general incarcerated population, or a danger to themselves into restricted housing. Correctional nurses must ensure that these special housing arrangements do not adversely impact a client's health. Numerous studies have demonstrated the higher rate of psychiatric illnesses among these individuals, ranging from anxiety and depression to hallucinations, psychosis, and suicidal ideation (ANA, 2021). Pregnant individuals, older individuals, transgender people, and adolescents are considered more vulnerable than the general incarcerated population; it can be difficult to house these individuals safely, requiring the correctional nurse to assess and advocate as necessary (ANA, 2021).

Correctional nurses are often the primary advocates for clients and need to assess and evaluate these individuals in restrictive housing and be part of the interprofessional care team to ensure their physical and psychological wellness. The NCCHC's position statement on solitary confinement is that "correctional health professionals' duty is to the clinical care, physical safety and psychological wellness of their patient and should not condone or participate in cruel, inhumane, or degrading treatment of patients" (NCCHC, 2016, p. 4). The NCCHC defines prolonged, greater than 15 days, solitary confinement as cruel and inhumane treatment and further states that adolescents, pregnant individuals, and individuals with mental illness should never be in solitary confinement.

Primary Care

Primary care in the corrections setting occurs during nursing encounters for intake screenings and assessments, sick call visits, chronic care clinic visits, medication administration, and in response to emergencies (Figure 29.5). The corrections nurse is involved in health promotion screening and education, falling under the realm of primary care. To meet public health and safety principles, infectious disease screening is imperative in a confined population. With each encounter, the nurse can educate the client on issues related to specific health needs. Correctional nurses also coordinate care between providers, arrange for ordered testing, and ensure follow-up visits with various health entities as ordered.



FIGURE 29.5 One role of nurses working in corrections settings is to provide health education to clients. (credit: "Navy Lt. j.g. Tiffany Rozas, a nurse with Joint Task Force Guantanamo's Joint Medical Group, discusses dietary nutrition with a detainee, July 9, 2010" by Joshua R. Nistas/U.S. Navy/Wikimedia Commons, Public Domain)

Acute Care

Some large correctional facilities have health facilities capable of providing acute care services, similar to those available in community hospitals. Care provided in an acute care setting is used to treat unexpected, urgent, or emergent episodes of injury and illness that could result in disability or death without intervention. The correctional nurse's role is to triage these clients and ensure the appropriate care is provided to minimize potential disability and suffering. If a facility cannot meet its client's needs, the nurse is involved in stabilizing the client and arranging for transfer to the appropriate facility.

Urgent or Emergent Care

The corrections nurse is often the first responder when there is a health care issue with a client, a visitor, or a staff member with a sudden complaint of illness, trauma, or another emergency. The nurse is responsible for responding to the location with appropriate emergency equipment and providing emergency care as needed. Depending on the assessment, the nature and severity of the injury or illness, and applicable policies, protocols, and procedures, the nurse will initiate an emergency plan of care that might include the activation of local emergency medical services (EMS). Throughout the entire process, from activating EMS, to the transition of care for the client across settings, to receiving the client back in the correctional facility, the nurse is responsible for effective communication and continuation of necessary care.

Palliative Care

Palliative care incorporates four attributes: individualized client care, support for the family, an interprofessional team approach, and effective communication (ANA, 2021). The correctional nurse may be the first health professional to recognize that a client will benefit from palliative care and needs to advocate for access to this specialty level of care. With the palliative care team, the correctional nurse develops a plan to ensure client-

centered care and may need to advocate for a release from a facility, for a nursing or home placement, or for family involvement. Correctional nurses provide palliative care by providing relief from distressing symptoms, coordinating treatments for the underlying disease or condition, integrating psychological and spiritual considerations into the care plan, offering support to assist clients to live as actively as possible, and helping clients understand their choices for treatment.

Hospice Care

Hospice care is palliative care provided to clients with less than six months to live if their disease were to follow its normal trajectory (ANA, 2021). The goal is to ensure the client's remaining time is as comfortable as possible. Correctional nurses provide this care to respect and carry out the end-of-life wishes of the client. This may involve advocating for the release from a facility, or it may mean advocating for appropriate lodging within a facility to allow for the provision of maximum comfort measures.

Transitional Care

Transitional care is moving from one facility to another or transitioning back into the community upon release from corrections. Correctional nurses are involved in assessing how well clients are adjusting to new a new facility or into the community. These nurses can act as care coordinators, making appointments, educating, and facilitating a discharge plan to continue medications, treatments, and services such as medical, dental, and psychiatric care when released from corrections (Schoenly & Knox, 2012). Just as discharge planning begins as soon as a client is admitted to a hospital, planning for reintegration back into society begins as soon as the client enters the correctional system (U.S. Department of Justice, n.d.).

Care Coordination

Correctional nurses provide care coordination services throughout a client's time in corrections through reintegration into the community. Nurses partner with the client to identify health issues, make appropriate referrals, track pending appointments and treatments, and ensure necessary care is completed. The nurse educates the client appropriately so that they can make informed decisions regarding their care. The corrections nurse is the liaison between the correctional health team, the client, and the community health team.

Medication Management

Correctional nurses administer medications that are ordered for clients and must be knowledgeable on appropriate dosing, side effects, contraindications, route of administration, and any food or drug interactions. In addition to administering the medications appropriately in compliance with state laws, the nurse needs to ensure the client is taking the medication and not "cheeking" it to divert it. Nurses are responsible for ensuring clients are properly educated about their medications and their role in managing their disease.

Health Promotion and Education

Health promotion, maintenance, and education are extremely important, given the health disparities in this justice-involved population. Often, clients have a history of a lack of access to care, to insurance, and to healthy lifestyle choices. Correctional nurses provide health education and health promotion activities for healthy lifestyles by encouraging preventive health practices and addressing health issues. By building skills for healthy living in this population, these individuals can transfer knowledge and skills when released back into communities. Correctional nurses can also educate the corrections staff on wellness issues that affect the clients such as infectious disease, first aid, responding to mental health crises, and suicide prevention. A large part of health promotion is client education. Client education helps to ensure clients are informed about their own health so that they can make informed decisions and take care of their health needs when they transition back into the community. An example of client education is the newly diagnosed client with diabetes who needs information on medication, monitoring blood glucose levels, diet, and exercise. An example of a community-level program would be educating communities on naloxone administration for opioid overdose.

Advocacy

The role of client advocate only intensifies when caring for a population that is incarcerated. Correctional nurses must work with correctional staff to limit barriers that may affect the delivery of timely health care interventions and treatments. Advocacy also includes ensuring follow-up appointments, appropriately triaging and attending to requests for health care visits, collaborating with correctional staff and court officials to guarantee clients receive needed health services, ensuring clients have access to proper hygiene and clean housing units, and discussing with

correctional staff regarding the transfer of clients for specialized health care needs such as dialysis.

Correctional nurses serve a socially marginalized population: these justice-involved individuals have lower educational attainment, lower pre-incarceration incomes, and numerous health disparities (ANA, 2021). Mental health disparities are evident in justice-involved individuals. Lifetime trauma exposure is higher for incarcerated women and men than for individuals without a history of incarceration, and these individuals are more likely to be diagnosed with a serious mental illness or SUD (ANA, 2021). Correctional nurses can improve this population's health through treatment and education of these long-term conditions during incarceration.

Common Health Problems of Incarcerated Individuals

Given the variety of settings where correctional nursing occurs, all nurses should understand the role of the corrections nurse and be familiar with common health problems of justice-involved individuals. Members of this population who are housed in prisons have much higher rates of disease than the general population; being incarcerated is associated with early mortality (AAFP, 2021; ANA, 2021). This population experiences many common health problems due to a multitude of factors, including pre-incarceration social conditions, lack of autonomy within the system, violence within the system, overcrowding, and overall congregate living situation (AAFP, 2021; ANA, 2021; Schoenly & Knox, 2012). Common health problems among members of this population include long-term diseases, infectious diseases, reproductive concerns, mental health and SUDs, violence, and self-harm. Additionally, certain populations, such as older adults, may have age-related functional limitations like mobility or sensory impairments, making the provision of appropriate care more challenging (Table 29.3) (ANA, 2021). Some prisons and jails require copays from the detainees to access health care services, serving as a potential barrier to care, adding an additional undue burden on this vulnerable population (ACOG, 2021).

Health Condition	Percent Reporting
Cancer	12 percent
Kidney problems	12 percent
Heart disease	23 percent
Diabetes	23 percent
Arthritis	45 percent
Hypertension	62 percent

TABLE 29.3 Percentage of People in State Prison Age 55 and Older Who Report Ever Having Specific Health Conditions (See Wang, 2022.)

Long-Term Diseases

The most common long-term conditions in justice system-involved persons are hypertension, arthritis, asthma, and hepatitis (Maruschak et al., 2021), some of which are seen at much higher levels in the justice system-involved population than the overall U.S. population due to persistent health disparities.

- Almost 17 percent of justice-involved individuals aged 55 and above in state prisons have asthma, whereas the general population of adults with asthma is 8 percent (Wang, 2022).
- About 10 percent of justice-involved individuals aged 55 and above in state prisons have hepatitis C, whereas the general population is under 2 percent. Hepatitis C is a curable disease; however, 80 percent of justice-involved individuals in state prison who have ever had a diagnosis of hepatitis C still have it (Wang, 2022).
- An estimated 65 percent of the U.S. prison population has a substance use disorder compared with 16.5 percent of the general population (National Institute on Drug Abuse [NIDA], 2020; U.S. Department of Health and Human Services, 2023).

Correctional nurses need to be well versed in the care of these long-term conditions, including screening intervals, follow-up intervals after medication adjustments, and ensuring the appropriate referrals to specialty care in the monitoring for potential complications. Asthma poses challenges for clients in correctional settings due to the nature of the disease process that results in intermittent asthmatic flare-ups. Justice-involved clients need to request care through the correctional officers, which may result in a delay from when a client feels a flare-up is imminent and actual care. Some asthmatic medications are meant to be used as a "rescue" when the client is having trouble breathing. This extra layer between a client and their medications can adversely impact their overall health and disease severity. Correctional nurses must advocate for these clients appropriately and educate

correctional officers on bringing them to the nurse as soon as feasible. By being a health advocate and champion, correctional nurses can improve these individuals' health through health promotion and disease prevention activities so that when the justice-involved clients reenter society, they are in better health and know how to manage their long-term diseases.

Infectious Diseases

Infectious diseases are a major concern in correctional facilities where environmental conditions make the spread of infectious disease more likely (ANA, 2021). Nurses are on the front line in preventing infectious disease spread through screening, client education and counseling, immunizations, handwashing, isolation procedures as necessary, and monitoring treatment compliance (CDC, 2023d; Schoenly & Knox, 2012). Individuals who are justice-involved often experience numerous risk factors for HIV, hepatitis, STIs, and tuberculosis (TB) (CDC, 2023d). Like long-term diseases, the incidence of these infections and diseases is higher in the justice-involved population and are often related to pre-incarceration SDOH, such as homelessness, poor nutrition, lack of medical care, substance use, and risky sexual behaviors (AAFP, 2021; CDC, 2023d; Schoenly & Knox, 2012). The corrections nurse will likely identify, treat, and manage these conditions and help limit their spread through client education and reinforcement of risk-reduction practices (CDC, 2023d; Schoenly & Knox, 2012). Justice-involved individuals incarcerated in state or federal prisons had the following rates of infection in 2021 (CDC, 2023d):

- 3 times higher rate of HIV
- 10 times higher rate of hepatitis C virus and between 3 to 38 times higher rate of hepatitis B virus
- Higher rates of chlamydia and gonorrhea
- 6 times higher rate of TB
- Rate of COVID-19 infection estimated to be 5.5 times higher among individuals who are incarcerated (LeMasters et al., 2022)

The CDC (2023k) recommends screening all individuals at intake for HIV, hepatitis B virus (HBV), hepatitis C virus (HCV), TB, gonorrhea, chlamydia, and syphilis. As of 2021, 16 states conducted mandatory HIV testing under state law, and 23 states and the FBOP offer opt-out HIV testing where individuals are informed that they will be tested for HIV unless they decline the screening (CDC, 2023d).

The CDC also recommends the following primary prevention measures (2023k):

- Beginning the hepatitis A vaccine series for all previously unvaccinated juveniles under 18 and all adults at increased risk for hepatitis A infection, such as men who have sex with men, those who use IV drugs, and individuals experiencing homelessness
- Beginning the hepatitis B vaccine series for juveniles and adults not previously vaccinated

Correctional nurses are also a part of the care team during transitions when the justice-involved client will be leaving the correctional facility. The nurse must ensure the client is linked with a community-based provider for continued care, especially with HIV, hepatitis, and TB as a public health prevention measure (CDC, 2023c).

At the height of the COVID-19 pandemic, justice-involved clients living in correctional facilities were at increased risk for COVID-19 for the same reasons they are at increased risk for other infectious diseases; congregate living arrangements and higher prevalence of comorbid medical conditions placed them at higher risk for infection (CDC, 2023f; LeMasters et al., 2022). The CDC (2023f) continues to recommend intake testing for COVID-19 as an enhanced prevention strategy. The CDC has released updated guidance (https://openstax.org/r/archivecdc) on assessing a facility's risk for COVID-19 and enhanced prevention strategies for everyday operations. For more information on COVID-19, see Pandemics and Infectious Disease Outbreaks.

CASE REFLECTION

Correctional Nursing Intake Interview

Read the scenario, and then respond to the questions that follow.

Jason, a correctional nurse employed in a state prison, is completing the initial intake for a client who is new to the prison system. The client, Rory, is a 23-year-old woman with a past medical history of asthma, bipolar disorder,

substance use disorder, and a prior suicide attempt. She reports she was in an abusive relationship that ended about 9 months ago and resulted in her experiencing homelessness. She has been sleeping outside as she had a negative encounter at the shelter on her first night there 9 months ago. She does not wish to go into further detail but reports she started using IV heroin while on the streets about 6 months ago.

1. What screenings should Jason recommend for this client?
2. Given Rory's social and medical background, what health issues is she at risk for?
3. What are Jason's priority actions at this time?
4. How can Jason build rapport and a therapeutic relationship with this client?

Reproductive Health Care

Women are the fastest-growing segment of the incarcerated population, comprising 10 percent of those incarcerated in 2019 (ACOG, 2021). The majority of justice-involved women are parents and of reproductive age. According to the ACOG (2021), reproductive health care for justice-involved individuals should be provided with the same guidelines and recommendations as for the general population, paying particular attention to the increased risk of infectious diseases and mental health conditions. The corrections nurse is an advocate, educator, and leader when advising detention facilities on guidelines and protocols to address comprehensive reproductive health and pregnancy needs. This includes contraception management, cervical and breast cancer screening, and holistic maternity care with the promotion and support of breastfeeding (ACOG, 2021).

Additionally, the corrections nurse needs to advocate at the organizational, local, state, and federal levels to support and push for the elimination of copays to access health care while in custody; to restrict shackling during pregnancy, labor, and the postpartum period; and to ensure adequate menstrual products are available at no cost (ACOG, 2021). The nurse should foster an appropriate birthing environment for justice-involved individuals who give birth while in custody and allow them to have the same opportunity to bond with their newborns. ACOG strongly urges all health professionals within corrections to advocate fiercely against placing pregnant clients in restrictive housing and for community-based alternatives to incarceration in this population, as incarcerated pregnant individuals have higher risks of adverse perinatal outcomes (ACOG, 2021; ANA, 2021).

Women who are incarcerated have higher rates of previous sexual and physical abuse than the general population. Therefore, the nurse must be trained to provide trauma-informed care (TIC) for these clients (ANA, 2021). When assisting health care providers with pelvic examinations, acknowledging that this procedure may be re-traumatizing to some clients and, as such, unnecessary. Nurses can be a chaperone to the health care provider performing the pelvic examination. They should also advocate that correctional officers not be present for these sensitive exams (ACOG, 2021). Research has demonstrated that justice-involved women have higher rates of gynecological conditions, such as irregular menstrual bleeding and vaginal discharge, than the general population of women. Long-term stressors related to poor social conditions in their pre-incarceration lives, such as unstable housing and exposure to trauma and violence, may influence abnormal menstrual bleeding, affecting up to 40 percent of these women (NCCHC, 2020). For transgender individuals, continuing hormone therapy and enabling access to gender-affirming care is key to providing comprehensive health care (ACOG, 2021).

Rates of breast and cervical cancers are higher among justice-involved women than among the general population, likely related to a lack of screening before and during custody (NCCHC, 2020). Many cervical cancers are preventable with appropriate screening, such as Pap smears and human papillomavirus (HPV) testing. National guidelines recommend females ages 21 to 29 get screened every 3 years, and those ages 30 to 65 get screened every 3 to 5 years. HPV vaccination is recommended through age 26, and this can be started while in custody (NCCHC, 2020). Guidelines for screening mammograms should follow appropriate national guidelines. The correctional nurse needs to be able to follow up on any abnormal Pap or mammogram results, which can be difficult during times of transition. Therefore, ensuring clients are connected with community health providers upon release is a key component of correctional nursing (NCCHC, 2020).

Among justice-involved women, rates of SUD, prior trauma and abuse, mental illness, and STIs are higher than the general population and higher than justice-involved men. The disproportionate rate of these conditions in women results from their intersection with the SDOH and, in BIPOC justice-involved women, structural racism as well (AAFP, 2021; ACOG, 2021; NCCHC, 2020). Additionally, the prevalence of trauma and sexual, physical, or emotional abuse in justice-involved women was as high as 90 percent in one study, indicating just how commonplace trauma

and violence are among these women (NCCHC, 2020). Correctional nurses should be trained in trauma-informed care and should screen all women for trauma history to identify those needing resources and treatment (NCCHC, 2020). Caring for Vulnerable Populations and Communities discusses TIC in more detail.

Mental Health

According to the NAMI (2021), two out of every five individuals who are incarcerated have a history of mental illness, twice the number in the overall U.S. population. The origins of this disproportionate burden date to the mid-1950s when mass deinstitutionalization from mental institutions occurred (Roth, 2021). At the height of mass institutionalization in 1955, half a million people lived in state-run psychiatric facilities (Roth, 2021). In 1963, President Kennedy signed the Community Mental Health Act (CMHA) into law; the goal was to decrease the number of institutionalized individuals by supporting and nurturing self-sufficient local mental health care centers within communities (Erikson, 2021). This made federal grants available to states to establish these community mental health centers to care for clients released from state hospitals. During this time, Medicaid was introduced, shifting funding for individuals with severe mental illness from state-funded and run hospitals to a shared partnership with the federal government (Yohanna, 2013). This incentivized states to close facilities and move these clients with severe mental illness into community-based centers, hospitals, and nursing homes partially funded by Medicaid and the federal government (Yohanna, 2013). Few community mental health centers were built, resulting in a shortage of mental health care (Roth, 2021). Mass deinstitutionalization and the unmet needs of individuals with mental illness often resulted in initial criminal justice issues and subsequent recidivism (ANA, 2021; Roth, 2021).

NAMI POLICY PRIORITIES: MENTAL HEALTH TREATMENT WHILE INCARCERATED

Access multimedia content (http://openstax.org/books/population-health/pages/29-3-correctional-nursing)
This video highlights the intersection between individuals with mental illness and incarceration. Mental illness is often not treated while individuals are incarcerated, resulting in unnecessary suffering and higher rates of suicide while incarcerated. NAMI supports public policies and laws to expand and improve access to metal health care within prison and jail settings.

Watch the video, and then respond to the following questions.

1. What is the relationship between mental illness and incarceration?
2. What are some alternatives to jail for individuals who have severe mental illness?

The correctional health system consistently underperforms in providing mental health care to individuals who are incarcerated (Roth, 2021). As law enforcement and courts treat mental illness like a crime, prisons and jails have more and more individuals with severe mental illness who are not being treated appropriately (Figure 29.6) (Wang, 2022). In a report from 2016, despite 56 percent of the state prison population having a mental health problem, only one-quarter of these individuals received professional mental help (Wang, 2022). The most common disorders are post-traumatic stress disorder, depression, bipolar disorder, and psychotic disorders such as schizophrenia (Aufderheide, 2014). The rates of most of these disorders are almost 3 times as high in women as in men (NCCHC, 2020; Wang, 2022). In prisons and jails, two-thirds of women had a history of a mental health diagnosis compared with 35–40 percent of men. There is a higher risk for attempted and completed suicide in the incarcerated population than in the general population (Hahn, 2022). In adolescents, suicide attempts are four times higher in justice-involved adolescents than in the general population (ANA, 2021). Correctional nurses must consider suicide potential during the intake of new justice-involved individuals into a facility and in all incarcerated persons, especially when there are threats of violence while incarcerated (Schoenly & Knox, 2012.)

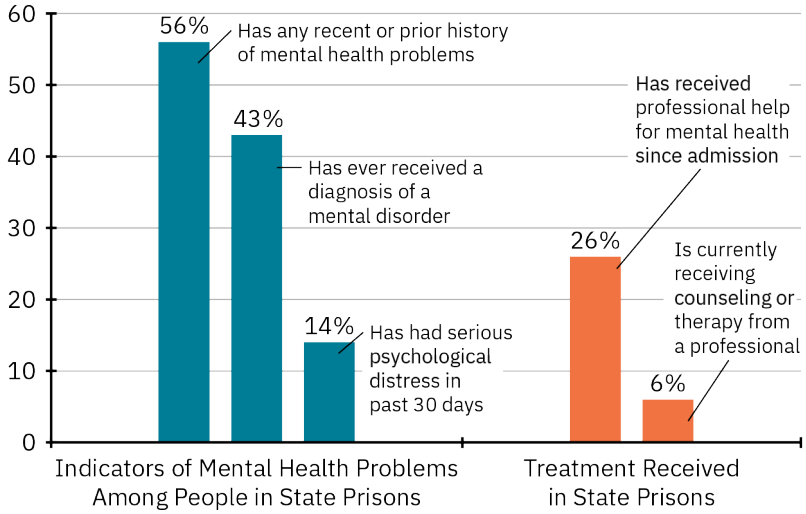


FIGURE 29.6 The extent of mental health problems in justice-involved individuals does not match the mental health help provided to these individuals. Over half of people in state prisons have reported a mental health issue, but only one in four has received professional help while incarcerated. (See Wang, 2022; data source: Maruschak et al., 2021; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Mental illness is common among justice-involved individuals, so correctional nurses need to be able to identify and care for clients with mental health problems. Understanding the implications of mental illness and comorbidity with other conditions, monitoring for drug interactions, and managing side effects are key aspects of correctional nursing care. A 2016 survey found that approximately 50 percent of individuals incarcerated in state prisons with a history of a substance use disorder also had a history of one or more mental health conditions, compared with only 38 percent of the general U.S. population with a history of a substance use disorder (Wang, 2022).

Substance Use

According to the NIDA (2020), an estimated 65 percent of the incarcerated population has an active SUD; an additional 20 percent was under the influence of drugs or alcohol at the time of their crime. Alcohol and drug withdrawal is a major concern for correctional nursing, along with health promotion activities designed to assist justice-involved clients in developing alternative coping mechanisms to reduce recidivism (Schoenly & Knox, 2012).

Although the incidence of opioid use disorder (OUD) in criminal justice settings is high and treatment of SUDs within the criminal justice system has been shown to make a difference in outcomes for affected individuals, most correctional facilities do not offer any medication to treat individuals with OUD (NASEM, 2019; NIDA, 2020). Appropriate treatment and counseling can change attitudes, beliefs, and behaviors toward drug use, decreasing opioid use and criminal activity once a person is released from prison (NIDA, 2020). Overdose deaths post-incarceration are lower when justice-involved individuals receive treatment and medications for addiction while incarcerated (NIDA, 2020). According to the National Academies of Sciences, Engineering, and Medicine (NASEM, 2019), medication-based treatment for SUD is effective across all settings and withholding approved medications—methadone, buprenorphine, and naltrexone—for the treatment of OUD in criminal justice settings amounts to blocking medical treatment.

The lack of medication-based treatment for these individuals results in a greater risk of returning to use and overdose post-incarceration, with a high risk of mortality following release (NASEM, 2019). Justice-involved individuals were more likely to engage in treatment post-incarceration and less likely to use illicit drugs 6 months out when they initiated medication-based treatment within the prison system (NASEM, 2019). There are ethical implications because withholding medications to treat OUD is associated with adverse outcomes for the individual and the community (NASEM, 2019). Another consideration with this population is the care transitions that occur upon release. Many justice-involved individuals are not adequately transitioned or even referred to outpatient medication-based treatment upon release (NASEM, 2019).

CORRECTIONAL HEALTH CARE

Access multimedia content (http://openstax.org/books/population-health/pages/29-3-correctional-nursing)

In this video, nurses describe the role of the correctional nurse and explain why they consider it to be the hidden gem of health care.

Watch the video, and then respond to the following questions.

1. What did you think of correctional health nursing before you read this chapter and watched this video? What do you think of it now? How has your perspective on corrections nursing changed, if at all?
2. What, if anything, about the role of correctional nurse surprised you?

CASE REFLECTION

Correctional Nursing

Read the scenario, and then respond to the questions that follow.

As introduced previously, Rory is a 23-year-old woman who completed her initial health intake with nurse Jason two months ago when she first arrived in state prison. At that initial intake, Rory underwent many screening tests, including STI testing and pregnancy testing. Rory tested positive for chlamydia, hepatitis C, and pregnancy. She was treated with antibiotics for chlamydia and started on a prenatal vitamin for her pregnancy. The medical facility also ordered asthma medications, a steroid inhaler, and a rescue inhaler for Rory. Rory went through active detox after admission because the state facility does not offer medication-based treatment for her opioid use disorder. She has yet to have her bipolar disorder evaluated or treated by the health care team but is scheduled to see the nurse midwife for her first obstetric visit next week. Rory's scheduled release date is in 11 months.

1. What is the role of the correctional nurse in caring for this client?
2. Given this client is pregnant, how should the correctional nurse approach the upcoming nurse midwife visit? What can the nurse do to help the client prepare for it?
3. How can the nurse assist this client with receiving treatment for her mental health diagnosis?
4. What is this client at risk for upon discharge? How can the correctional nurse assist Rory as she plans for discharge in less than a year?

29.4 Public Health Nursing and Public Health Departments

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 29.4.1 Examine the structure and organization of local and state public health agencies in the United States.
- 29.4.2 Identify how state and local public health departments are financed.
- 29.4.3 Differentiate between the functions of state and local health departments.
- 29.4.4 Delineate how public health differs from other practice areas across the continuum of care.

Public health nursing promotes and protects a population's health by synthesizing knowledge from nursing, social, and public health sciences and applying it for **social betterment** (ANA, n.d.; ANA, 2022). Social betterment was a term first used in 1912 by Lillian Wald, often considered the first public health nurse in the United States, to describe the role of public health nurses (PHNs) in addressing the upstream determinants of health—the places where people live, work, learn, play, and worship (ANA, 2022). Public health nursing in the United States is grounded in ensuring the circumstances and environment in which health equity and well-being for populations can be attained by minimizing health disparities for all (ANA, 2022). This nursing specialty is a population-based practice with a focus across multiple levels—individuals, families or small groups, communities, and systems within the overall context of the community as a whole (ANA, 2022).

BAPTISM OF FIRE – HENRY STREET SETTLEMENT

Access multimedia content (http://openstax.org/books/population-health/pages/29-4-public-health-nursing-and-public-health-departments)

This video highlights Lillian Wald's work with vulnerable populations in New York City in the late 1890s and early 1900s. Wald and her colleagues provide a great example of how public health nursing positively impacts the lives of individuals, families, and communities and how advocacy can alter federal policies and laws.

Watch the video, and then respond to the following questions.

1. Why were the efforts of the reformers called the "settlement movement"?
2. How does Lillian fulfill the role of the public health nurse?
3. What surprised you most about Lillian's work in public health?

PHNs use all levels of prevention with an emphasis on primary prevention and a focus on improving health outcomes by addressing the SDOH, particularly the physical and the environmental determinants of health. Health equity, social justice, and environmental justice are highlighted as pillars of public health nursing (ANA, 2022). Refer to Foundations of Public/Community Health for more details on the role of public health nursing. The United States has a complicated public health system composed of individuals, government workers, and organizations in both the public and private sectors collaborating in various ways at the local, state, and national levels (Public Health Law Center [PHLC], 2015). This section explains different types of public health governance structures, explores public health funding, and compares the roles of the state and local health departments.

Public Health Governance Structures

The government public health sector comprises federal, state, the District of Columbia, and local and tribal public health agencies. There are almost 3,000 local governments and over 500 federally recognized tribal agencies. States have leeway in defining their public health role, resulting in national variability (PHLC, 2015). Just as states have the leeway to define their role in public health, there is no uniform public health governance structure. Although the governance structures of state health departments (SHDs) vary from state to state, the relationships between SHDs and local health departments (LHDs) also vary widely. The following are four general types of governance health structures between SHDs and LHDs (CDC, 2022g; Leider et al., 2018; PHLC, 2015):

- Centralized
  - LHDs are units of the state government and led by state employees.
  - SHDs manage LHDs as divisions of the SHD.
- Decentralized
  - LHDs are led by local governments and the employees of local governments.
  - Local governments make most of the financial decisions in this model and keep more power and accountability for delivering public health services.
- Mixed
  - Some LHDs are led by the state government and some by the local government.
  - In this model, generally LHDs keep more power and accountability for delivering public health services.
- Shared
  - LHDs may be led by state employees or by employees of local governments.
  - If led by state employees, the local government can make financial decisions and issue public health orders. If led by local government employees, then the state has the authority.
  - In this model, generally LHDs keep more power and accountability for delivering public health services.

The Association of State and Territorial Health Officials (ASTHO (https://openstax.org/r/astho)) interactive dashboard gives detailed information on each state's and each region's public health agency structure. ASTHO first reported data in 2007 and updates data every 2 to 3 years, defining the scope of state and territorial public health services, identifying the variations in practice among states and territorial agencies, and representing the work overseen by the various health agencies nationwide. On an individual state level, the ASTHO website outlines the governance structure, workforce, and finance structure, affording the public an understanding of how their state public health departments function (ASTHO, 2023).

State Health Departments

The CDC is the federal government organization charged with population health protection and improvement activities (Leider et al., 2018). Other federal agencies with public health functions include the U.S. Department of

Health and Human Services (HHS), the Health Resources and Services Administration (HRSA), the Food and Drug Administration (FDA), the Substance Abuse and Mental Health Services Administration (SAMHSA), and the National Institutes of Health (NIH) (Leider et al., 2018). Although the CDC has set a federal public health agenda, much of the oversight of public health is left to individual states. The structure of state-level public health varies. State health agencies are tasked with implementing federal regulations or policies, such as Medicaid, Medicare, and the Children's Health Insurance Programs (Leider et al., 2018).

Within the United States, about 55 percent of SHDs are independent, whereas the other 45 percent are organized as one unit of a larger health-related agency that includes mental health services, long-term care services, public assistance, and traditional public health functions (PHLC, 2015). Each state's health department is usually the primary public health authority and supports delivering public health services. A council or board of health often oversees and directs SHDs. These boards often advise elected officials on PH matters, develop state PH policies, and develop legislative PH agendas. State legislatures approve state PH agency budgets, establish PH laws and regulations, determine fees for health services, and establish taxes to support public health. State PH agencies are often influenced by the elected officials in the state (PHLC, 2015).

Public health system funding is difficult to generalize as the structure of the public health system is determined by how state and local health departments are empowered within a state with much variation across the nation (Leider et al., 2018). SHDs receive both federal and state funds. Alternate funders are foundations and for-profit institutions (Leider et al., 2018). The federal government is the largest funder of state public health. Federal agencies will provide funds for particular diseases or programs, which can decrease the public health program's ability to respond to local needs and priorities (Leider et al., 2018). Public health systems for territories and tribal nations are funded externally by the federal government. They tend not to have a distinct public health operation as they integrate population-oriented services with direct health care services (Leider et al., 2018).

Local Health Departments

Local health departments obtain authority from the state. Their roles and scope of authority are contingent on state policy and the governing relationship between the state and LHD. As noted previously, the role and governing structure of LHDs vary widely. Some LHDs provide direct clinical care, whereas others focus solely on population-based services (Leider et al., 2018). Some LHDs in large cities have functional abilities similar to those of SHDs, although small LHDs often provide a limited set of public health services. LHDs can be designed as locally governed, a branch of the state health department, a state-created region, or a department serving multiple counties. The commonality is that LHDs have governmental power and are responsible for public health at the local level (PHLC, 2015). They are also responsible for following state laws and regulations (Leider et al., 2018).

The National Association of County and City Health Officials (NACCHO) estimates there are 2,800 LHDs in the United States of varying size and complexity (Leider et al., 2018). Spending estimates for LHDs are complicated and not readily available as they are self-reported by the nation's LHDs and capture only basic information such as revenues and expenditures. LHDs are often supported by cities, counties, and local governments, partially financed through local property taxes or via a devoted public health revenue stream from the local government (Leider et al., 2018). Local government support of public health agencies averages about 3 percent of total local taxes (Leider et al., 2018). Some state legislatures fund LHDs through grants and contracts managed by the SHD. The federal government will also support some large local governments with grants, but most often federal dollars go to SHDs first to then be further disbursed to LHDs (Leider et al., 2018).

Trends in Public Health Funding

Public health is chronically underfunded with fragmented infrastructure (Johns & Rosenthal, 2022; Leider et al., 2018). Historically, public health is deeply siloed with funding dedicated to specific diseases or focal areas and allocated across many entities in the public health system. State and local health departments fund and conduct public health activities. The federal government provides additional funding through its various branches, with the CDC being the primary funder, yet the CDC's funding decreased by more than 8 percent between 2010 and 2021 (Johns & Rosenthal, 2022). Federal contributions have remained stagnant, resulting in state and local funding sources compensating for the lack of increased funding. This has created an inequitable system, as each locality has different funding sources (Johns & Rosenthal, 2022). Due to these funding differences, there are also significant differences in local public health services nationwide.

Public health spending increases of as little as $10 per capita have been linked to decreased mortality rates of as much as 7 percent and an overall greater percentage of the population reporting being in good or excellent health (Johns & Rosenthal, 2022). Similarly, decreases in low birth weight, rates of STIs, and foodborne illnesses have been directly linked to spending on public health initiatives (Johns & Rosenthal, 2022). Investments in public health can offload some of the burden on the U.S. health care system. In 2019, less than 3 percent of the overall $3.8 trillion spent on health care in the United States went toward public health (Johns & Rosenthal, 2022). This mirrors the finding that, over the past two decades, between 2 and 3 percent of health spending went directly to public health. Health care costs are increasing, with most of the spending going toward treating preventable conditions, yet population health in the United States continues to decline. For every $1 spent on public health interventions focused on diabetes and cardiovascular health, $5 in health spending is saved (Johns & Rosenthal, 2022).

Functions of Public Health Agencies

States have autonomy in public health efforts promoting population health. In centralized governance structures, LHDs are a subsidiary of the SHD and follow the direction of the SHD in their efforts to protect and promote the health of residents. In decentralized governance structures, LHDs have autonomy in public health efforts to promote the safety and well-being of constituents. Since both SHDs and LHDs are tasked with promoting and protecting the health of residents in their districts, they may have overlapping roles.

Role of State Health Departments

State health departments have a variety of responsibilities within public health that include the governance functions of policy development, resource stewardship, legal compliance, partner engagement, continuous improvement, and oversight (PHLC, 2015).

- Policy development
  - Contribute to developing policies to protect, promote, and improve public health.
  - Ensure the agency is consistent with laws, rules, and regulations.
- Resource stewardship
  - Ensure the availability of necessary resources to implement the essential public health services. These resources may include finances, workforce, legal support, and technology.
- Legal compliance
  - Exert legal authority as needed in the roles, responsibilities, and functioning of the governing body, health officers, and staff.
- Partner engagement
  - Develop and fortify community partnerships through engagement and education.
  - Ensure teamwork and partnership among all relevant partners in promoting the community's health.
- Continuous improvement
  - Evaluate and monitor progress regularly.
  - Set measurable outcomes used to monitor the health status of the community.
  - Assess the health agency's ability to meet its responsibilities.
- Oversight
  - Accept responsibility for public health performance in the community.
  - Provide supervision and guidance as needed to support the agency in meeting established outcomes.

State health departments provide population-based public health services focusing on prevention—primary, secondary, and tertiary. SHDs promote health and well-being by ensuring access to health care services, focusing on prevention and health equity, and by ensuring water and food safety, ensuring children have access to all childhood vaccines, and overseeing the health care-related professions and services (Commonwealth of Massachusetts, 2023a). The box below presents the typical duties of state health departments.

COMMON STATE HEALTH DEPARTMENT DUTIES

- Epidemiological disease surveillance and data collection
- State laboratory services
- Preparedness and response to public health emergencies

- Population-based health promotion and prevention strategies
  - Vaccine order management and inventory distribution
  - Tobacco cessation support
  - HIV and AIDS education on prevention, screening, and management
  - STI education, counseling, screening, treatment, and partner notification
  - Nutrition education
  - Physical activity education
- Direct health care services
- Regulation of health care providers and other licensed professionals
- Environmental health
- Technical assistance and training

(See PHLC, 2015.)

Role of Local Health Departments

LHDs coordinate public health activities in their jurisdiction and follow the SHDs rules and regulations. The responsibilities are diverse and will vary depending on state law (Commonwealth of Massachusetts, 2023b; PHLC, 2015). They may include:

- Monitoring the health status of the community
- Understanding health issues facing the community
- Protecting the community from health problems and hazards
- Educating the community on a variety of health topics to assist them in making healthy choices
- Engaging the community in identifying and addressing health problems
- Developing public health policies and plans
- Enforcing public health laws and regulations
- Assisting community members in accessing health services
- Maintaining a competent public health workforce
- Evaluating and improving programs and interventions
- Enforcing state sanitary, environmental, housing, and health codes

LHDs are involved in many activities designed to keep communities safe and healthy. There are more than 3,000 LHDs across the nation, and these city, county, and tribal departments work to ensure the safety of food, water, and air, among many other activities (NACCHO, 2017). Examples of activities include immunizations, food safety, infectious disease control, long-term disease service, injury and violence prevention, tobacco control, emergency preparedness, maternal and child health, and environmental health (NACCHO, 2017).

Role of the Public Health Nurse

PHNs serve many roles across the public health spectrum and constitute the largest portion of the professional public health workforce (Association of Public Health Nurses [APHA], 2022). PHNs can meet the needs of a variety of clients, especially more vulnerable populations, due to a strong clinical nursing background and knowledge from both the public health and social sciences (APHA, 2022). Current PHN practice is moving toward public health work across disciplines to address the SDOH and improve community health by advancing a culture of health (ANA, 2022b). The Robert Wood Johnson Foundation created the Culture of Health in 2013 to improve all individuals' health and well-being. It aligns with the public health nurse's role in advancing health equity and strengthening the integration of health services and health systems by fostering cross-sector collaboration (ANA, 2022b).

Public health nursing is a specialty with roots in the sciences of nursing and public health. It focuses on population health at the community and systems levels, emphasizing health promotion, disease prevention, and risk reduction. Note that the work setting is not the defining characteristic of public health nursing; instead, it is the focus on population health and partnering with populations in communities as the foundation of public health nursing practice (ANA, 2022b). Examples of the PH nursing role may include:

- Conducting health screenings such as blood pressure, weight, and depression
- Leading group coaching sessions to assist individuals in setting SMART (specific, measurable, attainable,

realistic, and timebound) personal health goals
- Overseeing mass vaccination clinics
- Designing outreach activities (such as addressing vaccine hesitancy) to vulnerable communities
- Partnering with disaster relief agencies to assist individuals in accessing clean water and safe food
- Managing directly observed therapy for active tuberculosis cases
- Advocating for the needs of complex medical care clients within the community
- Visiting community members in their homes to provide direct clinical care services

Public health nursing can be practiced in any location with a population of people:

- Health departments
- Schools
- Community health centers
- Visiting nursing
- Health clinics
- Correctional facilities
- Occupational work sites
- Mobile vans
- Tribal government agencies
- Churches or other faith-based programs
- Rural health care
- Refugee and immigrant clinics
- Primary care clinics
- Ambulatory outpatient facilities
- Voluntary organizations
- Homeless shelters

The primary role of the PHN is to promote, protect, and improve the health and welfare of the public. PHNs develop, deliver, and evaluate services and programs that focus on the health of populations while collaborating with many entities and serving as a safety net for vulnerable populations (ANA, 2022b).

PUBLIC HEALTH NURSING: A CAREER WITH MEANING

Access multimedia content (http://openstax.org/books/population-health/pages/29-4-public-health-nursing-and-public-health-departments)
This short video highlights the role of the public health nurse.

Watch the video, and then respond to the following questions.

1. One nurse in the video says that public health nurses look at health in a holistic way. What does this mean?
2. When making home visits, public health nurses enter a client's "space." What are some possible challenges with caring for clients in their homes? What are some benefits?

Public health departments help build and maintain healthy communities, states, and the nation. Every 10 years, the Department of Health and Human Services' Healthy People goals and targets establish the nation's health improvement priorities. By supporting policy, advocacy, and education, nursing has a great impact on public health especially in the areas of immunizations, infection prevention, environmental health, and the response to the opioid crisis (ANA, n.d.). PHNs have the knowledge, skills, and leadership abilities to promote a culture of health by improving the health of individuals, families, and communities and heeding the call of The National Academy of Medicine's report, *The Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity* (ANA, 2022).

THE SPIRIT OF HEALING: FAITH COMMUNITY NURSING

Access multimedia content (http://openstax.org/books/population-health/pages/29-4-public-health-nursing-and-public-health-departments)
Faith-based nursing, also known as parish nursing or faith community nursing, focuses on the client's spiritual

care to prevent or minimize illness and promote holistic health care (Galan, 2023). The purpose of this specialty is to nurture the human spirit with health education and spiritual support while connecting the client to resources within the congregation or faith community.

Watch the video, and then respond to the following questions.

1. What is the relationship between the role of faith-based or faith community nursing and community health?
2. What roles did you see these faith-based nurses taking in the care of their clients?
3. How did the relationships that the parish nurse cultivated with her clients empower the clients to take action to promote their own health and well-being?

Chapter Summary

29.1 Occupational Health

Occupational and environmental health nursing focuses on providing preventive health care, health promotion, and health restoration in a safe and healthy work environment. OHNs require specialized competencies depending on the industry; however, the scope of practice has common overarching concepts of community health, law, economy, politics, policy, and regulatory issues. OSHA creates and enforces workplace safety standards to ensure safe and healthy conditions for workers. NIOSH is the research agency tasked with studying worker safety and health. NIOSH provides evidence for many of the standards that OSHA enforces. OHNs' roles include clinician, educator, case manager, corporate director, consultant, and researcher with diverse work settings including hospitals, academia, government, military, and industrial factories.

29.2 School Health

School nursing protects and promotes student health by facilitating optimal development and academic success. School nurses are health care and education leaders who advocate for student-centered care, coordinate care, and collaborate with school administrators, staff, teachers, families, and the interprofessional health care team. They are change agents, improving the health of children, families, and communities. Roles include clinical care provider, health educator, and advocate. Two established frameworks, the *Framework for 21st Century School Nursing Practice* and the *Whole School, Whole Community, Whole Child Model*, guide school nursing practice. Common health concerns the school nurse encounters are asthma, diabetes, epilepsy, food allergies and anaphylaxis, obesity, oral health issues, behavioral problems, learning difficulties, teen pregnancy, STIs, and substance misuse.

29.3 Correctional Nursing

Correctional nursing provides care to clients in the criminal justice system, jails, prisons, juvenile detention centers, and substance-misuse treatment centers. Correctional nurses must defer to correctional officers and safety protocols. They use a broad range of nursing skills to care for individuals across the justice system, including incarceration, probation, parole, treatment programs, individuals housed in immigration and customs facilities, and those transitioning between settings. They perform many roles in various settings, such as restricted housing, primary care clinics, urgent care clinics, inpatient infirmaries, community-based facilities, and palliative and hospice care settings. Correctional nurses provide care related to substance misuse, sexual abuse, long-term health conditions, infectious diseases, reproductive care, mental health, and transitional services such as medication management, health promotion screening, and teaching.

29.4 Public Health Nursing and Public Health Departments

Public health nursing promotes and protects a population's health by synthesizing knowledge from nursing, social, and public health sciences and applying it for social betterment. The government sector of public health includes public health agencies at the federal and state levels, including the District of Columbia, with almost 3,000 local governments and over 500 federally recognized tribal agencies. SHDs' responsibilities include policy development, resource stewardship, legal compliance, partner engagement, continuous improvement, and oversight. SHDs provide population-based public health services focusing on primary, secondary, and tertiary prevention. LHDs' roles and scope of authority are contingent on state policy and their governing relationship with the state. LHDs coordinate public health activities in their jurisdiction and follow the SHDs' rules and regulations.

Key Terms

correctional nursing providing nursing care to clients within the criminal justice system, jails, prisons, juvenile detention centers, and substance-misuse treatment centers

ergonomics a set of practices, such as adjustable desk heights and keyboards that more naturally fit the wrist's contours, in workplaces that increase worker efficiency and productivity while reducing injuries and discomfort

individual health plan (IHP) a plan used by schools that outlines what to do if a student has a medical event while at school; serves as an agreement between the school and the student, outlining the student's needs and the plan to address them

industrial health nursing the term used for occupational health nursing in the late 1800s and early 1900s

justice-involved individuals who are involved with

the criminal justice system in jails, prisons, juvenile detention centers, and substance misuse treatment centers

Nurse Practice Act the state's governing law that determines the scope of practice of nursing that school nurses must follow

occupational and environmental health nursing a specialty practice focused on providing preventive health care, health promotion, and health restoration within the setting of a safe and healthy environment

public health nursing the discipline of promoting and protecting a population's health by synthesizing knowledge from nursing, social sciences, and public health sciences and applying it for social betterment

restricted housing a type of detention that includes voluntary or involuntary removal from the general incarcerated population with placement into a locked cell or room for an extended period of time

root cause analysis (RCA) a component of an incident investigation that is used to identify, evaluate, and correct the causes of accidents

school nursing a nursing specialty with a focus on protecting and promoting student health by facilitating optimal development and promoting academic success

social betterment the role of public health nursing in addressing the upstream determinants of health—the places where people live, work, learn, play, and worship

standard a regulatory requirement established by the agency that serves as criteria for evaluating whether employers are following OSHA laws (a.k.a. regulation)

Total Worker Health® (TWH) policies, programs, and practices that focus on work-related safety and protection

Review Questions

1. What is the most appropriate intervention for the school nurse to implement to promote a healthy school environment?
   a. Advocate for nutritious school lunch programs
   b. Provide care for children with asthma
   c. Develop individualized health plans
   d. Educate students and families about screening for scoliosis

2. Which action should the school nurse perform to address dental health at the community level?
   a. Educate caregivers of children with dental caries about oral health
   b. Advocate for fluoridation of drinking water
   c. Assist caregivers with finding dental resources for children without dental insurance
   d. Teach children in school how to floss properly

3. Which function would the public health nurse perform while working at a local health department?
   a. Teaching a client how to self-inject insulin
   b. Implementing Medicaid regulations
   c. Educating a community about influenza vaccinations
   d. Regulating the Children's Health Insurance Programs (CHIPs)

4. What principle of correctional health care did the 1976 ruling in *Estelle v. Gamble* establish?
   a. Accreditation for correctional health care facilities
   b. Health information privacy for individuals in custody
   c. Autonomy over health care decisions for incarcerated people
   d. The provision of health care for incarcerated people

5. Which concept should the nurse use when providing care for individuals who are incarcerated?
   a. Education levels of the incarcerated population are the same as the general population.
   b. There is a lack of privacy when caring for incarcerated people.
   c. Therapeutic nurse-client relationships are not utilized in correctional nursing.
   d. Most incarcerated people are middle-age or older adults.

6. Which intervention can the nurse implement to reduce the spread of infectious disease in a correctional

facility?

a. Encouraging daily handwashing
b. Asking about HIV status at intake to a correctional setting
c. Questioning people about sexual practices
d. Advocating for vaccination for hepatitis A and hepatitis B

7. A school nurse is preparing a presentation to the school board on the scope of practice of the school nurse. Which information will the nurse present?

a. The school district's job description for the school nurse overrides the Nurse Practice Act.
b. The Nurse Practice Act is a state law that determines the scope of practice for the school nurse.
c. The scope of nursing practice for the school nurse is the same in every state.
d. The state medical board decides the scope of practice for the school nurse in each state.

8. Which action by the occupational health nurse is a secondary prevention activity?

a. Screening for hearing loss
b. Conducting safety inspections of work areas and facilities
c. Educating employees to wear eye protection
d. Completing a physical assessment after an injury

9. Which workplace condition will the occupational health nurse include when teaching factory employees about ergonomic hazards?

a. Repetitive motions
b. Infectious agents
c. Noise levels
d. Cleaning solutions

10. Which activity would the correctional nurse implement to address tertiary health promotion in individuals with long-term disease who are incarcerated?

a. Teach rescue inhaler use for people with asthma
b. Administer medication for the treatment of hepatitis C
c. Advocate for low-sodium dietary options for people with hypertension
d. Recommend physical therapy for people with arthritis

CHAPTER 30

Care Transition and Coordination Across the Community



FIGURE 30.1 A health care provider listens to the client to gather information to aid in care coordination. (credit: modification of work by Scott Housley/CDC, Public Domain)

CHAPTER OUTLINE

30.1 The Effects of Care Coordination and Care Transitions on Outcomes

30.2 Care Transition Models

30.3 Role of the Community Health Nurse

INTRODUCTION Mrs. Johnson is a 72-year-old client with multiple chronic conditions, including diabetes, hypertension, and heart failure, living in a rural community. After a hospital stay during which she received appropriate medical interventions for exacerbation of heart failure and experienced symptom improvement, Mrs. Johnson has been discharged from the hospital and is going home. The nursing role in the transition from hospital to home is to ensure the client is safe and continues to receive the necessary care and support they need. Ensuring a smooth transition from hospital to home is critical in preventing readmissions and promoting the health and well-being of clients. Nurses play a central role in making this process as seamless as possible.

Transitions of care and care coordination are pivotal in the delivery of high-quality, client-centered care in the community. **Transition of care** refers to the movement of clients from one health care setting to another or from one level of care to another. **Care coordination** involves the deliberate organization and integration of health care services across different providers and settings to facilitate the delivery of holistic and continuous care to individuals and populations. As individuals move between health care settings or their care needs change, smooth transitions and effective coordination are essential for optimal health outcomes and client well-being.

This chapter aims to provide a comprehensive understanding of transitions of care and care coordination in

community health nursing. By exploring the principles and best practices in transitions of care and care coordination, this chapter seeks to empower community health nurses in their roles as advocates, coordinators, and educators in the health care system. By mastering the art of transitions and coordination, community health nurses can positively impact the health outcomes and well-being of individuals, families, and communities they serve.

30.1 The Effects of Care Coordination and Care Transitions on Outcomes

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 30.1.1 Describe the terms transitional care and care coordination.
- 30.1.2 Identify factors that contribute to poor transitions of care outcomes.
- 30.1.3 Explain how transitional care improves health outcomes.

Transitional care refers to a comprehensive and coordinated set of actions designed to ensure the safe and smooth transfer of clients. It encompasses a range of services and interventions aimed at supporting individuals as they move from one health care provider or facility to another or from one stage of care to another, such as from hospital to home or from acute care to rehabilitation.

The primary goal of transitional care is to optimize continuity and quality of care during these transitions, ensuring that clients experience seamless and coordinated health care. Effective care transitions and care coordination are essential components of a well-functioning health care system. They contribute to improved client outcomes, enhanced client experiences, and reduced health care costs. By ensuring seamless information exchange, collaborative decision-making, and comprehensive care planning, care transitions, and care coordination can minimize care gaps prevent adverse events, and promote optimal health outcomes for individuals in the community.

Community health nurses play a crucial role in facilitating transitional care for clients by managing the transfer of information, responsibilities, and support services between health care providers, settings, and clients themselves. They serve as key coordinators of care, provide education and support to clients and families, and facilitate smooth and effective transitions between health care settings (Institute of Medicine, 2010). To achieve this, community health nurses rely on a set of essential skills and competencies, including care coordination, client education, interdisciplinary collaboration, and communication, among others (Iwamoto, 2023). Additionally, community health nurses are well-positioned to engage in follow-up care activities, such as medication management, home visits, and referrals to community-based resources. These interventions are critical components of transitional care that enhance client safety, prevent readmissions, and increase client satisfaction.

Transitional care interventions often include the following key components:

1. Assessment and planning: A thorough evaluation of clients' needs, preferences, and resources is conducted to develop an individualized care plan that addresses their unique requirements during the transition.
2. Communication and information sharing: Effective communication among health care providers, clients, and their families is vital. Timely and accurate transfer of medical information, care instructions, and follow-up plans helps ensure continuity of care and prevent errors.
3. Medication management: Reviewing and reconciling medication lists, addressing any changes in medications, providing clear instructions, and promoting adherence are crucial in preventing medication errors and adverse events during transitions.
4. Care coordination: Collaboration and coordination among health care providers, including nurses, primary care physicians, specialists, and other team members, help ensure a seamless transition and continuity of care.
5. Client and family education: Empowering clients and their families with the knowledge and skills needed to manage their health conditions, recognize warning signs, and navigate the health care system effectively promotes self-care and reduces the risk of complications or readmissions.
6. Follow-up and monitoring: Establishing appropriate follow-up appointments, monitoring client progress, and ensuring access to support services or resources contribute to ongoing care and prevent gaps in care.

Transitional care interventions minimize adverse events, promote client safety, enhance client satisfaction, and improve health outcomes during care transitions. Transitional care recognizes the importance of maintaining continuity and coordination throughout the health care journey to facilitate a seamless and client-centered health care experience. Table 30.1 compares transitional care interventions.

	Transitional Care	Care Transition	Care Coordination
Definition	The process of transferring clients' care between health care providers or settings, ensuring the continuity of care, and promoting client safety	The movement of clients between health care settings or levels of care (e.g., hospital to home, hospital to long-term care facility)	The process of organizing and coordinating health care for clients, involving collaboration between health care providers, clients, and their families
Focus	Coordinating the handoff of care during transitions to optimize client outcomes and avoid medical errors	Ensuring a smooth and safe transfer of care as clients move between different health care settings	Coordinating the delivery of health care services to ensure continuity and effective care for clients

TABLE 30.1 A Comparison of Transitional Care Interventions

Care Transitions

Care transitions are critical junctures in health care where individuals move from one health care setting to another or experience changes in their care needs. In the community setting, transitions of care encompass a wide range of scenarios.

Some common types of transitions include:

- Hospital to Home: This transition often requires careful planning to ensure that clients receive the necessary support and resources to manage their health conditions at home (Figure 30.2).
- Home to Long-Term Care: Transitions from home to long-term care settings, such as nursing homes or assisted living facilities, may occur when individuals require a higher level of assistance or specialized care that cannot be adequately provided in their homes. These transitions involve coordination between home care services, long-term care facilities, and families to ensure a smooth transfer of care.
- Rehabilitation or Subacute Care: Transitions to rehabilitation or subacute care facilities are common when individuals require intensive therapy, post-surgical care, or recovery support following an acute illness or injury. These transitions involve coordinating the transfer of medical information and care plans between acute care hospitals and rehabilitation facilities.



FIGURE 30.2 Nurses are involved in the transition of care when clients are discharged from hospitals to their homes. This photo depicts the discharge of a veteran who spent 50 days in a VA hospital recovering from COVID-19. (credit: "Arvin McCray, first COVID-19 patient goes home aft 50 days" by Milwaukee VA Medical Center/Flickr, Public Domain)

The quality of the care transition can have an impact on clients, families, and health care providers.

- Client Outcomes: Effective transitions of care positively influence client outcomes, leading to improved health outcomes, reduced hospital readmissions, and enhanced quality of life. Well-coordinated transitions support medication adherence, timely access to follow-up care, and effective self-management.
- Family Involvement and Support: Transitions of care affect not only clients but also their families, who play a crucial role in supporting the transition process. Inadequate support or coordination can result in caregiver burden, stress, and challenges in managing the care needs of their loved ones.
- Nurses and Other Health Care Providers: Transitions of care impact all health care providers by requiring effective communication, collaboration, and coordination. Nurses must ensure accurate transfer of information, address client and family concerns, and support clients during the transition process.

Care Coordination

Nurses are central to care coordination efforts, utilizing their unique knowledge, skills, and expertise to facilitate the delivery of comprehensive and seamless care as clients move between different health care settings, ensuring the continuity of care. This process involves sharing critical client information, including medical history, diagnoses, medications, and care plans, with the receiving nurses and other health care providers. This information exchange helps prevent care gaps and gives a comprehensive understanding of the client's needs, enabling providers to deliver appropriate and timely interventions.

Care coordination involves identifying clients' specific needs during transitions and making timely and appropriate referrals to other health care professionals or community resources. For example, a community health nurse may coordinate referrals to home health services, physical therapy, or social support services to facilitate a smooth transition and ensure ongoing care and support for the client.

Coordinated care includes **medication reconciliation**, the process of comparing a client's medication orders to all the medications that the client has been taking and ensuring that clients have access to necessary medications during transitions. This helps prevent medication errors. Ensuring that clients have a clear understanding of their medication regimen, dosages, and any changes that may have occurred during the transition reduces the risk of adverse drug events and enhances client safety.

Care coordination promotes collaboration and communication among health care providers involved in the client's care. This collaboration allows for the exchange of information, coordination of treatment plans, and addressing any potential issues or concerns during the transition. By working together, health care providers can ensure a smooth handoff of care and provide consistent and coordinated support to the client. During case conferences or interprofessional team meetings, nurses and other health care providers share information, discuss the client's current status, review progress, and collaborate on the development of a comprehensive care plan. They can discuss any challenges or concerns, share updates on treatment plans and interventions, and make decisions collectively to ensure an integrated and cohesive approach to care.

Actively engaging clients and their families in the transition process leads to more sustained outcomes. This includes providing education, support, and resources to empower them to actively participate in their care. Involving clients and their families in care coordination enhances their understanding of the transition process, improves adherence to care plans, and promotes self-management skills, ultimately leading to better outcomes. Arranging appropriate follow-up appointments and monitoring the client's progress after the transition ensures that clients receive timely and necessary post-transition care and support, such as reviewing treatment effectiveness, addressing any concerns or complications, and making any adjustments to the care plan as needed.

Care coordination enhances communication, collaboration, and support among health care professionals, clients, and their families, resulting in improved outcomes, reduced readmissions, and enhanced client experiences during transitions of care.

Factors Contributing to Poor Transitions of Care Outcomes

Many factors can undermine the quality of transitions of care and hinder the achievement of optimal outcomes. Some challenges or risks associated with transitions of care include:

- Care Coordination Complexity: Coordinating care across different health care settings and multiple providers

can be challenging. Lack of care coordination can lead to disjointed care plans, conflicting instructions, and delays in accessing necessary services, which may negatively impact client outcomes.

- Client and Family Factors: Transitions of care can be overwhelming for clients and their families. The stress of navigating new care settings, understanding care plans, and managing medications can contribute to anxiety, confusion, and nonadherence to treatment plans.
- Transitional Care Vulnerabilities: Vulnerable populations, such as older adults, individuals with low health literacy, individuals who are economically insecure, and those with limited social support, face additional challenges during transitions of care. They may have difficulties accessing resources, paying for resources, understanding care instructions, or advocating for their needs.

Communication Breakdown and Limited Health Literacy

Communication breakdowns contribute to poor transitions of care outcomes in several ways. One significant factor is the incomplete transfer of client information between health care providers and settings. Vital details, including medical history, diagnoses, medication changes, and care plans, may be inaccurately documented or omitted, leading to a fragmented understanding of the client's needs and potential risks during the transition.

Limited health literacy contributes to poor transitions of care outcomes. Health literacy refers to an individual's ability to obtain, understand, and use health information to make informed decisions and navigate the health care system. When health literacy is limited, individuals may struggle to comprehend medical instructions, follow medication regimens, or engage in self-care, leading to suboptimal management of health conditions during transitions of care.

The absence of standardized communication tools and processes is another challenge. Varying documentation formats, inconsistent terminology, and limited guidelines for handoffs hinder effective information exchange, resulting in misunderstandings, misinterpretations, and vital information being lost in translation.

Transitions of care involve multiple health care professionals working together, but communication breakdowns can occur. Competing responsibilities, inadequate communication channels, and ambiguity regarding roles and responsibilities contribute to confusion, decision-making delays, and missed collaboration opportunities.

Effective communication with clients and their families is vital during transitions of care. Inadequate information sharing, limited health literacy, and cultural or language barriers hinder effective communication, impede understanding, and contribute to gaps in care and medication mismanagement.

Technological barriers also pose challenges. The use of electronic health records (EHRs) and other health information systems, if not optimized for effective communication, can impede the seamless transfer of information. Incomplete or inaccurate data entry, interoperability limitations, and suboptimal user interfaces can hinder the exchange of information between health care settings and providers.

Addressing these communication breakdown factors is crucial. Standardizing communication tools, improving documentation practices, enhancing interprofessional collaboration, involving clients and families, and optimizing health information technology can mitigate communication breakdowns and promote effective communication during transitions of care. By doing so, health care providers can enhance client safety, improve outcomes, and ensure continuity of care throughout the health care journey.

Care Fragmentation

Care fragmentation refers to a lack of communication, collaboration, and integration among various health care entities involved in an individual's treatment and management. This fragmentation can occur at multiple levels, including within health care systems, between different health care settings (such as hospitals, primary care clinics, and specialty clinics), and across different providers involved in a client's care.

The impacts of fragmentation of care on health outcomes are profound and far-reaching. Firstly, fragmented care can lead to delays in diagnosis and treatment, as information and medical records are not easily shared or accessible between different health care providers. This can result in missed or delayed interventions, which can have serious consequences for clients, particularly those with chronic or complex conditions.

Secondly, the lack of coordination and continuity in care can lead to duplicated or conflicting interventions, unnecessary tests, and medication errors. Without a centralized system to track and manage a client's health care

journey, providers may not have a comprehensive understanding of the client's medical history, resulting in suboptimal decision-making and potential harm to the client.

Moreover, fragmentation of care can negatively impact client engagement and empowerment. When clients are shuttled between different providers and settings, they may feel disconnected from their care and struggle to navigate the complex health care system. This can lead to frustration, confusion, and a decreased sense of ownership over their health, ultimately hindering their ability to actively participate in their own care.

Furthermore, fragmented care poses challenges for comprehensive management of chronic diseases. Clients with multiple comorbidities often require the involvement of various specialists and health care professionals, but the lack of coordination can result in fragmented treatment plans and inadequate attention to the client's health needs. This can contribute to suboptimal disease management, poorer health outcomes, and increased health care costs.

Social Determinants of Health and Health Disparities

Social determinants of health (SDOH) are the nonmedical factors that significantly influence health outcomes and disparities. They include socioeconomic status, education and health literacy, social support networks, housing and environment, and access to health care. As discussed in Social Determinants Affecting Health Outcomes, disadvantaged socioeconomic status often translates into reduced access to quality health care, limited transportation options, and financial constraints, all of which impede seamless transitions of care. For example, individuals with lower incomes may be unable to afford necessary medications or follow-up appointments, resulting in interrupted continuity of care and increased health risks.

Health disparities, which are systemic differences in health outcomes among different population groups, exacerbate the challenges faced during transitions of care. Disadvantaged communities, including racial and ethnic minorities, individuals with disabilities, and older adults, often experience higher rates of chronic diseases and face barriers to accessing health care services. These disparities can stem from structural and social determinants of health, such as discrimination, inadequate health care infrastructure, and limited availability of culturally responsive care. Consequently, individuals from these populations are more likely to encounter difficulties during transitions of care, leading to poorer health outcomes.

SDOH have a significant impact on transitions of care and creates a complex web of challenges that contribute to poor transitions of care outcomes. Efforts to improve health literacy through educational initiatives and enhanced communication strategies are crucial in empowering individuals to actively participate in their care during transitions. Additionally, addressing SDOH including health disparities requires comprehensive interventions, such as equitable health care policies, improved access to affordable health care, and culturally responsive care delivery. By addressing these interconnected issues, health care systems can strive to minimize the impact of SDOH and improve transitions of care outcomes, leading to better health outcomes for all individuals. Table 30.2 summarizes the factors that contribute to poor transitions of care outcomes.

Factors	Description	Contributing Factors
Communication Breakdown	Inadequate exchange of information between health care providers and settings	• Lack of standardized communication protocols and channels • Insufficient transfer of medical records • Incomplete or delayed transmission of client information • Language barriers • Misinterpretation of information
Fragmented Health Care	Disjointed care delivery and coordination among multiple providers	• Lack of care coordination mechanisms • Inadequate collaboration between health care providers and settings • Fragmented electronic health records (EHR) systems • Inefficient handoffs and referrals • Poor integration of primary care and specialty care
Medication Errors	Errors in medication reconciliation, prescription, or administration	• Inaccurate medication histories • Lack of standardized medication reconciliation practices • Inadequate client education on medication management • Illegible or incomplete prescriptions • Lack of medication reconciliation during care transitions
Limited Client Engagement	Insufficient involvement of clients in their own care	• Limited health literacy and understanding of care processes • Lack of client empowerment and shared decision-making • Inadequate client education on self-management and care transitions • Limited access to health care information and resources • Cultural or language barriers affecting client engagement

TABLE 30.2 Factors Contributing to Poor Transitions of Care Outcomes

Factors	Description	Contributing Factors
Inadequate Follow-Up Care	Insufficient support and monitoring following the care transition	• Delayed or missed appointments • Lack of clear discharge instructions • Inadequate care coordination between settings and providers • Limited access to necessary follow-up services or specialists • Lack of timely communication regarding test results and treatment plans
Socioeconomic Factors	The interaction of social and economic factors that influence care transitions	• Limited access to health care services due to financial barriers • Unstable housing or homelessness • Lack of social support and resources • Low health literacy and limited knowledge of available resources • Transportation barriers

TABLE 30.2 Factors Contributing to Poor Transitions of Care Outcomes

To address communication breakdowns during transitions of care, several strategies can be implemented:

- Standardizing Communication: Health care organizations should adopt standardized communication tools, such as structured handoff protocols like SBAR (Situation, Background, Assessment, Recommendation) to ensure a consistent and comprehensive transfer of information, enabling effective communication during transitions.
- Improved Documentation Practices: Encouraging accurate and detailed documentation of client information, medication lists, and care plans supports effective information exchange. The use of electronic health records with standardized templates can facilitate consistent and comprehensive documentation practices, minimizing the risk of vital information being overlooked or misinterpreted.
- Enhancing Interprofessional Collaboration: Establishing clear communication channels, holding regular team meetings, and implementing shared decision-making frameworks help prevent communication breakdowns and enhance collaboration. By fostering a culture of effective communication, health care providers can ensure a smooth and coordinated transition process.
- Client and Family Involvement: It is vital to actively engage clients and their families in the transition process via client education, shared decision-making, and clear communication. Using plain language, providing written materials, and considering cultural and linguistic factors contribute to client engagement and mitigate communication barriers. By involving clients and families as partners in care, health care providers can improve understanding, promote adherence, and promote successful care transitions.
- Technology Optimization: Health care organizations should prioritize the optimization of health information technology. This includes ensuring interoperability between different systems, implementing user-friendly interfaces, and enabling comprehensive data-sharing capabilities. By optimizing technology, health care providers can facilitate seamless communication, reduce errors, and improve the exchange of information during transitions of care.

Transitional Care Improves Health Outcomes

Transitional care, when effectively applied, can significantly improve health outcomes for clients. This integrated and coordinated approach ensures that clients receive the care they need, when they need it, and in a way that they understand. It is a comprehensive, person-centered, and evidence-based approach that facilitates the safe and timely movement of clients between levels and locations of health care. Effective transitional care is characterized by continuity of care, regular follow-ups, personalized care plans, client and caregiver education, medication reconciliation, and careful scheduling of appointments. It promotes improved communication between health care providers across different settings, reduces hospital readmissions, and decreases health care costs.

For the client, effective transitional care feels supportive, well-coordinated, and tailored to their unique needs. They experience a seamless transition between care settings with no unnecessary repetition of medical histories, tests, or procedures. Clients receive education about their conditions and medications, and they are encouraged to be active participants in their care, which enhances their sense of control and responsibility for their health outcomes.

CASE REFLECTION

Transistional Care

The following scenario provides more information on Mrs. Johnson from the chapter-opening scenario. Read the scenario, and then respond to the questions that follow.

Seventy-two-year-old Mrs. Johnson was hospitalized for congestive heart failure. When discharged, she was still in a fragile state, prone to potential health complications. However, through effective transitional care, Mrs. Johnson's transition from hospital to home was planned and coordinated by a dedicated team, ensuring she was not left to navigate her recovery alone. Mrs. Johnson's transitional care started with a clear and comprehensive discharge plan detailing her medications, diet, and activity levels, ensuring she understood her condition and treatment. The team explained the plan to both Mrs. Johnson and her family, giving them all a chance to ask questions and clarify the plan of care. A registered nurse followed up with Mrs. Johnson within 48 hours of discharge, answering questions and addressing any immediate concerns. The care plan included scheduled check-ups with her cardiologist and primary care physician, a visiting nurse service, and connection to a heart failure support group.

Mrs. Johnson's medication was reviewed and reconciled, reducing the risk of medication errors. She was also provided with a 24/7 contact number in case of emergency or if she had any questions about her care. Mrs. Johnson and her family felt supported and empowered, leading to her adherence to her care plan and ultimately resulting in a quicker recovery and significantly lower risk of readmission. Effective transitional care, such as the care Mrs. Johnson received, leverages the strengths of an interprofessional approach, promoting better health outcomes, improving client experience, and reducing health care costs. As the health care system moves toward a more integrated and person-centered model of health care, optimized transitional care is becoming an integral part of the journey toward better health for all.

1. Why is effective transitional care essential for clients like Mrs. Johnson, who have chronic conditions such as congestive heart failure?
2. What are some of the benefits of using an interprofessional approach to plan and coordinate transitional care? How does this approach improve client outcomes and reduce health care costs?
3. What are some potential barriers that may arise when implementing effective transitional care plans?
4. How can nurses address these barriers to ensure clients receive the best possible care?

HEALTHY PEOPLE 2030

Health Communication

Healthy People 2030 focuses on improving health communication (https://openstax.org/r/healthgovhp) so that people can easily understand and act on health information. Health information and messages are often overly complex, making them hard to understand and use. Health care providers who communicate clearly and use

methods like **teach-back** and shared decision-making can help people make informed health-related decisions. Teach-back involves asking the client or family to explain in their own words what they need to know or do about the client's health. These strategies can help improve outcomes, especially for certain groups—like people who have limited health literacy skills or speak English as a second language.

30.2 Care Transition Models

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 30.2.1 Describe care transition models.
- 30.2.2 Compare and contrast care transition models.
- 30.2.3 Describe elements of the IDEAL Discharge Planning guide for engaging the client and family in discharge planning

Care transition models are designed to facilitate the smooth movement of clients from one health care setting to another, ensuring continuity of care and improving overall client outcomes. Care transition models are systematic approaches designed to ensure seamless and safe transition of clients between different levels and settings of care. Various models have been developed to enhance transitional care, addressing specific elements like communication, client and caregiver education, medication reconciliation, and timely follow-ups.

Over time, these models have evolved in response to a need for a more client-centered approach and an aim to reduce health care costs by minimizing hospital readmissions (Earl et al., 2020). Initially, the focus of health care was primarily on acute conditions and emergencies, and client care was often uncoordinated and fragmented. In the 20th century, with advancements in medical sciences and technology, there was a rise in chronic conditions, and health care became more complex. Consequently, there was a growing recognition of the need for a more coordinated approach to client care, particularly for those moving between various care settings. In the late 20th and early 21st centuries, health care started to transition from a primarily fee-for-service model to a more client-centered approach (Coleman & Boult, 2003). This change was catalyzed by the understanding that clients often faced problems related to miscommunication, discontinuity of care, and poor follow-up after hospital discharge, which led to unnecessary readmissions.

There are several transitional care models that have been developed to improve care transitions from hospital to home. The most-used models are the Care Transitions Intervention (CTI), the Transitional Care Model (TCM), and the Better Outcomes for Older Adults through Safe Transitions (BOOST). Each model has varying components but with the same purpose in mind: bridging the care between health care settings so that clients can receive appropriate and coordinated care during the transition process.

Care Transitions Intervention

One of the earliest models to address these issues was the Care Transitions Intervention (CTI), developed by Dr. Eric Coleman (Coleman & Boult, 2003), a primary care provider. Often, Dr. Coleman did not know that his clients had been in the hospital. He also discovered his clients were receiving differing instructions from care team members or did not know whom to call with questions, and their confidence decreased with medication shifts. Often, post-hospitalization, clients became their own care coordinators—which can be overwhelming.

The CTI model empowers clients to take a more active role in their health care decisions, providing them with tools to ensure a smooth transition between care settings. This model marked a shift toward recognizing the importance of client engagement and education in health care. It involves a transition coach who encourages and supports the client to take on a central role in managing their health and health care. This model focuses on four pillars: medication self-management, dynamic client-centered record, primary care and specialty care follow-up, and knowledge of red flags that indicate worsening conditions. The intervention lasts about one month, and the coach predominantly interacts with the client by phone after initial hospital discharge.

Client Example: Mr. Smith, a 65-year-old client with COPD, is frequently hospitalized due to exacerbations. Upon his latest hospital discharge, a transition coach from the CTI program assists Mr. Smith. They work together to ensure that Mr. Smith understands his medication regimen, knows when and why he should see his health care providers, and recognizes signs that his condition is worsening. The coach, mainly via phone contact, empowers Mr. Smith to

manage his disease effectively, aiming to reduce hospital readmissions.

Transitional Care Model

Further evolution of care models came with Mary Naylor's Transitional Care Model (TCM) (Naylor et al., 2004), which centered on high-risk older adults transitioning from hospital to home. This model emphasized the use of advanced practice nurses (APRNs) to coordinate care, educate clients and caregivers, and facilitate communication among various health care providers. It is designed to ensure the health and safety of high-risk older clients. APRNs begin working with the client while they are still in the hospital and continue providing support and follow-up for a period after discharge, up to 2–3 months. TCM emphasizes client and caregiver education, promoting self-management and improving communication among health care providers.

Client Example: Mrs. Zhao, a 78-year-old client with congestive heart failure, was recently discharged from the hospital after a severe exacerbation. She has multiple comorbidities including diabetes and chronic kidney disease. She lives alone and sometimes struggles with medication management and understanding her complex medical instructions. An APRN from the TCM program visits Mrs. Zhao at home, assesses her health and home situation, and provides comprehensive care, including medication reconciliation, education on disease self-management, and arranging necessary appointments with specialists (Mai Ba et al., 2020). The APRN maintains frequent contact over the next couple of months, ensuring Mrs. Zhao's health remains stable.

Better Outcomes for Older Adults Through Safe Transitions

Better Outcomes for Older adults through Safe Transitions (BOOST) targets older adult clients who are at risk for adverse events after hospital discharge. This model prioritizes the identification of risk factors for readmission and addresses them through an individualized discharge plan. BOOST utilizes an interprofessional team that emphasizes accurate medication reconciliation, comprehensive discharge planning, and adequate client education for self-care. BOOST differs from other models in that it is embedded in the hospital and does not extend to home-based care.

Client Example: Mrs. Garcia, an 80-year-old client, was hospitalized for pneumonia. She has a history of dementia and **polypharmacy**, or taking many medications to treat her ailments and additional medications to treat medication side effects. Prior to discharge, an interprofessional team from the BOOST program identifies her risk factors for readmission, such as dementia, multiple medications, and potential for caregiver misunderstanding. They design an individualized discharge plan, ensuring accurate medication reconciliation and providing education to Mrs. Garcia and her family about her condition, medications, and necessary follow-up care.

Comparing Care Transition Models

The Hospital Readmissions Reduction Program (HRRP) of the Affordable Care Act, enacted in 2010, had a significant influence on care transition models (McIlvennan et al., 2015; Wadhera et al., 2019). In response to this legislation, hospitals became more motivated to prevent readmissions, leading to the development of a variety of transition care models. More recently, models like Guided Care and the Patient-Centered Medical Home (PCMH) have emerged, which focus on integrating care among all the client's health care providers, enhancing communication, and implementing comprehensive care plans.

The evolution of care transition models reflects a shift toward a more client-centered, integrated, and coordinated approach to health care. They are driven by a commitment to reduce health care costs, improve client outcomes, and enhance client experience. By focusing on the transition from one care setting to another, these models recognize the importance of communication, continuity, and coordination in providing high-quality health care.

Table 30.3 presents the strengths and limitations of different transitional care models.

Model	Description	Strengths	Limitations
TCM (Transitional Care Model)	This nurse-led model focuses on high-risk older adults transitioning from hospital to home. It includes comprehensive discharge planning and home follow-up.	Proven to reduce the likelihood of readmissions, lower health care costs, and improve client health outcomes	Primarily focuses on older adults and may not be applicable or scalable to all client populations
CTI (Care Transitions Intervention)	This 4-week program aims to improve skills and confidence in self-care among clients. It includes a home visit and three phone calls from a transition coach.	Empowers clients to take active roles in their care and has been shown to reduce hospital readmissions	The short duration (4 weeks) may limit the long-term impact of the intervention.
BOOST (Better Outcomes for Older Adults Through Safe Transitions)	This model reduces preventable readmissions, improves provider workflow, reduces medication-related errors, and prepares and empowers clients, families, and caregivers.	Initiative using medication reconciliation, teach-back, and the Discharge Patient Education Tool (DPET) to reduce medication-related errors	Implementing this process requires a large interprofessional team and a project team—this might not be available in all settings.
Project Re-engineered Discharge (RED) (Jack et al., 2009)	The RED intervention is founded on 12 discrete, mutually reinforcing components and has been proven to reduce rehospitalizations and yield high client satisfaction.	The RED program successfully reduced hospital utilization, improved client self-perceived preparation for discharge, and increased PCP follow-up.	The RED process involves many steps and is primarily provider driven.

TABLE 30.3 Strengths and Limitations of Transitional Care Models

Model	Description	Strengths	Limitations
Chronic Care Model (CCM) (Yeoh et al., 2018)	The CCM identifies the essential elements of a health care system that encourage high-quality chronic disease care: the community, the health system, self-management support, delivery system design, decision support, and clinical information systems.	This model can be applied to a variety of chronic illnesses, health care settings, and target populations. The bottom line is healthier clients, more satisfied providers, and cost savings.	Provider-driven and needs additional support resources in the practice; difficult to motivate clients with short consultation times
Interact Model (Ouslander et al., 2014)	The Interact Quality Improvement Program aims to reduce hospital readmissions and improve care for long-term care residents and provides tools and resources to support care transitions from hospitals to skilled nursing facilities.	Provides tools and resources for effective care transitions from hospitals to skilled nursing facilities; builds collaborative relationships between hospitals and skilled nursing facilities	Many nursing home organizations do not have the infrastructure, skills, expertise, or personnel to develop and implement a comprehensive, facility-wide quality improvement project. Some may only implement parts of the program, which may not improve the transitions of care and prevent hospital readmissions.

TABLE 30.3 Strengths and Limitations of Transitional Care Models

IDEAL Discharge Planning Guide

Discharge planning is a transitional care process that aims to ensure a smooth transition for a client from a hospital or other health care setting to their home or another facility (such as a rehabilitation center, nursing home, or hospice). This process is interprofessional, involving physicians, nurses, social workers, and others who work collaboratively with the client and their family or caregivers. In essence, the goal of discharge planning is to create a comprehensive plan, tailored to the client's individual health needs, personal circumstances, and post-discharge environment, to ensure a successful transition from the hospital to the next phase of care (see Table 30.4).

Goals of Discharge Planning	
To ensure continuity of care	Discharge planning aims to maintain the continuity of care by ensuring that the care the client receives after leaving the hospital is appropriate and effectively coordinated.
To reduce hospital length of stay and unplanned hospital readmissions	Effective discharge planning can help optimize discharge timing and reduce unnecessary delays in the discharge process, potentially reducing the length of the hospital stay. It also aims to reduce the likelihood of hospital readmission by ensuring clients have the necessary care and support after discharge.
To enhance client safety and satisfaction	The discharge process should ensure that clients understand their medication regimen, follow-up appointments, lifestyle recommendations, and signs or symptoms that should prompt a call to a health care provider, reducing the risk of post-discharge complications and improving client satisfaction.

TABLE 30.4 Goals of Discharge Planning

Goals of Discharge Planning	
To promote client autonomy and self-care	By involving clients in the discharge planning process, they can better understand their health condition and become more capable of managing their health, thus promoting autonomy and self-care.
To ensure efficient use of hospital and community resources	By facilitating a timely and effective transition of care, discharge planning can also help to optimize the use of resources in both the hospital and the community.

TABLE 30.4 Goals of Discharge Planning

The IDEAL Discharge Planning guide, launched around 2013, is part of the Agency for Healthcare Research and Quality's (AHRQ) Strategy 4: Care Transitions from Hospital to Home (AHRQ, 2017). The IDEAL acronym, standing for Include, Discuss, Educate, Assess, and Listen, reflects the main actions that should be performed by the health care team to effectively involve clients and their caregivers in discharge planning.

The goal of developing this guide was to address the need for better communication and information sharing between clients, families, and health care providers to prevent avoidable readmissions and to enhance clients' capacity for self-care at home after discharge (Figure 30.3). It aimed to involve clients and families more deeply in the discharge process, recognizing that they are essential for successful transitions from hospital to home. The guide was developed based on evidence from research and input from clients and families, health professionals, and health literacy and communication experts.



FIGURE 30.3 Registered nurse case managers coordinate referrals for clients as part of discharge planning. (credit: "Naval Hospital Jacksonville Case Manager 220921-N-QA097-030" by Deidre Smith/U.S. Navy/Flickr, Public Domain)

This approach provides a systematic way to ensure client and family involvement in the discharge planning process. Its elements are as follows:

- **I**nclude: Include the client and family as full partners in the discharge planning process. This might involve inviting them to team meetings about discharge, consulting them about their preferences and needs, and including them in key decisions about post-discharge care.
- **D**iscuss: Talk about the client's condition, treatment, and post-discharge needs in plain language, confirming understanding. Discussing the client's health and care helps the family know what to expect after discharge. This could include discussing the diagnosis, treatment plan, medication regime, follow-up appointments, and any signs or symptoms to watch for.
- **E**ducate: Educate the client and family in plain language about the client's condition, the discharge process,

and next steps at every opportunity throughout care. Use the teach-back method to ensure the client and their family understand the information.

- **A**ssess: Assess how well doctors and nurses explain the diagnosis, condition, and next steps in the care process to the client and family, and use teach-back techniques throughout. Encourage the client and family to ask questions. This step ensures that the client and family understand the information they're given, increasing the likelihood they'll be able to manage care effectively after discharge.
- **L**isten: Listen to and honor the client and family's goals, preferences, observations, and concerns. Listening means giving the client and their family the opportunity to express their concerns, ask questions, and share their preferences. This can help to ensure the discharge plan is personalized to the client's situation.

By incorporating the IDEAL approach into the discharge planning process, health care providers can better ensure that clients and families are active and engaged participants in their care. This can lead to improved health outcomes, a smoother transition from hospital to home, and lower rates of hospital readmissions.

30.3 Role of the Community Health Nurse

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 30.3.1 Describe key responsibilities and competencies of community health nurses in care coordination.
- 30.3.2 Incorporate evidence-based intervention to improve outcomes and safety during the transition of care between care areas.
- 30.3.3 Discuss strategies to improve safety and continuity of care for vulnerable clients.
- 30.3.4 Describe how the nurse can contribute to enhanced quality through care coordination and transition management.
- 30.3.5 Explain the role electronic health, mobile health, and telehealth systems play in the coordination and transition of care.
- 30.3.6 Describe a collaborative approach in coordinating care with other health care professionals and community partners.

The role of the community health nurse (CHN) in transitional care is integral to supporting clients through the often-complex process of moving between care settings, ensuring continuity of care, and promoting optimal health outcomes (see Table 30.5). While nurses do not often complete all the roles in this process, they are often the central person with the most client contact. This allows them to be sure all the areas are covered for the client.

Role	Description	Client Example
Discharge Planning	CHNs assist in developing comprehensive discharge plans, ensuring clients have the resources and support they need when transitioning from a hospital to home or another health care facility. They coordinate with physicians, social workers, and family members to ensure that the client's needs will be met after discharge.	Mr. Aguilar has been discharged from the hospital following a stroke. The CHN coordinates with the hospital team, Mr. Aguilar, and his family to create a comprehensive discharge plan that includes physical therapy appointments, home care assistance, and regular medical checkups.
Client Education	CHNs educate clients and their families about the client's condition, medications, necessary lifestyle changes, and self-care techniques. They also help them understand the care plan and what to expect during the transition.	The CHN educates Mr. Aguilar and his family about stroke recovery, including lifestyle modifications such as diet, exercise, and stress management, and taking prescribed medications.
Medication Reconciliation	CHNs play a vital role in reviewing and reconciling medications when clients move between care settings, ensuring they understand their medication regimen, and reducing the risk of medication errors or adverse events.	The CHN reviews all of Mr. Aguilar's prescribed medications, checking for potential drug interactions and ensuring Mr. Aguilar and his family understand the dosages and timing for each.

TABLE 30.5 Community Health Nurse Roles in Transitional Care

Role	Description	Client Example
Coordination of Care	CHNs help facilitate communication among the care team, the client, and their family, which is crucial for a smooth transition.	The CHN coordinates Mr. Aguilar's care, communicating with his primary care doctor, physical therapist, and home care aide to ensure a holistic approach and seamless transition to home.
Follow-Up Care	CHNs often conduct follow-up visits or calls to monitor the client's health status, ensure they're adhering to their care plan, and address any health concerns or changes in condition. These follow-ups can help prevent unnecessary hospital readmissions.	The CHN visits Mr. Aguilar at his home a week after his discharge to assess his recovery progress, ensure his adherence to the care plan, and address any new health concerns.
Home Safety Evaluations	CHNs can perform home safety evaluations, identifying potential hazards and recommending modifications to support the client's health, safety, and independence.	Upon Mr. Aguilar's return home, the CHN assesses his living environment for potential hazards like loose rugs or poor lighting that could increase his risk of falls and suggests necessary modifications.
Linkage to Community Resources	CHNs connect clients with community resources that can support their health and well-being, such as meal delivery services, transportation assistance, support groups, and rehabilitation services (Figure 30.4).	The CHN connects Mr. Aguilar with a local meal delivery service, a transportation service for his therapy appointments, and a local support group for stroke survivors.
Advocacy	CHNs advocate for clients' needs and rights during transitions, ensuring they receive the care they need, and their preferences are respected.	The CHN advocates for Mr. Aguilar's needs and preferences, such as his wish to have a family member present at medical appointments, ensuring these are communicated to and respected by the rest of his care team.
Documentation	CHNs ensure all aspects of the transition care process are documented to keep all involved parties informed and facilitate communication among health care professionals.	The CHN documents all aspects of Mr. Aguilar's transition care process, including his medical history, care plan, medication regimen, changes in health status, and interactions with other care providers, ensuring all information is up-to-date and accessible to the entire care team.

TABLE 30.5 Community Health Nurse Roles in Transitional Care



FIGURE 30.4 Community health nurses help connect clients with community resources, such as services that make it easier to access nutritious food. In this photo, a store clerk prepares to load healthy groceries into a client's car during a curbside pickup. (credit: U.S. Department of Agriculture/Flickr, Public Domain)

CASE REFLECTION

The Role of the Community Health Nurse in Transitional Care

The following scenario continues following Mrs. Johnson. Read the scenario, and then respond to the questions that follow.

Before discharge, Mrs. Johnson received education on her condition and her care plan. She also received a follow-up call from a registered nurse two days after her discharge, during which she reported feeling well and having no health or other concerns.

One week later, Mrs. Johnson's community health nurse visited her home for a follow-up visit. The nurse found that Mrs. Johnson had been experiencing shortness of breath and fatigue, which she had not reported during her follow-up call. Upon further assessment, the nurse found that Mrs. Johnson's blood pressure was elevated, and there were changes in her lung sounds. The nurse discovered that Mrs. Johnson had not been following her prescribed diet and medication regimen. The nurse notified Mrs. Johnson's physician, who readjusted the medication regimen and referred Mrs. Johnson to a registered dietitian. With appropriate care and follow-up, Mrs. Johnson's condition improved, and she was able to maintain her health and avoid readmission.

1. How might a lack of communication, such as Mrs. Johnson's failure to report her symptoms, affect the effectiveness of the transitional care plan?
2. What are some of the challenges that the community health nurse may face when conducting a home visit for clients like Mrs. Johnson? How can these challenges be addressed to ensure optimal client outcomes?
3. What strategies could be implemented to encourage client adherence to their prescribed medication and diet regimen? How can the community health nurse support clients in adjusting to their new care routines?

Community Health Nurses' Role in Care Coordination

CHNs play a vital role in care coordination. They provide health care services to individuals, families, and groups within the community, often focusing on prevention, promotion, and maintenance of health. Table 30.6 summarizes their key responsibilities and competencies in care coordination. These responsibilities require a range of competencies, including strong communication skills, leadership abilities, critical thinking, problem-solving,

adaptability, and a solid understanding of public health principles and nursing best practices.

Client Assessment	CHNs assess the health needs of individuals, families, or communities. They identify potential health risks and work toward mitigating these risks through education and direct care.
Health Education and Promotion	CHNs educate clients and community members on healthy behaviors and self-care skills, with the goal of promoting a healthy lifestyle and preventing disease. They also provide information about local resources and health services.
Care Planning and Case Management	CHNs develop and implement care plans based on assessments. They manage cases, coordinating services across different health care providers and community resources, to ensure clients receive comprehensive care that addresses their unique health needs.
Advocacy	CHNs advocate for individual and community health needs, helping clients navigate the health care system, understand their rights, and access necessary resources and services.
Collaboration	CHNs work collaboratively with other health care providers, social workers, educators, and community organizations to improve the overall health of the community. This includes attending multidisciplinary team meetings and contributing to community health strategies.
Monitoring and Evaluation	CHNs monitor the health status of clients and communities, evaluate the effectiveness of interventions, and adjust care plans as needed. They also identify trends and potential gaps in care and work to address them.
Cultural Competency	CHNs must understand and respect the diverse cultural backgrounds, beliefs, and values of their clients. They incorporate cultural considerations into care planning and delivery, fostering a more individualized and effective approach to care.
Research and Evidence-Based Practice	CHNs apply evidence-based practices and use research to inform their care strategies. They may also participate in community health research to further knowledge and improve care services.
Ethical Practice	CHNs must adhere to professional nursing ethics and maintain client privacy and confidentiality at all times.

TABLE 30.6 Role of the CHN in Care Coordination

Evidence-Based Interventions

Transition of care between different care areas is a critical time for clients, and evidence-based nursing interventions can help improve outcomes and enhance client safety during this process. Here are some interventions supported by evidence:

- Effective provider communication (universal transfer tool)
- Health information technology (continue work on interoperability and compatibility)
- Medication reconciliation
- Ensuring access to care after discharge
- Communication of health care information
- Follow-up telephone calls
- Post-discharge home visits

Effective Provider Communication

Effective communication between health care providers plays a vital role in ensuring a seamless transition for clients between different health care settings. Unfortunately, challenges arise due to incomplete health information and the absence of a universally accessible electronic health record (EHR). These limitations impede the ability of acute care providers to access records from ambulatory care and community pharmacy settings, especially when the inpatient provider differs from the primary care provider. Consequently, miscommunication can persist following discharge from the acute care setting, as the primary care provider may not receive comprehensive documentation of the client's diagnostic tests, procedures, and medication changes during hospitalization.

It is crucial to acknowledge that hospital discharge summaries have been identified as primary sources of communication errors, underscoring the need for improvements in this area (Mansukhani et al., 2015). Without adequate information during transfers, it is difficult to maintain continuity of care. The National Transitions of Care Coalition (NTOCC) has recognized the barriers to direct communication between health care providers during client transitions and supports the use of a **universal transfer tool** to facilitate the movement of clients.

A universal transfer tool can be instrumental in supporting care coordination by standardizing the exchange of client information during care transitions. This tool or form helps ensure that essential information, such as client medical history, current medications, diagnoses, and care instructions, is accurately and comprehensively communicated between different health care settings and providers (Mansukhani et al., 2015). It can facilitate efficient and effective handoffs, reducing the risk of miscommunication, medical errors, and adverse events.

Moreover, a universal transfer tool enables health care professionals to have a standardized format for documenting and transmitting critical client information, making it more accessible and understandable across different health care personnel and settings. This enhances continuity of care, enables prompt decision-making, and promotes collaborative care planning.

Medication Reconciliation

Making sure medications are reconciled accurately is crucial to the transition process. The Institute for Health Care Improvement explains that medication reconciliation involves creating a precise list of all the medications a client is taking, including the names of the drugs, their strengths, how often they are taken, and how they are administered. This list is then compared to the orders given by the health care provider during admission, transfer, or discharge.

Throughout a client's care, clinicians may stop, pause, or adjust medications that were previously prescribed to manage or optimize treatment. This makes medication reconciliation during discharge necessary to prevent errors and ensure effective communication for post-acute care. This process involves repeating the initial reconciliation done at admission right before the client is discharged or transferred to another health care setting. The medication list is checked again for accuracy and completeness, and it is shared with the next level of care along with any new prescriptions and written instructions.

The accuracy and completeness of the discharge medication list largely depend on how accurately and completely the medication reconciliation was done at the time of admission. If the list of medications taken at home is incomplete or inaccurate, discrepancies will arise after discharge. For example, studies have found that clients' discharge medication lists frequently contain at least one discrepancy (Caleres et al., 2020; Lalonde, 2008; Mueller et al., 2023). Tomlinson et al. (2020) noted that interventions that best support older clients' medication continuity are those that bridge transitions; these also have the greatest impact on reducing hospital readmission. Interventions that included self-management, telephone follow-up, and medication reconciliation activities were most likely to be effective. Medication reconciliation activities are particularly important as having incorrect information can lead to inappropriate transitions of care and is a significant cause of rehospitalizations among older adults (Figure 30.5).



FIGURE 30.5 Medication reconciliation is an important part of care coordination. (credit: "Naval Branch Health Clinic Jacksonville Pharmacy 211014-N-QA097-300" by Deidre Smith/U.S. Navy/Flickr, Public Domain)

Access to Care after Discharge

Caregivers must ensure that clients have access to necessary medications and durable medical equipment such as nebulizers, walkers, wheelchairs, and home oxygen. It's also crucial for clients to properly fill, pick up, and take their medications. Weir et al. (2020) found that almost half of all clients did not adhere to some or all changes made to their medications at hospital discharge and that clients who did not adhere to any of their medication changes had a significantly higher risk of adverse events compared to those who did.

Access to a pharmacy is also important for clients to adhere to their medication regimen after discharge. Research has shown that fewer clients obtained their medications when given a prescription compared to when they were given the medications directly during a hospital visit. There are programs that aim to improve medication access and reduce readmission rates. For example, the Medication REACH program provided uninsured clients with free medications for the first 30 days after discharge. A study conducted at Einstein Medical Center in Philadelphia found that clients in the program had a lower readmission rate compared to those in the control group (American Society of Health-System Pharmacists and American Pharmacists Association, 2013).

Some health care facilities have started delivering medications to clients at their bedside before discharge (Katz et al., 2020). This approach, along with follow-up phone calls a few days later, has been found to significantly reduce readmission rates compared to standard care (Katz et al., 2020). Bedside medication delivery can help overcome initial barriers to medication access and address any insurance or medication-related issues before the client leaves the hospital.

Communication of Health Care Information

Sharing health care information with clients and their families can be challenging due to various factors like physical limitations (e.g., hearing, vision, or cognitive impairments) and low health literacy. It's important to note that only around 12 percent of Americans have a high level of health literacy, and more than one-third struggle with basic health tasks, such as understanding prescription labels (Lopez et al., 2022). Individuals with poor health literacy or cognitive impairments may have difficulty reading and comprehending written health information. This can lead to problems like not following discharge instructions or medication regimens as well as failing to follow up with health care providers after leaving the hospital.

To address these challenges, health care providers and CHNs should allocate sufficient time to interact with clients and identify any barriers they may face, such as low health literacy or cognitive deficits. This allows providers to find effective ways to overcome these barriers and improve communication with these clients.

Follow-Up Telephone Calls and Home Visits

Programs like Medication REACH and BOOST have introduced follow-up telephone calls to improve transitions of care. These calls focus on important aspects like the client's medication list, any side effects experienced, their overall health, and any challenges they face in filling their prescriptions. The timing of these calls varies, ranging from 24 to 72 hours after discharge. The aim is to promptly address client needs, resolve any issues during the transition between care settings, and assess their ability to self-manage their health. However, a systematic review found that follow-up telephone calls alone didn't have a significant impact on readmission rates (Crocker et al., 2012). Van Spall et al. (2019) found that making the follow-up part of a patient-centered intervention that included follow-up calls, nurse-led home visits, and interprofessional clinics were associated with a reduction in readmissions and death in heart failure clients.

Many programs, including the Veterans Affairs (VA) and Accountable Care Organizations (ACO), have also adopted post-discharge home visits by different health care providers (Pedersen et al., 2017). These visits allow providers to monitor vital signs, check laboratory test results, manage medication usage, provide additional health education, and identify new problems. Additionally, telehealth services (or telemedicine) can remotely monitor a client's health status at home and transmit this information to health care providers. This enables adjustments to drug regimens as necessary, potentially preventing rehospitalizations. Srivastava et al. (2019) found that personalized and client-centered home telehealth monitoring in heart failure clients was successful in reducing admissions without an increase in outpatient visits or hospital readmission in VA clients (Figure 30.6). During the COVID-19 pandemic, studies highlighted a novel and sustained shift to telehealth that they found reduced barriers to accessing high-value services for older adults during transition periods like discharge to home (Anderson et al., 2021).



FIGURE 30.6 A nurse with the Naval Medical Center San Diego conducts virtual client visits. (credit: Erwin Jacob V. Miciano/U.S. Navy/Flickr, Public Domain)

Strategies to Improve Safety and Continuity of Care for Vulnerable Clients

Care coordination is a critical aspect of health care for vulnerable clients, particularly those with behavioral health needs and those in need of end-of-life/palliative care. Effective care coordination strategies are essential to ensure that these clients receive timely and appropriate services that meet their unique needs. Strategies such as collaborative care models, care teams, and the use of EHRs can help facilitate effective care coordination, ultimately resulting in improved outcomes for vulnerable clients.

Clients transitioning for end-of-life or palliative care services require specialized care that addresses their physical, emotional, and spiritual needs. Effective care coordination for these clients involves ensuring access to appropriate services, including hospice care, counseling services, and pain management. It also involves identifying and

addressing cultural and spiritual needs to ensure that care is provided in a compassionate and respectful manner (Reeves et al., 2020).

Transitional care for behavioral health discharges poses a challenge due to the vulnerable period that clients experience during the transition from acute mental health inpatient to community care. Clients discharged from behavioral health hospitals may experience additional risks and anxiety during this period as they adjust to new environments and face potential challenges in accessing follow-up care. Additionally, clients with mental health conditions may have complex care needs that require specialized support and resources, which may not be readily available in the community.

Evidence-based discharge planning for behavioral health clients involves using strategies that have been shown to improve client outcomes and reduce readmissions. This includes conducting a comprehensive needs assessment, collaborating with clients and their families to develop a client-centered care plan, coordinating care and services with community providers, and ensuring timely follow-up appointments and communication between inpatient and outpatient providers (National Institute of Mental Health, 2019).

Effective discharge planning also involves providing clients with education and resources to manage their condition, including medication management and crisis support, and involving family members or other caregivers in the transition process (National Alliance for Suicide Prevention, 2019). Research has shown that evidence-based discharge planning can improve client outcomes and reduce readmissions for clients with mental health conditions (Pincus et al., 2016). By providing clients with the support and resources they need to manage their condition, evidence-based discharge planning can help clients successfully transition from inpatient to outpatient care and improve their overall quality of life.

Quality Through Care Coordination and Transition Management

The main goal of transitional care models is to create a care plan that meets the specific needs of each client and provides continuous care across different settings. This involves organizing practical arrangements, educating clients and their families, and coordinating services during transitions.

Nurses are often at the forefront of quality improvement initiatives. They can actively participate in interprofessional teams, contribute to the development of care protocols and standards, and provide valuable feedback based on their firsthand experiences. Nurses are directly responsible for monitoring and assessing clients and performing immediate interventions to reduce risk or prevent medical complications. Nurses also oversee other care providers, such as certified nursing assistants (CNAs), licensed practical nurses (LPNs), patient care technicians, caregivers, and more. A nurse educates clients and family members regarding post-hospital care before discharge. Nurses' keen observations and drive for client safety at each of these intersections can contribute to quality improvement.

Quality improvement initiatives around transitions of care must be interprofessional and can be led by nurses. The areas for improvement can be around the care planning and include the following steps that could be optimized:

- Assessment: The transitional care nurse, who specializes in caring for clients with chronic conditions like heart disease, stroke, COPD, cancer, and diabetes, begins by evaluating the client's health status and behaviors, the level of care and support needed, and their health goals.
- Accumulating Data: The nurse collects all the necessary information and enters it into the health care provider's electronic medication administration record (eMAR) system. This data is used to develop a personalized care plan for the client.
- Access: Authorized health care professionals like doctors, nurses, and social workers can access the care plan to provide evidence-based daily care to ensure the client's optimal health upon discharge.
- Appointments: The transitional care nurse continues to provide care even after the client leaves the hospital. This includes home visits or remote appointments for about 12 sessions, ensuring a smooth transition from the hospital to the home environment.
- Adjustments: The nurse remains available via telephone for clients and their families to seek additional medical advice when needed. This is crucial for identifying changes in the client's health condition and making necessary adjustments to their care.

The box below provides an example of a quality improvement project.

QUALITY IMPROVEMENT PROJECT EXAMPLE

A standardized discharge process for clients transitioning from the hospital to their homes or other care settings is one example of a quality improvement project that focuses on transitional care. This project aims to improve communication, reduce readmission rates, and ensure seamless transitions for clients.

1. Project Goal: The goal is to develop and implement a standardized discharge process that promotes effective communication, client education, and coordination of care during the transition from hospital to home or other settings.
2. Interprofessional Team: A team of health care professionals, including nurses, physicians, case managers, pharmacists, and quality improvement experts, is formed to lead the project.
3. Gap Analysis: The team conducts a thorough assessment of the current discharge process to identify areas for improvement. This may involve reviewing existing protocols, interviewing staff, and analyzing client feedback.
4. Development of Standardized Protocols: Based on the findings, the team develops standardized protocols and guidelines for the discharge process. This includes clear instructions for medication reconciliation, client education materials, follow-up appointment scheduling, and communication with primary care providers.
5. Staff Education and Training: The team provides comprehensive education and training sessions for health care staff involved in the discharge process. This ensures that all team members understand their roles, responsibilities, and the new protocols.
6. Implementation and Monitoring: The standardized discharge process is implemented and closely monitored for effectiveness. Key metrics to monitor may include readmission rates, client satisfaction scores, and adherence to the protocols.
7. Continuous Improvement: Regular meetings and feedback sessions are conducted to evaluate the project's progress and identify areas for further improvement. The team gathers input from clients, families, and staff to refine the process and address any issues that arise.
8. Data Analysis and Reporting: The team analyzes the data collected throughout the project to assess its impact on readmission rates, client outcomes, and health care utilization. The findings are reported to concerned parties, including hospital leadership and relevant departments.
9. Sustainability and Spread: Once the project has demonstrated positive results, efforts are made to sustain the standardized discharge process and spread it to other departments or health care facilities within the organization. This may involve creating implementation toolkits, sharing best practices, and providing ongoing support and education.

By focusing on improving the transitional care process through standardized discharge protocols, this quality improvement project aims to enhance client safety, reduce readmissions, and promote better coordination and continuity of care during care transitions.

HIT in Care Coordination

Evidence-based approaches using health information technology (HIT) to aid in care coordination have been developed (Marcotte et al., 2015). HIT may provide a more timely and seamless transfer of information between providers and health care settings compared with traditional paper forms. Electronic health records (EHRs) are helpful tools that can enhance providers' access to health information, reduce redundant tests and repetitive medical histories, and improve communication between health care professionals.

Health information technology, including EHRs, mobile health (mHealth), and telehealth systems, plays a vital role in enhancing the coordination and transition of care.

- *EHRs:* EHRs are digital versions of clients' medical records that provide a centralized repository of health information. They enable health care providers across different settings to access and share client data, ensuring seamless coordination and transitions. EHRs allow for quick retrieval of vital information, such as medical history, medication lists, lab results, and allergies, facilitating more efficient and informed decision-making.

- *Care Coordination Platforms:* HIT platforms designed for care coordination allow health care providers to collaborate and exchange information about a client's care plan, progress, and treatment goals. These platforms enable real-time communication among the care team, supporting effective care coordination and reducing the risk of miscommunication or duplicated efforts.
- *mHealth Applications:* Mobile health applications, accessible on smartphones or tablets, offer clients and health care providers various tools to manage and monitor health. These applications can facilitate self-care and client engagement by providing educational resources, medication reminders, symptom tracking, and appointment scheduling. Clients can share data collected through mHealth apps with their health care providers, ensuring continuity and coordination of care (Debon et al., 2019).
- *Telehealth Systems:* Telehealth involves the use of technology to provide remote health care services, including virtual consultations, remote monitoring, and telemedicine. Telehealth systems enhance care coordination and transitions by enabling health care providers to remotely assess and monitor clients, consult with specialists, and offer follow-up care. This reduces the need for unnecessary hospital visits and facilitates ongoing care from the comfort of clients' homes.
- *Interoperability and Data Exchange:* Interoperability refers to the ability of different health care systems and technologies to exchange and interpret data seamlessly. HIT systems that support interoperability allow for the secure sharing of client information between different health care providers and settings. This facilitates care coordination and transitions, as relevant data can be accessed by authorized personnel at the right time, leading to more informed decision-making and continuity of care.
- *Decision Support Systems:* HIT systems often incorporate decision support tools that provide evidence-based guidelines, alerts, and reminders to health care providers. These tools help ensure adherence to best practices and enhance care coordination by supporting consistent and standardized care across different settings. Decision support systems can prompt health care providers with relevant information during care transitions, reducing the likelihood of errors or omissions.

THEORY IN ACTION

Transitions of Care

Access multimedia content (http://openstax.org/books/population-health/pages/30-3-role-of-the-community-health-nurse)

As clients transition from one health care provider to another, their information needs to follow them. Health information exchanges (HIE) enable the fast, private, and secure movement of client information between health care organizations. The video "Transitions of Care" highlights how the Massachusetts statewide HIE (Mass HIway) enables this process.

Watch the video, and then respond to the following questions.

1. How does the implementation of a health information exchange (HIE) impact the continuity of care for clients as they transition between health care providers? Consider the benefits and challenges associated with this system in ensuring that client information follows them seamlessly.
2. In what ways does an HIE contribute to client safety and reduce medical errors during transitions of care? Reflect on the potential risks and benefits of sharing client information electronically across health care organizations.
3. How can the use of an HIE improve the overall efficiency and effectiveness of health care delivery? Explore the potential impact of HIEs on reducing duplicate testing, enhancing care coordination, and facilitating better-informed clinical decision-making.

Collaborative Approaches in Coordinating Care

A collaborative approach in coordinating care with other health care professionals and concerned parties is essential to improve client outcomes and quality of care. Collaboration involves the integration of knowledge, skills, and expertise from multiple health care providers, including physicians, nurses, pharmacists, and other allied health professionals. According to Reeves et al. (2017), collaboration in health care requires a shared understanding of client needs, effective communication, mutual trust, and respect among health care providers.

One example of a collaborative approach in health care coordination is the use of interprofessional teams. Interprofessional teams involve health care providers from different disciplines working together to provide comprehensive care to clients. According to Bachynsky (2019), interprofessional teams can improve client outcomes, reduce health care costs, and enhance the quality of care. Interprofessional teams can include physicians, nurses, pharmacists, social workers, and other health care professionals who work collaboratively to develop and implement care plans for clients (Figure 30.7).



FIGURE 30.7 Physical therapists are frequently part of the interprofessional team providing comprehensive care to clients. This photo shows two physical therapists consulting about a client. (credit: "Pacific Partnership 2022 Side-by-Side Physical Therapy Exchange Aboard USNS Mercy 220801-N-AU520-1045" by Jacob Woitzel/U.S. Navy/Flickr, Public Domain)

Another example of a collaborative approach in health care coordination is the use of care coordination platforms (see the box below). Care coordination platforms provide a centralized location for health care providers to communicate and collaborate on client care (Duan-Porter et al., 2020). These platforms can improve care coordination and reduce the risk of miscommunication or duplication of services. Clients can also use care coordination platforms to communicate with their health care providers, access educational resources, and manage their health information.

COLLABORATIVE CARE COORDINATION EXAMPLE

John Smith is a 65-year-old client who recently had a heart attack and is being discharged from the hospital. His care requires collaboration among different health care workers for effective care coordination.

1. Hospital Physician: The hospital physician who treated John during his hospital stay communicates John's medical condition, treatment plan, and medication prescriptions to the care team for a smooth transition.
2. Cardiologist: John's cardiologist, who specializes in heart conditions, reviews John's medical history, test results, and treatment plan. They collaborate with the care team to ensure appropriate follow-up care, including medication adjustments, lifestyle modifications, and further cardiac evaluations if necessary.
3. Primary Care Physician (PCP): John's PCP plays a vital role in his care coordination. The PCP is notified about John's hospitalization and collaborates with the hospital physician and specialists to receive updates on John's condition, treatment, and recommendations for ongoing care.
4. Pharmacist: The pharmacist ensures that John understands his prescribed medications, including dosage, frequency, and potential side effects. They collaborate with the care team to resolve any medication-related concerns, such as drug interactions or allergies, and coordinate medication refills.

5. Home Health Nurse: A home health nurse visits John after his discharge to assess his recovery, provide education on post–heart attack care, monitor vital signs, and ensure proper wound care if necessary. The nurse collaborates with the hospital physician and PCP to report any changes in John's condition and adjust the care plan as needed.
6. Physical Therapist: A physical therapist works with John to develop an exercise and rehabilitation program tailored to his condition. They collaborate with the care team to monitor John's progress, make appropriate adjustments to the therapy plan, and ensure continuity of care.
7. Case Manager/Social Worker: The case manager or social worker acts as a coordinator, ensuring effective communication among all health care team members. They assess John's social and support needs, provide resources for community services, and coordinate follow-up appointments and tests.

Chapter Summary

30.1 The Effects of Care Coordination and Care Transitions on Outcomes

Transitional care is as a process that supports clients as they move between different health care settings, ensuring continuity and safety. Factors contributing to poor transitions of care outcomes include communication breakdown, care fragmentation, limited health literacy, socioeconomic factors, and health disparities. Transitional care promotes seamless and well-coordinated care, reducing medication errors, preventing readmissions, and enhancing client engagement. By understanding the importance of effective care coordination and transitions, health care professionals can strive to optimize client outcomes and overall health care system performance.

30.2 Care Transition Models

Care transition models are frameworks designed to facilitate smooth transitions of care. Commonly used models include CTI, TCM, and BOOST. Each model aims to ensure that clients can receive appropriate and coordinated care during the transition process. Discharge planning helps ensure a smooth transition for a client from a hospital or other health care setting to their home or another facility. The IDEAL Discharge Planning guide engages clients and their families, emphasizing the importance of client-centered care, effective communication, and education.

30.3 Role of the Community Health Nurse

CHNs play a crucial role in improving outcomes and safety during care transitions through the incorporation of evidence-based interventions. CHNs may use a variety of strategies to enhance safety and continuity of care for clients transitioning from behavioral health hospitalization to outpatient care, with each emphasizing the importance of a comprehensive and client-centered approach. CHNs contribute to enhanced quality through care coordination and transition management by promoting effective communication, client engagement, and seamless transitions. Utilizing electronic health, mobile health, and telehealth systems facilitates coordination and transitions of care. A collaborative approach in coordinating care with other health care professionals and concerned parties ensures comprehensive and coordinated client care.

Key Terms

care coordination the deliberate organization and integration of health care services across different providers and settings to facilitate the delivery of holistic and continuous care to individuals and populations

care fragmentation the division and disconnection of health care services and providers, leading to disjointed and uncoordinated client care

care transition models strategic frameworks designed to improve the coordination and continuity of health care as clients transfer between different locations or different levels of care

care transitions critical junctures in health care where individuals move from one health care setting to another or experience changes in their care needs

discharge planning a transitional care process that aims to ensure a smooth transition for a client from a hospital or other health care setting to their home or another facility (such as a rehabilitation center, nursing home, or hospice)

medication reconciliation the process of comparing a client's medication orders to all the medications that the client has been taking

polypharmacy taking many medications to treat ailments and additional medications to treat medication side effects

teach-back teaching technique that involves asking the client or family to explain in their own words what they need to know or do about the client's health to ensure the client and their family understand the information

transition of care the movement of clients from one health care setting to another or from one level of care to another

transitional care a comprehensive and coordinated set of actions designed to ensure the safe and smooth transfer of clients, encompassing a range of services and interventions aimed at supporting individuals as they move from one health care provider or facility to another or from one stage of care to another, such as from hospital to home or from acute care to rehabilitation

universal transfer tool tool or form that helps ensure that essential information, such as client medical history, current medications, diagnoses, and care instructions, is accurately and comprehensively communicated between different health care settings and providers

Review Questions

1. Which transition of care intervention would the community health nurse perform when a client is discharged from the hospital to home?
    a. Assisting the client with activities of daily living
    b. Administering medications in the home setting
    c. Performing medication reconciliation
    d. Transporting client to medical appointments

2. Which condition does the nurse recognize as increasing the risk of a poor outcome during a transition of care?
    a. A client being discharged from hospital to home
    b. A client with an identified social support system
    c. A client with limited health literacy
    d. A client with one provider

3. The home care nurse is performing medication reconciliation with a client during the first home visit following hospital discharge. Which statement by the client requires follow-up by the nurse?
    a. "I understand why the doctor has stopped some of my medications."
    b. "I have not seen that blue pill before."
    c. "I set alarms on my phone to remind me to take my medications."
    d. "I use a daily pill box to set up my medications."

4. The nurse, caring for a client who will be transferred from the hospital to a rehabilitation facility following a stroke, is using a care transition model to facilitate the transfer. Which explanation for the use of a care transition model will the nurse provide to the nursing student working the client?
    a. "Care transition models predict client outcomes during care transitions."
    b. "Care transition models guide health care providers in the decision-making process."
    c. "Care transition models support the coordination of care between health care settings."
    d. "Care transition models focus on client education during care transitions."

5. Which action will the nurse take when planning discharge for a client using the IDEAL Discharge Planning guide?
    a. Use accurate medical terms when educating the client and family about discharge instructions
    b. Engage clients and their families in the discharge planning process
    c. Ask the client if they have any questions to evaluate understanding of the discharge teaching
    d. Provide the client with a standardized discharge plan of care

6. Using the Transitional Care Model (TCM), which action would the nurse take when preparing an 81-year-old client with diabetes, hypertension, and heart failure for discharge home from the hospital following an exacerbation of heart failure?
    a. Provide the client with a standardized plan of care to follow
    b. Identify risk factors for readmission and develop an individualized discharge plan
    c. Refer the client to a discharge coach to encourage client self-management
    d. Contact the advanced practice nurse to coordinate the discharge from hospital to home

7. The community health nurse is facilitating transitional care for an older adult client between the hospital and home. Which action is a priority responsibility of the community health nurse in this transition of care?
    a. Providing direct client care in the home setting
    b. Educating clients about health promotion and prevention
    c. Coordinating care among health care providers
    d. Administering medication in the home

8. A nurse is concerned about the increasing rate of hospital readmissions in clients due to not filling or picking up prescriptions at the pharmacy after discharge from the hospital. Which intervention should the nurse

recommend to the hospital leadership to improve adherence to the medication regimen after discharge?

a. Calling prescriptions in to the client's pharmacy at discharge
b. Handing client prescriptions for home medications during discharge instruction
c. Providing client with home medications at discharge
d. Telling the client that medication adherence will reduce readmissions to the hospital

9. Which intervention by the community health nurse improves care for clients during the transition from behavioral health hospitalization to outpatient care?

a. Ensuring effective communication among health care providers
b. Reducing the number of providers involved in the client's care
c. Requiring medications to be taken under direct observation by a nurse
d. Attending follow-up appointments with the client

10. Which health information system would the nurse utilize to promote self-management in a client with diabetes who has been having difficulty controlling blood glucose levels?

a. Decision support systems
b. Mobile health applications
c. Care coordination platforms
d. Electronic health records

CHAPTER 31

Caring for Populations and Communities in Crisis



FIGURE 31.1 Recognizing a community in crisis is not always as simple as reading the writing on the wall. Working in the community, nurses are uniquely positioned to recognize the signs of crisis and advocate for their clients' needs. (credit: modification of work "!!!" by Eric Chan/Flickr, CC BY 2.0)

CHAPTER OUTLINE

31.1 Trauma-Informed Care
31.2 The Mental Health Crisis
31.3 The Opioid Epidemic and Substance Use Disorders
31.4 Human Trafficking
31.5 Refugees

INTRODUCTION One morning in a suburban Texas emergency department (ED), Eileen, a self-identified 16-year-old female, presented for treatment, clutching her abdomen and complaining of pain. Following an assessment, the ED nurse could not find anything wrong with Eileen. When told she could go home, Eileen said if she went home, she'd "kill myself by taking a whole bottle of extra-strength Tylenol." Since Eileen could not be discharged if her life was in danger, she was moved to a bed in the hospital's inpatient mental health unit, where psychiatric nurse Sally Strong was in the middle of her shift. Nurse Strong scrolled through Eileen's chart to see if she had any previous mental-health visits or a history of depression. Finding none, Nurse Strong noticed that Eileen had recently been to several nearby EDs, each time receiving treatment for sexually transmitted infections (STIs) and various types of substance misuse (marijuana, cocaine, ecstasy, and bath salts). A few months earlier, Nurse Strong's hospital implemented a protocol that helped nurses identify victims of sex trafficking. Eileen's repeated ED visits for STIs and substance misuse suggested to Nurse Strong that Eileen might be one of them, and her instincts were right. She sat with Eileen and gently shared that she noticed her medical history, asking, "Is someone making you do things

you don't want to do?" Without looking up, Eileen explained that a man was forcing her to have sex with other people and to use drugs to make her "spaced out enough to be able to do it." Eileen did not have to say the exact words for Nurse Strong to know Eileen was being trafficked. Nurse Strong followed the hospital protocol for reporting. She referred Eileen to a safe house and connected her with resources to help her build a new life.

A community crisis can be extremely challenging for the people directly affected. It can include individuals, local families, workers, businesses, industries, and the community. As nurses, listening to the voices of the people impacted by the crisis is essential to build trust, foster resilience, and facilitate recovery. One only needs to watch the global news media to recognize an exponential number of communities in crisis—from both natural and human causes. This ongoing expansion requires a simultaneous evolutionary adaptation in nursing education, practice, research, and policy to ensure that all nurses—from front-line professionals to researchers—have the baseline knowledge, skills, abilities, and autonomy to protect populations at greatest risk and improve the readiness, safety, and support of the nursing workforce.

31.1 Trauma-Informed Care

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 31.1.1 Define trauma-informed care (TIC).
- 31.1.2 List the six key elements to TIC.
- 31.1.3 Demonstrate how the nurse can utilize TIC during a crisis.

Trauma-informed care (TIC) is a therapeutic approach that acknowledges trauma's long-lasting emotional, neurological, psychological, social, and biological effects on a person's present and future health. For many people, adverse childhood experiences (ACEs (https://openstax.org/r/violenceprevention)) ultimately hinder emotional, social, and even physical health, even if they seem unrelated to present problems (Centers for Disease Control and Prevention [CDC], 2023a). Trauma-informed care is unique as it reimagines the client-therapist relationship as a partnership. The nurse or therapist provides support throughout a client's journey of healing and growth, using six guiding principles that ensure every interaction is mindful and aware. However, first and foremost, at the core of trauma-informed care is the tenet of *primum non nocere,* which translates from Latin as "first, do no harm" (Sommers-Flanagan & Sommers-Flanagan, 2021).

Six Key Elements to Trauma-Informed Care

The CDC and the Substance Abuse and Mental Health Services Administration (SAMHSA, 2020) collaborated to develop six principles for TIC that negate the potential for re-traumatizing the client. These core principles are safety, trustworthiness and transparency, peer support, collaboration and mutuality, empowerment and choice, and cultural, historical, and gender issues (Table 31.1).

Principle	Definition
Safety	• Providing nonjudgmental, unconditional, positive regard during all interactions and encouraging client expression of safety needs, values, and perspective to ensure physical and emotional safety.
Trustworthiness and transparency	• Making tasks clear and maintaining appropriate boundaries. For example, demonstrating ongoing acceptance and empathy while encouraging a client's complex reflections of feeling. • Continuously clarifying the role of the clinician while providing autonomy of the client.
Peer support	• Promoting both peer support and self-help services that provide safety and hope.

TABLE 31.1 The Six Principles of Trauma-Informed Care (See CDC, 2020b.)

Principle	Definition
Collaboration and mutuality	• Partnering and leveling power among the client as consumer and health care as provider. • Allowing the client control over treatment and recovery. • Examples include eliciting input, asking permission, and asking questions.
Empowerment and choice	• Promoting client-centered recovery with an understanding of power differentials. • Using shared decision-making, choice, and goal setting. • Using self-advocacy and the client's unique concept of recovery. • Examples include a focus on change talk, a focus on client strengths and values, evocative questions, and an emphasis on client personal choice and autonomy.
Cultural, historical, and gender issues	• Offering services sensitive to the gender, culture, and unique background of the client. • Examples include emphasis on personal choices and control and focus on client autonomy.

TABLE 31.1 The Six Principles of Trauma-Informed Care (See CDC, 2020b.)

A printable infographic of "6 Guiding Principles to a Trauma-Informed Approach" is available from the CDC and SAMHSA here (https://openstax.org/r/infographics).

The CDC and SAMHSA note that a trauma-informed approach is not accomplished through a single technique or checklist. A trauma-informed approach requires constant attention, caring awareness, sensitivity, and possibly a cultural change at an organizational level. An internal organizational assessment and quality improvement, as well as engagement with community partners, will help to embed this approach, which can be augmented with organizational development and practice improvement. However, with thoughtful intention by the nurse, it is easy to generalize and apply the six core principles across the various clinical settings where clients may receive treatment.

The Role of Nurses and Trauma-Informed Care in Clinical Practice

A nurse can apply the principles of TIC in daily interactions with all clients. TIC requires a nurse to be mindful, sensitive, and responsive; to be sensitive to the impact of trauma on others and oneself; to understand and use tools to support self and others during times of stress; and to identify and support the system change needed to reduce re-traumatization. In alignment with the principles of safety, respect, and trust, nurses can ask themselves three simple questions as a first step to applying a trauma-informed lens to their practice (Fleishman et al., 2019):

Safety: Does this cultivate a sense of safety?

Respect: Am I, and are others, showing respect?

Trust: Does this build trust?

The nurse can mindfully employ strategies in their daily practice to engender trustworthiness, transparency, empowerment, and the other facets of TIC; for example (Fleishman et al., 2019):

- Introduce yourself and your role in every client interaction: When a client understands who you are and your role in their care, they can feel empowered to be more actively engaged in their own care.
- Use open and nonthreatening body positioning: Using nonthreatening body positioning helps prevent the threat-detection areas of the brain from taking over, which helps clients stay regulated.
- Ask before touching: Asking permission before you touch clients gives them a choice and empowers them to have control over their body and physical space.
- Protect client privacy: Protect client privacy and safety by ensuring that the client desires those present to hear about their care. This ensures compliance with the HIPAA Privacy Rule (U.S. Department of Health and Human Services [HHS], 2022).

- Use plain language and teach-back: Using clear language and teach-back empowers clients with knowledge and understanding about their care.

For a health care system to thoroughly implement and embody TIC, policies, procedures, and culture need to be trauma-informed. Nurses who utilize a trauma-informed approach in clinical practice can enhance job satisfaction, reduce risk for burnout, and improve client experiences and outcomes (Wolotira, 2023).

TRAUMA-INFORMED CARE

Access multimedia content (http://openstax.org/books/population-health/pages/31-1-trauma-informed-care)
In this video, nurse Cheryl Martin describes trauma-informed care in her community as a responsive approach to providing care for individuals who have experienced trauma.

Watch the video, and then respond to the following questions:

1. How would you distinguish positive stress, tolerable stress, and toxic stress?
2. What are some examples of how people respond to toxic stress? Why might each individual respond differently to a similar situation?
3. How would you describe a "safe environment"? What is the nurse's role in creating a safe environment for clients?
4. Cheryl Martin makes the point that only the client is the "expert" about their own disease. Why is this viewpoint essential for providing TIC?

CASE REFLECTION

Practicing Trauma-Informed Care

Read the scenario, and then respond to the questions that follow.

Nellie, 21, is a survivor of interpersonal violence. After successfully transitioning from an abusive household to a shelter, Nellie lives independently in rent-assisted housing. She is employed as a waitress at a local restaurant. However, she struggles with chronic headaches and neck pain from past abuse by her former boyfriend, who repeatedly beat her and tried to strangle her while he was intoxicated. Since becoming a "survivor," Nellie frequently visits the local clinic for follow-up appointments related to these past injuries. After enduring this physical and emotional abuse, she has misused substances for both anxiety and pain. Nellie wants her physical and emotional pain to go away and wants the nurse to convince the doctor to write her prescriptions because she has been "cut off" and finds the "talk therapy" that they want her to go to to be too "scary and emotional to deal with."

1. Why is it important for Nellie to feel that she is in a safe space? What can the nurse do to facilitate this?
2. How might the nurse use a TIC approach to open a dialogue with Nellie to find out what she really needs?
3. What alternate pain-management techniques might the nurse suggest for Nellie?

31.2 The Mental Health Crisis

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 31.2.1 Describe the state of mental health in the United States.
- 31.2.2 Examine the origins of the U.S. mental health crisis.
- 31.2.3 Describe why mental health conditions are increasing worldwide.
- 31.2.4 Assess the effect of stigma, prejudice, and discrimination against people with mental illness.
- 31.2.5 Discuss the nurse's role in addressing the mental health crisis to uphold nursing's societal mission.

In the United States, mental health illnesses have become an epidemic—considered a **mental health crisis**—with nearly one in five people (47.1 million) diagnosed with a mental health condition, constituting an increase of 1.5 million from 2022 (Mental Health America [MHA], 2023). Rates of suicidal ideation (SI), also called suicidal thoughts

or ideas, a broad term used to describe a range of contemplations, wishes, and preoccupations with death and suicide, are highest among youth, especially those who identify as LGBTQ+ (Harmer et al., 2023; SAMHSA, 2020; The Trevor Project, 2022). In September 2020, over half of all 11- to 17-year-olds reported having thoughts of suicide or self-harm more than half of or nearly every day of the previous 2 weeks. According to MHA (2023):

- Nearly 78,000 youth reported experiencing frequent suicidal ideation, including nearly 28,000 LGBTQ+ youth.
- Over half (54.7 percent) of adults with a mental illness reported that they do not receive treatment, totaling over 28 million individuals.
- Almost a third (28.2 percent) of all adults with a mental illness reported that they were not able to receive the treatment they needed.
- 42 percent of adults with mental illness reported they were unable to receive necessary care because they could not afford it.
- 10.8 percent (over 5.5 million) of adults with a mental illness are uninsured.
- 59.8 percent of youth with major depression do not receive any mental health treatment.

In the United States, there are an estimated 350 individuals for every one mental health provider; however, these figures may overestimate active mental health professionals, as they may include providers who are no longer practicing or accepting new clients (MHA, 2023).

THE STATE OF MENTAL HEALTH IN AMERICA REPORT

Mental Health America (MHA), the nation's leading national nonprofit dedicated to the promotion of mental health, well-being, and illness prevention, publishes the annual *State of Mental Health in America Report*, providing a yearly snapshot of the prevalence of mental health conditions and a baseline for future legislation on mental health parity (MHA, 2023). Operating nationally and in communities across the United States, MHA advocates for closing the mental health equity gap while increasing nationwide awareness and understanding through public education, direct services, tools, and research. The State of Mental Health in America Report ranks all 50 states and the District of Columbia based on 15 mental health prevalence and access measures for youth and adults.

Explore the Ranking of the States 2022 (https://openstax.org/r/mhanational) to find information about your state, and then respond to the following questions.

1. Where does your state rank in terms of the prevalence of mental illness?
2. Where does your state rank for the prevalence of adults with substance use disorder in the past year?

You may also download the printable report The State of Mental Health in America 2023 (https://openstax.org/r/mhanationalo).

The Origins of the U.S. Mental Health Crisis

According to a White House briefing, "our country faces an unprecedented mental health crisis among people of all ages." Specifically, "two out of five adults report symptoms of anxiety or depression. And, Black and Brown communities are disproportionately undertreated—even as their burden of mental illness has continued to rise" (The White House, 2022). Even before the COVID-19 pandemic, rates of depression and anxiety were rising. Loneliness and social isolation during the pandemic exacerbated these trends, with increasing numbers of children reporting thoughts of suicide and self-harm.

Mental health services in the United States are insufficient to address this crisis. A majority of Americans (76 percent) report that they consider mental health as important as physical health, and more than half of Americans (56 percent) seek mental health services (National Council for Mental Wellbeing, n.d.). Americans seeking these services tend to be younger, with lower incomes, and often from military backgrounds. Among Americans seeking treatment, 96 million (38 percent) have had to wait over a week for mental health treatments. A National Council for Mental Wellbeing study found that a large percentage of Americans want to seek treatment for mental health issues for themselves or loved ones but have not done so in part because they do not know where to go. What's more, 53 million American adults (21 percent) have wanted to see a mental health professional but were unable to for

reasons outside of their control including lack of insurance, an available provider, transportation (private or public), and child care, as well as geographical isolation, conflicting work or school schedules, or domestic violence issues. Gen Z (born between 1997 and 2012) and millennial (born between 1981 and 1996) Americans are less sure about available resources for mental health services compared to older generations. The National Council for Mental Wellbeing study suggests that these younger generations are also more likely to find it difficult to distinguish legitimate mental health resources online, turning instead to unreliable social media resources, including Facebook, YouTube, and Twitter, for information (National Council for Mental Wellbeing, n.d.).

HEALTHY PEOPLE 2030

Mental Health and Mental Health Disorders

A focal point for the Healthy People 2030 initiative is addressing public health priorities and challenges related to mental health and mental health disorders (https://openstax.org/r/healthypeopleob). Recognizing that about half of all people in the United States will be diagnosed with a mental disorder at some point in their lifetime, *Healthy People 2030* focuses on the prevention, screening, assessment, and treatment of mental disorders and behavioral conditions. The Mental Health and Mental Disorders objectives also aim to improve health and quality of life for people affected by these conditions.

The Ongoing Global Expansion of a Mental Health Crisis

Behavioral health disorders are on track to become the number-one cause of disability worldwide, surpassing all other illnesses. For example, one in four people globally experience mental disorders, more than those with cancer, diabetes, or heart disease (Clubhouse International, 2023). Half of those with mental disorders begin to show signs of the disease by age 14 but often take more than 10 years to get treatment (National Alliance on Mental Illness [NAMI], 2023). Worldwide, suicide has become a global epidemic with 90 self-directed deaths every hour, which calculates to nearly 2,200 people/day, 800,000/year. Ninety percent of these suicides are directly related to mental health disorders (World Health Organization [WHO], 2019, 2022a).

Globally, mental illness (MI) now accounts for 30 percent of the overall burden of the health care industry, yet only 3 percent of the world's health care budget goes toward providing mental health care services (WHO, 2016). This imbalance highlights the need for nurses to be savvy in mental health assessment and treatment strategies.

The Effects of Stigma, Prejudice, and Discrimination on Mental Health

The social stigma associated with mental health continues to be a barrier to seeking help (American Psychiatric Association, 2023). In this context, stigma refers to negative attitudes that disparage a person with a mental health condition. This stigma causes many individuals to delay seeking treatment. According to a National Council for Mental Wellbeing study (n.d.), nearly one-third of Americans, or 31 percent, have worried about others judging them when they told them they have sought mental health services, and over a fifth of the population, or 21 percent, have lied to avoid telling people they were seeking mental health services. Stigma is an especially acute problem among younger Americans. Among respondents in a National Council for Mental Wellbeing study, 49 percent of Gen Z respondents (born between 1997 and 2012), 40 percent of millennial respondents (born between 1981 and 1996), 30 percent of Gen X respondents (born between 1965 and 1980), and 20 percent of baby boomer respondents (born between 1946 and 1964) indicated that they have worried about others judging them when they say that they have sought mental health services.

Stigma often comes from lack of understanding or fear. Inaccurate or misleading representations of mental illness contribute to both of those factors. A review of studies on stigma shows that while the public may accept the medical or genetic nature of a mental health disorder and the need for treatment, many people still have a negative view of those with mental illness.

According to the American Psychiatric Association (2023), researchers identify different types of stigma:

- **Public stigma** involves the negative or discriminatory attitudes that others have about mental illness.
- **Self-stigma** refers to the negative attitudes, including internalized shame, that people with mental illness have about their own condition.

- **Institutional stigma**, which is more systemic, involves government and private organizations' policies that intentionally or unintentionally limit opportunities for people with mental illness. Examples include lower funding for mental illness research or fewer mental health services than other health care services.

General **prejudice**, a preconceived negative opinion not based in facts, toward people with MI may predispose people to dislike and/or disrespect others with a specific diagnosis, such as schizophrenia or depression (American Psychiatric Association, 2023). Prejudiced attitudes toward people with MI range from discomfort with having them as a neighbor to avoiding someone because of their diagnosis. Researchers studying prejudice and MI identified four dimensions underlying prejudice: *fear/avoidance* (fear of people with MI and the desire for social distance from them), *unpredictability* (belief that the behavior of people with MI is unpredictable), *authoritarianism* (belief in the need to control people with MI), and *malevolence* (lack of benevolent attitudes and belief in inferiority of people with MI) (Kenny et al., 2018).

Discrimination, unfair treatment based on irrelevant characteristics, is an ongoing challenge for those diagnosed with MI. Americans are familiar with the idea that refusing employment to a person based on their gender, race, or sexuality is unfair and amounts to sexism, racism, or homophobia. Although discrimination based on MI can be more subtle, it negatively affects the individual's quality of life and career. According to the Americans with Disabilities Act National Network (2023), discrimination based on mental illness includes:

- Terminating an employee based on the discovery of their MI
- Assigning an employee bad or inconvenient shifts or assignments
- Making insulting jokes about the MI
- Failing to make reasonable accommodations for the employee with MI
- Offering only poor working conditions
- Not allowing the employee to miss work for medical appointments
- Not allowing the individual enough time to complete tasks

Stigma, prejudice, and discrimination directly affect individuals with MI and the loved ones who support them. In some communities, MI stigma is a barrier to obtaining mental health services. For example, in some Asian cultures, seeking professional help for MI may be counter to values of strong family, emotional restraint, and avoiding shame (NAMI, 2019). Distrust of the mental health care system prevents individuals from certain racial and ethnic groups from seeking care; this is often seen in Black communities (African American Wellness Project, 2023).

CONVERSATIONS ABOUT CULTURE

Mental Health = Health for Diverse Communities

Access multimedia content (http://openstax.org/books/population-health/pages/31-2-the-mental-health-crisis)
This video provides an overview of mental health and mental illness, describing some persistent myths about the causes of mental illness and the role culture plays in seeking treatment.

Watch the video, and then respond to the following questions.

1. What is the difference between mental health and mental illness?
2. What are two commonly held cultural myths regarding mental health?
3. What two effects can mental health stigma have on a person's life?

The Nurse's Role in Addressing the Mental Health Crisis

Nurses are in a unique position to recognize mental health concerns, as they are often the first to connect with a client and can swiftly establish rapport with them, starting all interactions using the steps of the TIC Approach. As trusted advocates, nurses can provide the compassion that clients may need at a difficult time and can help them access treatment. Nurses must be aware of the potential impact of stressors on their clients and how these may manifest in a crisis. Population health nursing focuses on the common good of the population in addition to individual client health. The public health/community health nurse may work with individuals, families, and groups to implement changes to mental health services that affect an entire community or population.

Nurses use a systematic process to assess health status, identify resources, and develop programs to improve

mental health in communities. The first step is to create a therapeutic nurse-community (as client) relationship. The nurse establishes an understanding of who the community as client is, what is occurring in their lives, and what resources are available by assessing demeanor, beliefs, and support systems to determine if a specific health issue or environmental situation is progressing to a crisis state. Crisis intervention is an important role for the nurse and health care team, as they can work swiftly to develop effective resolutions. During the crisis intervention process, the client develops new skills and coping strategies, resulting in change. A crisis state is time-limited, usually lasting several days but no longer than 4 to 6 weeks. Using the nursing process in crisis resolution planning, nurses implement therapeutic interventions based on the stage of the crisis to assist the individual.

The foundational goals of crisis intervention include (Caplan, 1964):

- Identification, assessment, and intervention
- Swift return to a prior level of functioning
- Lessening negative impact on future mental health

Various factors can influence an individual's ability to resolve a crisis and return to equilibrium, such as realistic perception of an event, adequate situational support, and adequate coping strategies to respond to a problem.

THE ROOTS OF HEALTH INEQUITIES

Social Determinants of Health and Mental Health Crisis in the United States

Social determinants of health (SDOH) are conditions in which people are born, grow, learn, work, play, and age that affect their health risks and outcomes. Social factors affect risk for mental illnesses and substance use disorders, as well as health outcomes of persons with these disorders. The NAMI article *Ways We Can Address the Social Determinants of Mental Health* (https://openstax.org/r/namiorgBlo) provides a useful overview for conceptualizing the relationship between the social determinants of health and mental health and provides recommendations for health care professionals. A focus on social determinants of health can lead to better mental health outcomes, including preventing mental illness. All nurses have a role to play in addressing the SDOH. This article provides several examples of social determinants of health and potential ways to address them.

(See Pointe, 2020.)

SAFE-T: SUICIDE ASSESSMENT FIVE-STEP EVALUATION AND TRIAGE FOR CLINICIANS

The community health nurse can use the following guidelines to perform a brief suicide assessment that uses a five-step evaluation and triage plan to identify risk factors and protective factors, conduct a suicide inquiry, determine risk level and interventions, and develop a treatment plan. Suicide assessments should be conducted at first contact with all mental health clients and at repeated intervals for those with any subsequent suicidal behavior, increased suicide ideation, or pertinent clinical change; if being used for inpatients, this assessment would additionally be conducted prior to increasing unsupervised privileges and at discharge.

1. Identify Risk Factors: Note those that can be modified to reduce risk
2. Identify Protective Factors: Note those that can be enhanced
3. Conduct Suicide Inquiry: Suicidal thoughts, plans, behavior, and intent
4. Determine Risk Level/Intervention: Determine risk; choose appropriate intervention to address and reduce risk
5. Document: Assessment of risk, rationale, intervention, and follow-up

Read all of the detailed teaching guidelines and find all of the resources at Suicide Assessment Five-Step Evaluation and Triage (https://openstax.org/r/samhsago).

Nurses can also download SAMHSA's Suicide Safe mobile app (https://openstax.org/r/samhsagoa).

31.3 The Opioid Epidemic and Substance Use Disorders

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 31.3.1 Describe the United States opioid epidemic.
- 31.3.2 Explain how the opioid epidemic arose in the United States.
- 31.3.3 Identify how stigma impacts people with opioid use disorder and health outcomes.
- 31.3.4 Apply the role of the nurse upholding nursing's mission to society in addressing the opioid epidemic.

Substance use disorders (SUDs) are chronic, relapsing, potentially deadly conditions that occur when the recurrent problematic use of substances impairs an individual's health and ability to function to meet vocational, academic, social, or personal responsibilities (CDC, 2022e; Stone et al., 2021). SUDs range in severity, duration, and complexity and are classified as mild, moderate, or severe based on the criteria defined in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5) (Stone et al., 2021). SUDs and other mental health disorders can be co-occuring (NIMH, 2023). The National Institute of Mental Health has identified three possibilities to explain why SUDs and other mental disorders may occur together:

- Common risk factors (e.g., genetics, stress, trauma, social and environmental factors)
- Brain changes in people with mental disorders, which may heighten the rewarding effects of substance use
- Substance use may trigger changes in brain structure and function, making an individual more likely to develop a mental disorder (NIMH, 2023)

Accidental drug overdose is now the leading cause of accidental deaths in the U.S, largely due to the opioid epidemic (CDC, 2022d). **Opioids** accounted for 75 percent of all drug overdoses deaths in 2020 (CDC, 2022a). Synthetic opioids have caused overdose deaths, primarily linked to fentanyl manufactured by illicit means, increasing the risk of overdose (CDC, 2020a). The risk of overdose is high with any use of illicitly manufactured fentanyl, as fentanyl is up to 50 times stronger than heroin (Congressional Research Service [CRS], 2022). This risk is increased among individuals who are **opioid naïve**, meaning they are not receiving opioids on a daily basis, or those whose tolerance to opioids has decreased following periods of abstinence (Baldwin et al., 2021).

Roots of the Opioid Epidemic

The CDC describes the rise of the opioid epidemic as a series of three waves corresponding with overlapping factors that accelerated surges in deaths from substance use in the United States (Figure 31.2) (CDC, 2022f).

1. First wave (1990s): Health care professionals' increased prescribing of prescription opioids, including natural opioids, semi-synthetic opioids, and methadone, resulted in overdose deaths which steadily grew through the year 2016 (CDC, 2022f).
2. Second wave (2007): Rapid increases in Mexican production led to greater availability of low-cost heroin to the United States (CRS, 2022). In 2015, overdose deaths involving heroin surpassed the number of deaths related to opioid pills (CDC, 2022f).
3. Third wave (2013): Illicitly manufactured fentanyl became available (CDC, 2022f; CRS, 2022). By 2016, fentanyl and tramadol overdose deaths in the United States surpassed those from heroin and prescription drug misuse (CRS, 2022). Illicitly manufactured fentanyl continues to evolve, with its widespread availability in combined formulations including heroin, counterfeit pills, and cocaine (CDC, 2022f).

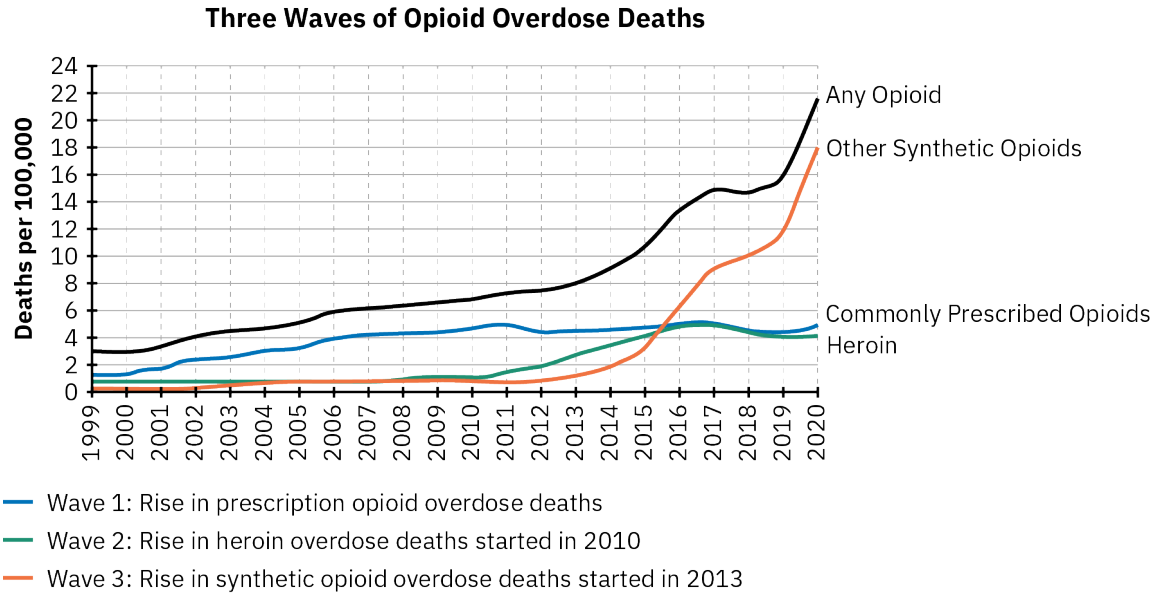
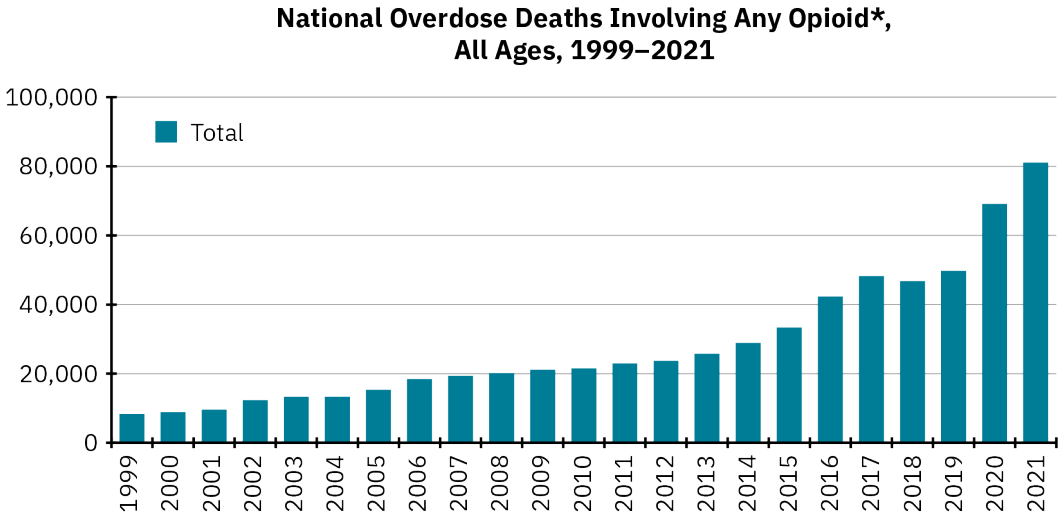


FIGURE 31.2 The rise in opioid overdose deaths in the United States can be outlined in three distinct waves. (data source: CDC, 2022f; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

U.S. drug overdose deaths accelerated at the height of the COVID-19 pandemic (2020 to 2022), as social isolation, unemployment, and reduced access to drug treatment and recovery support services damaged mental health (CDC, 2020). The stress and social isolation of the pandemic led to increased substance use (Figure 31.3) (Baldwin et al., 2021; CDC, 2020). Synthetic opioid deaths continue to climb, while opioid pill and heroin overdose deaths have slackened but remain at high levels (CDC, 2022f; Ciccarone, 2019).



*Among deaths with drug overdose as the underlying cause, the "any opioid" subcategory was determined by the following ICD-10 multiple cause-of-death codes: natural and semi-synthetic opioids (T40.2), methadone (T40.3), other synthetic opioids (other than methadone) (T40.4), or heroin (T40.1).

FIGURE 31.3 U.S. overdose deaths involving any opioid increased dramatically from 1999 to 2021. (data source: National Center for Health Statistics, 2021; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

HEALTHY PEOPLE 2030

Addiction

Recognizing that SUDs are linked to multiple health problems and result in overdose and death, Healthy People 2030 provides evidence-based resources and strategies to prevent SUDs (https://openstax.org/r/healthypeoplea) at the school, family, and community levels.

The Impact of Stigma on SUDs

Addressing stigma is critical to combating the opioid crisis, as stigma is attached to SUDs and addiction (McGinty & Barry, 2020). Research demonstrates a pervasive stigma in U.S. culture that addiction is a personal choice, reflecting a lack of willpower and a moral failing (McGinty & Barry, 2020). Research has demonstrated that people identified with SUDs are perceived as more blameworthy and dangerous compared to individuals labeled with mental illness (van Boekel et al., 2013). Such stereotypes often lead to less helping behavior and more avoidance of people with drug addiction than of those with mental illness (van Boekel et al., 2013). Stigmatizing beliefs predispose negative attitudes about addiction and target certain races and socioeconomic classes (McGinty & Barry, 2020). Bias may assume an individual's poor personal choices led to their SUD instead of social factors such as poverty, a history of trauma, or structural barriers to accessing effective treatments (McGinty & Barry, 2020).

Studies show people with SUDs face negative labeling and stereotyping, status loss, and discrimination (McGinty & Barry, 2020; National Institute on Drug Abuse [NIDA], 2023b). This stigma can discourage people who need help from seeking care (NIDA, 2023b). The language that people, including health care professionals, use to describe SUDs can contribute to stigma and discrimination against people with these conditions (NIDA, 2023b). Changing the culture, attitudes, and practices around substance use is essential to lasting health care reform (HHS, 2016). This includes creating a society where people who need help feel comfortable seeking it and where health care professionals and population health nurses treat clients with SUDs with the same level of compassion and care as they would clients with any other chronic disease. It also means facilitating a mindset that everyone can offer the care and support needed to ensure a meaningful difference in someone's recovery (HHS, 2016).

THEORY IN ACTION

Stigma and Substance Use Disorder

Access multimedia content (http://openstax.org/books/population-health/pages/31-3-the-opioid-epidemic-and-substance-use-disorders)

This American Heart Association video discusses the need to destigmatize drug use to minimize the negative effects of discriminatory and inaccurate perceptions on individuals with SUDs and related conditions.

Watch the video, and then respond to the following questions.

1. What are some factors that influence the stigma of SUDs?
2. How can nurses decrease barriers to care for individuals with SUDs?
3. What innovative strategies can nurses develop to eliminate stigma in their organizations or personal interactions with clients with SUDs?
4. Reflect on your feelings, attitudes, and experiences with individuals with SUDs and describe how you can promote change in destigmatizing SUDs.

Addressing the Opioid Crisis

The opioid crisis affects Americans of all ages, ethnicities, socioeconomic classes, and geographic areas. With the notable increase in Americans dying from opioid-involved overdoses, multiple legal, social, and public health efforts have ensued to curb opioid misuse and drug-related overdose deaths (CRS, 2022). Collaborative multidisciplinary strategies must address barriers to care, effective legislation and regulation, equitable evidence-based interventions, and awareness and education initiatives among communities nationwide.

SUDs Prevention

Prevention strategies at the school, family, and community levels are key to reducing SUDs, with interventions to accelerate treatment to reduce opioid-related deaths (ODPHP, n.d.-a). The CDC outlines six principles and five strategic priorities rigorously applied to research and evaluation projects to reduce overdoses and substance use–related harms. Nurses can apply these guidelines by promoting evidence-based strategies to ensure the delivery and implementation of effective methods to prevent and reduce overdose and substance use–related harms for diverse audiences and settings (CDC, 2022c). To strengthen efforts to reduce drug overdoses, public health nurses can build multidisciplinary partnerships to collaborate with public safety and community

organizations at national, state, and local levels (CDC, 2022c). See Table 31.2.

The CDC's Six Guiding Principles to Address the Overdose Crisis	
1. Promote Health Equity	Ensure equitable opportunity to prevent overdose and substance use–related harms by resolving health disparities related to the overdose crisis. Promote interventions that advance health equity in all communities.
2. Address Underlying Factors	Identify harmful and protective factors to better design interventions to address the overdose crisis, while attending to health disparities and inequities.
3. Partner Broadly	Form broad and diverse partnerships as a foundation of preventing overdose and substance use–related harms that include opportunities to develop, coordinate, and implement targeted strategies to prevent harm.
4. Take Evidence-Based Action	Promote evidence-based action to ensure the delivery of effective methods for preventing and reducing overdose and substance use–related harms that are translated and adapted for diverse populations.
5. Advance Science	Build the evidence base for what is most effective to end the overdose crisis by: • advancing science through supporting public health surveillance • identifying risk and protective factors • developing and evaluating prevention strategies • ensuring effective communication strategies that are adapted for diverse audiences
6. Drive Innovation	Promote the generation, implementation, evaluation, and widespread adoption of new and innovative ideas to address the overdose crisis.

TABLE 31.2 The CDC's work is guided by six principles to address the overdose crisis (See CDC, 2022d).

The CDC's prevention framework includes five strategic priorities (https://openstax.org/r/drugoverdose) in response to the overdose crisis:

- Monitor, Analyze, and Communicate Trends
- Build State, Tribal, Local, and Territorial Capacity
- Support Providers, Health Systems, Payors, and Employers
- Partner with Public Safety and Community Organizations
- Raise Public Awareness and Reduce Stigma

Government Efforts

Federal, state, and local governments have mandated legal and policy initiatives to curb opioid misuse and drug-related overdose deaths in the United States (CRS, 2022). Congress has enacted laws that prevent the overprescribing and misuse of opioids, reduce capabilities for domestic diversion and illicit trafficking, and curtail foreign supply with sanction efforts (CRS, 2022). The federal government has also increased the appropriation of funds to expand the availability of substance use prevention, treatment, and recovery services (CRS, 2022). Federal funding supports evidence-based initiatives to reduce opioid use, such as medication-assisted treatment (MAT), peer recovery networks, and harm-reduction strategies, such as needle exchange programs and the distribution of naloxone to reverse opioid overdoses (CRS, 2022). Community efforts are discussed further in the next section.

Community Efforts

The community plays a crucial role in the public health response to the opioid epidemic (Worcester County Health Department, 2019). The SAMHSA publication (2022) Community Engagement: An Essential Component of an Effective and Equitable Substance Use Prevention System (https://openstax.org/r/samhsagov) outlines the community's role in reducing substance misuse. Communities can increase participation in these efforts by schools and community agencies and provide educational programs targeting high-risk, vulnerable individuals and

populations using community resources (Figure 31.4). Local boards of education have piloted multidisciplinary instructional units on prescription opioids and heroin with middle-school students, teaching them how opioids and heroin affect the brain, its chemistry, and the societal impacts of addiction (Worcester County Health Department, 2019). Such approaches are promising prevention strategies to maximize harm reduction (HHS, 2016).



FIGURE 31.4 As part of a recovery program, this Navy veteran in Wisconsin began creating his own art after failing to find photos or images that enabled him to express his feelings and emotions. (credit: "Sketching A Path Toward Recovery" by Benjamin Slane/Flickr, Public Domain)

Other examples of community efforts include prescription drug monitoring programs (PDMPs), which have reduced opioid prescribing, multiple provider episodes ("doctor shopping"), and opioid-related overdose deaths in states where they are mandated. Free sterile needle and syringe programs and other support services, such as counseling and testing for sexually transmitted infections (STIs), have dramatically reduced disease transmission. For example, studies have demonstrated that needle/syringe exchange programs effectively reduce HIV transmission and do not increase rates of community drug use (HHS, 2016).

Naloxone is an FDA-approved opioid antagonist medication that effectively reverses opioid overdose (HHS, 2016). Education and the distribution of naloxone to at-risk individuals and their families, public health nurses, emergency medical technicians, police officers, other first responders, and community-based opioid overdose prevention programs has saved countless lives (HHS, 2016).

In addition to financially investing in community-based efforts, urban areas are improving access to treatment and housing by engaging and supporting impacted communities (Syed, 2023). For example, Philadelphia has increased the availability of permanent housing opportunities to support people experiencing homelessness at different stages of recovery and piloted the first licensed mobile wound-care van in Pennsylvania by expanding mobile outreach teams citywide (Syed, 2023).

In contrast, rural communities experience a disproportionately high burden from the opioid crisis (Palombi et al., 2019). An effective grassroots approach to rural community engagement involves collaborative teams composed of community members, public health professionals, university faculty, law enforcement, and medical professionals, among others, that convene from the bottom up through community coalitions and forums (Palombi et al., 2019). Coalitions in Minnesota have raised awareness and galvanized community efforts around diverse topics including substance misuse, syringe exchanges, and naloxone distribution (Palombi et al., 2019). As depicted in the video, America Addicted (https://openstax.org/r/communityoverwhelmed), the ongoing challenges of the opioid crisis are overwhelming community efforts to curb opioid overdoses. A collaborative government and community effort is needed to create substance-free communities that address social determinants of health (Palombi et al., 2019).

THE ROOTS OF HEALTH INEQUITIES

Social Determinants of Health, Disparities, and Substance Use

Research is ongoing to explore how the interaction of biological and social factors may contribute to an individual's increased vulnerability to be at risk for developing SUDs (Amaro et al., 2021). Chronic exposure to stressors such as poverty, food and housing insecurity, racism, and health inequities may underpin a maladaptive stress response, resulting in physical dependence and SUDs (Amaro et al., 2021). This article (https://openstax.org/r/sciencedirectc) from the journal *Neuropharmacology* explores how the stress of these social determinants of health play a critical role in creating vulnerability to substance use (Amaro et al., 2021).

(See Amaro et al., 2021.)

SUDs Treatment

Individuals with SUDs have historically received treatment through mental health services or substance use disorder treatment programs (HHS, 2016). As discussed, the demand in the United States for mental health services often exceeds the supply (Kuntz, 2022). Increasingly, primary or general health care practices are involved in delivery of treatment (HHS, 2016). Increasing nonopioid pain management of minor procedures, like dental rehabilitation, and of health conditions, like muscle strains, can minimize opioid exposure and dependency. The most effective treatment for opioid use disorders is medication-assisted treatment (MAT), which can combine pharmacologic agents and counseling or behavioral therapy and other support services (HHS, 2016). Successful MAT programs for opioid addiction have been shown to decrease overdose deaths, be cost-effective, reduce transmissions of HIV and hepatitis C related to IV drug use, and moderate associated criminal activity (HHS, 2016).

MEDICATIONS FOR OPIOID USE DISORDER

Access multimedia content (http://openstax.org/books/population-health/pages/31-3-the-opioid-epidemic-and-substance-use-disorders)

This National Institute on Drug Abuse video describes medications for opioid use disorder (MOUD) and how they work. These medications can support recovery and improve health by reducing cravings, easing withdrawal symptoms, and possibly reversing an opioid overdose (NIDA, 2021). Pharmacotherapy for SUDs can be used alone or as part of a larger treatment plan (NIDA, 2021). These medicines are safe and effective and can save lives (NIDA, 2021).

Watch the video, and then respond to the following questions.

1. Which medication is commonly used in treatment programs for substance use disorders to produce a noneuphoric state and to replace opioid use?
2. Which medication is most appropriate for the treatment of a client with SUDs after the opioids have been completely cleared from their body?
3. Why must a community health or public health nurse be familiar with the different medication options to treat opioid use disorder?

The Nurse's Role in Addressing the Opioid Epidemic and Substance Use Disorders

Because nurses practice in various direct-care, care-coordination, leadership, and executive roles, they are uniquely situated to help clients and their families understand the treatment options for SUDs (ANA, 2018). Nurses can screen for early identification of risk factors surrounding SUDs and assist with nonopioid pain management and alternative medication modalities, regional anesthetic interventions, surgery, psychological therapies, rehabilitative/physical therapy, and complementary and alternative medicine (CAM) (ANA, 2018). As educators and client advocates, nurses can champion sustainable harm-reduction programs linked to positive outcomes and lobby for health policies and regulations that promote equitable distribution and availability of high-quality health care services. Through awareness, education, early identification, evidence-based interventions, research, interdisciplinary collaboration, and political advocacy, nurses possess the leadership skills, knowledge, care, and capabilities to address this public health crisis.

CLIENT TEACHING GUIDELINES

What to Do for a Suspected Overdose

It may be hard to tell whether a person is high or experiencing an overdose. If you are unsure, treat it like an overdose—you could save a life.

1. Call 911 immediately.*
2. Administer naloxone, if available.
3. Try to keep the person awake and breathing.
4. Lie the person on their side to prevent choking.
5. Stay with the person until emergency assistance arrives.

*Most states have laws that may protect a person who is overdosing, or the person who called for help, from legal trouble.

(See CDC, 2023c.)

31.4 Human Trafficking

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 31.4.1 Define human trafficking.
- 31.4.2 Differentiate between labor trafficking and sex trafficking.
- 31.4.3 Examine national human trafficking statistics.
- 31.4.4 Describe tactics traffickers use to control their victims.
- 31.4.5 Discuss how to recognize a victim of human trafficking and how to safely intervene.
- 31.4.6 Explain the nurse's role in addressing human trafficking to uphold nursing's mission to society.

According to the Department of Homeland Security, **human trafficking** (HT) involves using force, fraud, or coercion to obtain labor or a commercial sex act (USDHS, 2022). The national Blue Campaign (https://openstax.org/r/bluecampaign) to End Human Trafficking (2023) refers to HT as "the business of stealing freedom for profit." Every year, millions of men, women, and children are trafficked worldwide, including in the United States. HT can happen in any community, and victims can be any age, race, gender, or nationality. Language barriers, fear of their traffickers, and/or fear of law enforcement frequently keep victims from seeking help, which often makes human trafficking a hidden crime (U.S. Department of Justice, 2019). Human trafficking has been called the fastest-growing criminal industry in the world. If one thinks of these victims in the same manner as a predator does, *as a product or commodity*, the rapid increase makes sense. For example, a person can be sold for a sex act numerous times, while a drug or weapon can only be sold once. The internet has facilitated the rapid, exponential expansion of human trafficking (United Nations Office on Drugs and Crime, 2021). Human trafficking is committed against a person's will, and the economic sectors that profit the most include agriculture, restaurants, manufacturing, domestic work, entertainment, hospitality, and the commercial sex industry.

According to UNICEF (2017), human trafficking is the only industry in which the supply and demand are the same thing: human beings. High demand drives supply. Increasing demand from consumers for cheap goods incentivizes corporations to find cheap labor, often forcing those at the bottom of the supply chain to exploit workers. Increased demand for commercial sex—especially with young people—incentivizes commercial sex venues, pornography, and prostitution to recruit and exploit children. Traffickers target vulnerability, and systemic inequalities and disparities make certain groups more vulnerable to exploitation. Mass forced displacement (such as from war, natural disasters, religious persecution, or economic collapse), conflict, extreme poverty, lack of access to education and job opportunities, violence, and harmful social norms like child marriage are all factors that push individuals into trafficking situations. Traffickers look for people who are living in poverty, are desperate, lack legitimate job options, lack educational opportunities, and/or are looking for a way to escape violence (U.S. Department of Justice [DOJ], 2019; USDHHS, n.d.; UNICEF, 2017).

The Difference Between Labor Trafficking and Sex Trafficking

The Trafficking Victims Protection Act (TVPA) of 2000 (https://openstax.org/r/justicegov) defines the crime of **sex trafficking** as the "recruitment, harboring, transportation, provision, obtaining, patronizing, or soliciting of a person for the purpose of a commercial sex act in which a commercial sex act is induced by force, fraud, or coercion, or in which the person induced to perform such act has not attained 18 years of age" (22 U.S.C. § 7102(11)(A)). In another major criminal industry, **labor trafficking**, individuals are compelled against their will to provide work or service through the use of force, fraud, or coercion. Traffickers frequently target vulnerable populations, such as children, individuals without lawful immigration status, those with debts, and those who are isolated, impoverished, or disabled of any race, religious affiliation, gender identity, or socioeconomic background. Victims of labor trafficking are rarely able to seek help. Victims may be hindered by language barriers or physically unable to seek help if their employer restricts and monitors their movements. U.S. citizens, foreign nationals, and women, men, and children of any race, religious affiliation, gender identity, or socioeconomic background can be victims of forced labor (HHS, n.d.; DOJ, 2022). Certain risk factors may make some individuals more vulnerable to forced labor than others, including (Department of Homeland Security, 2022b):

- Unstable immigration status
- Language barriers
- Poverty and lack of basic needs like food, shelter, and safety
- The psychological effects of a recent or past trauma
- Lack of social support systems such as friends, family, and community
- Physical or developmental disabilities

Common types of labor trafficking include people forced to work as domestic servants, farmworkers coerced through violence to harvest crops, or factory workers held in inhumane conditions with little to no pay. In the United States, domestic work is the most common form of labor trafficking (International Labour Organization [ILO], 2023; Department of Homeland Security, 2022b).

Examining National Human Trafficking Statistics

Based on the criminal nature of human trafficking and its subsequent underreporting, it is challenging to establish reliable statistics on its true prevalence in the United States. The hidden nature of the crime reduces the quality and quantity of available data and complicates efforts to identify individual victims. For these reasons, data and statistics may not reflect the full nature or scope of the problem.

The International Labour Organization (ILO) and the Walk Free Foundation, in partnership with the International Organization for Migration (IOM), released *Global Estimates of Modern Slavery* (https://openstax.org/r/iloorgwcmsp) in September 2022. This report estimates that, at any given time in 2021, approximately 27.6 million people were in forced labor. Of these, 17.3 million were exploited in the private sector, 6.3 million in forced commercial sexual exploitation, and 3.9 million in forced labor imposed by the state. The definition of forced labor used in this report is based on ILO Forced Labour Convention, 1930 (No. 29), which states in Article 2.1 that forced labor is "all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily" (ILO, 2022).

Tactics Used by Sex Traffickers

Sex traffickers recruit victims in the United States in shopping malls, junior high and high schools, foster homes, group homes, courthouses, restaurants and bars, bus stations, concerts, parks, libraries, and social networking websites (Figure 31.5). Caregivers should be aware that one of the most common ways that traffickers access children is through the use of social media sites like Facebook and Instagram (U.S. Department of State, 2023).



FIGURE 31.5 Human trafficking occurs in all areas of a community, often in plain sight. (See Blue Campaign, 2023; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Traffickers are experts at finding moments when people are vulnerable, working the angles, manipulating reality, and leveraging fears. The methodical, intentional process of identifying and manipulating victims is called **grooming**. It is the most common way that people—adults and children—wind up in sex trafficking situations. Sex trafficking rarely begins with a violent abduction. While every situation is different, the overall grooming process usually involves the following steps:

- Targeting the victim
- Gaining their trust
- Meeting their needs
- Isolating them from social supports
- Exploiting their weaknesses
- Maintaining control of their actions

Using the grooming process, a trafficker gains full control over their victim and manipulates them into cooperating in their own exploitation. While spotting the grooming process from outside the relationship can be difficult, knowing and understanding the three types of traffickers/pimps—Romeo, gorilla, and CEO—could help prevent future victimization (ARK2Freedom, 2022; Switch 2023).

Romeo pimps capitalize on the victim's need to feel loved, be seen, and feel desired. They use the "boyfriending" technique, romancing the victim and promising to fill their voids and vulnerabilities, encouraging the victim's loyalty. Although they may use physical violence, Romeo pimps maintain control of their victim through psychological manipulation. They may cut the victim off by moving them away from family and friends and taking away their phone and other means of communication. The Romeo pimp is the most common tactic used when manipulating a potential victim into human trafficking. This method is frequently employed to lure minors, particularly runaway children, children from foster homes, or children who feel unwanted, abandoned, or rejected by their caregivers, such as LGBTQ+ youth.

Gorilla pimps fit the stereotypical image depicted in Hollywood movies. These pimps flaunt their wealth and control their victims through physical violence and force. Gorilla pimps often use money and drugs to lure their victims and

extort those already in unstable situations. This is the most brutal type of pimp and the opposite of a Romeo pimp in that it involves no staged love or affection. Instead, gorilla pimps use routine violence to recruit and trap people in sex trafficking, making it clear that a victim's job is to engage in sex for payment and failure to do so will result in severe consequences, usually involving physical and sexual abuse.

CEO pimps conduct their operations as they would a legitimate business. They often own a legal business to cover up their crimes. CEO pimps often look like average business executives. They are entrepreneurs of the sex trade and may keep books or engage in other legal and illegal endeavors for profit.

HUMAN TRAFFICKING, EXPLAINED

Access multimedia content (http://openstax.org/books/population-health/pages/31-4-human-trafficking)
This video provides an overview of the pimps of human sex trafficking and the different tactics they use to groom potential victims.

Watch the video, and then respond to the following questions.

1. What are two examples of vulnerabilities that pimps might identify and use to lure in potential victims?
2. What are the three types of pimps? How are they different?
3. How might a pimp use social media to traffic victims?

The Nurse's Role in Addressing Human Sex Trafficking

Health care workers, including nurses, must be trained to recognize sexual slavery. Human trafficking will continue as long as there is demand for its victims. Health care encounters with nurses may be one of the only channels through which a victim is identified—for example, in the emergency department (ED), health care clinic, or primary care setting. Proper nurse education can lead to potential identification and intervention. Victims who are in a clinic or ED may rely on a nurse to ask the right questions at the right time. A nurse may be the only other human contact they experience in months or years, depending on their situation.

Unless they watch for signs and clues, a nurse may not recognize a victim. This is especially true if the abuser acts protective and caring or does not allow adequate time or conversation with the victim. Nurses must be sensitive and methodical in approaching a suspected victim. Knowing appropriate questions to ask the victim and abuser or using a screening tool can open dialogue and uncover possible victimization.

INDICATORS OF HUMAN TRAFFICKING

Recognizing key indicators of human trafficking is the first step in identifying victims and can help save a life. Common indicators to help recognize human trafficking are listed below. You can also download or order the Blue Campaign indicator card (https://openstax.org/r/dhsgovb) in a wide variety of languages. The Blue Campaign indicator is a small plastic card that lists common signs of trafficking and how to report the crime.

- Does the person appear disconnected from family, friends, community organizations, or houses of worship?
- Has a child stopped attending school?
- Has the person had a sudden or dramatic change in behavior?
- Is a juvenile engaged in commercial sex acts?
- Is the person disoriented or confused or showing signs of mental or physical abuse?
- Does the person have bruises in various stages of healing?
- Is the person fearful, timid, or submissive?
- Does the person show signs of having been denied food, water, sleep, or medical care?
- Is the person often in the company of someone to whom they defer? Or someone who seems to be in control of the situation, e.g., where they go or to whom they talk?
- Does the person appear to be coached on what to say?
- Is the person living in unsuitable conditions?

- Does the person lack personal possessions and appear not to have a stable living situation?
- Does the person have freedom of movement? Can the person freely leave where they live? Are there unreasonable security measures?

Not all indicators listed above are present in every human trafficking situation, and the presence or absence of any of the indicators is not necessarily proof of human trafficking.

Pay attention for the now commonly used nonverbal emergency SOS hand signal. The Canadian Women's Foundation introduced the signal in April 2020 in response to increasing rates of domestic violence during the COVID-19 lockdown. The "Signal for Help" is designed to be displayed inconspicuously and is made by facing the palm outward, folding the thumb across the palm, and then closing the fingers over the thumb (Figure 31.6).

(See Department of Homeland Security, 2022a.)

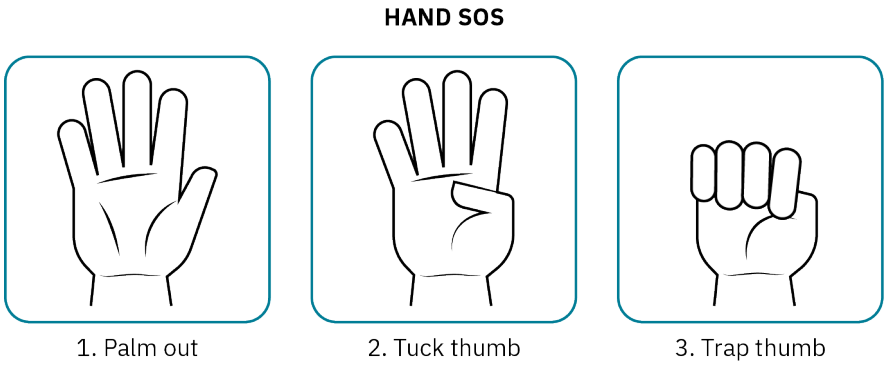


FIGURE 31.6 The Canadian Women's Foundation designed this emergency SOS Hand Signal as a response to increasing rates of domestic violence during the COVID-19 lockdown. (See Canadian Women's Foundation, n.d.; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

THE ROOTS OF HEALTH INEQUITIES

A Public Health Perspective on Human Trafficking

The article "Multi-level Prevention of Human Trafficking: The Role of Health Care Professionals" provides an overview of key public health strategies aimed at addressing human trafficking. Primary prevention can be achieved by identifying social determinants through the critique of the economic, education, social welfare, criminal justice, and health care systems that continue to perpetuate the traumatization of individuals.

(See Greenbaum et al., 2018.)

HEALTHY PEOPLE 2030

Violence Prevention

One goal of Healthy People 2030 is *Prevent violence and related injuries and deaths (https://openstax.org/r/healthypeopleobjective)*. Recognizing that human trafficking is often linked to physical assaults and sexual violence, Healthy People 2030 provides evidence-based resources and prevention strategies at the school, family, and community levels.

31.5 Refugees

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 31.5.1 Differentiate between a refugee and an asylum seeker.
- 31.5.2 Describe common health conditions affecting population health in refugee camps.
- 31.5.3 Explain the unique health challenges for refugees and asylum seekers.
- 31.5.4 Discuss why promoting the health of refugees is a matter of social justice.
- 31.5.5 Explain the nurse's role in addressing the refugee crisis to uphold nursing's mission to society.

Refugee and *asylum seeker* both refer to people who have left their homes, and they are often used interchangeably. Although the two groups flee their homes for similar reasons, they use different means to reach the United States. The different designations have separate legal statuses with consequent legal obligations and protections.

According to the 1951 Convention Relating to the Status of Refugees (https://openstax.org/r/instrumentsmea), a **refugee** is "a person who, as a result of a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion" has crossed an international border and cannot return to their home (United Nations [UN], 2023a). Recently, more people have been forced to flee their homes than at any time since World War II, with about 110 million individuals displaced worldwide (International Rescue Committee, 2023; UN Higher Commission for Refugees [UNHCR], 2023b). Child refugees face numerous risks and dangers, including disease, malnutrition, violence, labor exploitation, and trafficking.

The UN Higher Commission for Refugees (UNHCR, 2023b) defines **forced displacement** "as a result of persecution, conflict, generalized violence or human rights violations" and a **stateless** person (UNHCR, 2023a) as someone who is "not considered as a national by any state under the operation of its law." Some stateless people are also refugees. However, not all refugees are stateless, and many people who are stateless have never crossed an international border (U.S. Department of State, n.d.).

Asylum is a form of legal protection that prevents individuals from being deported to a country where they might experience harm and may legally remain. An **asylum seeker** is someone who has fled persecution and serious human rights violations in their home country but who has not yet been legally recognized as a refugee or received a decision on their asylum claim. Seeking asylum is a human right (Amnesty International, 2023), and individuals can apply for asylum either at another country's border or from within the country where they would like to resettle. An individual cannot seek asylum in the United States from their native country—individuals may file for asylum only if they are in the United States or at a port of entry.

International law protects refugees. Under the 1951 Refugee Convention (and its 1967 Protocol), refugees cannot be returned to their home country after fleeing and seeking asylum in another country. Before leaving their geographical home of legal affiliation (i.e., where they would hold a passport of issuance), they must apply for refugee status through the United Nations High Commission for Refugees (UNHCR; 2023c) and then be selected for resettlement. Refugees do not get to choose the country where they will be resettled; they are more likely to be resettled in the United States if they already have family members living there. Refugees are thoroughly vetted, with multiple background checks and medical screenings. Once they have passed all checks and are approved, they are flown to the United States, where a local resettlement agency helps them during a transition period when they first arrive. Table 31.3 presents definitions of the terms used to describe these populations.

Term	Definition
Asylum seeker	Someone whose request for sanctuary has yet to be processed. Every year, around one million people seek asylum.
Immigrant	A person living in a country other than that of their birth.

TABLE 31.3 Comparison of Terms to Describe Individuals Who Leave Their Home Countries

Term	Definition
Migrant	An umbrella term, not defined under international law, reflecting the common lay understanding of a person who moves away from their place of usual residence, whether within a country or across an international border, temporarily or permanently.
Refugee	Someone forced to flee their home because of war, violence, or persecution, often without warning. They cannot return home unless and until conditions there are safe for them again.

TABLE 31.3 Comparison of Terms to Describe Individuals Who Leave Their Home Countries

Common Conditions Affecting Health in Refugee Camps

Many who flee their homes or are forcibly displaced find themselves in a refugee camp, a temporary settlement built to accommodate displaced people who have fled their home country; however, camps are also made for internally displaced people (Figure 31.7). Usually, refugees seek asylum after escaping war in their home countries, but some camps also house environmental and economic migrants. Refugee camps with over a hundred thousand people are common; however, the average-sized camp houses approximately 11,000 people (Daynes, 2016; USA for UNHCR, 2023). The Kutupalong-Balukhali refugee settlement in Bangladesh includes over 800,000 refugees, over half of them children, making it one of the largest such settlements in the world (USA for UNHCR, 2023).

Refugee camps are usually built and run by a government, the UN, international organizations (such as the International Committee of the Red Cross), or nongovernmental organizations (NGOs). Refugee camps generally develop impromptu to provide people with protection and assistance. Shelters include rental units, prefabricated containers, tents, plastic sheeting, and other materials based on available supplies (UNHCR, n.d.-a; n.d.-b). Space in the camps is often tight, so shelters are often crowded together. It is common for several families to live together in the same dwelling.

The quality and quantity of sanitation facilities vary among camps. While some may have communal toilet facilities and running water, others may rely on pit latrines dug by residents. Few or no sanitary facilities may be accessible for people with disabilities (CARE Staff, 2020). Poor drainage, seasonal flooding, and inadequate cleaning increase infectious disease risk. According to the UNHCR Emergency Handbook, each person should be allocated 15 liters (about 4 gallons) of water per day in an emergency situation and 20 liters (about 5.25 gallons) in a nonemergency situation for personal and domestic needs (UNHCR, n.d.-a). However, the UNHCR estimates that over half of existing camps lack the water to meet these guidelines (The Borgen Project, 2020).



FIGURE 31.7 A refugee camp is a temporary settlement built to accommodate displaced people who have fled their home country or an

area within their home country. (credit: "Emergency shelter tents and waste drainage ditch, inside the IDP camp at Menik Farm, near Vavuniya, Sri Lanka. 16 June 2009" by Russell Watkins/Department for International Development/Flickr, CC BY 2.0)

Unique Health Challenges

Refugees and asylum seekers can have complex health needs. Overcrowding, poor water and sanitation conditions, lack of vaccinations, delayed diagnosis, and reduced access to treatment can increase the occurrence, severity, and case fatality of infectious diseases (Altare et al., 2019). For example, viral hepatitis A, B, and C (CDC, 2020; Taha et al., 2023), measles, diarrheal diseases, acute respiratory infection, and malaria account for 60 to 80 percent of all reported causes of death among refugees (Johns Hopkins Bloomberg School of Public Health, 2018). Cholera outbreaks may also occur because camps have ideal conditions for its spread: inadequate water treatment, poor sanitation, and inadequate hygiene (Bonyan Organization, 2023). For children, key priority infectious diseases among refugee populations include tuberculosis, hepatitis B, and vaccine-preventable and parasitic diseases (Shetty, 2019). COVID-19 took a devastating toll on refugee resettlement. In addition to exposure to infectious diseases, individuals may have preexisting or poorly controlled chronic conditions, such as diabetes, cardiovascular diseases, respiratory conditions, and cancer. Many have psychiatric illnesses like post-traumatic stress disorder and depression (Abbas, et al., 2018) as well as maternity care needs.

Holistic and person-centered care is essential to support resilience and help refugees and asylum seekers adapt to life in the United States. When a nurse treats a refugee or asylum seeker, they should screen for infectious diseases that are common in countries where these clients have spent time. The nurse may also identify symptoms of communicable diseases when clients present with other routine issues. In some countries, screening for infectious diseases, such as HIV and hepatitis, may not be easily accessible, or people may not seek testing due to fear of stigma or lack of treatment options. Nurses should discuss the possibility of receiving a positive result in advance with clients from countries with high rates of certain diseases. They should find out what vaccinations refugees and asylum seekers have received and offer missing vaccinations to children and adults based on the latest national immunization schedule. As with all clients, nurses should inform refugees and asylum seekers about any testing, treatment, or vaccinations offered to them. This may require extra care in explaining their rights to confidentiality. For example, a nurse may need to reassure a client that a positive test result will not negatively affect asylum applications. Some clients may need additional health education in an appropriate language to understand their options, which may require an interpreter, or it may be appropriate to give the client written information in their language to take away, depending on their literacy level. Specialist client support organizations may also be able to assist with educating and informing clients about their rights and health care options.

Women who have experienced female genital mutilation (FGM), and their female children if they are considered to be at risk of FGM, may require additional support. FGM can cause ongoing physical and mental health issues, including complications during pregnancy and childbirth, which should be planned for. It may also deter women from being screened for cervical cancer (United Nations Population Fund, 2022).

Although refugees and asylums seekers do not display mental health problems frequently (Gov.UK, 2017; Hynie, 2018), they can be at increased risk, particularly if they have experienced violence and trauma, including exploitation, torture, or sexual and gender-based violence. Issues can range from low to moderate levels of anxiety and depression to more severe mental disorders. People from different cultural backgrounds can have different conceptions and experiences of mental illness. For example, clients may complain about nonspecific pain, frequent headaches, and stomachaches rather than emotional distress. In such cases, the nurse should sensitively investigate their history, as well as current circumstances, to establish whether such complaints may be an expression of mental health or other social issues. This approach can help minimize unnecessary referrals for investigations and medication prescribing. It can be helpful to consider dialect, culture, gender, and sexual orientation when selecting a language interpreter. It may also be beneficial to link clients with support organizations with expertise in supporting refugees and asylum seekers.

Providing TIC for people who have experienced violence or persecution—particularly torture—can be challenging. Refugees and asylum seekers are also at risk of exploitation, trafficking, and modern slavery. According to the British Medical Association, "recent estimates suggest that on average 44 percent of asylum seekers have experienced torture, although this can vary significantly by country" (BMA, 2023). This can often involve experiences of mental, physical, and sexual violence. They may be unable to discuss their health problems openly or fear examination. They may also have difficulty trusting people in positions of authority, including doctors.

Experiences of torture and other violence can cause deep-rooted feelings of shame, humiliation, and guilt, and many clients may be reluctant to disclose to a relative stranger. Nurses should respond compassionately and sensitively and be aware that building a relationship of trust and support to facilitate disclosure can take some time. If clients are willing to talk about what happened to them, the situation described can be disturbing for the nurse and the client. This is a time when the nurse can maximize their use of the TIC steps presented earlier in the chapter.

Promoting Social Justice

As a term, "social justice" must consider four principles: access, human rights, participation, and equity (Soken-Huberty, 2023; WHO, 2022b):

- Access: Countries that have signed the 1951 Convention are obliged to protect refugees on their territory and treat them according to internationally recognized standards. Subsequently, protecting refugees is the primary responsibility of states.
- Human rights: Refugees have human rights, the inalienable rights to which a person is entitled merely for being human. Refugees must respect the laws and regulations of the United States. Refugees should receive at least the same rights and basic help as any other foreigner who is a legal resident, including freedom of thought and movement and freedom from torture and degrading treatment.
- Participation: Refugees bring productivity to host countries, where they are integrated across communities. They enrich those communities, helping to nurture understanding and appreciation for social diversity.
- Equity: To fulfill physical protection minimum standards, refugees need to be provided with adequate food, sanitation, hygienic products, and any nonfood items that are needed in a specific context or emergency.

Nurses have a professional and ethical responsibility to advocate for social justice (ANA, 2015). Refugees are one of the most vulnerable populations in the United States, and they interact with nurses at all levels of the health care system. As nurses become increasingly educated and skilled in cultural competence, they can make the transition to immigration less chaotic and subsequently enhance well-being and promote healthy lifestyles.

The Nurse's Role in Addressing the Refugee Crisis

It is a human right to seek asylum from persecution or safety from war or disaster, and in doing so, people should not be subjected to cruel, inhumane, or degrading treatment or circumstances. Nurses need to foster a healthy and adaptive environment in which people can thrive despite personal, political, emotional, physical, or social adversity. Nursing care is indispensable for the easing of human distress and for the promotion of comfort and coping. Nurses are essential in advocating for policies that will enhance immigrants' access to health care and mental health services and address barriers irrespective of their status as migrants, refugees, or asylum seekers (Desmyth et al., 2021). At the macro level, based on the *New York Declaration for Refugees and Migrants* (https://openstax.org/r/ohchrorgenm), signed by the United Nations (2016b), it is the obligation of a state not to hinder refugees seeking to enter it, nor to return them forcibly to the country they have fled (the principle of nonrefoulement), which is grounded in the natural duty not to harm the innocent.

At the more micro level, nurses need to understand the legal and systemic difference between an individual seeking asylum for fear of persecution and someone who has been granted refugee status and offered humanitarian protection. While health care entitlements between these groups remain inconsistent, the principle of access to equitable health care as a fundamental human right must be upheld (Desmyth et al., 2021). The codes of ethics of the ANA and the International Council of Nurses (ICN) mandate that all nurses work to advocate for social justice (ANA, 2015; ICN, 2012). Thus, nurses are expected to apply these ethical principles in practice.

Nursing care and advocacy must be in the context of justice and equity, which requires ongoing awareness of and involvement with the resources in communities. Nurses can collaborate with organizations to acknowledge and dismantle racism and sexism and foster human rights. Instead of giving a "voice" to migrants and refugees, nurses provide opportunities for them to tell their own stories as well as to identify their own health needs and the best ways to address those needs (Commodore-Mensah et al., 2021).

HEALTHY PEOPLE 2030

Social Cohesion

A focal point for the *Healthy People 2030* initiative is *Social Cohesion (https://openstax.org/r/healthypeopleab)*. Social cohesion has significant ramifications for health. For example, one study examined the link between four measures of social capital (perceived fairness, perceived helpfulness, group membership, and trust), income inequality, and mortality. The authors found that all four measures of social capital were associated with mortality. They also found that the relationship between income inequality and mortality may be partially explained by reductions in social capital as income inequality increases. Collective efficacy, an aspect of social capital and social cohesion, is grounded on mutual trust and describes a community's ability to create change and exercise informal social control (i.e., influence behavior through social norms). Collective efficacy is associated with better self-rated health, lower rates of neighborhood violence, and better access to health-enhancing resources like medical care, healthy food options, and places to exercise. Social institutions like religion and the family are common sources of social capital and social control as well as social networks and social support.

Chapter Summary

31.1 Trauma-Informed Care

TIC is a therapeutic approach that centers on the understanding that trauma can have long-lasting emotional, neurological, psychological, social, and biological effects. It acknowledges that ACEs can significantly impact present and future health. A TIC-informed approach uses six guiding principles to ensure every client interaction is mindful and places the client's well-being first; the client is not harmed further or retraumatized by working on their past. A trauma-informed approach requires the nurse's constant attention, caring awareness, and sensitivity.

31.2 The Mental Health Crisis

The U.S. health care system is overburdened with the rise in mental health issues. Mental health services are insufficient to address clients' needs. Stigma surrounding mental illness can be a barrier to accessing mental health services. As trusted advocates, nurses are uniquely positioned to recognize mental health concerns, provide compassion to clients, and help clients access treatment. Nurses must establish a therapeutic nurse-client relationship. Understanding who the client is, what is occurring in their life, what resources are available to them, and their individual beliefs, supports, and demeanor can help a nurse determine if a client is at risk for ineffective coping and possible progression to crisis.

31.3 The Opioid Epidemic and Substance Use Disorders

Deaths from SUDs, particularly with opioid overdoses, have increased dramatically in recent years. The opioid epidemic has many causes including the notable increase in opioid prescriptions, rise in heroin use, and availability of illicitly manufactured fentanyl. This public health crisis spawns various socioeconomic and health consequences affecting all populations. Public health initiatives must address social determinants of health that cause systematic inequalities, barriers to health care access, and the promotion of stigma. A unified approach is needed to address associated mental disorders and SUDs. Nurses are poised to make a distinct difference in effecting change in vulnerable individuals, communities, and populations impacted by the opioid epidemic. Evidence-based strategies must include early identification, evidence-based interventions, harm-reduction programs, recovery services, and advocacy for policies to combat this public health epidemic.

31.4 Human Trafficking

Every year, millions of men, women, and children are trafficked worldwide. This often-hidden crime can happen in any community and to individuals of any age, race, gender, or nationality. Human trafficking is committed against a person's will, and the economic sectors that profit the most include agriculture, restaurants, manufacturing, domestic work, entertainment, hospitality, and the commercial sex industry. Language barriers, fear of their traffickers, and/or fear of law enforcement frequently keep victims from seeking help. Health care encounters with nurses may be one of the only channels through which a victim is identified. The nurse's ability to identify a victim and knowledge of the available resources to assist a victim can be lifesaving for some victims.

31.5 Refugees

Refugees and asylum seekers have left their homes, fleeing persecution due to race, national origin, religion, political opinion, or membership in a particular social group. This population faces many risks and dangers, including disease, malnutrition, violence, labor exploitation, and trafficking. Poor living conditions and inadequate hygiene make refugees vulnerable to many health conditions. Overcrowding, poor water and sanitation conditions, lack of vaccinations, delayed diagnosis, and reduced access to treatment can lead to increased occurrence, severity, and case fatality of infectious diseases. Nurses treating this population should offer screening for infectious diseases and determine vaccination status. Some clients may need additional health education in an appropriate language to understand their options. Specialist client support organizations may also be able to assist.

Key Terms

asylum a form of legal protection that prevents individuals from being deported to a country where they might experience harm

asylum seeker a person who has left their country and is seeking protection from persecution and serious human rights violations in another country but who has not yet been legally recognized as a refugee and is waiting to receive a decision on their asylum claim

CEO pimps pimps who promise victims lucrative

careers and legitimate income

discrimination treating someone unfairly based on characteristics that ought to be irrelevant

forcibly displaced forced to leave one's home because of conflict caused by humans (war, religious or political persecution, etc.) or by natural disasters

gorilla pimp a pimp who controls their victims almost entirely through physical violence and force

grooming a process in which a trafficker works to gain the trust of their identified victim by posing as a good listener who cares deeply as they learn more about what they can do to insinuate themselves in the victim's life; once a trafficker has gained the trust of their victim and better understands the victim's needs, the trafficker offers a solution to meet those needs

human trafficking (HT) also known as trafficking in persons, a crime that involves compelling or coercing a person to provide labor or services or to engage in commercial sex acts

institutional stigma government and private policies that intentionally or unintentionally limit opportunities for people with mental illness

labor trafficking a form of slavery in which individuals perform labor or services through the use of force, fraud, or coercion; includes situations of debt bondage, forced labor, and involuntary child labor

mental health crisis describes the current state of the U.S. health care system as it continues to be overburdened by the rise in mental health issues, as available mental health services are insufficient to meet clients' needs

opioid naive the connotation that an individual is not chronically receiving opioids daily

opioids natural, synthetic, or semisynthetic chemicals that interact with opioid receptors on nerve cells in the body and brain to reduce the intensity of pain; this drug class includes the illegal drug heroin, synthetic opioids such as fentanyl, and pain medications available legally by prescription, such as oxycodone, hydrocodone, codeine, morphine, and many others

prejudice a preconceived negative opinion of someone that is not based in facts; may predispose people to dislike and/or disrespect people with a specific diagnosis, such as schizophrenia or depression

public stigma involves the negative or discriminatory attitudes that others have about mental illness

refugee a person outside their country of origin for reasons of feared persecution, conflict, generalized violence, or other circumstances that have seriously disturbed public order and, as a result, require international protection

Romeo pimps human traffickers who usually operate by trying to make young people fall in love with them or who manipulate young people in other ways; once they have victims under their influence, they exploit them

self-stigma refers to the negative attitudes, including internalized shame, that people with mental illness have about their own condition

sex trafficking the recruitment, harboring, transportation, provision, or obtaining of a person for the purposes of a commercial sex act in which the commercial sex act is induced by force, fraud, or coercion or in which the person induced is under age 18

stateless a person who does not enjoy citizenship—the legal bond between a government and an individual—in any country; some stateless people are also refugees, but not all refugees are stateless, and many people who are stateless have never crossed an international border

substance use disorders (SUDs) chronic, relapsing, potentially deadly conditions that occur when the recurrent problematic use of substances leads to significant impairments of an individual's health and function to meet major vocational, academic, social, or personal responsibilities

trauma-informed care (TIC) a therapeutic approach that acknowledges trauma's long-lasting emotional, neurological, psychological, social, and biological effects on a person's present and future health

Review Questions

1. The community health nurse is performing an admission assessment on a client with a substance use disorder. Which of the following questions is most appropriate for the nurse to use when interviewing the client about their substance use history?

a. Why have you waited until now to seek treatment?
b. What type of substances do you use and how often?
c. Do you think you can follow through with the treatment plan?
d. Why did you let yourself get addicted?

2. A nurse is speaking to a community group about the opioid epidemic. Which of the following statements about the epidemic is accurate?
   a. The epidemic started with increased availability of prescribed opioids.
   b. The epidemic started with increased availability of low-cost heroin from Mexico.
   c. Increased prescribing of opioids prompted the second wave of the epidemic.
   d. Illegally manufactured fentanyl generated the second wave of the epidemic.

3. The community health nurse is working with a group of sexual assault survivors. During a group discussion, the nurse offers each client 10 minutes to share their feelings with the group. This action by the nurse is consistent with which of the CDC's principles of trauma-informed care?
   a. Cultural, historical, and gender issues
   b. Empowerment and choice
   c. Collaboration and mutuality
   d. Trustworthiness and transparency

4. The nurse is working with a group of clients that includes assault survivors. Which of the following actions by the nurse best reflects trauma-informed care?
   a. The nurse places a hand on the client's shoulder to show support.
   b. The nurse provides instruction using medical terminology relevant to their experiences.
   c. The nurse introduces themself and explains what they will be doing during the session.
   d. The nurse remains standing and walks around the (seated) clients during the session.

5. The community health nurse is working with a group of teenagers as part of an after-school health promotion program. When working with this age group, which of the following risk factors should the nurse be aware of?
   a. Teenagers are more likely to be uninsured.
   b. Teenagers are less likely to be depressed.
   c. The risk of mental illness is the highest among this age group.
   d. The risk of suicidal ideations is the highest among this age group.

6. The nurse is working with a family that has a member who was just diagnosed with a mental illness. Another family member tells the nurse that he believes the client is "just being annoying and trying to get attention." Which of the following best describes the family member's statement?
   a. It reflects the public stigma around mental illness.
   b. It reflects the institutional stigma around mental illness.
   c. Since a close family member made the comment, it is a form of self-stigma.
   d. It is a discriminatory statement.

7. A community health nurse is aware that which members of the community are at highest risk of becoming victims of labor trafficking?
   a. Environmental services workers
   b. Hotel workers
   c. Food service workers
   d. Farmworkers

8. When nurses interact with clients with SUDs, which of the following terms/language would be best to avoid because it may promote stigmatization of SUDs?
   a. Maintaining recovery; substance-free
   b. Clean sample; dirty drug test
   c. Person with substance use disorder
   d. Negative test; positive test

9. Which of the following would alert the nurse that a client may be a victim of human trafficking?
   a. The client can show their driver's license.

b. The client gives a home address.
c. The adult who brought the client does not want to leave them alone with the health care staff.
d. The client states she is tired and hungry.

10. A nurse working in a refugee camp should consider which of the following when working with refugees in the camp?
a. Refugees do not receive protection under international law.
b. Refugees can return to their home country after fleeing and seeking asylum in another country.
c. Their health is influenced by both camp conditions and their country of origin.
d. Most refugee camps are built according to public health standards.

CHAPTER 32

Principles of Disaster Management



FIGURE 32.1 Health care providers treat clients in a temporary shelter and two trailers following the destruction of their health care facility by Hurricane Maria. (credit: modification of work by Preston Keres/USDA/Flickr, Public Domain)

CHAPTER OUTLINE

32.1 Types of Disasters

32.2 Biological Terrorism

32.3 Mass Violence

32.4 The Disaster Management Cycle

32.5 The Nurse's Role in Emergency Preparedness and Disaster Response

INTRODUCTION Community hospitals and health care centers near coastlines stay on alert for hurricanes and storm surges during the active hurricane season. One year, hospital administrators along the Gulf Coast are particularly concerned, as experts have forecasted nine hurricanes, five of which are expected to be major storms. The hospital has several outlying facilities, and the administrators have invited Beverly, a community health nurse, to their annual review and update of the disaster plan. The community has experienced rapid growth in retirees and culturally diverse groups of residents, and they are relying on Beverly's expertise in the community to help predict the needs of people in the event of a catastrophic storm. Beverly has conducted a community assessment and is presenting the current state of the population and the potential risk factors that could impact them if the area sustained a direct hit from a hurricane.

Nurses like Beverly play a valuable role in disaster preparedness in the community. They are familiar with the community's demographics and available resources, making them an essential part of the preparedness team. This chapter will discuss the types of disasters that require disaster response, the disaster response cycle, and the nurse's role in disaster response.

32.1 Types of Disasters

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 32.1.1 Describe different types of disasters, differentiating between natural and human made.
- 32.1.2 Discuss health and safety hazards of disasters and public health emergencies and how they affect people and communities.
- 32.1.3 Assess conditions to identify disasters or public health emergency risks, including a community's vulnerability to a disaster.

The word "disaster" can elicit feelings of anxiety, dread, and fear. A **disaster** is any occurrence that causes destruction, human injury, or loss that overwhelms the community's available resources. The number and impact of disasters rise each year. In 2022, 387 disaster events occurred worldwide. These events affected 185 million people, caused 30,704 deaths, and resulted in $223.8 billion in economic damage (Centre for Research on the Epidemiology of Disasters [CRED], 2023). As disasters become more common globally, people are more sensitive than ever to discussions of disasters. Advanced communication methods can instantaneously disseminate news to social media outlets, inundating individuals with a constant flow of information and graphic details of the aftermath of disasters. Seemingly "small" incidents may quickly develop into a disaster if resources such as supplies, equipment, personnel, or any other reserves necessary to provide care and recovery during a serious event are unavailable or are depleted quickly. For example, if only one emergency responder arrives without supplies or equipment on the scene of a single car accident with four victims, this could be viewed as a disaster until appropriate resources are dispatched and arrive to assist.

Public health or community health nurses play a key role in reducing a disaster's impact. They help assess a community's disaster risk, coordinate and participate in preparedness activities, and aid in disaster response/recovery efforts to maximize available resources and minimize loss. A solid disaster prevention, preparedness, response, and recovery plan is key to the community's ability to emerge stronger and healthier if a disaster occurs.

Disasters are categorized into two main types: natural and human made. Each type has the potential for human, material, economic, or environmental losses with short- or long-term effects on the community.

Natural Disasters

Natural disasters are those that arise from forces of nature, such as weather events (hurricanes, tornadoes, snowstorms, heat waves, lightning, thunderstorms, and droughts), geological events (mudslides, floods, landslides, and avalanches), underground events (tsunamis, earthquakes, and volcanic eruptions), or epidemiological events (communicable disease outbreaks or swarms). Some natural disasters occur gradually or can be predicted, allowing communities to prepare for the event. However, many natural disasters occur suddenly and are unpredictable, causing significant public health risks to communities (Figure 32.2). Destruction and devastation from natural disasters have risen astronomically throughout the world over the past 40 to 50 years (U.N., 2021; White House, 2022). Floods, droughts, severe storms, hurricanes, and heat waves have caused 80 to 90 percent of all documented natural disasters since 2013 (World Health Organization [WHO], 2023b). The WHO (2023b) has attributed the number of weather-related natural disasters in recent years to increased weather extremes resulting from climate change. See Environmental Health for more information on the effects of climate change.



FIGURE 32.2 On March 11, 2011, a magnitude 9.1 earthquake occurred off the eastern coast of Japan, near the Tōhoku region. The quake was the fourth largest in recorded history and set off a massive tsunami, with some waves estimated to be as much as 133 feet high. The tsunami in turn caused the Fukushima Daiichi nuclear disaster, which involved the meltdown of three of the power plant's reactors, the release of radioactive water, and the evacuation of hundreds of thousands of residents in what became the exclusion zone. This photo of the tsunami-damaged interior of a seaside recreation facility within the exclusion zone was taken 10 years later. The scope of the disaster complicated emergency response operations and meant that staff, volunteers, and resources were overburdened and had difficulty keeping up with mounting needs. Lack of detailed planning for vulnerable populations, such as older adult and hospitalized clients, resulted in deaths that may have been avoidable. (Committee on Lessons Learned from the Fukushima Nuclear Accident for Improving Safety and Security of U.S. Nuclear Plants, 2014) (credit: "Marine House Futaba" by Joi Ito/Flickr, CC BY 2.0)

10 MOST DANGEROUS NATURAL DISASTERS

Access multimedia content (http://openstax.org/books/population-health/pages/32-1-types-of-disasters)
Natural disasters cause widespread destruction and health risks within communities. This video describes the 10 most dangerous natural disasters.

Watch the video, and then respond to the following questions.

1. What are common causes of landslides?
2. Where is the most tornado-prone area in the world?
3. Why are earthquakes rated the most dangerous natural disaster?

Flooding, when excess water overwhelms normally dry land, is the most common natural disaster. Floods may result from heavy rainfall, rapid snowmelt, or a storm surge from a hurricane or tsunami in coastal areas and can cause widespread devastation, loss of life, and damage to property and critical public health infrastructure (WHO, 2023b). In 2022, a reported 176 floods affected over 57 million people globally, resulting in more than 7,000 deaths and $44.9 billion in economic losses (CRED, 2023). There are three common types of floods:

- **Flash floods** are caused by heavy or excessive rain falling over a short time span, often less than 6 hours. Flash floods cause raging torrents that raise water levels quickly, sometimes overtaking roads, clearing away everything in their path.
- **River floods** occur when excessive rainfall or snowmelt forces a river to exceed capacity.
- Coastal floods are caused by **storm surges** associated with hurricanes and tsunamis. Storm surge is an abnormal rise of water generated by a storm, over and above the predicted astronomical tides (National Oceanic and Atmospheric Administration [NOAA], n.d.-b).

Tornadoes and hurricanes are characterized by high wind speeds and thunderstorms that can produce violent weather conditions, resulting in property destruction. Tornadoes and hurricanes have similar devastating effects,

such as high winds and water accumulations from rainfall, but each has its own distinctive dangers (Emergency Planning, 2017). Tornadoes are usually short-lived but have violent rotational winds of 100 to 300 miles per hour that extend from thunderstorms that come into contact with the ground (NOAA, n.d.). Often these storms are visible from miles away. Hurricanes occur in tropical climates. They are typically much larger storms than tornadoes and can span long periods of time in one area. This increases rainfall accumulation and makes the area more prone to flooding or storm surges. Hurricanes differ from tornadoes in that they have more sustained winds of at least 74 miles per hour rather than rotational winds. Based on the speed of the sustained winds, hurricanes are rated on a scale from one to five. The higher the rating, the greater the storm's potential for damage. While there have been advancements in storm predictions, there is no guarantee of safety in tornadoes, so the threat of tornadoes and hurricane activity should always be taken seriously (NOAA, n.d.-a, n.d.-c). Tornadoes can spawn from hurricanes, thereby increasing the risk of damage to life and property.

Human-Made Disasters

Human-made disasters are directly caused by people's actions that devastate and destroy human life. Examples include warfare (acts of terrorism and biological warfare), mass violence, shootings, industrial accidents, and nuclear/radiation incidents. Such disasters can be intentional or accidental, but they are always a result of human activity or neglect that causes damage to or loss of life or property.

Human-made disasters can be divided into three categories:

1. **Technological disasters**, also known as Natural Hazards Triggering Technological Accidents (**NA-TECH**) disasters, are technological accidents triggered by natural events. Often, technological accidents are foreseeable and preventable if the associated risks are managed responsibly and warning signs are not ignored (Krausmann & Necci, 2021). Examples include industrial accidents such as chemical spills, transportation accidents, and mining accidents.
2. **Social disasters**: Examples include warfare, genocide, civil unrest, and terrorism.
3. **Environmental disasters**: Examples include deforestation and wildfires due to arson.

Two well-known technological disasters are the Deepwater Horizon oil spill and the Chernobyl nuclear accident. Both were avoidable accidents resulting from systematic failures and human neglect. The morbidity and mortality of human and ecological life from both events were high and continue to have long-standing effects.

The Deepwater Horizon oil spill began with the explosion and sinking of an oil drilling rig in the Gulf of Mexico on April 20, 2010, resulting in the deaths of 11 workers and the largest offshore oil spill in the history of marine oil drilling operations. The accident dumped 134 million gallons of oil into the Gulf of Mexico over 87 days (EPA, 2022). The effects of the oil spill spanned 1,300 miles of shoreline along five U.S. states, killing thousands of marine life, birds, and sea turtles and contaminating their natural habitats (NOAA, 2017). This environmental contamination altered the marine ecosystem, thereby reducing the availability and sustainability of a major source of the U.S. seafood supply until the restoration of the ecosystem is complete.

On April 26, 1986, in a part of the former Soviet Union that is now Ukraine, a nuclear reactor in the Chernobyl Nuclear Power Plant exploded, causing fires and releasing radioactive material that contaminated the immediate area and many parts of Europe. The disaster resulted from a flawed reactor design operated by inadequately trained personnel. Two Chernobyl plant workers died in the explosion, and 28 people died from acute radiation syndrome within the following weeks. Long-term health effects from the disaster include approximately 5,000 cases of thyroid cancers, 15 of which resulted in fatalities (World Nuclear Association, 2022). Radiation fallout from the disaster was carried by wind and storm patterns over much of the northern hemisphere, although the amounts were insignificant in many cases (International Atomic Energy Agency, 2023).

TECHNOLOGICAL DISASTER: EAST PALESTINE, OH, TRAIN DERAILMENT

Access multimedia content (http://openstax.org/books/population-health/pages/32-1-types-of-disasters)
On February 3, 2023, a train carrying toxic chemicals derailed in East Palestine, Ohio. The derailment caused chemical contamination of the ground, water, and air. Following this disaster, some community members evacuated the area and sold their homes, while others evacuated and have since moved back.

Watch the video, and then respond to the following questions.

1. What was the immediate response to the trail derailment?
2. What were the immediate impacts of the derailment on the community? How might the community be impacted in the long term?
3. What methods were used to clean up the toxic chemicals in the ground, water, and air?

Examples of social disasters include warfare and terrorism, such as the Russian invasion and occupation of parts of Ukraine on February 24, 2022, which was a major escalation of the Russian-Ukrainian War that began in 2014, and the Boston Marathon bombing on April 15, 2013. Social disasters result in the loss of human life, physical and mental injury, damage to the local economy, and destruction of property, infrastructure, and environment. Social disasters may also give rise to social-political issues and civil unrest, impacting not only the local community but also the national and global community.

Environmental disasters are devastating events affecting an area's ecological system that destroy wildlife and pose a significant threat to humans. Wildfires are one example. In U.S. history, of the 58 wildfires considered the most destructive, almost 28 percent were attributed to arson—fires set intentionally. The community impact of these deliberate acts includes the destruction of 6,500 homes and businesses, 50 fatalities, and the devastation of one million acres of forests (Prell, 2017).

IMPACT OF WILDFIRES

Access multimedia content (http://openstax.org/books/population-health/pages/32-1-types-of-disasters)
Wildfires cause destruction of local life, property, infrastructure, agriculture, environment, and economy and displacement of the local population and wildlife. Additionally, the smoke from wildfires spreads hundreds of miles, affecting air quality. The video describes the impact of wildfires on humans.

Watch the video, and then respond to the following questions.

1. How did the wildfires in this video impact local residents?
2. Who is most vulnerable to reduced air quality due to wildfires?

Public Health and Safety Hazards of Disasters

Disasters pose significant health and safety risks at the community and individual levels, especially for vulnerable populations. Understanding the breadth and depth of the impact on communities and vulnerable populations requires the consideration of direct and indirect health effects. Risk factors are dynamic and can change based on social and political circumstances surrounding the disaster (Khorram-Manesh & Burkle, 2020).

Impact of Disasters: Communities

The direct impact of disasters on community health may include large numbers of injuries and deaths that overwhelm the local emergency response services and health systems. Damage to the health services infrastructure, roads and transportation, and communication systems; reduced resources, such as available health care staff; and increased need for additional equipment can impede health care providers' abilities to care for victims in the immediate response. It also affects the provision of follow-up care, which may have negative consequences for morbidity and mortality in the community. A significant risk of communicable diseases from a contaminated water supply, deceased animals, standing water, or other environmental factors may exist. Overcrowded health care facilities or living conditions compound the risk of infectious diseases. Food and water shortages pose a significant threat to the population, especially if the community is geographically challenging for responders to access. In addition, the psychological and psychosocial effects of witnessing and surviving catastrophic events may be substantial.

Indirect impacts on health because of disasters may include disruptions in modes of communication such as telephones, internet connections, and television services. Transportation may become limited due to damaged roads or highway infrastructure and vehicles. Community utilities, including electricity, water, and sewer systems, may be damaged or experience service disruptions.

Some communities are at greater risk during and following a disaster. Large populations, limited escape routes, population congestion, dense infrastructure, and low socioeconomic status increase community vulnerability (Donner & Rodriquez, 2011). Impoverished communities often have inadequate infrastructure to withstand a disaster and have disproportionately larger vulnerable populations.

A resilient community has the ability to recover from a disaster and can sustain itself in the face of hardship. Social connectedness is an essential characteristic of community resilience (Urban Footprint, 2023). Community members participate in their community, fostering a sense of togetherness and of feeling valued. Resilient communities also have social connections that provide emotional and physical support (Urban Footprint, 2023). Local organizations are trusted and provide needed community resources, such as food banks and financial assistance. Strong health care systems and government are prepared for disaster and recovery and have access to resources such as clean water and medical equipment. These communities continuously work on building resilience by improving social connections, ensuring government involvement in disaster management, improving risk communication to the entire community and vulnerable groups, improving community members' physical and mental health, and increasing community social and economic health (Urban Footprint, 2023).

Impact of Disasters: Vulnerable Populations

Vulnerable populations are those with characteristics that affect their capacity to anticipate, respond to, and recover from the impact of disasters. The most vulnerable populations are low-income populations, older adults, and ethnic and racial minorities.

Those of low socioeconomic status are less prepared for disasters (SAMHSA, 2017). This population often lacks the resources to afford mitigation efforts, such as strengthening household structures and purchasing disaster insurance. Financial resources are most often used for immediate needs rather than to prepare for a potential disaster in the future. Even more vulnerable are people with lower incomes who are also experiencing homelessness, women, or residents of public housing because they often lack finances and resources needed in case of evacuation (SAMHSA, 2017). These groups are less likely to evacuate prior to a disaster. Following a disaster, low-income populations have greater difficulty obtaining aid, housing loans, food assistance, assistance with evacuation and transportation, and access to medical resources (Martin, 2019; SAMHSA, 2017). Consequences of disaster for low-income populations include greater incidence of homelessness, unemployment, injury, mortality, economic loss, depression, and posttraumatic stress (SAMHSA, 2017).

Older adults are more vulnerable to disasters as compared to other age groups (American Red Cross, 2020). Mortality rates within this population following disasters are greater because older adults are more likely to have chronic conditions, comorbidities, cognitive impairment, and medication needs. A greater number of older adults are dependent on assistive devices and caregiver support and are socially isolated.

THE ROOTS OF HEALTH INEQUITIES

Spotlighting Health Disparities in the Face of Disaster: The Risk Project

Natural disasters disproportionately affect vulnerable populations, such as low-income or racial or ethnic minority groups. These groups are more likely to live in areas at high risk for natural disasters and in housing that poses safety risks when disasters occur. The Resilience in Survivors of Katrina (RISK) Project began as a research study in New Orleans, Louisiana, to examine the effects of economic and academic support on the retention of community college students. Over a 15-year period (2003–2018), researchers studied 1,019 parents who were low-income and primarily Black. In 2005, Hurricane Katrina disrupted the study, as many participants were hurricane victims. As a result, the study became the RISK Project, focusing on the effects and consequences of a disaster on vulnerable populations.

The results of the RISK Project have health policy implications for improving the quality of health for vulnerable populations and racial/ethnic minorities. The study found barriers to evacuation and care and a lack of long-term mental health services led to poorer health and psychosocial effects on individuals affected by disasters.

The recommendations for health policy included expanding avenues for primary prevention of disaster exposure.

- Protecting critical infrastructure and coastal wetlands to add a buffer to storm damage

- Revising building codes to require the elevation of new buildings and retrofitting existing buildings to provide flooding resilience
- Timely evacuation from at-risk areas and prohibiting employers from penalizing workers for early evacuation
- Providing public transportation for evacuation and affordable short-term housing for those who require evacuation and sustain damage to residences
- Improving post-disaster health care and mental health services, as physical and mental health are significantly affected by traumatic events

(See Raker et al., 2020.)

Assessment of Disaster or Public Health Emergency Risk

Beverly, the nurse described at the beginning of this chapter, conducted a community assessment to identify the needs of vulnerable populations within the community in the event of a hurricane. This assessment contributed to a larger assessment of the community disaster and public health emergency risk that assists the community in meeting the National Preparedness Goal, which outlines what entire communities need to prepare for different emergencies. The National Preparedness Goal is "a secure and resilient Nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk" (Homeland Security, 2015). Community disaster and public health emergency risk assessment provides information for communities to plan for, protect, respond to, and recover from hazards.

Many frameworks are available to guide disaster risk assessment. For example, the Threat and Hazard Identification and Risk Assessment (https://openstax.org/r/femagovsi) (THIRA), which should be completed every three years using a collaborative community approach (FEMA, 2023; FEMA/Homeland Security, 2018), guides communities to identify:

- The threats and hazards that could affect the community
- The impact of those hazards on the community
- The capabilities that the community should have to respond to those hazards
- The current capabilities of the community
- The gap between the target capabilities and current capabilities

Communities use multiple resources, such as previous experience, existing hazard assessments, organizational and business risk assessments, and new data, to identify potential natural, technological, and human-caused hazards (FEMA/Homeland Security, 2018). The process begins by determining the likelihood and impact of the hazard. The community then identifies the effect of the location, magnitude, and time of the hazard. Finally, the current capability of the community to handle the hazard and target or goal for capability is determined. The gap between the current and target goal for capability directs the community to plan to decrease the gap.

One method, the Asia-Pacific Climate Change Adaptation Information Platform (AP-PLAT), guides communities through six steps to identify potential community hazards, areas of increased exposure to hazard, and areas of increased vulnerability utilizing mapping (AP-PLAT, 2022). Table 32.1 provides details regarding the parts of the six-step disaster risk assessment process (AP-PLAT, 2022).

Step	Activities
1. Hazard analysis	• Identify patterns of community natural hazards. ◦ What is the potential impact? ◦ Will this hazard lead to another? ◦ Is the hazard local or distant? ◦ Are there seasonal patterns? • Identify potential human-made hazards. ◦ What is the potential hazard? ◦ Could this hazard lead to another? • Create a map depicting hazards identified within the community. A map is created for each season, if applicable.
2. Exposure assessment	• Identify people, infrastructure, and assets in locations that hazards could affect. This may include buildings, roads, farms, hospitals, schools, airports, industry, commerce, people, etc.
3. Vulnerability assessment	• Determine the probability that the community will be negatively affected by and vulnerable to a hazard. This includes estimating damages and the community's capacity to reverse or combat those damages.
4. Risk assessment and mapping	• Classify hazard risk as high, moderate, and low. • Place those hazard risks on a map. The map may include hazards and exposures.
5. Risk scenario development	• Describe a hazard event that could occur in the future. Assumptions regarding the hazard and impact are deduced from previous assessments.
6. Resource and capacity mapping	• Identify and map available resources and capacity used during the hazard event. Compare the map to the risk assessment map. • Develop a list of resources and capacity. • Identify gaps.

TABLE 32.1 The Six Steps of Disaster Risk Assessment (See AP-PLAT, 2022.)

Communities may use several tools, databases, and sources to complete disaster risk assessment. For example, the Federal Emergency Management Agency (FEMA) manages The National Risk Index (https://openstax.org/r/hazardsfe), which is a tool that maps 18 natural hazards that impact the United States and identifies those most at risk. The Risk Index identifies potential natural hazards and ranks communities based on expected annual loss, social vulnerability, and community resilience. Communities are ranked according to risk. The higher the percentile, the greater the risk compared to other communities.

THEORY IN ACTION

The National Risk Index

The National Risk Index ranks natural disaster risk by U.S. county and census track.

Use the interactive map (https://openstax.org/r/hazardsfema) to explore your community's natural disaster risk, and then respond to the following questions.

1. What is your community's total risk index?
2. How does your community's expected annual loss, social vulnerability, and community resilience compare to other U.S. communities?
3. What are natural hazard types in your area?

The Social Vulnerability Index (SVI) database is used to locate the most socially vulnerable populations within a community by census tract (Flanagan et al., 2018). SVI categories of vulnerability include socioeconomic status,

household composition and disability, minority status and language, and housing and transportation. These vulnerability factors influence an individual's and community's capability to prepare for, respond to, and recover from disaster (Flanagan et al., 2018). This assists communities in identifying areas that may require additional assistance with disaster management.

THEORY IN ACTION

The Social Vulnerability Index

The Social Vulnerability Index (SVI) ranks a community's ability to respond to hazardous events across factors related to socioeconomic status, individual characteristics, housing type, transportation, and minority status.

Use the interactive map (https://openstax.org/r/atsdrcdcgo) to explore your community's SVI, and then respond to the following questions.

1. What is your community's most recent National Overall SVI Score? What does this mean?
2. View the Prepared County Map – Overall Social Vulnerability. Within your community, where are the most vulnerable located?
3. View the Prepared County Map – CDC/ATSDR SVI Themes. Which theme appears to affect your community most? Where are the most vulnerable, according to each theme, located? Other sources include existing hazard assessments and plans, historical data, homeland security data, private-sector assessments, and forecasting tools to determine future weather patterns, demographic shifts, or emerging threats (FEMA/Homeland Security, 2018).

32.2 Biological Terrorism

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 32.2.1 Define biological terrorism.
- 32.2.2 Categorize bioterrorism agents and diseases.
- 32.2.3 Describe how Category A agents have been or could be used as bioterrorist weapons.
- 32.2.4 Describe strategies for identifying and managing casualties of biological terrorism.
- 32.2.5 Explain the nurse's role in identifying and managing casualties of biological terrorism as a component of emergency preparedness and disaster response.
- 32.2.6 Explain the nurse's role as a first line of defense against biological terrorism.

Terrorist attacks use force or violence against civilians, cause mass property damage, and create fear and panic among the public. Chemical, biological, radiological, and nuclear (CBRN) agents have been used as weapons against humans, causing devastating health consequences (Bland, 2014). Chemical agents include nerve agents, vesicant agents, cyanides, pulmonary agents, incapacitants, toxic industrial chemicals, pharmaceuticals, and riot-control agents. Biological agents include live pathogens, such as bacteria, fungi, and viruses, and toxins derived from bacteria, fungi, plants, and animals. Radiological agents have ionizing radiation present, such as alpha, beta, gamma, and neutron participles. Nuclear agents are materials used to generate nuclear power.

Biological terrorism, or bioterrorism, is the intentional release of biological agents into the atmosphere or environment to threaten a civilian population. Humans and animals absorb the biological agent through inhalation, ingestion, skin, mucous membranes, or eyes (Bland, 2014). Bioterrorism can cause disease or death among a large number of people or livestock and can contaminate food or water supplies. Inhalation of biological agents poses the greatest risk for multiple casualties because the agent is transferred through the air and can reach larger numbers of the population (Bland, 2014).

Categorization of Bioterrorism Agents

As discussed in Pandemics and Infectious Disease Outbreaks, biological agents that would likely be used as agents of bioterrorism include bacteria, viruses, and toxins. The CDC categorizes these agents by risk threat (see Table 32.2 for examples). Most biological agents are difficult to grow and maintain, as many are destroyed quickly when exposed to sunlight and other environmental factors (CDC, 2018; Siegel et al., 2023). Other agents, such as anthrax

spores, are heartier and live much longer, especially on surfaces. Biological agents can be dispersed by spraying them into the air, infecting animals that carry the disease to humans, and contaminating food and water (Bland, 2014). Delivery methods include:

- Aerosols: Biological agents are circulated into the air via a fine mist that may carry for miles. Inhaling the agent may cause disease in people or animals.
- Animals: Diseases are spread by insects and animals, such as fleas, mice, flies, mosquitoes, and livestock.
- Food and water contamination: Pathogenic organisms and toxins are released into food and water supplies. If contamination is known, most microorganisms can be killed and toxins deactivated by cooking food and boiling water for 1 minute or longer.
- Person-to-person: Communicable diseases such as smallpox and plague can be spread via close human contact.

Category	Definition/Impact on Public Health	Agent/Disease
Category A—Highest priority	• Have the greatest impact on public health due to public panic and social disruptions • Easy to disperse and highly transmissible • High mortality rates • Special actions for public health preparedness	• Anthrax (Bacillus anthracis) • Botulism (Clostridium botulinum toxin) • Plague (Yersinia pestis) • Smallpox (variola major) • Tularemia (Francisella tularensis) • Viral hemorrhagic fevers ◦ Filoviruses (Ebola, Marburg) ◦ Arenaviruses (Lassa, Machupo)
Category B—Second-highest priority	• Moderately easy to disperse • Moderate morbidity rates and low mortality rates • Require specialized disease surveillance by the CDC	• Brucellosis (Brucella species) • Epsilon toxin of Clostridium perfringens • Threats to food safety (Salmonella, Escherichia coli 0157:H7, Shigella) • Melioidosis (Burholderia pseudomallei) • Psittacosis (Chlamydia psittaci) • Q fever (Coxiella burnetiid) • Ricin toxin from Ricinus communis (castor beans) • Staphylococcal enterotoxin B • Typhus fever (Rickettsia prowazekii) • Viral encephalitis (alphaviruses, such as eastern equine encephalitis, Venezuelan equine encephalitis, and western equine encephalitis) • Threats to water safety (Vibrio cholerae, Cryptosporidium parvum)
Category C—Third-highest priority	• Have the potential for high morbidity and mortality rates with major health impacts • Pathogens that could be biologically engineered for mass dispersion because of availability, easy production, and dispersion	Emerging infectious diseases (Nipah virus and Hantavirus)

TABLE 32.2 CDC 2018 Categorization of Biological Agents (See CDC, 2018; Siegel et al., 2023.)

Anthrax, a Category A agent, has been used for almost a century as an effective biological weapon, as it can be released quietly and discreetly. Anthrax spores are easily available in nature, can be produced in a laboratory, and remain persistent in the environment for a long period. The microscopic spores can be deployed in a powder or spray and can be used to contaminate the air, food, and water supplies. They may be invisible to the naked eye,

odorless, and tasteless (CDC, 2020). The German Army used biological agents against enemy countries during World War I, attempting to directly infect animals and contaminate their feed with anthrax (Frischknecht, 2003).

Anthrax was used in the worst biological attack in U.S. history, known as "Amerithrax" (FBI, n.d.). Following the terrorist attacks of September 11, 2001, letters laced with anthrax began circulating through the U.S. Postal Service (USPS), addressed to the offices of U.S. senators and national media outlets in Washington D.C., South Florida, and New York. Opening the letters released anthrax powder into the offices, where it was inhaled, ultimately causing the deaths of five victims and illness in 17 individuals. Panic and fear spread around the country, as it was unknown how many people had come into contact with these letters or how many other letters might be contaminated. This biological attack resulted in one of the largest and most complex law enforcement investigations to date (FBI, n.d.). The costs of human life, emotional distress, and resources were significant. Over 32,000 people exposed to anthrax were required to take prophylactic antibiotics, the USPS purchased 4.8 million masks and 88 million gloves for its employees, and 300 postal facilities were tested for anthrax. The investigation required extensive law enforcement resources. The Amerithrax Task Force comprised 25 to 30 full-time FBI investigators, the U.S. Postal Inspection Service, other law enforcement agencies, and federal prosecutors from the District of Columbia, and the Justice Department's Counterterrorism Section spent hundreds of thousands of investigative hours on the case. These efforts involved more than 10,000 witness interviews on six different continents, the execution of 80 searches, and the recovery of more than 6,000 items of potential evidence during the investigation. More than 5,750 grand jury subpoenas were issued, and 5,730 environmental samples were collected from 60 sites. These efforts ultimately did not result in a conviction, as the suspect took his own life (FBI, n.d.).

ANTHRAX AS A WEAPON

Access multimedia content (http://openstax.org/books/population-health/pages/32-2-biological-terrorism)
This video gives an overview of how and why anthrax has been used in biological warfare globally.

Watch the video, and then respond to the following questions.

1. What makes anthrax an effective biological agent for terrorists?
2. What do you think are the risks that stores of anthrax, intended for use as a biological agent in warfare, pose to the community?
3. Who do you think might be at risk of contamination when biological agents are dispersed via a federal communication system such as the USPS?

Identification and Management of Biological Casualties

Nurses within the community and acute care facilities must be prepared to identify and manage biological casualties. The United States remains vulnerable to bioterrorism. Biological agents like anthrax, botulinum toxin, and bubonic plague can cause a large number of illnesses or deaths in a short amount of time. An attack using a biological agent can mimic a natural outbreak or event, complicating public health assessment and response. Biological agents capable of secondary transmission can lead to epidemics, so early recognition of unusual circumstances is essential in prevention and response (WHO, 2023a).

The first step in identification is recognizing potential exposure to a biological casualty. Indications of biological agent exposure include (Bland, 2014):

- Reports of unexplained or unusual symptoms, such as headache, burns, vision problems, chest tightness, difficulty breathing, excessive secretions, nausea, vomiting, convulsions
- Multiple casualties with an unidentified cause
- Unusual taste, smell, or mist
- Unexplained dead animals or plants

Whenever the nurse suspects individual exposure to a biological agent, a thorough assessment should be completed only after ensuring personal safety. For example, the biological agent may have contaminated the individual's clothing, putting the nurse in danger of exposure. The nurse in this situation should don appropriate PPE, direct the individual to remove contaminated clothing, and follow procedures for decontamination, which include washing with soap and water.

In the event of biological exposure and contamination, decontamination may be necessary. **Biological contamination** occurs when infectious agents come into contact with a body surface, inanimate objects, or food or water supplies. **Biological decontamination** includes disinfection or sterilization of the area to reduce the number of microorganisms to a safe level (Table 32.3) (Dembeck et al., 2011).

Method	Examples
Mechanical • Removes but may not neutralize the agent	• Filtration of drinking water to remove water-borne pathogens • Air filtration of aerosolized agents • Scrubbing with soap and water to remove from skin or other surfaces
Chemical • Neutralizes using liquid, gas, or aerosol disinfectants	• Sodium hypochlorite (bleach) and hydrogen peroxide • Effectiveness dependent on contact time, concentration of solution, composition of the contaminated surface, and characteristics of the biological agent • Disinfectant may be harmful to humans, animals, the environment, and/or other materials
Physical • Use of heat or radiation to decontaminate surfaces or objects	• Sterilization using high temperatures

TABLE 32.3 Mechanical, Chemical, and Physical Methods of Biological Decontamination

The nurse compares individual assessment data to signs and symptoms of common biological agents to assist in diagnosis and potential treatment options. Table 32.4 describes common agents of bioterrorism, method of transmission, signs and symptoms, and treatments. The nurse reports biological agent exposure to the local health department and the CDC.

Agent of Bioterrorism	Transmission	Signs & Symptoms	Treatment
Anthrax *Bacillus anthracis*	• Ingestion, contact, or inhalation of spores • Not spread person to person except cutaneous • 1 to 7 days incubation, up to 60 days	Cutaneous • Painless, red papule evolving to black eschar Ingestion • Necrotic ulcers in GI tract, fever, nausea, vomiting progressing to hematemesis and bloody diarrhea • 25 to 60 percent fatality if untreated Inhalation • 4 to 10 days of flu-like symptoms (headache, fever, malaise, cough) followed by rapid deterioration with severe dyspnea and shock • 85 to 90 percent fatality if untreated	60 days of doxycycline, ciprofloxacin, or levofloxacin
Botulism *Clostridium botulinum*	• Ingested or inhaled • Not spread person to person • 1 to 5 days incubation	• Generalized weakness, dizziness, blurred vision, dysarthria, dysphagia, diplopia, followed by symmetrical descending flaccid paralysis	• Antitoxin • Respiratory support, including mechanical ventilation if necessary

TABLE 32.4 Transmission, Signs and Symptoms, and Treatments of Common Agents of Bioterrorism (See Hayoun & King, 2022; Siegal et al., 2023.)

Agent of Bioterrorism	Transmission	Signs & Symptoms	Treatment
Ebola Ebola virus	• Contact or inhaled • 2 to 19 days incubation	• Fever, muscle pain, malaise, headache, vomiting, diarrhea, rapidly progressing to impaired organ function, hypotension, shock, bleeding, death • 25 to 90 percent fatality rate depending upon strain of virus	• Monoclonal antibodies • Supportive care • Airborne precautions
Plague *Yersinia pestis*	• Inhaled for pneumonic plague—spread through air and droplets, person to person (most deadly form) • Vector for bubonic plague—spread through flea bites • 1 to 4 days incubation	• Pneumonic—100 percent fatal if untreated: fever, chills, headache, cough, dyspnea, weakness progressing to hemoptysis, circulatory collapse, and bleeding • Bubonic—swollen, tender lymph nodes; fever; headache, chills, weakness	• Streptomycin, ciprofloxacin, doxycycline, or chloramphenicol • Droplet precautions • All possible exposures treated prophylactically
Smallpox *Variola* virus	• Inhaled or contact • 7 to 19 days incubation	• Macular rash beginning in face and distal extremities, then moving to the trunk (rash appears after contagious)	• Cidofovir • Smallpox vaccination within 72 hours of exposure • Airborne precautions
Tuleremia *Francisella tularensis*	• Inhaled, ingested, or vector through bites of infected ticks, mosquitos, flies, rodents, rabbits, or hares • Not spread person to person • 1 to 14 days incubation	• Malaise, cough, dyspnea, fever, weight loss	Streptomycin, gentamicin, doxycycline, ciprofloxacin

TABLE 32.4 Transmission, Signs and Symptoms, and Treatments of Common Agents of Bioterrorism (See Hayoun & King, 2022; Siegal et al., 2023.)

Mass exposure to biological agents must be identified and managed as quickly as possible to prevent additional

exposure. Principles of mass exposure management include (Bland, 2014):

- Recognition of exposure
- Ensuring safety of the area through evacuation of nonessential personnel, use of PPE, and limiting additional exposure
- Establishing zones for decontamination, treatment, and safe or clean zones; see Zoning of Care Areas
- Setting up a command center and establishing a chain of communication
- Triage, assess, treat, and transport exposed individuals

The U.S. government remains in a constant state of readiness to protect Americans against the potential release of biological agents in terrorist threats and attacks. The **Strategic National Stockpile** (SNS) is part of the federal medical response infrastructure. The SNS supplements MCMs for states, tribal nations, territories, and metropolitan areas during public health emergencies. The stockpile has supplies, medicines, and devices for lifesaving care that can be used in the short term when the immediate supply of critical medical assets is unavailable or insufficient to meet the community's needs (Administration for Strategic Preparedness and Response [ASPRN], n.d.).

Federal law enforcement and health and safety agencies focus on risk assessments and ensuring that preventative **medical countermeasures** (MCM) are safe, effective, and secure. The U.S. Food and Drug Administration (FDA) Medical Countermeasures Initiative (MCMi) works at local, state, national, and international levels of government to support MCM-related public health preparedness and response efforts (FDA, n.d.). MCMs are used to prevent, diagnose, or treat conditions associated with biological agents and include:

- Biologic products, such as vaccines, blood products, and antibodies
- Drugs, such as antimicrobial medications, antiviral medications, antidotes, or radiation treatments
- Devices, including diagnostic tests to identify threat agents, and personal protective equipment (PPE), such as gloves, respirators, face masks, and gowns

The Nurse's Role in Bioterrorism Preparedness and Response

Nurses are essential members of the public health system. Public health and community health nurses must be prepared for the possibility of terrorist activity at any time. The American Nurses Association (2016) has developed policies, resources, and educational opportunities for nurses on disaster preparedness and acknowledges the importance of preparation so that nurses are equipped to respond to critical events. Nurses have a role in primary, secondary, and tertiary prevention for bioterrorism preparedness and response (Table 32.5). Refer to Pandemics and Infectious Disease Outbreaks for more information on conducting surveillance.

Primary Prevention
• Disease surveillance and preparation ◦ Community health nurses are in ideal positions within communities to participate in surveillance. They must be alert to signs of possible terrorist activity, monitoring their communities for specific indicators of possible biologic terrorism, such as unusual numbers of dead or dying animals, unexplained serious illnesses or deaths, atypical vapors or odors in the environment, or unusual swarms of insects that might also indicate the use of biologic agents for terrorism. Diligent surveillance is essential in the early recognition of diseases caused by biological agents. Nurses work collaboratively in partnerships across disciplines for disease surveillance and to communicate vital information via appropriate channels to implement preparedness and response plans (Akins et al., 2005). ◦ Creating, updating, and implementing a disaster plan is one of the most effective community-based strategies to mitigate injury and mortality from biological attacks. **Tabletop exercises**, sessions where key individuals who would respond to a disaster discuss their role and response in specific emergency situations, and **disaster simulations**, where key individuals respond to a specific emergency, simulate the disaster, and respond as if the situation were real, are useful strategies for ensuring that there is a stable response plan and that all team members know their role.
Secondary Prevention

TABLE 32.5 Nurses' Role in Primary, Secondary, and Tertiary Prevention for Bioterrorism Preparedness and Response

• Screening and treatment of the community's health needs ◦ Recognition of disease states is key for early intervention during a bioterrorist attack. Nurses may be among the first to recognize the presentation of an unusual illness. The community health nurse must be prepared to act safely, access information rapidly, and use resources effectively (International Council of Nurses, 2019). The community health nurse may be called on to provide direct care to survivors, to serve as a hospital–community liaison, to set up and administer mass immunizations, to support shelters, to make home visits to affected families, to establish a case management system for survivors, or to serve on committees responding to terrorist acts. ◦ In addition to large numbers of casualties, there may be widespread public panic and fear. The community health nurse must be competent to recognize and respond to the psychological needs of the victims, the public, and the workers responding to a bioterrorism event (International Council of Nurses, 2019).
Tertiary Prevention
• Rebuilding and long-term recovery of the community Recovery and rebuilding a community may take a long time. Victims physically affected by biological agents require time to heal. Groups, families, or individuals who experience a terrorist-related event require ongoing care and recovery for the psychological toll caused by the epidemic of fear and panic (Radosavljević & Jakovljević, 2007).

TABLE 32.5 Nurses' Role in Primary, Secondary, and Tertiary Prevention for Bioterrorism Preparedness and Response

32.3 Mass Violence

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 32.3.1 Describe the term mass violence.
- 32.3.2 Examine U.S. mass shooting statistics.
- 32.3.3 Examine how mass violence can impact whole communities and the population at large.
- 32.3.4 Identify signs of emotional distress related to incidents of mass violence.
- 32.3.5 Discuss the principles of mass casualty management.

Mass violence refers to incidents of intentional criminal acts targeted at defenseless citizens with the intent to harm or kill large numbers of victims. Mass violence often occurs without warning and can happen anywhere, impacting whole communities and the country at large. These types of disasters, which include shootings and acts of terrorism, disturb the sense of order and safety in situations that are normally nonthreatening. The impact of mass violence is far-reaching, instilling feelings of confusion, fear, and helplessness. They violate the larger community's sense of safety and order, affecting even those without personal connections to the event (SAMHSA, n.d.). The most common manifestations of mass violence are:

- Mass shootings
- Terrorist bombings
- Mass riots
- Hijacking of aircraft, trains, buses, or other transportation services

Mass Shootings in the United States

Statistically, mass violence is uncommon, with mass shootings comprising most incidents. There is no standard definition of mass shooting, but there is a common definition for **active shooter**. An active shooter is an individual who is killing or attempting to kill people with a firearm within an area (USA Facts, 2023). Criteria to report mass shootings differ by the number of victims, whether injuries are included, the location of the shooting, whether it occurred with another crime, and the relationship between the shooter and the victims (Smart & Shell, 2021). More common definitions include an incident where four or more people have been murdered by a firearm or an event where at least four victims were injured or killed by a firearm. Although less than one percent of all firearm deaths annually in the United States are attributed to mass shootings, they have incited fear and panic beyond the direct victims and their families (Soni & Tekin, 2022). In the United States, the rate of mass shootings and the number of

people killed over the last four decades has increased, resulting in over 1,000 deaths and 1,500 injuries (NCMDI, 2019; Soni & Tekin, 2022). Federal funds to study gun violence were largely unavailable for about 20 years, but in 2019 the U.S. Congress approved funding for the CDC and National Institutes of Health to conduct gun violence research. This opened the door to new research on gun violence, suicide, and injury prevention (Weir, 2021). Table 32.6 provides 2016–2022 statistics, highlighting the recent increase in mass shootings. Table 32.7 compares the outcomes of the deadliest mass shooting incidents in the United States.

Source	2016	2017	2018	2019	2020	2021	2022
Gun Violence Archive (2023)	383	348	336	417	610	690	647
Everytown (2023)	372	341	329	410	605	686	636
*numbers vary based upon the definition of mass shooting							

TABLE 32.6 Mass Shooting Incidents Since 2016

2017 Concert in Las Vegas, NV	60 killed	411 wounded
2016 Nightclub in Orlando, FL	49 killed	53 wounded
2019 Store in El Paso, TX	23 killed	23 wounded
2017 Church in Sutherland Springs, TX	25 killed	20 wounded
2022 Elementary School in Uvalde, TX	21 killed	17 wounded
2018 High School in Parkland, FL	17 killed	17 wounded

TABLE 32.7 Deadliest Mass Shootings in the United States, 2016–2022 (See Everytown, 2023; Statista, n.d.)

The Impact of Mass Violence

Mass violence and shootings have significant mental health effects on population health. These terrifying and traumatic incidents are often directed at strangers in public places. The community's response is defensive and urgent, demanding an explanation to try to make sense of the nonsensical. In the aftermath of mass violence, political leaders often blame mental illness, a narrative that echoes the public's common belief that individuals with mental illness generally pose a danger to others. It is difficult to comprehend the logic of mass violence or to imagine that a mentally stable person would intentionally kill multiple strangers; therefore, one might conclude that all perpetrators of mass violence must be mentally ill (NCMDI, 2019). However, according to a report from the U.S. Department of Homeland Security, the motives for mass violence are complex. The most common reasons relate to grievances, ideology, bias, political beliefs, and psychotic behavior (Alathari et al., 2023). Some offenders give multiple reasons for committing acts of mass violence, and others, killed during the event, never provide a reason. Table 32.8 outlines cited motivations for mass violence events. Over half are attributed to personal, domestic, or workplace grievances, while only 14 percent are related to psychotic symptoms (Alathari et al., 2023).

Components to Motivate*	2016	2017	2018	2019	2020	Total
Grievances	40%	50%	68%	35%	60%	51%
Personal	*5*	*9*	*11*	*8*	*13*	*46*
Domestic	*6*	*6*	*8*	*1*	*8*	*29*
Workplace	*2*	*6*	*3*	*4*	*3*	*18*
Ideological, bias-related, or political beliefs	30%	24%	10%	21%	10%	18%
Psychotic symptoms	13%	26%	10%	15%	8%	14%
Desire to kill	13%	8%	3%	9%	3%	7%
Fame or notoriety	7%	8%	3%	6%	5%	6%
Other	3%	3%	10%	9%	8%	6%

TABLE 32.8 Motives for Mass Violence Over Time (See Alathari et al., 2023.)

Components to Motivate*	2016	2017	2018	2019	2020	Total
Undetermined	20%	8%	10%	29%	23%	18%

**The percentages for each year do not total 100% as some attackers had multiple motives.*

TABLE 32.8 Motives for Mass Violence Over Time (See Alathari et al., 2023.)

Mental health issues related to mass violence events are correlated to direct victims, their families, and the general population. Research has shown that 48 percent of Americans live with the fear of becoming a victim of a mass shooting, and more than 10 percent have avoided large crowds or bought a weapon because they are worried about the threat of mass shootings (Brenan, 2019). Individuals living in the community or attending the school where a shooting has occurred have increased emotional distress, with a higher likelihood of taking antidepressants, engaging in risky behaviors, or considering suicide (Brodeur & Yousaf, 2022; Deb & Gangaram, 2023).

Public health and community health nurses and other health providers must be aware of the role of mental illness in mass violence for both victims and offenders to provide support and lead efforts to prevent mass violence (Alathari et al., 2023). Like many other community health concerns, preparation and prevention are key strategies for combating mass violence. Planning and participation in regular preparation activities like active-shooter drills supports proactivity and preparation for the worst-case scenario (Peterson & Densley, 2021).

A part of preparation, albeit not coordinated, is attention to warning signs. Warning signs include having behavioral problems or difficulty connecting with others, being noncommunicative, having aggressive or violent verbalizations, being withdrawn, harming self or others, and being emotionally unstable (Peterson & Densley, 2021). Education and advocacy programs for teachers, caregivers, and the public can go a long way in promoting awareness of behaviors that might be precursors to violence in individuals. Seemingly innocuous comments or interactions may be warning signs or cries for help (Peterson & Densley, 2021).

Mass Casualty Management

Mass casualty incidents (MCIs) are human-made or natural disasters that overwhelm the resources of local management agencies and the health care system. Emergency medical services (EMS) are often the first responders on the scene of a mass casualty event, but the principles of response apply to any health care responder. First responders are critical in triaging, stabilizing, and preparing to transport victims to health care facilities after MCIs. As the name implies, MCIs involve large numbers of victims who will need varying levels of care. Effective management, communication, and collaboration are essential during an MCI. Local community agencies, such as the fire department or police department, may respond, and state or national agencies may also become involved, depending on the type and severity of an MCI (Alpert & Kohn, 2023).

Response to a mass casualty event is complex, involving many people from different disciplines. Planning is a critical step to response, as a methodical approach to a crisis engages community responders in thinking through the lifecycle of a potential crisis, determining required capabilities, and establishing a framework for roles and responsibilities (FEMA, 2021). Since mass casualty disasters can happen without warning, a constant state of readiness requires training and regular drills. Simulations are frequently used to prepare health care workers and first responders for mass casualty management, as individuals must understand the roles that each one has in mass casualty response (Figure 32.3).



FIGURE 32.3 EMS staff participate in a training exercise to prepare for a mass casualty incident. (credit: "Mass Casualty Incident Training, Mammoth Hot Springs" by Neal Herbert/NPS/Flickr, Public Domain)

Multiagency, Interprofessional Team Coordination

The National Incident Management System (NIMS) provides a framework for the management of disasters and MCIs. NIMS guides the multiagency, interprofessional structure and organization for communication and incident command, allowing for efficient communication using common terminology, clarification of leadership and roles, and effective management and distribution of resources. Figure 32.4 illustrates the organization of Incident Command System (ICS) used in NIMS. Table 32.9 provides further description of the roles of command staff in the ICS.

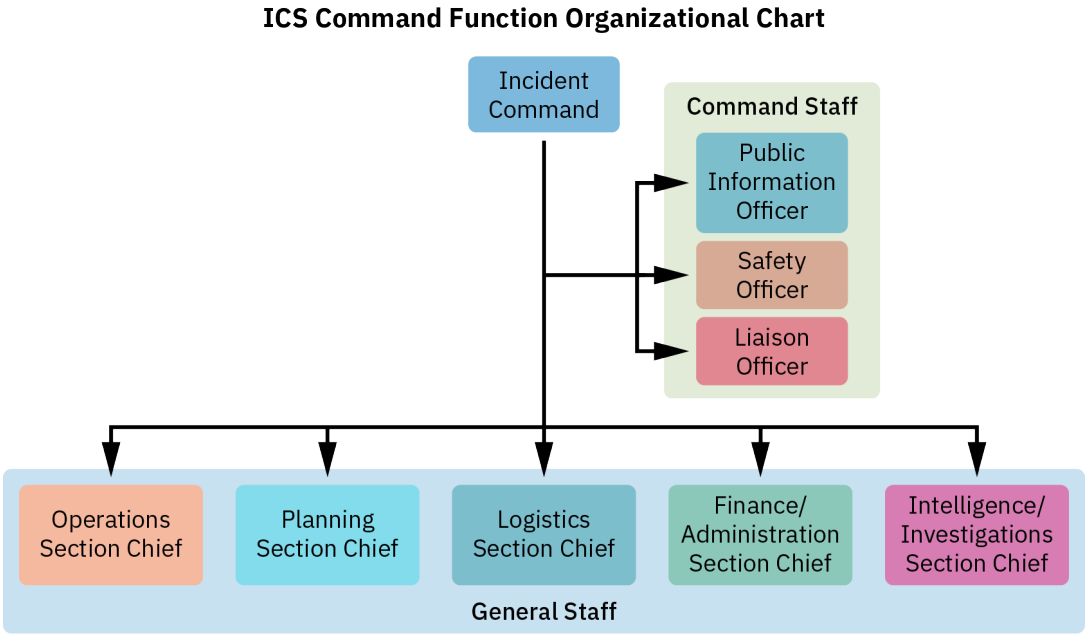


FIGURE 32.4 The ICS provides responders with a framework for organization, decision-making, and communication during a disaster or mass casualty event. (credit: modification of work "ICS Command Function Organization Chart" by FEMA, Public Domain; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Role	Function
Incident Command	• Has overall responsibility for the incident • Sets objectives for the incident and approves the incident action plan • Manages the incident and approves requests
Public Information Officer	• Develops and coordinates press releases • Monitors and maintains information related to the incident
Safety Officer	• Identifies and mitigates hazards • Approves the Medical Plan • Ensures safety messages and briefings are made throughout the incident
Liaison Officer	• Communicates with cooperating agencies • Maintains list of responders and responding agencies • Monitors resources, providing current resource status, including limitations and capabilities of agency resources
Operations Section Chief	• Organizes services and resources to carry out the plan • Supervises operations • Requests additional resources if needed
Planning Section Chief	• Develops incident action plan to accomplish incident objectives • Collects data related to the plan • Facilitates meetings • Assembles task forces if needed
Logistics Section Chief	• Provides facilities, transportation, communications, supplies, fuel, food, and medical services for incident personnel • Manages incident logistics • Identifies anticipated services and support • Oversees communications, medical, and traffic plans • Oversees demobilization of logistics section and resources
Finance/Administration Section Chief	• Monitors incident costs • Provides financial guidance
Intelligence/Investigations Section Chief	• Scope and function determined by the Incident Commander • May be incorporated as a part of the planning section, operations section, or general staff section • Prevents unlawful activity during incident • Collects, processes, and analyzes information, evidence, and intelligence • Investigates the cause of the incident and identifies suspects • Conducts missing persons investigations

TABLE 32.9 ICS Command Roles and Functions (See FEMA, 2018.)

The Medical Branch (nurses and other health care staff) reports to the Operations Section Chief. This includes the medical director, who supervises triage, treatment, and transport of clients; the triage officer, who oversees triage of clients; the treatment officer, who manages the treatment area; and the transport officer, who arranges and documents transport of clients from the scene (Lincoln et al., 2023). Additional roles may be added depending upon the number of clients and the time needed to manage medical needs.

Scene Safety Considerations

When responding to a mass casualty incident, there are several issues that must be considered to effectively manage the scene and victims for optimal outcomes.

- Scene Safety
  - The top priority on the scene of an MCI is the safety of the responders. Verifying that the scene is safe before first responders provide care prevents secondary incidents and subsequent injuries (Alpert & Kohn, 2023). Scene security and the responsible agency will depend on the nature of the MCI. If the event is a vehicular accident, the environment around the scene should be assessed for fuel leakage, fire hazard, and other risks that would further endanger victims or responders.
  - Appropriate personal protective equipment (PPE) needs to be available and used by responders to a chemical, biological, radiological, or nuclear event.
  - In response to a terrorist or mass violence attack, the possibility of an explosive detonation or a suicide bomber should be considered and bomb disposal experts dispatched before responders begin lifesaving measures.
  - In a mass shooting incident, if the offender has not been apprehended or has fled the scene, first responders must not approach the scene unless they are trained in tactical medicine and are wearing appropriate protective gear.
  - The response to or after a fire poses a risk of building collapse and inhalation (Alpert & Kohn, 2023).
- Field Triage
  - After scene safety, mass casualty response requires field triage of victims. Examples of field triage systems will follow later in this chapter.

THEORY IN ACTION

Situational Awareness in Multi-casualty Incidents

Access multimedia content (http://openstax.org/books/population-health/pages/32-3-mass-violence)

Nurses and other field-level providers increasingly will be called on to respond to both natural and human-made situations that involve multiple casualties. Situational awareness (SA) is necessary for managing these complicated incidents. SA is the ability to perceive, understand, and respond to the current situation. Basically, it is knowing what is going on in the environment, recognizing unsafe situations, and responding to the situation in a safe, efficient way. Situational Awareness For Emergency Response (SAFER) utilizes technology to access building information and video surveillance when responding to emergencies.

Watch the video, and then respond to the following questions.

1. Why is situational awareness important when responding to a hazardous event?
2. What information does SAFER give to responders?
3. How can SAFER be used during response to a disaster?

Zoning of Care Areas

In an MCI, the area of care is divided into zones if there is a risk of chemical, biological, radiological, or nuclear contamination (Figure 32.5) (Alpert & Kohn, 2023).

- The hot zone is the immediate location of the incident, where victims and responders have direct contamination.
- The warm zone is the area surrounding the hot zone where contamination is present from victims or responders leaving the hot zone. Triage and decontamination can occur in the warm zone to neutralize the risk to victims.
- The cold zone is where care for victims occurs and may serve as the location for minor casualty holding or release.

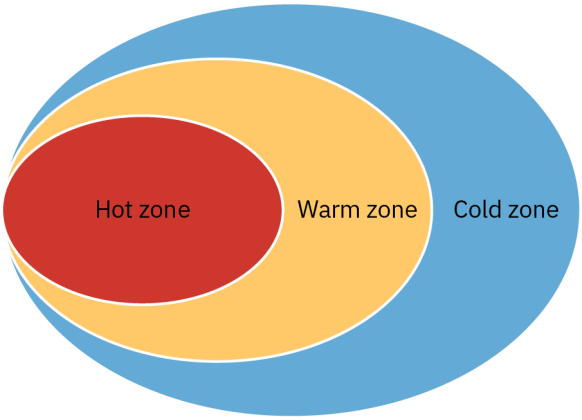


FIGURE 32.5 During an MCI, responders divide care into hot, warm, and cold zones if there is a chemical, biological, radiological, or nuclear contamination risk. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

32.4 The Disaster Management Cycle

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 32.4.1 Describe the disaster management cycle.
- 32.4.2 Explain the nurse's role in the disaster management cycle.
- 32.4.3 Discuss how community partners work together to prevent, prepare for, respond to, and recover from disasters.

A planned, systematic approach to disaster management allows community members, health care providers, emergency response agencies, and community organizations to respond to disasters and mass causalities effectively and efficiently. Community assessment identifies potential disasters, enabling planning to prevent, prepare, and respond to reduce their impact. Nurses play an integral role in all phases of the disaster management cycle. Multisector, interprofessional collaboration enhances disaster prevention, preparation, and response.

Phases of the Disaster Management Cycle

To establish a plan for disasters, the nurse must understand the phases of the **disaster management cycle** (Figure 32.6). The public health/community health nurse has an important role in each phase to promote optimal health outcomes for the people involved.

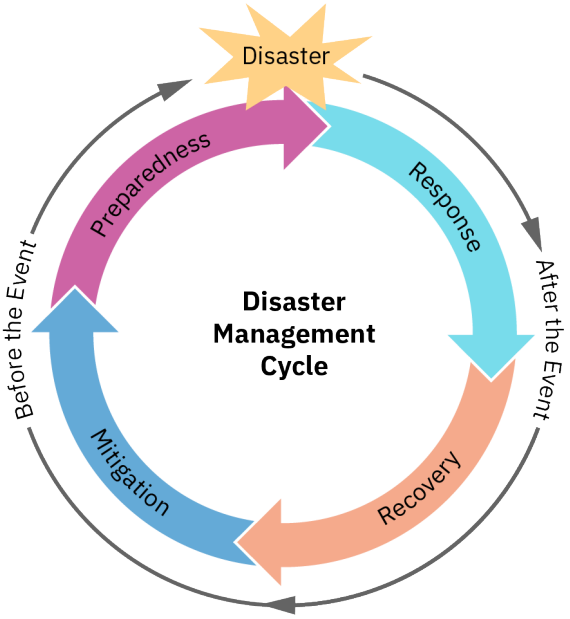


FIGURE 32.6 The disaster management cycle has four phases. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Mitigation, an action to prevent or reduce the cause, impact, or consequences of a disaster, is the first phase of the disaster management cycle. A community assessment identifies community risk factors. This includes determining what natural disasters the community is likely to face. For example, communities geographically situated in coastal regions are at risk for hurricanes or tsunamis. This also includes identification of potential targets of terrorist attacks and potential human-made disasters, such as the release of dangerous chemicals from a factory following an explosion. Community programs focused on preventing the occurrence and mitigating the impact of disasters are developed and implemented (Homeland Security, 2015). For disasters that cannot be prevented, such as earthquakes, hurricanes, and tornadoes, efforts may focus on mitigating the effects of the event on the community. Examples of mitigation include placing sandbags along a river to decrease the amount of floodwater, constructing levees or barriers to prevent or control flooding, boarding windows before a hurricane makes landfall, and improving building infrastructure to reduce the risk of damage during an earthquake.

Preparedness is the second phase of the disaster management cycle. It includes planning, training, and educational activities to address the consequences of disasters that cannot be mitigated. Preparedness is a continuous state of planning for rapid response when a disaster occurs. Task forces made up of community representatives from the local government, health care providers, social services providers, police and fire departments, major industries, local media, schools, and citizens' groups form to ensure that each area of the community knows its role and has a plan in place for when a disaster occurs. In the preparedness phase, responding personnel from each agency are trained. This training includes drills or simulations of mock disasters. Public education is key in providing community members with information on how they can best prepare their families and whom to contact if they are directly impacted by a disaster (FEMA, 2021). The disaster preparedness plan includes what to do in case of disaster, where to go, who to call for help, identifying home vulnerabilities, and accumulating disaster supplies/equipment.

EMERGENCY PREPAREDNESS HOME TOUR

Access multimedia content (http://openstax.org/books/population-health/pages/32-4-the-disaster-management-cycle)
Personal and family preparedness is a professional nurse disaster competency. In this video, a city councilor from Gresham, Oregon, describes how families can prepare their homes in case of an emergency or disaster.

Watch the video, and then respond to the following questions.

1. How does the family plan for disaster within their home?
2. How does your personal preparedness home plan compare to the video?

For more information on developing a personal preparedness plan, visit the American Red Cross Disaster Preparedness Plan (https://openstax.org/r/redcrosso) or Minnesota Department of Public Safety website on Personal and Family Preparedness (https://openstax.org/r/mngovdivision).

Disaster response is the third phase of the disaster management cycle. Disaster response is the execution of the disaster plan when a disaster event occurs. Disaster response management is a local community responsibility that begins before the announcement of an official disaster declaration (Klein & Irizarry, 2022) and continues for the first 72 hours (deAnda et al., 2022). If local resources are depleted after 72 hours and cannot be managed, the Stafford Disaster Relief and Emergency Assistance Act allows the state governor to request a disaster declaration from the president of the United States. This declaration mobilizes federal resources to assist local agencies in the aftermath of a disaster (deAnda et al., 2022).

Disaster recovery, the fourth phase of the disaster management cycle, begins during the response phase once the threat to human life and infrastructure has passed. Recovery efforts aim to return a community to some degree of normal predisaster functioning (Klein & Irizarry, 2022). The simultaneous work of rebuilding and resuming regular operations and activities may require a prolonged period. Disaster recovery includes rescue work to provide relief, primarily immediate medical care, food and water, clothing, and shelter (Polcarová & Pupíková, 2020). Once people's immediate needs are met, restoring public services such as communication and transportation begins the process of returning to normalcy. Rebuilding community infrastructure may be a long-term course but may also present improvement opportunities (Polcarová & Pupíková, 2020).

HEALTHY PEOPLE 2030

Emergency Preparedness

These Healthy People 2030 objectives aim to improve emergency preparedness (https://openstax.org/r/healthypeopleo) and response by building community resilience. The following general emergency preparedness objectives are in the developmental stage:

- Increase the proportion of parents and guardians who know the emergency or evaluation plan for their children's school — PREP-DO1
- Increase the proportion of adults who prepare for a disease outbreak after getting preparedness information — PREP-DO2
- Increase the proportion of adults who know how to evacuate in case of a hurricane, flood, or wildfire — PREP-DO3
- Increase the proportion of adults who have an emergency plan for disasters — PREP-DO4

The Nurse's Role in the Disaster Management Cycle

The ANA (2016) considers disaster preparedness and response a basic competency of nursing practice. While most nurses may not have extensive experience in disaster response, they are expected to have minimum knowledge about disaster management. They participate in preparedness planning and training drills, and they have skills and abilities to provide client care and community support during a disaster. Community health nurses collaborate with health care professionals and partner with health system leaders, individuals, and families to improve population health outcomes and promote community resiliency when disasters occur (Chegini et al., 2021).

Nurses are an important part of all phases in the disaster management cycle. Understanding the inherent risks a community faces for different types of disasters is critical in the mitigation phase. If a community is at a higher risk of a particular type of disaster, then more time and resources can be focused on activities that will prevent losses. For example, community health nurses who work in areas at risk for tropical weather may need to spend more time mitigating the effects of hurricanes than the risk of forest fires. Public safety education helps people in the community understand the potential hazards and effects of the disasters for which their community is at greatest risk. Community education on strategies to mitigate hazards and how to respond in case of a disaster raises individuals' awareness and increases the likelihood that they will develop a disaster plan. Families should know what to do, who to call, and where to go in emergencies. When individual community members are generally disaster-aware, they can immediately implement the personal disaster response plan as needed. The nurse plays a key role in educating community members on disaster preparedness.

CLIENT TEACHING GUIDELINES

Disaster Preparedness

Community education for disaster preparedness includes:

- Create a family preparedness plan (https://openstax.org/r/readygovp) that includes an evacuation plan (https://openstax.org/r/readygovev). Review the plan annually.
- Determine a family communication plan that includes an emergency meeting place. How will you communicate if phone lines and towers are not working?
- Assemble a disaster kit (https://openstax.org/r/readygovkit). Inventory the kit at least annually, replacing expired items.
- Assemble an emergency kit (https://openstax.org/r/readygovcar) for your vehicle.
- Store important documents in a waterproof, portable container.
- Make a plan for your pets and animals (https://openstax.org/r/readygovpets).
- Secure property prior to a disaster.

(See U.S. Department of Homeland Security, 2023.)

The nurse must be involved in preparedness activities and participate in disaster management education and training from the beginning of nursing education programs (ANA, 2016). Many organizations provide practicing nurses opportunities for further education to build the skills to prepare for and respond to emergencies. The FEMA Emergency Management Institute has a curriculum of disaster preparedness and response online courses available to the public free of charge at this link (https://openstax.org/r/trainingfemago).

Collaboration with federal, state, and local relief agencies and organizations is critical in preparedness activities. Organizations like FEMA, the American Red Cross, state officials, and local emergency medical services come together to practice disaster response. Mock drills are simulation exercises that are regularly conducted to ensure community members and responders have practiced how to respond appropriately in disasters. Nurses should help plan and participate in these mock drills that simulate the type of disaster the community is most likely to have. Tabletop exercises are also useful for frequently reviewing disaster policies and procedures.

HURRICANE TABLETOP EXERCISE

Access multimedia content (http://openstax.org/books/population-health/pages/32-4-the-disaster-management-cycle)

Tabletop exercises are discussion sessions where community members discuss their roles and responses during a specific emergency or disaster. This video discusses the benefits of conducting tabletop exercises.

Watch the video, and then respond to the following questions.

1. Why does this community complete hurricane tabletop exercises annually?
2. What are the benefits of testing the emergency plan using a tabletop exercise?

As care providers, nurses are often among the first to respond to health care needs in disaster situations. Lifesaving actions, injury treatment, and minimizing the effects of the disaster are the priority. Immediate needs such as medical treatment, shelter, food, water, and psychological support for survivors are the primary focus. The COVID-19 pandemic brought nursing disaster response to the forefront. Nurses worked tirelessly in their community hospitals, providing client care at the bedside, and the need for nurses to provide client care on the front lines was greater than the number of nurses available in many areas. In January 2020, the CDC activated the Incident Management System in response to the COVID-19 crisis. The CDC and Agency for Toxic Substances and Disease Registry Nurses' Work Group (CNWG) helped to distribute and meet requests for nurse deployments to support the COVID-19 response (Zauche, 2022). The group used an Emergency Operations Management System application to track the work hours of those who contributed to the response. Among 190 CNWG members, 146 (76.8 percent) were deployed to work between January 21, 2020, and September 18, 2021. Combined, they recorded more than 24,600 days and nearly 198,000 hours on the response. Nurses worked in local facilities and with state public health agencies and departments throughout the pandemic as policy experts, contact tracers, researchers, epidemiologists, nurse consultants, and client advocates (Zauche, 2022).

Nurses also have a role in helping the community return to normalcy in the recovery period. They work collaboratively across disciplines to restore health care to optimal operations along the recovery continuum, adjusting according to the community's needs. Nursing assessment and intervention during the recovery stage include monitoring and screening for communicable and infectious diseases, educating on water and food safety, educating on cleanup and disposal of debris and deceased livestock/animals, eliminating safety risks, and screening and treatment for mental health issues. Nurses have been essential in the post-pandemic phase of the COVID-19 pandemic. Nurses led the way in vaccine education, distribution, and coordination of administration in vaccine clinics. These efforts were essential to reestablishing health care to its modified baseline, and they have been active participants in creating new policies and practices to help prevent a resurgence.

UNFOLDING CASE STUDY

Part A: Disaster Management

Read the scenario, and then answer the questions that follow.

Juanita, a public health nurse on the Florida Coast, is a member of the disaster management team. In anticipation of the approaching hurricane season, Juanita reviews disaster prevention and mitigation plans for the community. She assesses the community for the most vulnerable individuals (those with physical and mental disabilities) and maps their locations. She also plans nursing interventions to mitigate the effects of the hurricane.

Juanita meets with the multiagency, interprofessional team during a tabletop exercise on hurricane disasters. She shares the location of the most vulnerable individuals in the community because they may require well-being checks or evaluation during power and phone outages. She provides input from a nursing perspective on potential sheltering locations, shelter resource needs, and the triage and transport process. Juanita suggests including surrounding communities in the hurricane disaster plan to prepare for increased population and health needs in their communities due population displacement before and following hurricane landfall.

1. What is another vulnerable population that may require well-being checks during emergency events and disasters?
    a. Older adults
    b. Single parents
    c. Persons with substance-use disorder
    d. Young adults

2. Which nursing intervention would be appropriate to mitigate the effects of a hurricane disaster?
    a. Conduct a simulation to practice triage in mass casualty situations.
    b. Teach classes on family safety planning prior to hurricane season.
    c. Draw a shelter blueprint to prepare for mass food, water, and health needs.
    d. Lead a tabletop exercise on hurricanes with health department staff.

Community Collaboration and Disasters

With the rising incidence of disasters, it is essential that public health professionals engage internal and external partners to promote community resilience and return to normalcy. Disasters present complex challenges for which no single discipline, agency, organization, or jurisdiction can or should bear sole responsibility (Association of Public Health Nurses [APHN], 2014). Community resilience after disasters is dependent on coordinated care and resource distribution. To gain the respect and confidence of the public, local agencies and leaders must manage disaster response and collaborate effectively to achieve optimal outcomes for the community (Charney et al., 2018).

Multisector, interdisciplinary collaboration is necessary at the community level during each stage of the disaster management cycle. Most often, the public health agency leads prevention and preparedness efforts within a community. Community partners who respond to and are affected by disasters are invited to participate in disaster management activities. This includes emergency response coordinators; emergency department managers; epidemiologists; nurses; emergency medical services; law enforcement; fire services; academic institutions; Medical Reserve Corps; private businesses; faith-based organizations; humanitarian organizations; nonprofit organizations; medical, health, and behavioral providers; and other community-based organizations (RHIhub, 2023). The disaster management team collaborates to assess the community for risk factors, plans efforts to mitigate disaster effects, and prepares for potential disaster through tabletop exercises and disaster simulations. Prevention and preparedness activities identify areas of strength, accessible resources, and areas for improvement.

The disaster management team utilizes the NIMS framework and ICS during disaster response and recovery to establish leadership, organize resources, and communicate effectively. When local resources are depleted, state partners, such as the National Guard, state emergency management agency, state health department, and governor's office, and federal partners, such as FEMA, National Disaster Medical System, Environment Protection Agency, and U.S. Department of Health and Human Services Incident Response Coordination Team, may join disaster response efforts. Table 32.10 describes the role of various disaster response organizations and partners.

Local Partners	
• Immediate response to local disasters • Establish preparedness plans • Conduct mitigation efforts	
Emergency response coordinators	• Establish local emergency action plans • Identify potential hazards within the community • Develop mitigation plans • Coordinate emergency response
Medical and mental health providers including nurses	• Triage, assessment, and treatment of victims • Participate in mitigation and preparedness activities • Ensure adequate resources for medical and mental health care • Educate on mitigation, preparedness, and risks following disaster
Emergency medical services	• Provide immediate response to disaster events
Law enforcement	• Provide immediate response to disaster events • Assist with scene safety, response, and logistics • Educate on disaster prevention, preparedness, and response
Fire services	• Provide immediate response for fire suppression, emergency medical response, and hazardous materials response • Assist with scene safety • Educate on fire prevention and response
Medical Reserve Corps (https://openstax.org/r/asprhhsgov)	• Assist in response to community health needs by offering medical support, shelter support, surge support, dispensing efforts, first-aid response, and community outreach
Hospitals and health care services	• Provide treatment during disaster • Educate on mitigation and preparedness
Humanitarian organizations	• Assist with sheltering, transportation, food, water, and resource distribution
Faith-based organizations	• Assist with sheltering, transportation, food, water, and resource distribution • Provide spiritual resources
State Partners	
• Provide recommendations for and approval of local emergency preparedness plans • License professionals • Assist in disaster response and recovery when local resources are exhausted	
State National Guard	• Assist with transportation, communications, public works and engineering, emergency management, mass care, search and rescue, and hazardous materials management
State Public Health Associations	• Approve local emergency preparedness plans • Provide training exercises and education on disaster management
National and Federal Partners	

TABLE 32.10 Partners and Organizations Involved in Disaster Management

	• Recommend guidelines for disaster management • Assist in disaster response and recovery when National Emergency declared or when state resources are exhausted
U.S. National Response Team (https://openstax.org/r/nrtorgn) (NRT)	• Provides assistance, resources, and coordination in response to land, air, and water pollution incidents
U.S. Environmental Protection Agency (https://openstax.org/r/epagovabout) (EPA)	• Provides leadership and assists with prevention and preparation for chemical emergencies • Responds to environmental disasters • Educates about chemical hazards
National Guard (https://openstax.org/r/nationalguard)	• Assists with transportation, communications, public works and engineering, emergency management, mass care, search and rescue, and hazardous materials management
Federal Emergency Management Agency (FEMA) National Incident Management System (NIMS (https://openstax.org/r/femagovem))	• Coordinates response of federal agencies to disasters • Provides guide for All-Hazards Emergency Operations Planning • Educates on NIMS and the National Response Framework (NRF (https://openstax.org/r/femagovemergency))
Department of Health and Human Services (HHS)	• Coordinates federal health, medical, and social services • Includes the Office of Human Services Emergency Preparedness and Response (https://openstax.org/r/acfhhsgovoh): collaborates with FEMA to coordinate services during disasters
Homeland Security (https://openstax.org/r/dhsgov)	• Provides national security from threats (aviation and border security, emergency response, cybersecurity, terrorism)
Centers for Disease Control and Prevention (CDC)	• Educates on health and health threats, including disaster preparedness and response • Responds to health threats • Investigates disease outbreaks
American Red Cross	• Private, volunteer agency • Provides immediate disaster relief (shelter, food, health services)

TABLE 32.10 Partners and Organizations Involved in Disaster Management

32.5 The Nurse's Role in Emergency Preparedness and Disaster Response

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 32.5.1 Explain the nurse's role in emergency preparedness, disaster response, and disaster recovery.
- 32.5.2 Compare the stages of disaster to the nursing process.
- 32.5.3 Describe disaster triage.

Community health nurses are well positioned to respond in times of disaster and maintain a constant role across the disaster cycle of preparedness and national planning framework (APHN, 2014). From emergency preparedness to disaster recovery, they work with individuals, families, the community, and local administrators to promote health and well-being and to prevent illness (Siva & Prema, 2018). Community health nurses are not only acute-care providers or first responders, but they also maintain a long-term focus on a healthy community during the disaster

phases. Their knowledge of and skills in epidemiology, determinants of health, community mapping, risk assessment, disease surveillance, community resources, health teaching, and mass education make them effective members of the disaster management team. Their relationships with and intimate knowledge of how people in the community will respond to a crisis and what resources they may use or benefit from make them trusted health care professionals during times of uncertainty (APHN, 2014; Siva & Prema, 2018).

As discussed, emergency preparedness is an essential role for the community health nurse. Having a workable plan that can be implemented in an immediate response to a disaster is critical. Community health nurses should be ready to expand their role in nonroutine practice areas during the response to a mass casualty event. The competencies expected of the community health nurse include emergency readiness and response and ensure the nurse's ability to understand and execute the necessary skills and behaviors in the event of an incident (International Council of Nurses, 2019). Table 32.11 lists disaster competencies for the general professional nurse, or nurses who have completed undergraduate nursing education programs. The competencies fall within eight disaster management domains.

Domain	Competency
1. Preparation and Planning	• Maintains a personal and professional preparedness plan • Participates in disaster exercises in the workplace • Maintains knowledge of available emergency resources, plans, policies, and procedures • Describes methods to assist vulnerable populations during a disaster response
2. Communication	• Uses disaster terminology correctly when communicating • Communicates disaster priority information promptly to appropriate individuals • Demonstrates basic crisis communication skills during disaster events • Uses culturally and linguistically appropriate resources to communicate with populations • Documents essential assessment and intervention
3. Incident Management	• Describes the national structure for response to a disaster • Uses disaster planning chain of command relevant to workplace and/or disaster drill • Contributes to post-event evaluation • Practices within license scope of practice during a disaster
4. Safety and Security	• Maintains safety for self and others throughout a disaster event • Adapts basic infection control practices to the available resources • Assesses self and others during a disaster event to identify the need for physical or psychological support • Uses PPE as directed during a disaster event • Reports possible risks to personal or others' safety and security
5. Assessment	• Reports symptoms or events that might indicate the onset of an emergency or disaster • Performs rapid physical and mental health assessments based upon principles of triage and the type of disaster • Maintains ongoing assessment for needed changes in care in response to an evolving disaster

TABLE 32.11 Disaster Competencies for the General Professional Nurse (See International Council of Nurses, 2019.)

Domain	Competency
6. Intervention	• Implements basic first aid as needed by individuals in the immediate vicinity • Isolates persons at risk of spreading communicable conditions to others • Participates in contamination assessment or decontamination of individuals when directed through the chain of command • Engages clients, family members, or volunteers, within their abilities, to extend resources during disasters • Provides client care based on priority needs and available resources • Participates in surge capacity activities, such as mass immunization • Adheres to protocol for management of large numbers of deceased persons in a respectful manner
7. Recovery	• Assists in organization to maintain or resume functioning during and post disaster • Assists assigned clients to maintain or resume functioning during and post event • Makes referrals for ongoing physical and mental health needs • Participates in transition debriefing to identify personal needs for ongoing assistance
8. Law and Ethics	• Practices within nursing and emergency-specific laws, policies, and procedures • Applies disaster ethical framework in care • Demonstrates understanding of ethical practice during disaster response based on utilitarian principles

TABLE 32.11 Disaster Competencies for the General Professional Nurse (See International Council of Nurses, 2019.)

Stages of Disaster Response and Recovery

When communities face a disaster, the success of the response and recovery depends on a common, interoperable approach to sharing resources, coordinating and managing incidents, and communicating information (Homeland Security, 2019). The National Response Framework (NRF) (https://openstax.org/r/femagovsites) provides foundational emergency management guidelines for response (Homeland Security, 2019). The National Incident Management System (NIMS) (https://openstax.org/r/femagovsitesdefa) was developed by the Department of Homeland Security in 2004 within the NRF to establish a standardized set of processes and procedures that guides emergency responders at all levels of government organizations, nongovernmental organizations, and the private sector to conduct response operations (FEMA, 2017). The NRF and NIMS identify key roles and responsibilities at each stage of disaster response. The NRF can be partially or fully implemented when there is a threat or hazard, a significant event is anticipated, or in response to an incident (Homeland Security, 2019).

Disaster response and recovery occurs in stages that occur sequentially as the incident develops. These stages are grouped by activities with a common purpose so that emergency response is well organized and sequenced through specific intervals of an incident (HHS, 2012).

- Stage 1: Incident Recognition—A rapid assessment of the situation is completed, and the organization decides that emergency-related support and response is needed.
- Stage 2: Initial Notification and Activation—Initial notification and activation occur simultaneously. Appropriate organizations within the response system are notified of the incident. Urgent information is provided about the incident, and guidance is provided about the actions the community should take. Activation determines the response level to the incident and activates the emergency response procedures.
- Stage 3: Mobilization—This is the movement of the organization from a state of inactivity or baseline operations to the required response level.
- Stage 4: Incident Operations—This refers to all actions that address the response objectives following

activation (other than mobilization and demobilization). The actions in this stage may be further divided into "initial" (or "immediate") and "ongoing" categories.

- Stage 5: Demobilization—This stage addresses the transition of resources from response activities back to baseline operations. Demobilization procedures are triggered as response objectives are achieved and resources are relieved of incident responsibilities.
- Stage 6: Transition to Recovery and Return to Readiness—This stage is a return to a state of readiness for the next emergency.

The Nursing Process Applied to Disaster Response and Recovery

Public health nurses bring critical expertise to each phase of a disaster: mitigation, preparedness, response, and recovery. The practice of public health nursing is often more visible and better understood by the general public during the response and recovery phases, but their contribution is just as vital in the mitigation and preparedness phases, although probably underutilized. The increased involvement of public health nurses in disaster planning and response begins with their understanding of the comprehensive scope and standards of practice and follows with their striving to achieve individual competencies to better collaborate with others and contribute to emergency preparedness and response (Jakeway et al., 2008). Table 32.12 shows the phases of the disaster management cycle and provides examples of the nurse's role in relation to the nursing process.

Disaster Phase	Assessment and Analysis	Planning	Implementation	Evaluation
Mitigation and Preparedness	• Assess the community for individuals and populations at risk during disaster. • Assess the community for hazard vulnerability and identify hazards that create the greatest risk. • Assess community design and available resources for potential locations for sheltering, routes for evacuation, and locations, transportation, and resources to hold and process mass casualties.	• Develop a plan to address needs of populations at risk during a disaster. • Create a plan to minimize hazard vulnerability, especially in those areas identified as high risk. • Collaborate with community members to plan for sheltering, evacuation, and mass casualty needs during disaster.	• Conduct tabletop exercises or simulations of the plan to address the needs of populations at risk. • Implement a plan to minimize hazard vulnerability, such as increasing security and monitoring high-risk areas. • Conduct exercises to practice the plan for sheltering, evacuation, and mass casualty events.	• Evaluate the tabletop exercises or simulations, identifying strengths, areas for improvement, and need for additional resources. • Evaluate the plan to minimize hazard vulnerability. • Evaluate sheltering, evacuation, and mass casualty plans, identifying strengths, areas for improvement, and need for additional resources.

TABLE 32.12 Nursing Process Applied to Disaster Management (See Association of Public Health Nurses, 2014; Jakeway et al., 2008.)

Disaster Phase	Assessment and Analysis	Planning	Implementation	Evaluation
Response	• Triage victims of a disaster. • Assess for risk for communicable disease. • Assess for health care needs of the community and current resources for response.	• Develop a plan for triage, treatment, and transport to health care facilities. • Develop a plan to provide mass vaccination to the community. • Schedule nurses and emergency response team to provide triage care throughout the community in shifts.	• Triage, treat, and transport clients to health care facilities. • Conduct a mass vaccination clinic. • Provide response care to the community in shifts.	• Evaluate the triage, treatment, and transport plan to identify strengths, need for resources, and areas for improvement. • Evaluate the plan for mass vaccination and revise as needed to increase the number vaccinated. • Evaluate the shift schedule and revise as needed to ensure the health care team is not overworked or overstressed.

TABLE 32.12 Nursing Process Applied to Disaster Management (See Association of Public Health Nurses, 2014; Jakeway et al., 2008.)

Disaster Phase	Assessment and Analysis	Planning	Implementation	Evaluation
Recovery	• Assess the community for continued communicable disease risks. • Assess the community and health care workers for mental health needs.	• Develop a plan to decrease communicable disease risks, such as education regarding food and water safety, eliminating standing water, and disposal of deceased animals. • Collaborate with community mental health workers to develop a plan to provide mental health care to the community and health care workers.	• Provide education on disease risk and methods to decrease risk. • Refer individuals to mental health providers.	• Evaluate the impact of the plan to decrease communicable disease risk. • Evaluate the plan to provide mental health services, identifying the need for additional resources, strengths, and areas for improvement.

TABLE 32.12 Nursing Process Applied to Disaster Management (See Association of Public Health Nurses, 2014; Jakeway et al., 2008.)

Mass Casualty Triage Systems

Response to mass casualty events often involves more victims than responding caregivers, requiring responders to sort victims categorically based on the degree of injury. Triaging during a mass casualty event is a dynamic process that requires disaster preparedness training. Medical responders to a mass casualty must triage victims differently than when caring for clients in a controlled setting, sorting victims based on severity of injury rather than treatment of injuries. This may seem counterintuitive to normal prehospital protocols. The goal of triage systems used in mass casualty events is to do the greatest good for the greatest number of people given limited available health care resources (Clarkson & Williams, 2023). Treatment during field triage is minimal, with the goal of moving clients away from the incident and toward resources that offer more comprehensive care. Victims should be reassessed and may be recategorized based on changes in their clinical status. The triage process should focus on clients' rapid assessment and quick movement (Clarkson & Williams, 2023).

There are several triage systems used worldwide. The algorithms are similar and have a tightly structured approach. The following sections discuss the most common triage systems.

START Triage

The Simple Triage And Rapid Treatment (START) method was developed in 1983 by Hoag Hospital and Newport Beach Fire Department staff in California for rescuers with basic first-aid skills. START is the most widely used triage system in the United States for mass casualty incidents (Clarkson & Williams, 2023). START assesses the victim's ability to obey commands, respiratory rate, and radial pulse or capillary refill.

The START triage system uses a color-coded tag method to categorize clients based on the severity of the injury and to guide transport. **Triage tags** allow responders to sort victims quickly and indicate the level of treatment needed

efficiently. These colors are universally recognized and correspond to a predetermined set of physical assessment findings, so responders have a standardized way to tag victims. Red indicates that the person has a life-threatening injury that requires immediate treatment; yellow indicates that the person has a serious injury that can tolerate delayed treatment, and green indicates that the person has minor injuries and is considered "walking wounded." The color black is used for those already deceased or imminently expected to expire. Figure 32.7 shows the decision tree for tagging victims based on assessment findings. Once victims are triaged and tagged, they should be moved to designated areas that serve as treatment and loading zones for transport to higher levels of care.

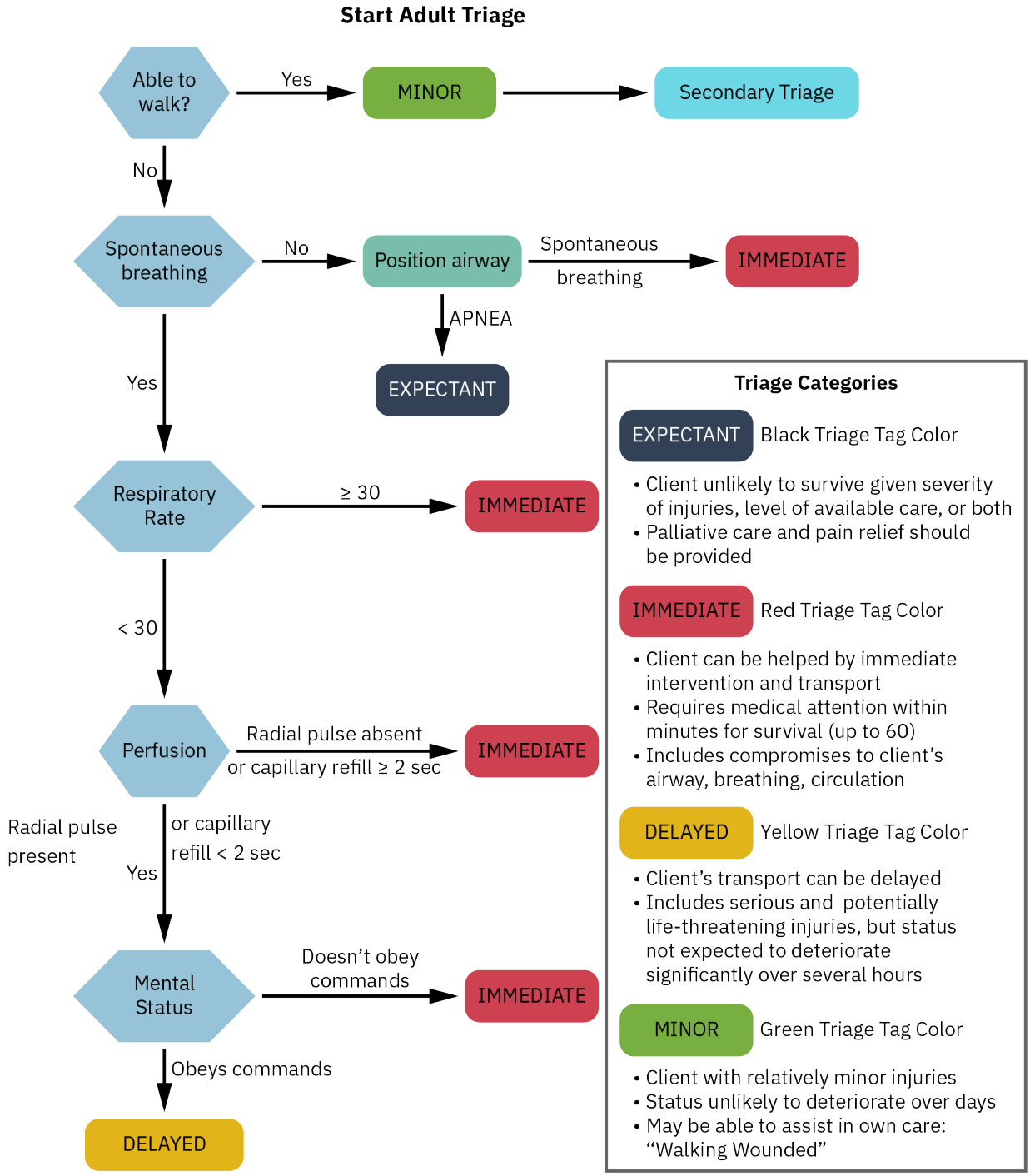


FIGURE 32.7 The START triage system uses a decision tree for tagging victims based on assessment findings. (See U.S. Department of Health and Human Services, 2023; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

SALT Triage

The Sort, Assess, Life-saving Interventions, and Triage/treatment (SALT) system is similar to the START system;

however, it is more comprehensive and adds simple life-saving interventions during field triage (Clarkson & Williams, 2023).

- SORT: Sort the walking, waving, and still. The responder asks all victims at the scene to walk to a designated casualty collection area if possible and wave an arm or leg if they need help. Those who cannot move or follow commands should be assessed first.
- ASSESSMENT: Assessment and lifesaving interventions occur concurrently. Upon assessment of a victim with life-threatening injuries, the responder should intervene.
- LIFE-SAVING INTERVENTIONS: If not time-intensive, simple techniques such as controlling major hemorrhages, opening airways, needle decompression, and auto-injector antidotes should be performed. Once the intervention is performed, the responder should assign a color-coded tag similar to the START system and move on to the next victim.
- TREATMENT AND TRANSPORT: Once tagged, victims are moved to the designated casualty collection point for transport by emergency management services to higher levels of care.

START TRIAGE BASICS

Access multimedia content (http://openstax.org/books/population-health/pages/32-5-the-nurses-role-in-emergency-preparedness-and-disaster-response)
This video gives an overview of how the START Triage algorithm is used during field triage.

Watch the video, and then respond to the following questions.

1. How does the nurse provide rapid assessment using START triage?
2. How should the nurse tag a client who passes all tests? How should a nurse tag a client who fails one test?
3. What interventions do victims tagged as immediate receive?

JumpSTART

JumpSTART is a modification to the START system to assess and triage pediatric victims up to 8 years old. This method considers the difference in normal respiratory rates for children up to age 8. If the child's age is unknown, the responder should look for underarm hair in males or breast development in females as an indicator of adult age (Clarkson & Williams, 2022).

The differences in this algorithm include:

- If a child is apneic with a pulse, open the airway and provide five rescue breaths. If breathing resumes, tag them as immediate (red). If apnea continues after five rescue breaths, they are given an expectant (black) tag.
- Normal respiratory rates are more than 15 or less than 45. If respirations fall outside this range, tag them as immediate (red).
- Neurological assessment is performed using the mnemonic AVPU (alert, responds to verbal stimuli, responds to painful stimuli, and unresponsive). Victims with abnormal posturing to painful stimuli or who are unresponsive are assigned an immediate (red) tag designation.

UNFOLDING CASE STUDY

Part B: Disaster Management

Read the scenario, and then answer the questions that follow based on all the case information provided in the chapter thus far. This case study is a follow-up to Case Study Part A.

A major hurricane makes landfall in Juanita's community, causing widespread damage, loss of electricity, flooding, and mass injury. The community activates the hurricane disaster plan and mobilizes the emergency response team. Juanita is dispatched with the first wave of emergency responders to assist in client triage on-scene. She tags victims using the START method for adults and JumpSTART for children and provides lifesaving interventions to red-tagged victims prior to moving them for transport.

The following day Juanita works at a shelter receiving community members displaced from their homes. She finishes set-up of the temporary health center, organizes and tracks supplies, assesses community members as they enter the shelter, and provides interventions to prevent communicable disease such as setting up handwashing stations, monitoring for signs of infection, and providing clean clothing, food, and water.

3. What action should Juanita complete prior to on-scene triage?
   a. Confirm victim transport has arrived
   b. Activate the Incident Command center
   c. Ensure the scene is safe
   d. Provide report to the emergency room

4. What finding will Juanita expect when assessing community members entering the shelter?
   a. Malnutrition
   b. Stress
   c. Communicable disease
   d. Confusion

Chapter Summary

32.1 Types of Disasters

All communities experience the risk for disasters. Disasters are classified as natural or human made. Natural disasters occur as a result of weather or a natural event. Human-made disasters occur as a result of human action. The health and safety of communities are directly impacted by disasters. Nurses contribute to the assessment of community disaster risk.

32.2 Biological Terrorism

Biological terrorism is the intentional release of biological agents to threaten populations and can lead to disaster and mass casualties. Biological agents are categorized by threat risk, with Category A as the highest priority agents that have the greatest threat of transmission and mortality. Nurses must be prepared to identify and respond to individual and community biological agent exposure.

32.3 Mass Violence

Mass violence is an intentional criminal act targeted at defenseless citizens with the intent to harm or kill in large numbers. Mass shootings make up the majority of mass violence events, with the number of incidences rising. Mass violence negatively impacts communities through loss of life, injury, decreased feelings of community safety, and increased mental health issues. Nurses must be prepared to recognize signs of potential violence and be able to respond to mass casualty events. Mass casualty management is complex and requires multiagency, interprofessional collaboration, efficient organization and communication, scene safety assessment, and zoning of care areas.

32.4 The Disaster Management Cycle

The disaster management cycle is a planned, systematic approach used by communities to prevent, prepare for, respond to, and recover from disasters. The nurse participates in every stage of disaster management. NIMS and ICS are used to promote multiagency, interprofessional collaboration and communication during an event.

32.5 The Nurse's Role in Emergency Preparedness and Disaster Response

Emergency preparedness is an essential role of the nurse. Upon completion of nursing school, attainment of disaster competencies for the general professional nurse is expected. Nurses involved in emergency response to disaster move through six stages of response and recovery. The nursing process is utilized during each phase of disaster management. Triage assessment is a vital nursing skill during disaster response. START, SALT, and JumpSTART are commonly used triage systems.

Key Terms

active shooter an individual (or individuals) who is killing or attempting to kill people with a firearm within an area

biological contamination occurs when infectious agents come into contact with a body surface, inanimate objects, or food or water supplies

biological decontamination mechanical, chemical, and physical methods used to reduce the number of microorganisms to a safe level following biological decontamination

biological terrorism the intentional release of biological agents into the atmosphere or environment to threaten a civilian population

disaster any occurrence that causes destruction or human injury or loss that overwhelms the community's available resources

disaster management cycle phases before and during an event designed to promote optimal health outcomes of the people; the four phases include mitigation, preparedness, response, and recovery

disaster simulation key individuals who would respond to a specific emergency simulate the disaster and respond as if the situation were real

environmental disaster the devastation of an area's ecological system that destroys wildlife and poses a significant threat to humans

flash flood caused by heavy or excessive rain falling over a short time span, often less than 6 hours

human-made disaster directly caused by actions of people that inflict devastation and destruction of human life

mass casualty incidents (MCIs) human-made or natural disasters that overwhelm the resources of local management agencies and the health care system

mass violence refers to incidents of intentional criminal acts targeted at defenseless citizens with the intent to harm or kill large numbers of victims

medical countermeasures (MCM) biologic products, drugs, and devices used to diagnose, prevent, protect from, or treat conditions associated with biological agents

mitigation an action to prevent or reduce the cause, impact, or consequences of a disaster

NA-TECH Natural Hazards Triggering Technological Accidents; human-made disaster resulting from technological accidents that are triggered by natural events

natural disaster disasters that arise from forces of nature, such as weather events (hurricanes, tornadoes, snowstorms, heat waves, and droughts), geological events (mudslides, floods, landslides, and avalanches), underground events (tsunamis, earthquakes, and volcanic eruptions), or epidemiological events (communicable disease outbreaks or swarms)

river flood caused when excessive rainfall or snowmelt forces a river to exceed capacity

social disasters human-made disasters that occur due to warfare, genocide, civil unrest, and terrorism

storm surge abnormal rise of water generated by a storm, over and above the predicted astronomical tide

Strategic National Stockpile (SNS) supplies, medicines, and devices for lifesaving care that can be used in the short-term when the immediate supply of critical medical assets is unavailable or insufficient to meet the community's needs; part of the federal medical response infrastructure

tabletop exercise sessions where key individuals who would respond to a disaster discuss their role and response in specific emergency situations

technological disaster human-made disaster resulting from technological accidents that are triggered by natural events

triage tag standardized method used to sort victims quickly, indicate the level of treatment needed using tag colors that are universally recognized and correspond to a predetermined set of physical assessment findings

Review Questions

1. Which action would the nurse perform while engaged in the mitigation phase of disaster management?
   a. Simulating the planned response to a hurricane event
   b. Placing sandbags at a river's edge prior to flooding
   c. Preparing a local school for temporary housing for flood victims
   d. Completing a tabletop exercise to plan for flooding

2. Using the START triage system, which victim would the nurse triage as immediate or red during a disaster response?
   a. A victim who is not breathing after two attempts to open the airway
   b. A victim who has a broken arm and can obey commands
   c. A victim who has multiple lacerations on extremities and chest
   d. A victim who has a respiratory rate greater than 30 beats/minute with flail chest

3. The nurse is assessing the victims of a train derailment using the Sort, Assess, Life-saving Interventions, and Triage/treatment (SALT) system. Which action will the nurse take during the Sort phase of this triage system?
   a. Moving victims who cannot walk to a staging area
   b. Placing color-coded triage tags on victims
   c. Opening the airway of victims who are not breathing
   d. Asking victims to walk to a staging area

4. Using the six steps of disaster risk assessment to determine a community's hazard risk, which question would the nurse ask during step 3, vulnerability assessment?
   a. Is the hazard risk high, moderate, or low?
   b. Is the risk of disaster seasonal?
   c. What are the estimated damages that would occur with the hazard?
   d. What road might be impacted during the hazard?

5. Which characteristic of a Category A biological agent will guide the nurse's actions during an outbreak?
   a. They have low mortality rates.
   b. They are highly transmissible.
   c. They are not a threat to the community.
   d. They are difficult to disperse.

6. Which action would the nurse perform as Logistics Section Chief following the activation of the Incident Command System after a hurricane?
    a. Provide boats for rescue from flooded areas
    b. Set objectives for hurricane response
    c. Create press releases regarding hurricane safety
    d. Conduct missing persons investigations

7. The nurse is assessing a 6-year-old child at the scene of a school bus accident and notes that the child has a respiratory rate of 14 breaths/minute. Which color triage tag will the nurse assign to the child using the JumpSTART triage system?
    a. Black
    b. Green
    c. Yellow
    d. Red

8. Which action will the community health nurse take during the primary prevention stage of bioterrorism preparedness?
    a. Participating in disaster simulations
    b. Recognizing signs and symptoms of a bioterrorist attack
    c. Immediately treating disease caused by a biologic agent
    d. Responding to the psychological aftermath of the bioterrorism event

9. A community health nurse conducting a class for high school parents and teachers on mass violence would include which adolescent behavior as a warning sign for potential school violence?
    a. Participation in class activities
    b. Withdrawing from social interaction
    c. Crying after failing an exam
    d. Visiting the school counselor during lunch

10. Which activity would the community nurse perform during the recovery phase of the disaster management cycle?
    a. Performing triage and emergency care
    b. Educating families on disaster preparedness
    c. Reducing the spread of communicable disease
    d. Performing triage and transport victims to services

CHAPTER 33

Advocating for Population Health



FIGURE 33.1 Nurses can advocate for change in a number of ways, including by participating in public demonstrations. (credit: modification of work "AFGE Rallying with National Nurses United" by AFGE/Flickr, CC BY 2.0)

CHAPTER OUTLINE

33.1 The Importance of Nurse Advocacy
33.2 Advocacy in Population Health
33.3 Advocacy and Coalition Building

INTRODUCTION Pat, a public health nurse assigned to a diverse low-income metropolitan area, has been promoting health access for Black, Indigenous, and people of color (BIPOC) populations. Over the past year, the community has experienced a 15 percent rise in reported cases of intimate partner violence (IPV), especially among women of color in some of the most disadvantaged regions of the city. The city has launched an IPV prevention program in collaboration with the public health department, local police departments, and local domestic violence shelters. The program includes education, interventions, and additional follow-up services, including safe houses and social services. Pat's role as a public health nurse includes oversight of public health education activities, with a goal of reducing incidents by 20 percent over the next 3 years through a federal grant.

Nurses must demonstrate professional accountability, acting in the best interests of their clients by supporting client rights and speaking on their behalf, if indicated. This support, or **advocacy**, is targeted toward improving the well-being of individuals and populations. The attributes of advocacy include empowerment, education, respect, protection, continuity of care, empathy, counseling, shielding, and whistleblowing (Davoodvand et al., 2016). Nurses advocate for their clients, coworkers, employees, and themselves to enhance the quality of care delivered. Nurse **advocates** often champion causes, such as disease awareness or other health issues, or they may advocate adopting high standards of nursing care or technology to improve their clients' outcomes. Advocacy often involves providing public support for a particular cause or policy (Abbasinia et al., 2020). Nurses may advocate for a cause to

support an action or a proposal within a community or in the media, or they may serve as lobbyists by influencing public officials to promote the passage of legislation.

This chapter explains how nurses advocate for healthy persons, communities, and populations in promoting health equity. The legacy of nurses who have ignited positive changes in health care demonstrates nurses' bold impact on health care practices. Historical and current examples of nurse advocates in this chapter provide evidence of nursing's role in population health. Finally, the chapter identifies the steps in developing a coalition and provides examples of how nurses can become involved in advocating for the health of populations.

33.1 The Importance of Nurse Advocacy

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 33.1.1 Examine the role of advocacy in promoting change and advancing a cause.
- 33.1.2 Explain how nursing has historically been concerned with the social, emotional, and physical needs of people whose incomes are below the federal poverty threshold.
- 33.1.3 Describe how the nurse advocate can advance public health and promote health equity through targeted social determinants.

Nursing is by far the largest health care profession in the United States, with over 4.6 million practicing registered nurses and 203,000 new positions created each year (American Association of Colleges of Nursing [AACN], 2023). There are many more nurses than physicians in the United States, but nurses are underrepresented in public health advocacy issues. However, given that nurses have been recognized as the most trusted profession in the United States for the past two decades (American Nurses Association [ANA], 2023b), they are well positioned to advocate for and protect clients' civil rights, equality, health, and safety. Nurses are aware of the inequities in health care, especially among those most vulnerable. Nurses often translate health care to their clients and the public, as they possess the knowledge and skills to promote health using a compassionate approach to address health equity for all persons. Nurses educate clients on how to adapt their lifestyles to accommodate a host of health conditions. They effectively communicate the barriers to health in communities, coordinate effective health strategies, and educate persons and communities on methods to improve their health.

The Role of Nurse Advocates

Nurses can advocate for community-based changes that disrupt the barriers to equitable health care. According to the ANA (2023b), nurses advocate by promoting the rights, health, and safety of their clients. As advocates, nurses have historically championed a wide range of efforts to ensure that services, policies, and regulations meet the needs of individuals, families, and communities. Nurses promote justice, fairness, and equity in health care and address the social inequities that affect health. As discussed in Social Determinants Affecting Health Outcomes, the social determinants of health (SDOH) are the conditions in which people are born, grow, live, work, and age (U.S. Department of Health & Human Services [HHS], 2020). These determinants often guide nursing practice and health policy development, as they overwhelmingly affect population health, well-being, and quality of life. The SDOH include access to safe housing, transportation, and neighborhoods; elimination of racism, discrimination, and violence; access to education, job opportunities, and adequate income; access to nutritious foods and physical activity; access to vaccinations and clean air and water; and elimination of linguistic barriers that limit literacy. For example, a family's access to grocery stores with quality fresh foods improves overall nutrition.

THEORY IN ACTION

Integrating the Social Determinants of Health into Nursing Practice

Access multimedia content (http://openstax.org/books/population-health/pages/33-1-the-importance-of-nurse-advocacy)

In 2020, researchers measured the confidence of 768 Midwestern nurses in discussing the SDOH with their clients. In this study, nurses expressed that they were confident asking their clients about certain determinants of health, such as access to a primary health care provider (53.7 percent) and general access to health care (46.7 percent), but were less confident discussing income (50.4 percent), civic participation (48.8 percent), crime and

violence (39.1 percent), utilities (38.8 percent), and interprofessional violence (34.8 percent).

This ignited a call for enhanced skill development in SDOH interviewing to improve the working knowledge of the SDOH. This skill development improved the nurses' ability to advocate for their clients by establishing referrals for services that promote health access and delivery for their communities (Phillips et al., 2020).

In this video, Rear Admiral and Assistant Surgeon General Jonathan Mermin discusses why a focus on the SDOH improves health outcomes and promotes health equity.

Watch the video, and then respond to the following questions.

1. What are the pillars of the social determinants of health?
2. What wrap-around services would the nurse explore in order to improve health equity?
3. When providing care to a population, what factors outside of the health care system impact the ability to maintain health?

Nurses' ability to advocate for populations begins with an appropriate assessment. Several tools are available to identify the social determinants of health (Tiase et al., 2022), and although using this approach has shown some success (Buitron de la Vega et al., 2019), a universal approach to assessing the SDOH remains a challenge. In some areas, nurses now screen clients in primary care clinic settings and inpatient settings to determine what social barriers prevent them from maintaining or improving their health. This has led to an increase in community-based referrals and new roles for nurses as nurse navigators (Tiase et al., 2022).

The History of Nursing Advocacy

The history of nursing advocacy involves nurses advocating for client rights, well-being, dignity, and health care improvements. Nurses have historically leveraged their unique frontline position to drive positive change. Public health nurses have identified novel ways to protect children and vulnerable populations and continue to have a strong voice for social changes that promotes health. Today's nurses stand on the shoulders of nurses who have made history by creating positive changes in their communities. Table 33.1 highlights a few of the many nursing leaders who have advocated for significant changes in public health.

Nursing Leaders	Changes for Which They Advocated
Florence Nightingale	• Collected and analyzed data on client outcomes to improve the health of the public • Influenced health policies and established a corps of nurses to tend to the soldiers during the Crimean war in the 1850s
Dorothea Dix	• An activist for mental health care and prison reform who exposed inhumane housing. • Petitioned the state legislature in Massachusetts in 1843 to finance training programs for nurses to expand mental health facilities • Advocated for the establishment of mental hospitals in Canada, England, and European countries
Mary Eliza Mahoney	• First Black nurse to graduate from a school of nursing, in 1879 • A passionate advocate for racial equality in nursing • Active in the women's suffrage movement • Cofounded the National Association of Colored Graduate Nurses
Sojourner Truth	• Born into slavery and escaped in 1826 with her newborn daughter • Worked to abolish slavery • Advocated for health and human rights for women and Black people • Advocated for policies to educate and train nurses

TABLE 33.1 Nurses Who Have Made History as Public Health Advocates

Nursing Leaders	Changes for Which They Advocated
Clara Barton	• Orchestrated Civil War relief efforts • Founded American Red Cross in 1881 • Influenced national and international health policies
Lavinia Dock	• Campaigned to ensure legislation for nurses rather than physicians to control the profession of nursing • Protested for women's right to vote and was later jailed for attempting to vote • Organized a nursing society in 1893 that later became the National League for Nursing
Lillian Wald	• Recognized the intersection of social conditions and health • Developed national and international health policy • Developed the Children's Bureau in 1912
Mary Breckinridge	• Developed rural health nursing practices • Established the Frontier Nursing Service in 1925
Susie Walking Bear Yellowtail	• First member of the Crow reservation to graduate from nursing school and become a registered nurse • Improved health services for Native Americans, especially abuses to Native American women, such as nonconsensual sterilization of Crow women • Established the Native American Nurses Association in the 1960s • Known as the "Grandmother" of American Indian Nurses
Ruth Watson Lubic	• Nurse midwife who developed the birthing center model of maternity care • Opened the first birthing center in 1975

TABLE 33.1 Nurses Who Have Made History as Public Health Advocates

Nurses must address the social, emotional, and physical needs of people whose health needs are underrepresented. For example, in the 1960s, Loretta Ford witnessed that primary care in the underserved communities surrounding Denver, Colorado, was desperately lacking. Using innovative thinking, specialized instruction, and novel curriculum design, Ford launched the first nurse practitioner program in 1965. Today, the nurse practitioner model has become so successful in meeting the needs of clients, families, and communities that several advanced nursing programs and certifications have been created to address the social determinants of health at the master's and doctoral levels.

In the current state of health care, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, and certified nurse midwives work in advanced practice clinical roles in community specialty practices such as pediatrics, maternal and family health, gerontology, mental health, and perioperative care and in a broad spectrum of institutional roles. Whether in a role as a registered nurse (RN) or an advanced practice registered nurse (APRN), every nurse has an opportunity and obligation to advocate for persons whose social, emotional, and physical needs are unmet and for persons with incomes below the federal poverty threshold in targeted social programs and strategies. However, the shortage of adequate health care professionals continues to be the most profound in rural areas in the United States as well as underserved communities and in care for older adults. The Title VIII Nursing Workforce Reauthorization Act of 2019 (https://openstax.org/r/congressgov) was developed and supported by nursing organizations to help meet the accelerating need for nurses to serve in these communities. The Title VIII act provides funding to support the education of nurses at the undergraduate and graduate levels for nurses planning to practice in these areas of greatest need. The U.S. House of Representatives passed this act in 2019, and it is currently with the Senate (Title VIII Nursing Workforce Reauthorization Act of 2019, 2019).

Nurse Advocacy: Theory and Attributes

The role of client advocate was first introduced into the code of ethics by the International Council of Nurses in the 1970s and was subsequently adopted into the code of ethics of other nursing organizations, such as the ANA (Abbasinia et al., 2020; Kalaitzidis & Jewell, 2020). The defining attributes of nurse advocacy include safeguarding, apprising, valuing mediating, and championing social justice in health care (Abbasinia et al., 2020). To advocate for persons and populations, nurses safeguard their clients by preventing medical errors and calling out incompetency or misconduct by any health care team member. Apprising may involve providing clients with education about a diagnosis, treatment, or prognosis; identifying alternatives in a treatment plan and follow-up care; and maintaining privacy. Nurses must also maintain self-control in their communications with their clients by valuing clients' autonomy when making health care decisions and understanding their considerations related to values, culture, beliefs, and preferences. Nurses may serve as liaisons for clients and families by communicating individual preferences to other health care team members. Nurses often confront policies or rules that create inequities in the delivery of health care services or resources (Abbasinia et al., 2020). In the community setting, nurses may strengthen partnerships, develop or participate in community action efforts, and develop healthy public policies (Iriarte-Roteta et al., 2020).

As an example of the nurse's role as an advocate, consider LGBTQIA+ youth. Transgender and nonbinary youths are two to three times more likely to experience poor mental health outcomes such as depression, anxiety, and risk for suicidal ideation, suicide attempts, and self-harm than cisgender youth (Reisner et al., 2015). A report in 2021 revealed that when nurses provided educational workshops in health care facilities and schools on LGBTQIA+ topics (such as gender-affirming health care, inclusive sex education, sexual and gender diversity education, bullying, suicide prevention, safe spaces, and support groups), health inequities and discrimination in the health care system decreased (Medina-Martinez et al., 2021). Therefore, public health nurses can advocate for the LGBTQIA community by conducting mental health and substance use screenings and promoting a gender-affirming environment. Nurses should use appropriate pronouns and gender-affirming language and demonstrate compassionate listening without making assumptions. In a recent study of 104 transgender and nonbinary youth, the receipt of gender-affirming care, including puberty blockers and gender-affirming hormones, was associated with a 60 percent reduction in moderate or severe depression as well as a 73 percent reduction in suicidality over a 12-month follow-up period (Tordoff et al., 2022).

CONVERSATIONS ABOUT CULTURE

Why LGBTQIA+ Cultural Competence Matters

Access multimedia content (http://openstax.org/books/population-health/pages/33-1-the-importance-of-nurse-advocacy)

In this video, Sarah Rosso, the executive director of the Hugh Lane Wellness Foundation and mental health advocate and ally, explains how LGBTQIA+ cultural competence supports clients' mental health.

Watch the video, and then respond to the following questions.

1. Why does Sarah advocate for LGBTQIA+ cultural competency training among the community partners and organizations that work with their organization?
2. How can communities reduce the impact of suicide on LGBTQIA+ youth?
3. As a new nurse, how would you approach the issue of gender dysphoria among the youth in your community?

33.2 Advocacy in Population Health

LEARNING OUTCOMES

By the end of this section, By the end of this section, you should be able to:

- 33.2.1 Describe how nurses can get involved in advocacy.
- 33.2.2 Engage in advocacy that fosters the best interest of the individual, community, population, and profession.
- 33.2.3 Demonstrate social responsibility as a global citizen who advocates for health equity for all.
- 33.2.4 Defend social justice and health equity, including addressing the health of vulnerable populations.
- 33.2.5 Identify evidence-based strategies to evaluate the efficacy of advocacy actions.

Compared to peer nations, the United States lags behind other countries in multiple health outcomes, especially in disparities in maternal and infant mortality, avoidable mortality, and chronic disease morbidity among at-risk populations (Tikkanen & Abrams, 2020). Although the reasons for these lagging outcomes are multifold, the United States continues to struggle in the reduction of risk factors for diseases and conditions that are modifiable, including unhealthy eating behaviors; a lack of physical activity; alcohol, tobacco, and drug use; and the surge in overweight and obese children and adults who are overweight or obese. The inability to move the needle on modifiable health risks has led to an increase in chronic conditions, a shortened life expectancy, and mental health problems, especially among populations and communities that are most vulnerable (Centers for Disease Control and Prevention [CDC], 2022).

The critical importance of nursing advocacy to improve health was clear on the front lines during the COVID-19 pandemic. Nurses witnessed the health inequities and modifiable risk factors affecting their clients daily at the bedside and in at-risk communities. Nurses routinely cared for clients who experienced tragic health outcomes when they could not afford health care and medications. This section offers strategies for nurses to address systemic health care bias and discrimination in systems and institutions that result in poor health care. Examples in this chapter of nurses involved in advocacy highlight nurses who have pioneered basic health-promoting initiatives to reduce health care inequities and several strategies for nurses to become successful advocates.

Skills and Strategies in Advocacy

Advocating for others requires skills in collaboration, influence, communication, and problem-solving (ANA, 2023b). However, the first step of advocacy is to effectively understand the audience's needs and address public concerns and their impact on the target population through effective listening. As discussed in Assessment, Analysis, and Diagnosis, nurse advocates must develop skills to assess communities that build respect, trust, and credibility with community partners affected by social or health issues. By understanding community concerns and building trusting relationships, nurses can influence community leaders, businesses, nonprofits, legislators, and grassroots efforts to promote health by ensuring access to clean water, food, shelter, sanitation, health equity, and access to health care. To effectively invoke change, nurses must bring not only their clients' stories but also data and facts that provide a visual image of humanity and ethics related to the issues at hand to public health agencies and politicians.

When initiating communication with community partners, it is essential to remain on point. Nurses should professionally and succinctly communicate key information regarding the issue within the first minute of a conversation. This requires preparing a brief, practiced discussion of the issue, including relevant statistics and perspectives from the community, ahead of time. The nurse should specify their role within the community and clearly identify any affiliated agency they represent. It is helpful to support this conversation with a one-page fact sheet containing relevant contact information, the key elements of the issue, the request in humanistic terms, and the impact of the problem at hand.

Getting Started in Advocacy

Today's nurses serve many roles to redesign health care and advocate for persons and populations. Many serve in communities directly, while others direct health care through appointed or elected government roles. Table 33.2 showcases modern influential nurse leaders who are changing the face of public health through their service in important advocacy roles. Many nurse advocates believe in **social justice**, a view that everyone deserves equal economic opportunities and political and social rights.

Nursing Advocate	Major Accomplishments
Rear Admiral Sylvia Trent-Adams, PhD, RN, FAAN	• Deputy Surgeon General of the U.S. Public Health Service Commissioned Corps (2015–2019) • Principal Deputy Assistant Secretary for Health (2019–2020) • First Black woman to lead University of North Texas Health Science Center, Fort Worth, 2022 • Principal Deputy Assistant Secretary for Health (2019–2020) • In these roles, Trent-Adams has advocated for quality and safety in client care. She led the United States in creating the white paper *Framework for Effective Governance of Health System Quality* as a member of the board of directors of the Institute for Healthcare Improvement.
Linda Aiken, PhD, RN, FAAN, FRCN	• Leading world authority on the causes and consequences of nurse shortages in the United States and globally • Founding director of Penn Nursing Center for Health Outcomes and Policy Research that changed hospital policy in 30 countries • Research in improved care for clients with AIDS • Research in organizational culture, nurse burnout, and client satisfaction
Regina S. Cunningham, PhD, RN, FAAN	• Elected as a new member of National Academy of Medicine (NAM) in 2022 and became the chief operating officer for the Hospital of the University of Pennsylvania • Developed innovative professional roles and advanced care delivery models that have served as models for health care internationally
Lauren Underwood, MSN/MPH, RN, FAAN	• Nurse practitioner and the youngest Black woman to serve in the U.S. House of Representatives • The first millennial to represent her community in Congress; advocates for affordable health care by lowering health care insurance premiums for people with preexisting conditions and lowering drug prices
Margaret P. Moss, PhD, JD, RN, FAAN	• Elected as a new member of NAM in 2022; the only American Indian nurse with a PhD and JD • Professor and nursing director, First Nations House of Learning, University of British Columbia • Exceptional leadership in nursing and has led legislation to reduce inequities in indigenous health care; co-led the Indigenous Strategic Plan globally and published the first nursing text on American Indian health
Franklin Shaffer, EdD, RN, FAAN, FFNMRCSI	• Fellow of the American Academy of Nursing (FAAN) and a member of the Fellowship of the Faculty of Nursing and Midwifery of the Royal College of Surgeons in Ireland (FFNMRCSI) • Representative to the United Nations, World Health Organization, and the International Council of Nursing • Conducted extensive research on global health • Established the National Nursing Assessment Service to provide an assessment system to evaluate the credentials of nurses from foreign nursing schools that seek licensure within a province of Canada

TABLE 33.2 Influential Nurse Leaders of Today

Nursing Advocate	Major Accomplishments
Norma Martinez Rogers, PhD, RN, FAAN	• Founded the International Association of Latino Nurse Faculty • Past president of the National Association of Hispanic Nurses • Engaged nursing students to participate in community-based primary care to advance public health • Founding commissioner of the Medicaid and Children's Health Insurance Program (CHIP) Payment and Access Commission
Cori Bush, RN	• The first Black woman and the first registered nurse to represent Missouri in the U.S. Congress • As a Nonviolence 365 Ambassador with the King Center for Nonviolent Social Change, received the Hershel Walker Peace and Justice Award (2019) for her distinguished advocacy to secure housing and health care for all persons and continues to fight for reproductive rights for women

TABLE 33.2 Influential Nurse Leaders of Today

Although nurses are well positioned to support and advocate for those without a voice, many nurses either do not know how to become involved or feel they do not have the required competencies to effect change. One of the first steps in becoming an advocate is to become informed of the many issues affecting health care equity and the issues that impact the nursing profession. To become fully informed, nurses often connect with other nurses and nursing organizations and other organizations in the community, state, or nation about issues that matter. Nurses advocate for the profession by fostering new nurses at the bedside and in the community. Nurses who mentor, teach, or model professional nursing responsibilities for new nurses facilitate excellence in care for their clients. Nurses must also advocate for the profession whenever they are asked about their work, as the general public often does not understand their professional role (ANA, 2023b). Practicing a 30-second "elevator speech" on the nursing scope of practice can help new nurses be prepared to engage in advocacy for the profession of nursing in public forums.

Making the Case for Advocacy

Nurse advocacy is critical from a population health perspective. A change in life circumstances within a population can result in many unanticipated threats to public health. For example, the COVID-19 pandemic resulted in a loss of income and stability for millions of Americans. It also caused stress, power imbalances, dependency, and a loss of community and social support, triggering increased alcohol and drug use. These conditions stimulated a rise in domestic and intimate partner violence (IPV)—physical, emotional, and financial—in the home. Violence at home is a significant cost to society given the adverse physical and mental health outcomes that present because of the abuse. These negative outcomes include depression, post-traumatic stress disorder, risky sexual behaviors, and high rates of chronic disease (American Psychological Association [APA], 2020).

To make the case for advocacy, let's use IPV and domestic violence (DV) as an example. One in every four women and one out of every seven men experiences IPV or DV, and 25 percent of children are exposed to DV during their childhood (APA, 2020; Huecker et al., 2023). Nurses as a population are disproportionately affected by IPV and DV. One study reported the prevalence of IPV among nursing students was 48.2 percent, and 58.7 percent for practicing nurses (Anikwe, et al., 2021). Among minority populations, such as Black and Native American people, the rates of abuse (40 percent) and resultant homicide are significantly higher than for White people and five times higher in families with low socioeconomic status (APA, 2020). Among the LGBTQIA+ community, the rate of IPV is disproportionately high (26 to 66 percent), and persons with disabilities have a much higher rate of IPV across their lifespan. IPV during college can lead to depression, low academic performance, substance misuse, a higher risk of dropping out, and, potentially, death (Seon et al., 2022). The social stigma of IPV among college students often limits reporting of these incidents. However, many universities have expanded support for victims of IPV using telehealth services or face-to-face counseling (Nelson et al., 2023). Counselors at one university noted a dramatic rise in IPV among students living on campus during the pandemic. Although students were seeking counseling, reporting these incidents to local police did not correlate with the rise in students seeking mental health services after rape. Test scores on standardized national exams dropped, and overall student retention rates at the university also dropped dramatically.

While the personal health, financial, and emotional consequences of IPV and DV are staggering, the estimated cost

to society in the United States due to injury, lost work, criminal justice, and other expenses is approximately $3.6 trillion. While health care professionals are taught to screen for a history of IPV or DV, few programs exist to prevent these situations in the first place.

CASE REFLECTION

Intimate Partner Violence

Read the scenario, and then respond to the questions that follow.

Tracy is a 21-year-old nursing student living in a dormitory on her university's campus. Tracy had been doing well in school until last week, when she missed school for 4 days after being sexually and physically abused by her boyfriend, also a student on campus. Withdrawing to her dorm room, Tracy refused to seek treatment, leave her room, or report the incident. Because she missed two important exams, Tracy was given an academic warning for the first time in her life. Finally, Tracy's roommate convinced her to go to university health services where she met with Tonja, a registered nurse. Tracy told Tonja that she was afraid to walk alone on campus. She was also afraid her boyfriend would be expelled or blame her for ruining his life if she told the police what had happened.

1. What campus resources are available to prevent intimate partner violence on your college campus?
2. How could the housing environment on campus affect a student's physical and mental health care and treatment following a sexual assault?
3. How could a university health services registered nurse advocate to improve physical safety on college campuses?
4. What type of programs could a nurse in university health services launch to prevent and/or better care for victims of intimate partner violence like Tracy on college campuses?

National Advocacy Organizations to Support Vulnerable Populations

The National Health Care for the Homeless Council (NHCHC) is an example of an advocacy organization that partners with federal agencies such as the CDC to collect data on homelessness and has formed coalitions with schools, health centers, veterans' groups, and several organizations to strengthen current health programs. The NHCHC connects health care professionals and individuals who are experiencing homelessness, provides health care and social services at over 200 homeless facilities, provides gateways to Medicaid insurance, seeks to reform the behavioral health system and the criminal justice system, and seeks to establish a universal health care plan and guarantee affordable housing by influencing health policy (NHCHC, 2023). The impact of these coalitions is reported using dashboards that identify the numbers of individuals who are homeless and the health status and health care of this population, such as immunizations, various health screenings, and incidence of diseases such as asthma, diabetes, hypertension, and modifiable conditions such as cardiovascular diseases using a cost-benefit analysis. Nurses can use these databases to access important information that will support their advocacy efforts in communities at the CDC's Data and Statistics (https://openstax.org/r/datastatistics) site.

Activism: Many Ways to Engage in Advocacy Efforts

Nurses are often involved in developing standards of care and new policies locally in their place of employment through membership in their organization's committees and councils that address the quality and safety and satisfaction of client care activities. For example, nurses have developed standing orders in electronic health records to ensure clients in clinics or acute care receive their recommended vaccinations. Nurses also work to improve documentation quality by ensuring that screening tools identifying the social determinants of health are part of the intake interview in clinics, schools, and hospitals (Buitron de la Vega, 2019). These advocacy efforts are all examples of activism.

Nurses actively contribute to decisions about staffing, resource allocation, workflow design, equipment needs, and other resources nurses need at the point of care, which can directly affect safety and satisfaction. Nurses are increasingly involved in the culture and climate of their work environment. Advocating for a healthy work environment by eliminating acts of incivility also ensures client safety and improves the recruitment and retention of nurses.

A focus on safety in the workplace, such as strategies to prevent staff injury, has led to the advent of specialized lift devices to prevent back injury, which affects between 40 and 50 percent of nurses annually, and 80 percent of nurses may experience work-related back pain during their career (Tariq et al., 2023). Data support reduced back injuries in institutions where lift devices are employed. Nursing advocacy can also lead to positions of leadership. For example, Regina Cunningham is a nurse who has advocated for her clients throughout her career. One of her many advocacy initiatives included methods to reduce overcrowding in the emergency room setting. As a result of her continued efforts to improve client care, she has held accelerating leadership roles. These initiatives have led to prestigious opportunities, such as a fellowship in the American Academy of Nursing and the Executive Nurse Fellows, part of the Robert Wood Johnson Foundation. Cunningham has served as chief executive officer at the Hospital of the University of Pennsylvania since 2017. She is the principal investigator of an award from the National Cancer Institute to improve the accrual of clients in clinical trials (Penn Nursing, n.d.).

Nurses can become advocates in formal public health roles, including positions in public health departments at the national, state, or local government levels. Nurses also serve on **political action committees** (PACs), in coalitions, or as lobbyists. Nurses have provided expert testimony to support bills in Congress and supported campaigns for candidates seeking public office who support public health agendas. PACs are formed to generate and spend funds for particular political candidates that align with their agenda, with most representing business, labor, or ideological interests. Many federal government public health activities are managed through regulatory agencies like the Food and Drug Administration (FDA) and non-regulatory agencies like the CDC. Nurses can also advocate for public health through the uniformed services. The U.S. Public Health Service (USPHS) is one of the nation's uniformed services and commissions nurses and other health care professionals as officers. Employment opportunities are available at Explore Opportunities (https://openstax.org/r/usphsgov). Nurses in the USPHS work on the front lines of public health to carry out laws and regulations, fight disease and monitor the spread of disease, conduct epidemiological research, and care for persons in underserved communities in the United States and other countries. Other opportunities include working for one of the armed services, such as the Army National Guard (Figure 33.2).



FIGURE 33.2 Nurses and other health care professionals who serve in the USPHS or in one of the armed services may provide direct care to clients nationwide and around the world and advocate on their behalf. This photo shows a National Guard mobile testing strike team administering COVID-19 tests in Georgia. (credit: "Georgia National Guard" by Capt. Fred Dablemont/Flickr, CC BY 2.0)

Many nurses join a nursing or other professional organization that aligns with their specialty or nursing practice or as a way to network with others of the same culture, region, or country to collaborate and improve client care. There are more than 100 different professional nursing organizations throughout the United States. In a nursing organization, committees of expert nurses create state of the science guidelines, create coalitions, and build leadership skills. Joyce Newman Giger is a great example. Dr. Giger was the first Black person elected as a chair for

a school of nursing faculty executive committee within a university. In her over 200 publications, she provides strategies to enhance culturally appropriate care using her model for assessing cultural phenomena relevant to delivering culturally congruent care. Using her model, she identified physiologic predictors of heart disease among premenopausal Black women. She has authored a best-selling textbook used by nearly 500 nursing, medicine, and allied health schools. She has received multiple accolades for her advocacy and research (American Academy of Nursing, 2023).

Sharing stories is a great way to advocate for clients, families, and communities. Social media platforms are an emerging strategy to engage active involvement through a wide range of grassroots efforts, including getting involved in well-known organizations and coalitions. For example, the National Nurses March took place in May 2023, and over 199,000 nurses joined forces on Facebook's National Nurses March group to organize the event and to inform nurses about issues affecting nurses, such as fair wages and standing up to address structural racism and violence against health care workers.

UNFOLDING CASE STUDY

Part A: Advocating for the At-Risk Client

Read the scenario, and then answer the questions that follow.

A nurse working in a public health role in an urban community with a high rate of homelessness is assigned to assist 52-year-old Tanesha White. Tanesha lost her job at a local department store 4 months ago when her diabetes and hypertension caused her to miss work for nearly 2 weeks. Two months later, Tanesha lost her apartment when she was unable to pay her rent. She presented to the homeless clinic as she needed more insulin to treat her diabetes. Her clothes are worn, she wears ill-fitting shoes, and she states her right foot is sore. Tanesha's teeth show evidence of decay, she has a productive cough, and she has smoked a pack of cigarettes a day for many years. Tanesha shares that she has "never felt more down" and has been relying on alcohol to get through the tough days. She has difficulty finding food and relies on the food kitchen about three times a week. She does not have a consistent health care provider and is uninsured. She is living in her car and has lost contact with her daughter and son. She left her husband after he physically abused and sexually assaulted her 3 years ago and has had trouble trusting anyone. At present, she has no social or family support. Her temperature is 101.2°F, and her blood pressure is 178/94 mm Hg. Her blood sugar is 302 mg/dL.

1. Tanesha is clearly experiencing a multitude of problems. Of these, your immediate priority of care is managing her:
   a. blood glucose
   b. hypertension
   c. respiratory status
   d. mental health

2. What agency or service would the public health nurse reach out to first in order to help clients like Tanesha?
   a. The local homeless shelter
   b. The area agency on aging
   c. A social worker
   d. An advanced practice nurse or physician

Addressing Health in Vulnerable Populations

Given the trust placed in nurses by the public and the indispensable services that nurses provide, combined with nursing skills of negotiation, communication, advocacy, and problem-solving, nurses are well-positioned to collaborate and offer expertise on public health issues. Nurse advocates in public health nursing may serve in many ways to protect the health of those most vulnerable. Many nurses who have made a national or global impact on improving care for vulnerable populations have been elected to become members of the **National Academy of Medicine** (NAM). This interdisciplinary, private nonprofit institution works outside of government agencies to provide objective advice to advocate for improved health equity by "advancing science, accelerating health equity,

and providing an independent, authoritative, and trusted advice nationally and globally" (NAM, 2023a). In 2021, the NAM published The Future of Nursing Report 2020–2030 (https://openstax.org/r/nationalacademies) describing its vision and goals for the nursing profession as they relate to public health and emerging health policies over the next decade. The overarching goals of the report are to (NAM, 2023b)

- attain high-quality, longer lives free of preventable disease, disability, injury, and premature death;
- achieve health equity, eliminate disparities, and improve the health of all groups;
- create social and physical environments that promote good health for all; and
- promote quality of life, healthy development, and healthy behaviors across all life stages.

There are challenges to creating a collective voice, especially when ideologies regarding health move outside of the purview of health care clinicians. The belief systems of the public and of elected politicians often shape health perspectives. Politicians must be keenly aware of a wide range of beliefs, as these will shape the controversies surrounding the adoption of a law. Political trends in the United States impact the evolution of health policy, and nursing coalitions advocate for clients and populations by either supporting or objecting to federal and state statutes.

THE HPV VACCINE | WHY PARENTS REALLY CHOOSE TO REFUSE

Access multimedia content (http://openstax.org/books/population-health/pages/33-2-advocacy-in-population-health)

Vaccine hesitancy is a delay in acceptance or refusal of vaccines despite their availability. Approximately 42.5 million Americans are infected with HPV, and 13 million Americans, including teens, become infected with HPV each year (CDC, 2023a). HPV is a sexually transmitted disease spread through direct skin-to-skin contact during vaginal or anal sex with someone who has the virus (CDC, 2023a). Approximately 12,000 women are diagnosed with HPV-related cancer, and 4,000 will die yearly from HPV-related cervical cancer. HPV has also been associated with other types of cancer in both men and women. Despite the wide availability of three HPV vaccines licensed by the FDA, HPV vaccination rates are suboptimal in the United States, and adolescents from medically underserved communities have the lowest vaccination rates (Tsui et al., 2023).

In this video, two researchers from Johns Hopkins University discuss their findings from a study of survey data to explore why some parents and caregivers choose not to immunize their children against HPV.

Watch the video, and then respond to the following questions.

1. What are common reasons parents choose not to vaccinate their children?
2. Why are fewer boys being vaccinated than girls?
3. How can community health and public health nurses advocate to improve HPV vaccination rates?

Nurse advocacy can also lead to political action. One of the most controversial politicized cases regarding public health care in U.S. history was decided by the Supreme Court: the regulation of abortion. In June 2022, the ANA offered harsh criticism of the Dobbs ruling that removed women's rights to make personal decisions about their reproductive and sexual health (*Dobbs v. Jackson Women's Health*). In its official statement, the ANA strongly denounced the overturning of *Roe v. Wade*: "ANA is deeply disappointed in the decision to upend Roe v. Wade, which we view as a legal protection of basic reproductive health rights and human rights," said ANA Enterprise CEO Loressa Cole, DNP, MBA, RN, FAAN, NEA-BC (ANA, 2022). In the official ANA response to the ruling, nurses continued to advocate for the rights of women:

> Nurses have an ethical obligation to safeguard the right to privacy for individuals, families, and communities, allowing for decision making that is based on full information without coercion. As the largest group of health care professionals, nurses have for decades assisted their clients with weighing the benefits, burdens, and available options, including the choice of no treatment, when discussing sexual health issues and pregnancy. ANA firmly believes that no nurse should be subject to punitive or judicial processes for upholding their ethical obligations to their clients and profession (ANA, 2022).

Figure 33.3 highlights several landmark changes made to health law over time as perspectives and beliefs have changed and evolved. Engagement in the Policy Development Process provides details regarding how health policy

is developed and how nurses can be involved, whether involvement consists of contacting a state or national legislator, providing testimony regarding a specific bill, participating in policy boards, or serving in public office. Nurses can also learn more about how to influence policy by serving as an intern in the House or Senate. Internships are available in a variety of paid or volunteer roles. More information is available through the Congressional Research Service (https://openstax.org/r/sgpfasorg).

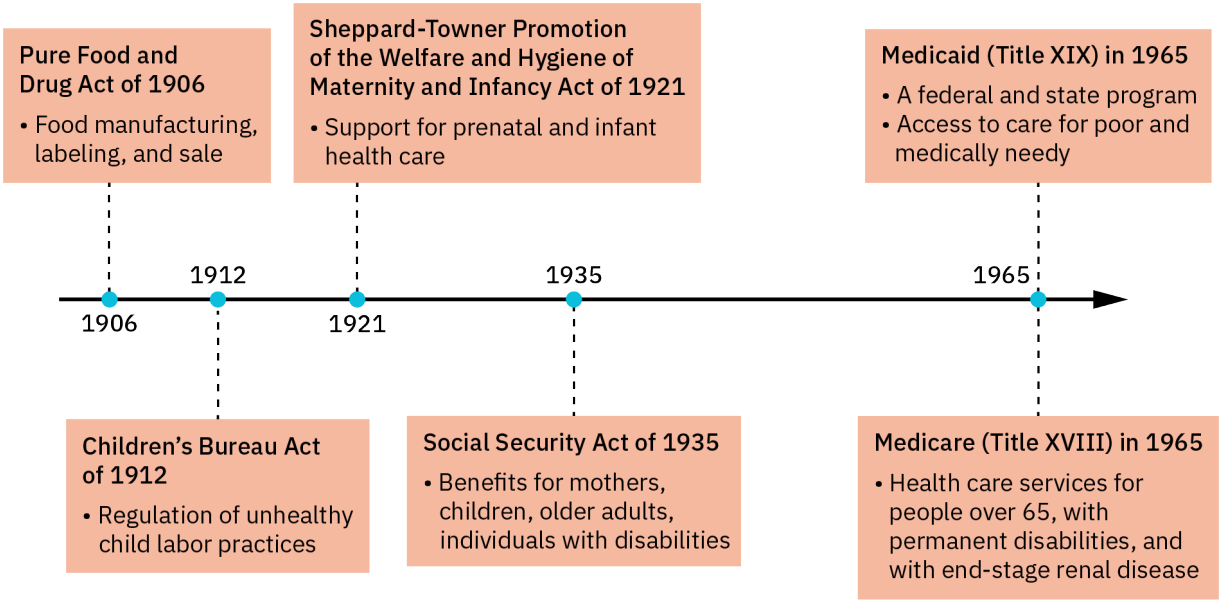


FIGURE 33.3 These landmark laws highlight the changes made to health law during the 20th century. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Nurses as Global Advocates in Health Equity

Nurses advocate to change health policy at the global level as well. Nurses routinely see the inequities in health care around the world through various missions and international agencies such as the United Nations, the World Health Organization, and the **International Council of Nurses**. Members of the International Honor Society of Nursing (Sigma (https://openstax.org/r/sigmanursing)) play an important role in health equity in each of these organizations as consultants and policy leaders and through the formation of global councils to address health inequities around the world. The Nursing Now Challenge (https://openstax.org/r/nursingnowo) fosters nurses to develop international leadership skills by connecting with experienced nurse leaders and mentors in a global network in support of health for all (Sigma, 2023). Organized through Sigma, the United Nations provides free events each year that address nursing issues worldwide. Several organizations, such as the International Council of Nurses, and a wide range of nongovernmental organizations (NGOs) across the globe share the international health issues and programs created to improve health conditions. The most basic elements of public health, such as access to clean water, high rates of disease transmission, lack of access to medical care, health care for women, and infant mortality, are among the issues that continue to plague nations.

Global disparities in maternal and infant mortality continue to be higher among BIPOC populations. In June 2023, the untimely death of Tori Bowie, an Olympic athlete (and once the fastest woman runner in the world), during an at-home delivery at 8 months of pregnancy (Chappell, 2023) highlights the stark statistic that Black women are five times more likely to die from pregnancy-related cardiomyopathy and blood pressure disorders such as eclampsia than White women (MacDorman, et al., 2021). Nurses and nurse midwives can dramatically reduce disparities in maternal care for Black women worldwide by creating new models of care. In one example, the Roots Community Birth Center (https://openstax.org/r/rootsbirthcenter) in Minneapolis cares for a population of women and children that previously had one of the highest rates of preterm births in the United States. Owned and operated by an Black midwife, the center offers pre- and post-natal care to women of the community, tailored to the individual's culture and beliefs. Although challenged with inadequate reimbursement from Medicaid, the center advocates for longer-than-normal prenatal visits with a nurse midwife and nursing team, and the Roots Center has proven results: of the 284 families that have been cared for at the center over a 4-year period, there were no preterm births (Hardeman et al., 2020).

Advocacy in Action

The need for nurses continues to rise while at the same time the nursing shortage persists in the United States. Nursing universities struggle to expand enrollment while recognizing the shortage of nursing faculty. Safe staffing has become a legislative issue in many states. State-level nursing organizations provide ongoing updates about health concerns throughout the state and offer regular professional development conferences, updates on health care issues, and legislation that affects nursing care to clients and their families. For example, while a four-client-to-one-nurse ratio has been shown to be ideal to promote positive client outcomes in acute care medical-surgical hospital units, research shows that during the COVID-19 pandemic, an inability to provide this staffing level led to an increase in in-hospital mortality, length of stay, and 30-day readmissions (Lasater et al., 2021). Many state-level nursing organizations send regular updates to nurses about the issues that affect health care in the state and the nursing profession. There are no federal mandates for nursing staffing. California is the only state that has enacted laws to mandate nurse-to-client ratios, and several other states have enacted legislation to provide oversight of nursing staffing to promote client safety (CT, IL, MA, MN, NV, NJ, NY, OR, TX, and WA) (Dierkes, et al., 2022). In Connecticut, the State Nurses Association advocated for a law regarding safe nurse staffing that ensures safe client care throughout the state. As a result of these tireless efforts in the state's congress, the new law was signed by Governor Lamont in June 2023 (Connecticut Nurses Association, 2023).

Many lessons were learned regarding nurse-to-client ratios during the COVID-19 pandemic. During the pandemic, staffing levels in 116 hospitals in New York State were reviewed as related to Medicare claims data on 417,861 medical-surgical clients. In-hospital mortality, length of stay, and 30-day readmissions were compared to client-to-nurse staffing levels. Nursing staff ratios ranged from 4.2 to 7.6 clients per nurse. Researchers estimated that 1,595 lives could have been saved, as well as $117 million, over the 2 years of this observational study if nursing ratios had remained at one nurse for every four clients, as the mortality rate increases by 16 percent for each additional client in the nurse's workload (Lasater et al., 2021). Additionally, in 2023, a universal nurse-to-client ratio of 1:2 in critical care was passed into law (New York State Nurses Association [NYSNA], 2023).

33.3 Advocacy and Coalition Building

LEARNING OUTCOMES:

By the end of this section, you should be able to:

- 33.3.1 Examine the benefits of uniting to create change.
- 33.3.2 Identify situations in which forming a coalition of groups and individuals would be beneficial.
- 33.3.3 Explain how to start a community coalition.
- 33.3.4 Describe the challenges and barriers to starting a community coalition.

A **coalition** is a group of people with shared vision or concerns, such as nurses or nursing associations and other groups that join forces to support a cause. Nurses may form coalitions to maximize resources to improve the chances of successfully achieving these goals. Coalitions may emerge from loose-knit networks of groups that are created to share resources and information. Coalitions may develop from groups formed by a task force, advisory committee, or commission. They may develop into a consortia, which consists of organizations with a particular goal. By creating a collective voice and sharing interprofessional expertise and resources, coalitions can have an impact on improving health outcomes by addressing inequities. To maximize their impact, coalitions require formal governance, strong leadership, participation, diversity, cohesiveness among the members, and collaboration with other agencies (Crowder et al., 2022).

The Essential Steps in Forming a Coalition

Coalitions can advance a cause more effectively than independent work as resources are shared and credibility is enhanced. This approach offers a more widespread reach than any single organization could achieve. For example, a parent-teacher association (PTA) is a coalition that may work toward improving student safety by requiring bike helmets for children riding their bikes to school. Members of this coalition may be from several organizations, such as retail stores, the department of public health, local government, parents, and others. These members may attend specific conferences or write letters to legislators and local news outlets to advocate for their cause. The cause's credibility is enhanced as the coalition may represent several organizations rather than a single special interest group. This dynamic often fosters trust and cooperation among several grassroots organizations.

The decision to form a coalition may be spontaneous or may be the result of a detailed analysis of a community's need (Figure 33.4). In some cases, receipt of a community-based grant may necessitate the formation of a coalition to fulfill the objectives specified in the grant award. The first step in deciding to form a coalition involves clarifying the objectives and appropriateness of the activities planned. A community assessment of the existing strengths and weaknesses is an essential element in forming a coalition as this identifies potential barriers and support systems in place, which guides the development of the best strategies to implement. An analysis of the strategy to employ must include the cost of the resources required. See Assessment, Analysis, and Diagnosis for more information on conducting a community assessment.



FIGURE 33.4 Community members in Laredo, Texas, participate in a community engagement event to discuss opportunities and challenges around food, nutrition, and health in Hispanic communities. Following such an event, community members may choose to form a coalition to focus on an identified issue. (credit: Ganjofarid Anvarzod/USDA/Flickr, Public Domain)

The coalition then decides how members are recruited, how many are needed, and what type of members are essential to meet the coalition's goals. While individual members may be recruited, existing member organizations may already be in place that are working toward a similar objective and may be willing to collaborate. Identifying competitors and adversaries who could impede the coalition's objectives is also important.

When forming a coalition, a leadership team is essential. It is often composed of a chairperson, facilitator, individual members, staff, a steering committee, a lead agency, and member organizations. While the chairperson is the organization's spokesperson, this individual is often responsible for signing letters, testifying in court, or serving in other roles to represent the coalition. The facilitator plays a key role as this individual will lead discussions and activities of the coalition and must possess the knowledge and skills of managing group dynamics. The facilitator will serve in a key role to resolve any disagreements, working in concert with the chairperson. The facilitator and chairperson may or may not be from the lead agency.

The coalition's activities will be developed, discussed, and defined at the meetings, conferences, or workshops by lead members of the coalition. The necessary resources will be identified in terms of the time commitment of the members and lead agency as well as financial considerations. Local service clubs and foundations may be essential in providing additional resources, and student trainees and volunteers may also support the coalition's activities.

The parameters of the membership agreement are critical to the organization's success and must be established and agreed upon. The location, frequency, and length of the meetings, as well as the members' expectations, is another important step when organizing membership. Also, there may be limitations to the duration of the coalition's existence. For example, the coalition's objective may be set to be achieved within 2 years, and a plan may be in place to disband the coalition when the objective has been met. Setting time limits for a coalition may help

members decide their involvement level.

The meeting structure and the method of making decisions should also be well communicated to all members. Members may also be expected to participate between structured meetings, and this commitment should be carefully outlined. After successfully forming the coalition, maintaining the energy and vision of the objective for each of the members requires skillful vision and attention to detail when problems arise. Leaders of the coalition must anticipate these difficulties, such as power sharing, group dynamics, individual disagreements, and the process for acceptance of new members.

Leaders must also actively engage steps to renew the objectives through ongoing education and training. Leaders will also embrace the challenge of bringing new issues to the group. An important step in maintaining a coalition is to focus on celebrating the group's successes, both large and small, and acknowledge key individuals who have gone above and beyond to support the cause. Evaluating the achievements will also lead to additional improvements in the strategies, enhancing the ability to continue moving forward. Evaluations may be formative (evaluating the process) and summative (evaluating the outcome).

Leaders and members of a coalition often serve to enhance visibility within a community to increase public awareness and influence the perception of the problem at hand. This may lead to additional organizations and individuals becoming interested in providing support. Lastly, while coalitions do not last forever, the mutual trust in relationships that are formed may last a lifetime, whether the objectives were met or not.

OTPC AWARDS THE NORTH TULSA COMMUNITY COALITION AS HEALTH COMMUNITY CHAMPIONS

Access multimedia content (http://openstax.org/books/population-health/pages/33-3-advocacy-and-coalition-building)

This video depicts how one community coalition was launched in Tulsa, Oklahoma, to address the social determinants of health.

Watch the video, and then respond to the following questions.

1. How did the idea for the North Tulsa Community Coalition begin?
2. What are the mission and goals of the North Tulsa Community Coalition?
3. What are some positive outcomes of this coalition?

Nurses and Coalitions

Many nurses hesitate to become involved in coalitions to support public health causes until they or someone they care about is personally affected by structural inequities in health care. Sometimes, a university professor or a client may have inspired one's interest in activism. Faculty in academic settings and nurse educators within the practice environment teach students and new nurses about safety and civility. They can ignite an interest in advocacy through mentoring and role modeling. In many ways, nurse educators are responsible for forming the professional identity of novice nurses to further the profession in an ever-changing health care environment (ANA, 2023a).

The ANA has developed a nursing advocacy coalition called RNaction that is available to help nurses act in groups on important issues in the United States that affect persons, nurses, and public health (ANA, 2023a). The **Campaign for Action** is another example of a coalition that has brought nurses, health care providers, consumers, educators, and businesses in almost every state together to ensure the health of all people by strengthening nursing (Campaign for Action, 2023). These state-level action coalitions build on the Future of Nursing Report to unite schools, fire and emergency services, and local businesses, clubs, and social justice organizations such as the Robert Wood Johnson Foundation to promote healthy communities by transforming health care. As a result of the Campaign for Action coalition, significant work is being conducted at the state level to address issues that impact health as a result of nursing care, such as access to health care, transforming nursing education, fostering interprofessional collaboration, the need for diversity in the nursing profession, and building healthy communities (Campaign for Action, 2023). For example, in 2022, 26 states improved access to health care by adopting full practice authority for all APRNs so they can practice to the full extent of their education and training. Several local and statewide programs have been launched to increase diversity in the nursing workforce due to this coalition. In Brandywine, Delaware, as part of the 2021 Nursing Innovations Fund project, the school district piloted an afterschool program

called BSD's Lifesavers to increase the awareness of nursing as a career to communities that are underrepresented in the nursing workforce (Campaign for Action, 2022). The program's success will be measured by identifying the percentage of participants pursuing a career in nursing.

CAMPAIGN FOR ACTION

The Future of Nursing: Campaign for Action, funded by the AARP Foundation, AARP, and the Robert Wood Johnson Foundation, collaborates nationally with nurses and other health care professionals, consumers, educators, and industry to improve health and health equity by strengthening nursing. The Campaign has action coalitions in every U.S. state.

Visit the Campaign for Action (https://openstax.org/r/campaignforaction) website, scroll to the bottom of the page, select your state or another state of interest, and read about the latest news from that state's coalition. Then respond to the following questions.

1. Which state did you select?
2. What current actions is that state taking to increase health equity for its communities?

Nurses also advocate for health care of populations by seeking appointments or elected positions on various trustee boards for businesses and organizations that impact health care, whether in nursing, business, or education. The Nurses on Boards Coalition (NOBC) was formed in 2014 in response to the 2011 Future of Nursing Report, which called for nurses to lead change and advance health (Institute of Medicine, 2011). The NOBC collaborates with its member associations, partners in health care, and businesses to provide nursing leadership as members on the boards of directors for over 10,000 organizations (NOBC, 2021). Nurses interested in serving on boards may register on the Nurses on Boards Coalition (https://openstax.org/r/nursesonboardscoalition) website to find an organization that matches their skills and expertise or seek resources to build leadership skills. Many national organizations such as specialty nursing organizations have local chapters. Becoming a local chapter member is a great way to stay up to date on the latest science and network with other nurses with similar interests. Leadership opportunities often become available within a specialty organization, and most are elected positions. The Nursing on Boards Coalition offers web-based and one-on-one advisement with a mentor to develop the skills to gain leadership skills and build to higher-level positions in these or other organizations congruent with an area of interest to advocate for populations of clients and nurses.

UNFOLDING CASE STUDY

Part B: Advocating for the At-Risk Client

Read the following scenario, and then answer the questions that follow based on all the case information provided in the chapter thus far. This case study is a follow-up to Case Study Part A.

Tanesha has been staying at the homeless shelter for the past 2 days. She was placed on antibiotics for lower lobe pneumonia, and her blood glucose level and blood pressure have stabilized. She has been able to shower and obtain shoes that fit her feet. She has a small diabetic ulcer at the base of her right great toe that has been cleaned and bandaged. Her car was moved to a safe place in the parking lot. She expresses concern about staying in the shelter; she fears that she will be assaulted and will be unable to protect herself as men have been seen sneaking into the women's ward. She said that she left home because she was assaulted and admits that she still feels afraid. She mentioned that she couldn't sleep well at the shelter because babies were crying all night. She said that she plans to return to her car to live soon if the conditions do not improve in the shelter.

3. What would the nurse consider a priority for clients like Tanesha?
   a. Suicide precautions
   b. Mental health evaluation
   c. Nutritional assessment
   d. Sleep assessment

4. What health policies might the nurse advocate for to best serve homeless individuals like Tanesha?
    a. Early childhood health education
    b. Safe housing programs for families with children
    c. Free mental health screening for veterans
    d. Education on how to access health care

Student Involvement in Coalitions

Universities have historically been centers for igniting social changes that improve health. At one college of nursing, senior-level nursing students were concerned about the lack of a mandate for the COVID-19 vaccination in the workplace. Under the direction of their public health faculty member, more than 100 students formed a coalition. They wrote letters to their respective legislators with their concerns, which launched a wide range discussion in the state, resulting in a meeting to discuss the issue with the state's health commissioner. The box below shows an example of the letter the students developed. Student nurses have many avenues to become involved in advocating for the health of the communities they serve.

SAMPLE LETTER FROM NURSING COALITION TO LEGISLATOR

Date

Name/affiliation/contact info

The Honorable _____

Dear State Senator _____

My name is____, and I reside at_____. I am currently a nursing student at _____ University, in (*town*), (*State*). I am writing to you in hopes that you will support our stance on the recommendation to endorse a mandate on the COVID-19 vaccination in the workplace. According to the CDC's reported data about the state of ____, "95% of the state's total population has received at least one vaccine dose, 83% are fully vaccinated and only 24.4% have the latest bivalent booster" (*cite*). In examining this data, most residents in our state are hesitant toward receiving a COVID-19 booster. As we move away from the height of the pandemic and into the future, it is necessary that action is taken to prevent any loss of progress. COVID-19 vaccines have been proven to fight against the virus and prevent hospitalizations. The CDC adds that moreover, "public health experts see reduced protection over time against mild and moderate disease, especially among certain populations. For the best protection, everyone 6 months and older is recommended to stay up to date with their COVID-19 vaccines, which includes getting boosters (CDC, ___)."

If the COVID-19 vaccination were to be mandated within the workplace, we would see an upward trend in (*state__*) residents staying up to date with CDC recommendations, which would influence others to follow suit. In addition, the workplace specifically must be accounted for as a place for greater risk of COVID-19 spread. Individuals working together in close quarters for many hours each week provides a breeding ground for infection spread. Studies have shown that "many private-sector employers want their employees to be vaccinated against COVID-19 to prevent the spread of the virus, reassure employees and customers that the premises are safe, avoid potential liability for transmission of the virus, and advance public health" (Rothstein et al., 2021, p. 1062). A mandate in the workplace would promote adequate protection of the individuals of (*state*). By keeping in line with the CDC recommendations, we can continue to move away from some of the darkest times in our world's history. Prevention is our biggest strength in continuing to fight against COVID-19. A mandate would only further promote this. This is a prevalent and dire time in our nation's history. With proper legislation, we can continue to move forward and keep on track for a healthy environment for all.

Thank you for your time and for considering this request.

Sincerely,

Name

RAY AND NICHOLAS SHARE THEIR STORY ABOUT WHY #CARECANTWAIT

Access multimedia content (http://openstax.org/books/population-health/pages/33-3-advocacy-and-coalition-building)

In this video, a father and son discuss the challenges of finding full-time support professionals to assist Nicholas, who has autism, intellectual disabilities, and several health issues. Visit The Arc (https://openstax.org/r/thearcorgc) website to learn about family perspectives regarding medically complex and fragile children.

Watch the video, review the website, and then respond to the following questions.

1. What are the financial and career challenges that parents of medically complex children face?
2. How does Medicaid support families of children that are medically complex?
3. How can nurses advocate to protect children that are ventilator dependent or have other medically complex needs?

Chapter Summary

33.1 The Importance of Nurse Advocacy

Nurses have an ethical responsibility to advocate for change to support populations most at risk for inequities. Nurse advocates work to address the social determinants of health that create health disparities among populations. The nursing profession can act to reduce disparities and advance health through advocacy at many levels.

33.2 Advocacy in Population Health

Nurse advocacy involves assessment, collaboration, and communication. To be effective advocates, nurses must seek information to be fully informed about the issues affecting the populations they serve. Nurses can act locally, regionally, nationally, or globally to advocate for changes that will improve the health of communities and populations. The 2021 Future of Nursing report provides guidance regarding the priorities of nursing as it relates to community-based health care.

33.3 Advocacy and Coalition Building

Nursing coalitions can be more effective than individual advocacy. They enable members to share expertise and resources, and they lend credibility to issues of concern. Prominent national and state organizations have developed nursing advocacy coalitions, and many national coalitions have local chapters where nurses can become involved. Colleges and universities provide avenues for student nurses to participate in advocacy efforts.

Key Terms

advocacy an act of support on behalf of another for a cause that improves health for persons and/or populations

advocate a person who champions causes, such as disease awareness or other health issues

Campaign for Action a coalition of nurses dedicated to transforming health and health care by nurses in collaboration with consumers, educators, and businesses in the United States

coalition a group of people with shared vision or concerns such as nurses or nursing associations and other groups that join forces to support a cause

International Council of Nurses (ICN) a federation of more than 130 national nurses' associations that works to ensure quality nursing care for all, sound health policies globally, the advancement of nursing knowledge, and the presence worldwide of a respected nursing profession and a competent and satisfied nursing workforce

National Academy of Medicine (NAM) an independent scientific advisory organization formed in 1970 that aims to improve health for all by advancing science and health equity and providing independent, authoritative, and trusted advice on a national and global platform

political action committee (PAC) a political committee organized for the purpose of raising and spending money to elect and defeat candidates

social justice a view that each person deserves equal economic opportunities as well as political and social rights

Title VIII Nursing Workforce Reauthorization Act the bill that reauthorizes loan repayment and scholarships for nurses, loans for nursing faculty development, advanced education nursing grants, grants for increasing nursing workforce diversity and nurse education, practice, quality, and retention grants

vaccine hesitancy a delay in acceptance of or refusal of vaccines despite the availability of vaccine services

Review Questions

1. Which activity would a nurse mentor recommend to a new nurse to begin to advocate for the profession?
   a. Lobby for health care reform to cover preventive services
   b. Educate families about the scope of nursing practice
   c. Serve as a volunteer for a state legislator's campaign
   d. Set up a flu shot clinic at a neighborhood church

2. Which information would the nurse provide to a state legislator about the need for safe staffing ratios in hospitals?
   a. A six-client-to-one nurse ratio on a medical-surgical unit is ideal for positive client outcomes.

b. Inadequate client-nurse ratios increased mortality during the COVID-19 pandemic.
c. Client-to-nurse staffing ratios do not adversely affect client outcomes.
d. Safe staffing ratios should be set by each hospital.

3. Which communication skill should the nurse use when preparing to meet with community partners about the need for increased health access for vulnerable populations?
a. Concisely present key issues within the first minute
b. Prepare an in-depth, detailed speech
c. Provide a multipage fact sheet to support the conversation
d. Present facts and avoid using client stories

4. Which concept should the nurse consider when providing maternal-child health care to immigrants who have newly arrived in the United States from various countries around the world?
a. The rate of infant mortality is consistent around the world.
b. Deaths from eclampsia are lower in Black women than White women.
c. Black women are more likely to die from pregnancy-related cardiomyopathy.
d. Global disparities in maternal-child deaths cannot be changed.

5. The community health nurse has formed a coalition to provide programming and safe meeting spaces for adolescents after school. Which statement best describes the nurse's purpose for forming a coalition?
a. The nurse does not have the time to create this program without help.
b. There will be shared blame if the program fails.
c. The nurse does not possess the skills to develop such a program without help.
d. Resources are shared to increase the likelihood of achieving success.

6. Which goal would a nurse utilize when developing a program to improve care for vulnerable populations based on the Future of Nursing Report 2020–2030?
a. Provide scholarships for student nurses to improve diversity
b. Increase the number and quality of shelters for the homeless
c. Improve quality of life and prevent disease, injury, disability, and premature death
d. Increase clinical hours for nurses obtaining advanced degrees

7. A nurse has joined a political action committee (PAC) through the state nursing organization. The nurse explains to community health nursing colleagues that the PAC performs which of the following functions?
a. Making political contributions
b. Conducting judicial reviews
c. Identifying issues of concern
d. Lobbying government officials

8. Which of the following is a reason why a nurse might contact the Nurses on Boards Coalition (NOBC)?
a. To get help in contacting their senator on a health care bill
b. To develop specialized clinical skills
c. To gain leadership skills in advocacy
d. To obtain funds for a new community hiking trail

9. To meet the health care needs of a community, a public health nurse has been asked to join a coalition. Which characteristic of a coalition should the nurse anticipate?
a. An informal group that disbands when its goal is met
b. A social group set up for networking
c. A group that focuses on a specific nursing specialty
d. A formal group with clearly defined positions

10. As a member of the Campaign for Action coalition, in which activity would the public health nurse participate?

a. Developing community walking trails
b. Working at the state level to attract diverse students to nursing
c. Lobbying at the state level for Medicaid expansion
d. Collaborating with the CDC to promote vaccine education

CHAPTER 34

Engagement in the Policy Development Process



FIGURE 34.1 Policies shape health behavior, such as a policy encouraging New Yorkers to wear masks when using public transit to prevent the spread of the coronavirus disease during the COVID-19 pandemic. (credit: modification of work "MTA Announces $50 Fine for Refusal to Wear a Mask on Public Transit" by Marc A. Hermann/MTA New York City Transit/Flickr, CC BY 2.0)

CHAPTER OUTLINE

34.1 Social Planning and Policy Change
34.2 Why Are Nurses Key Players in Health Policy?
34.3 Policy Development
34.4 Advancing Health Care Policies

INTRODUCTION After recently graduating from nursing school, Alex works with the tuberculosis (TB) group in the health department of a large metropolitan county. Alex's group performs screening tests for clients with known TB risks or exposures and offers treatment to clients who are diagnosed with TB. While some clients seeking TB screenings are walk-ins, the majority have been referred to the health department by their health care providers. During their orientation to the TB group, Alex learned that state public health policies mandate the reporting of active and latent tuberculosis to the health department. Alex discovers that both health policies and laws are involved in mandatory disease reporting for a variety of communicable diseases and decides to learn more about these rules and how they vary from state to state. Alex learns that nurses are involved with health policy at all levels, from workplace institutional policies to regulatory policies and laws at the state and federal levels.

This chapter explores how and why health policies are made and how nurses can be involved in their creation and revision. It also periodically revisits Alex's work as a nurse in the health department in relation to policy discussions.

34.1 Social Planning and Policy Change

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 34.1.1 Describe the differences between policy and law.
- 34.1.2 Describe how cultural beliefs and values impact both individual and community responses to health policy.
- 34.1.3 Explain how policies can interrupt the cycle of poverty, disadvantage, and poor health.

Nurses encounter many different types of policies daily. **Policy** is a term that can take on slightly different meanings depending on the context in which it is used. In its broadest sense, a policy is a relatively stable, deliberate course of action that evolves over time to deal with a specific problem or concern. The terms *law* and *policy* are often used interchangeably because they overlap, but they are two separate and necessary parts of social health planning. **Laws** are created and enacted by the government and carry an aspect of punishment. Laws are the system of rules by which a country or community regulates the behavior and actions of its members. Policies are created by and for the people affected by them. An example of the difference between the two would be that attempting to practice nursing without a license is a violation of the *laws* regulating professional nursing, but if a nurse works in a critical care area, they may be required to earn and maintain a certification in critical care nursing to comply with a facility employment *policy*.

WHAT IS POLICY?

Access multimedia content (http://openstax.org/books/population-health/pages/34-1-social-planning-and-policy-change)

This video defines policy, explains how it differs from law, and describes some aspects of policy development.

Watch the video, and then respond to the following questions.

1. How would you define *policy* in your own words?
2. How are policies and laws different?
3. Name three examples of health policies.

When local, state, or national regulations are passed, they are called **public policy** (Columbia University, 2023). Public policies aimed at improving the nation's health include regulating highway speed limits to lower the incidence of traffic-related deaths and requiring municipal water systems to fluoridate water to improve oral health outcomes. **Health policies** describe a health goal and a way to accomplish it, such as a mandatory quarantine to lower the spread of infectious disease, as occurred during the COVID-19 pandemic. **Social policy** covers those policy decisions that promote the public's general welfare, such as a minimum age to purchase tobacco. **Nursing policy** sets goals and boundaries for nursing practice, such as setting the minimum qualifications necessary to obtain and keep a nursing license, and finally, **institutional policies** are rules that an organization has developed to govern the activities of anyone employed by or associated with the institution. An example is a hospital policy that requires nurses to be checked off before drawing arterial blood gas (ABG) samples. Understanding how policies are created and implemented allows nurses to address issues in the communities in which they live and work and to improve health outcomes for the nation (Brokaw, 2016).

HEALTHY PEOPLE 2030

Health Policy

Many Healthy People 2030 objectives relate to improving individuals' health, safety, and well-being across all age groups and demographics. The objectives related to Health Policy (https://openstax.org/r/healthgovhealthype) highlight the importance of collecting population-level health data on environmental health risk factors, reducing oral decay, and working toward tobacco cessation. Evidence-based resources are available to use in developing policies and programs that are effective, reproducible, and sustainable.

Cultural Influences on Health Policy Development

Health policymaking refers to the work of government bodies and other relevant organizations to formulate and establish policies and implementation methods to address any of the varied aspects of health care, which include public health and the health care system. It involves carefully thought-out decision-making processes to establish goals and priorities, fund the planned policy, and make plans for the policy's eventual implementation (Smith, 2020).

Health policy developers need to be sensitive to differences between their own cultural backgrounds and those of the prospective populations the policies will impact. Culture, religion, and ethnicity may influence beliefs and values that people have about health and health care. It is important to consider these beliefs and values when attempting to create new policy, whether for a single hospital department or for the whole nation. Researching and understanding the customs and values of a group before drafting a policy is a good start. Working with leaders from within a cultural group to establish the concerns and needs of the group demonstrates support and respect. Each ethnic group brings its own perspectives and values to the health care system, and some of these beliefs and practices differ from those of the traditional American health care culture.

Poverty and Health Inequality

The federal government creates and sponsors many policies and programs intended to improve the health of the population of the United States as a whole. Past programs include those designed to find employment for individuals left destitute by the Great Depression, such as the Works Progress Administration (WPA) of the 1930s (Figure 34.2). While not designed to improve health status alone, the WPA program and many similar programs allowed individuals and families to afford shelter and food in a time of economic turmoil.



FIGURE 34.2 A worker employed by the Federal Works Progress Administration (WPA) that ran from 1935 to 1943 during Great Depression receives a paycheck. (credit: "Photograph of Works Progress Administration Worker Receiving Paycheck" by Federal Works Agency. Work Projects Administration. Division of Information. 7/1/1939-1943/National Archives Catalog, Public Domain)

In 2010, President Barack Obama signed the Patient Protection and Affordable Care Act (PPACA or ACA) into law. This was the government's first major effort to improve access to health care since the introduction of Medicare and Medicaid in 1965. As a result of the ACA, by 2016, the number of uninsured U.S. citizens was cut nearly in half. Another beneficial, client-centered outcome of the ACA was a reduction in clients' out-of-pocket costs due to **preexisting conditions**—health problems diagnosed before an insurance policy goes into effect. The ACA limited insurers' ability to refuse to pay for treatments for preexisting conditions (Office of Disease Prevention and Health Promotion [ODPHP], 2020b). A major goal of the ACA was to improve the health of Americans who lived near or below the poverty line. Without health insurance, visiting a medical provider for preventative medicine was a luxury many could not afford. Often, the only place a low-income client could be treated for an illness or injury was the

emergency department (ED). Although treatment in the ED requires no up-front payment, the relative cost of care in this medical setting generates large medical bills that uninsured clients may be unable to repay. This debt makes low-income families even more financially unstable as it lowers their credit scores and drives them toward medical bankruptcy. While this may sound like a problem that only affects individuals or families, this medical debt can be the entry into a multigenerational financial ruin.

The **cycle of poverty**, also known as the poverty trap, refers to a series of events that occur between generations. The main idea is that once a person or family becomes impoverished, it is almost impossible to change their economic status, and an external intervention is needed to break the cycle (Maryville University, 2022). As seen in Figure 34.3, many factors play a part in perpetuating this cycle.

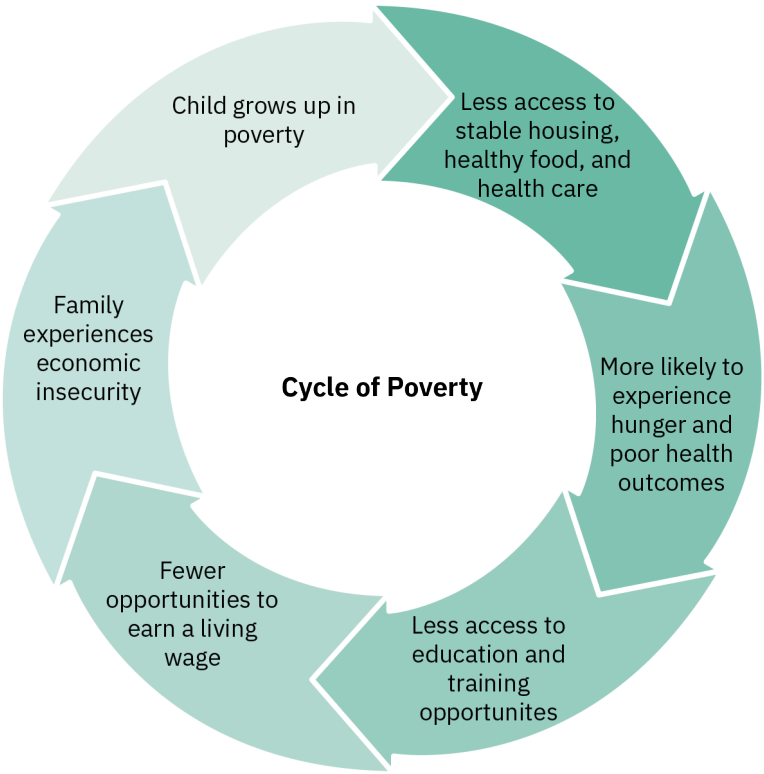


FIGURE 34.3 The cycle of poverty most often begins when a low-income family has children but may also begin when students fail to graduate high school and have difficulty finding work that pays a living wage due to their limited education. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

The cycle typically begins when a child is born into a poor family with few resources to create opportunities for healthy growth or advancement (Coughlin et. al, 2022). Children are often the family members who are affected the most by poverty, with one in seven children in the United States living in poverty (Children's Defense Fund, 2023). Children depend on their families to meet all their needs, such as food, clothing, and shelter. As discussed in Caring for Vulnerable Populations and Communities, the presence of children in a family is a financial burden on all the other members (de la Sablonnière, 2017).

THE ROOTS OF HEALTH INEQUITIES

The Financial Roots of Health Inequities

In the article U.S. Healthcare Policy and Child Poverty (https://openstax.org/r/academicpedsjnl), the authors discuss how the structure of the American health care system leads to high medical bills for the uninsured and the many negative effects these bills have on the children of families with health care debt. The authors offer three suggestions for addressing this issue, including raising the minimum wage, capping the costs of medications, and offering government-sponsored low-cost childcare for working parents.

Read the article, and then respond to the following questions.

1. Which of these ideas would be the easiest for the government to implement? Why?
2. Which idea would do the most to improve the lives of children born into the cycle of poverty?
3. Are there other ways to address this problem that the authors did not suggest?

(See Sharfstein & Thornton, 2021)

Families in the cycle of poverty can have several disadvantages compared to families with financial stability. Some of these negative social determinants of health include

- low level of education,
- few marketable job skills,
- lack of transportation,
- frequent moves due to eviction,
- high levels of debt that can lead to recurrent bankruptcies,
- depression, and
- higher-than-average incidence of alcohol and substance misuse.

For impoverished families, the more of these factors are present, the more difficult it will be for them to improve their economic situation, even with the support of friends and family (Coughlin et. al, 2022). Breaking the cycle of poverty can be even more challenging for people who lack family support or live in remote and sparsely populated areas. This relative isolation is another barrier for individuals experiencing poverty to overcome. When thinking of positive predictive factors, or circumstances that help break the cycle of poverty, two that come at little cost are social support and social capital (Dickey et.al, 2022).

Social support is both actual and perceived support from a person's social network, such as coworkers, friends, and family. Having a family member or neighbor who can babysit a sick child to prevent a caregiver from missing work is a form of social support; this allows the caregiver to avoid a day of lost wages, which might destabilize the household's monthly finances. **Social capital** refers to resources accessed through social connections, or networking, which decrease barriers to health care. An individual notifying a friend about an opening at their workplace for a job with higher wages and/or benefits and providing the friend with a referral letter is an example of social capital in action. Unfortunately, when people are already living in an impoverished state, they often lack friends and acquaintances with significant social capital, and this creates barriers to economic support (Dickey et al., 2022).

Children living in poverty are more likely to experience malnutrition (due to a lack of quality foods), disease (due to poor sanitation and lack of immunizations), and reduced access to education (Sharfstein, 2021). Research shows that the effect of interventions aimed at childhood nutrition and early childhood education through programs like Head Start has increased the high school graduation rate of children impacted by these programs (Bitler & Figinski, 2019).

Community health nurses use policies and programs to improve childhood nutrition and to encourage early childhood education, well-child checks, and vaccinations. At the local level, improving childhood nutrition happens through food assistance programs, often called food pantries, and zoning policies that encourage the building of grocery stores in underserved areas to increase the presence of fresh foods and eliminate food deserts.

States can support families by providing supplemental funding to their Head Start centers, which provide children ages 3 to 5 with early educational interventions, free hot meals, and education and resources for caregivers. Children from infancy to age 3 can be enrolled in Early Head Start where available, which provides parents with a safe, no-cost alternative to paid childcare (U.S. Department of Health and Human Services [HHS], 2023).

At the national level, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and the Supplemental Nutrition Assistance Program (SNAP) provide nutritional support for families. These programs provide healthy food needed for children's growth and development and maintain nutritional health in adults (Benefits.gov, 2021). A recent evaluation of the effects of SNAP on child health has shown that the program has helped reduce child poverty and that without the support of SNAP as a primary food source for a family, twice as many children would live in deep poverty (Trisi & Saenz, 2020).

$35 INSULIN CAP FOR SENIORS ON MEDICARE

Access multimedia content (http://openstax.org/books/population-health/pages/34-1-social-planning-and-policy-change)

In this video, Robin, an older adult with diabetes who is on Medicare, describes how a recent health policy has greatly impacted her life and finances.

Watch the video, and then respond to the following questions.

1. Why do you think the government put a limit, or "cap," on the amount pharmacies can charge for insulin for clients enrolled in governmental health programs such as Medicare?
2. Could limiting the cost of insulin for every client help break the cycle of poverty? Why or why not?
3. What are some ways that lowering the cost of insulin could help improve the overall health of individuals who have diabetes?

34.2 Why Are Nurses Key Players in Health Policy?

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 34.2.1 Discuss the nurse's role in health policy formation.
- 34.2.2 Explain how nurses can influence social policies to promote justice, fairness, and health equity.
- 34.2.3 Discuss the importance of nurses' contributions as leaders in policy issues.

Nursing is the single largest health care profession in the United States, with almost 5.2 million registered nurses in 2023 (American Association of Colleges of Nursing, 2023). With such an incredibly large number of members of the profession, nurses have the potential to impact health policy at all stages—from policy formulation through adoption and evaluation. To effectively influence health care quality, nurses must capture the attention of community partners and policymakers to make nursing care issues visible. Nurses have the advantage of strength in numbers. To benefit from this advantage in creating and changing policy, using a coordinated approach is helpful. Nursing advocacy groups, also called special interest groups, combine the voices of their members to draw attention to the problems or issues they wish to change.

An example of a nurse advocacy group that works within the nursing profession to spark positive changes in those around them is Healthy Nurse, Healthy Nation (HNHN). Created through a collaboration between the American Nurses Association (ANA), the American Nurses Foundation, and the American Nurses Credentialing Center, the goal of this advocacy group is to have nurses engage in personal care activities to avoid burnout, stress, and fatigue (HNHN, 2023). By modeling these self-care actions, nurses can influence their friends and families to do the same. Joining an advocacy group that represents an issue of personal importance is an excellent way for an individual nurse to become a part of policy change.

The separate areas of focus in which nurses play a role in shaping health policy have been described as **four spheres of political action in nursing** and include (de la Sablonnière, 2017)

- the nursing workplace,
- the government,
- professional organizations, and
- the local community.

In the workplace, nurses can serve on committees that evaluate current policies and create new ones, such as school nurses advocating for the removal of soft-drink machines from the cafeterias to occupational health nurses working to make the grounds of a facility a nicotine-free zone.

On a local or state level, nurses can use the power of the media to obtain support for community initiatives directed at improving the health of the area, such as advocating for changes in property zoning to keep businesses that release chemical fumes or particulate-laden smoke away from schools (Deschaine & Schaffer, 2003).

Membership in professional nursing organizations such as the ANA is an excellent way for nurses to use a united voice in lobbying governmental officials to change health policies (Muetzel et. al, 2022). In addition, nurses can

lobby their legislators directly through telephone calls, letters, and meetings with their elected representatives. Although each nurse has the power and potential to use their individual voice in each of the four spheres to influence health policy, collective action can bring transformational changes that can improve clients' health throughout the nation. Advocating for Population Health describes the nurse's role as an advocate in more detail.

In addition to the ideas already listed, another way that nurses can present their questions and concerns at any management level is through writing a policy brief. There are four types of briefs that can be used to share public health evidence, as shown in Table 34.1.

Type of Brief	Description
Information Brief	A concise summary of the current research on a policy method, approach, or other related concerns
Issue Brief	A summary of the best available evidence on a public health problem with no current solutions
Policy Brief	Builds on an issue brief to include the most current evidence-based best practices or health regulation options that could be used to address the public health issue
Policy Impact Brief	The most in-depth briefing document; provides a summary of the best available evidence on health, economic, or budgetary impact of one or more policies for a public health problem; appropriate when evaluations and evidence exist on the health or economic impact of the policy

TABLE 34.1 The Four Types of Policy Briefs (See Centers for Disease Control and Prevention [CDC], 2020a.)

A well-written policy impact brief completes all of the following: clearly describes the concerns, the effects of the issue, and why it matters to the policymaker's constituents. The steps of writing a policy impact brief are much like those of preparing to give an SBAR shift report. Rather than providing just the situation, background, assessment and recommendations, a policy impact brief will begin with a title and summary before describing the problem and any research or policies related to the problem. The impact brief then ends with recommended solutions along with the references and sources used to prepare the brief. The Centers for Disease Control and Prevention (CDC) provides resources and information (https://openstax.org/r/cdcgovpolicypolaris) on writing briefs.

THE ROLE OF THE NURSE IN PUBLIC HEALTH POLICY

Access multimedia content (http://openstax.org/books/population-health/pages/34-2-why-are-nurses-key-players-in-health-policy)
In this video, Dr. Bialous of the University of California San Francisco School of Nursing discusses the role of nursing in shaping public policy.

Watch the video, and then respond to the following questions.

1. How can nurses position themselves at the early stages of the policy process rather than at implementation only?
2. What are some ways to make yourself visible as a nurse when seeking policy change?
3. How do nurses influence health policy statements?

Social justice is the fair and equal treatment of individuals. Social justice in nursing happens when client rights are protected, resources are distributed fairly, and treatment decisions are unbiased (Abu, 2020). Health equity is "the state in which everyone has the opportunity to attain full health potential, and no one is disadvantaged from achieving this potential because of social position or any other socially defined circumstance" (National Academies of Sciences, Engineering, and Medicine [NASEM], 2017, p. 32). Nurses can increase social justice in their daily lives by being strong advocates for their clients (NASEM et al., 2021).

As has been discussed throughout this text, health is affected by a wide range of social determinants of health (SDOH), including housing, transportation, nutrition, physical activity, education, income, laws and policies, and discrimination (CDC, 2020b). Because nurses work with clients in a wide variety of settings, such as inpatient,

outpatient, school, correctional, and occupational health, they can play a major role in addressing the underlying causes of poor health. Nurses are uniquely positioned to drive social justice and equity in health care due to the level of trust they hold with clients.

Nurses can influence social policy to improve health equity through four approaches (NASEM, 2021):

- Addressing social needs in clinical settings
- Addressing social needs and SDOH in the community
- Using interdisciplinary collaboration to meet multiple needs
- Advocating for policy change

The depth of knowledge that nurses gain through their interactions with clients allows them to recognize and understand the variety of factors that influence daily wellness and longevity. Nurses can use this client-specific knowledge to promote justice by creating individualized interventions and working with other disciplines and health allies to acquire the resources the client will need to implement those solutions (Timmons, 2021).

CASE REFLECTION

Advocating for Individual Clients

Read the scenario, and then respond to the questions that follow.

To return to the scenario from the beginning of this chapter, at Alex's health department, some of the clients being treated for active TB are required to take each dose of medication in the presence of a health care worker. This process is called **directly observed therapy** (DOT) and is implemented when a client is at high risk for noncompliance, such as with clients who lack a permanent address. Alex has noticed that the policy in their department currently requires every client to come to the health department daily to obtain medication doses. One of the current clients uses a wheelchair and struggles to make the daily trip to the health department due to their mobility issues. Alex is concerned that this situation is not equitable for that client and works with the clinic managers to send an outreach worker to client's residence each day instead of requiring the client to make the difficult journey to the clinic.

1. Why is asking the client's family to give them their medication instead of a health department worker not a viable solution to this problem?
2. How could the TB clinic staff build rapport and trust with their clients?
3. How does using DOT for clients with TB help limit the spread of the disease?

Nurses can influence local, state, and national social justice policies (Figure 34.4). For example, nurse administrators can create policies to increase diversity in the workplace, encourage multilingual staff to become certified medical translators, increase diversity in hiring, and offer virtual clinical services through telemedicine. Table 34.2 provides other ideas of how nurses can participate at these three levels.



FIGURE 34.4 There are many ways for nurses to draw attention to unfair or just social policies. Nurses created this parade float to call attention to the health needs of rural communities and Indigenous Peoples, whose livelihoods and cultures are closely dependent on the natural environment. (credit: "The Nurses' Float, decorated by registered nurses from across the United States, in the 124th Rose Parade in Pasadena, California" by Carol M. Highsmith/Library of Congress, No known restrictions)

Local Level
• Participate in the creation and review of policies at their work site to minimize bias • Engage with local legislators on health-related issues in their community • Work with a local advocacy group to raise awareness of health-related issues in their community • Maintain and use a current list of local support agencies, free clinics, and shelters • Offer client paperwork and educational handouts in multiple languages
State Level
• Support political candidates who advocate for those social justice issues that matter to you • Work with the state's board of nursing to raise awareness of social justice issues affecting nurses • Lobby the state's members of Congress to pass legislation giving increased access to care
National Level
• Serve in public- and private-sector leadership positions for national health advocacy groups • Join a national nursing organization that lobbies for national policy changes

TABLE 34.2 Ways Nurses May Influence Social Justice Policies

34.3 Policy Development

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 34.3.1 Describe the stages of the policy development process.
- 34.3.2 Explain how policies are conceptualized, developed, adopted, and evaluated.
- 34.3.3 Apply the CDC's policy analytical framework to identify, analyze, and prioritize policies that improve health.
- 34.3.4 Discuss the role of the nurse in policy evaluation.

The previous section discussed why nurses are important in health policy, but many nurses may be unfamiliar with how policies are created. This section discusses the steps of formal policy creation, including the structure used to draft a new or amend an existing policy.

Stages of the Policy Development Process

The term **policy development process** (also referred to as **health policy process**) describes the steps or stages that are followed as a specific problem or concern generates a plan of action intended to correct it. Think of this as an umbrella term that captures all stages from the idea for a new policy to the evaluation of the policy. This is similar to the steps of the nursing process, so this should feel familiar. There are many models that describe the steps of policy development, but one of the most commonly used in creating public health policy is the **stage-sequential model**, illustrated in Figure 34.5.

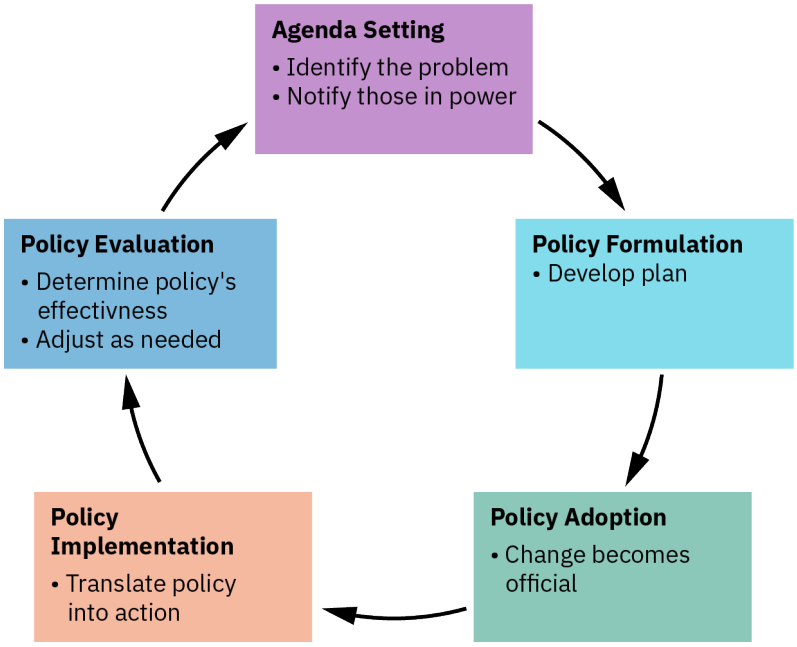


FIGURE 34.5 The stage-sequential model of policy development closely parallels the nursing process. (attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

This model breaks the policy development process into five general stages (CDC, 2020a):

- Agenda setting
- Policy formulation
- Policy adoption
- Policy implementation
- Policy evaluation

Again, these steps likely look familiar as in this model the policy development process is very similar to the nursing process. Let's review each stage and its parallel in the nursing process.

The first stage is **agenda setting**. This stage combines two steps of the nursing process: assessment and diagnosis. Before a policy addressing an issue can be created, it is first necessary to define the problem clearly. For example, if a clinic does not allow children to be present during their caregiver's appointment, this policy might lead to canceled or skipped appointments when childcare plans fall through, negatively influencing the caregiver's health. This particular situation can be dealt with by changing the existing policy. Having identified the problem, the next step would be to bring it to the attention of those with the power to change the policy. In this example, the policy directors may be the health care providers, nurses, and the clinic manager, and the individual who identified the problem could send these individuals an e-mail or talk to them directly about their concerns (Coughlin et. al, 2022).

For issues outside the workplace, there are many other less direct ways to gain attention for a policy issue. When activists organize a demonstration, lobbyists brief lawmakers on the current concerns of their sponsor, or investigative reporters publish stories, they are bringing light to a perceived problem (ODPHP, 2020b).

The second stage, **policy formulation**, means developing a plan to solve the previously identified problem. This is the same action as the planning stage of the nursing process. This step of policy development should result in a tangible outcome: a fully completed proposal for a new or amended policy. Returning to the previous example of the

clinic, the plan to solve this problem might be proposing new guidelines for when children may be present at a parent or caregiver's medical appointment.

The third stage, **policy adoption**, is when the policy or change in existing policy becomes official. Adoption can be as informal as a facility-wide memorandum indicating the new policy and the date it will be in effect. For example, "as of July 1, children under the age of 5 are permitted to be in the examination room with a parent or caregiver." Notifying others, such as clients, customers, or other community partners, about the new policy may also be part of the adoption process, depending on who the policy will affect. Policy adoption can also be handled formally; for example, a federal health care policy is adopted when Congress passes legislation. There is no step that corresponds directly to this stage in the nursing process.

Stage four, or **policy implementation**, happens when administrators decide how to deploy people, funding, and other resources to translate a policy into action (CDC, 2020a). Some policies do not require money or resources to implement. In the clinic example, this policy is a purely behavioral change and costs nothing to implement. However, if people or material resources are needed to enact a policy, obtaining the money to pay for them can make the implementation process much slower.

Stage five, **policy evaluation**, is the same in policy development and in the nursing process. For both, it means determining how well a policy is working. If a policy makes substantial changes to a process, involves many people, and is implemented over a long period of time, evaluation can be surprisingly difficult to accomplish. To gain an objective view of the policy's success, it is necessary to collect data on its outcomes. Government policies are frequently evaluated by comparing the outcomes of the changes to the cost of implementing the policy, which is called a **cost-benefit analysis** (CDC, 2020c). In the clinic example, evaluation of the new policy would require tracking data to know whether giving flexibility in bringing children to appointments resulted in fewer cancellations or rescheduled visits. It would also assess if the policy resulted in any unforeseen effects, such as slowing the office and clinical staff down. Finally, if the policy evaluation determines that the new or revised policy has created another problem, the whole process will begin again.

HOW POLICY IS MADE

Access multimedia content (http://openstax.org/books/population-health/pages/34-3-policy-development)
This video walks through the basic stages of the policy development process.

Watch the video, and then respond to the following questions.

1. The video uses an alternate model (six-step model), which breaks the stage of policy formulation into two parts. How does this model compare to the stage-sequential model? Which model would you be more comfortable using?
2. What examples of public policy related to health care are currently in process?
3. What are some issues in your area that a nurse might attempt to solve by seeking changes in public policy?

Health Policy Development

Three generalized groups participate in the creation of health policies:

- Private institutions (micro-level)
- State- and regional-level agencies and lawmakers (meso-level)
- Federal agencies and lawmakers (macro-level)

Policy committees consisting of facility administrators and medical personnel often develop health policies at the micro-level. The goal of health policy development at this level is to act as change agents for the future of local health care, often by drafting or changing facility policies. Although policies at the micro-level may impact a small number of people, they still do important things, like reducing practice variations or human error.

At the meso-level, health care policies concern the county, state, or larger geographical region. Each state has specific health policies that can include laws that set minimum hospital stays for new mothers and babies and policies that outline disease reporting. County and state health departments and state boards of nursing fall under the meso-level.

Macro-level health policies affect the nation. These policies are written by elected and appointed officials with input from other professionals. Advocacy from nurses and nursing organizations is especially important at this level because few government officials have the background in health care needed to create health policy. The CDC's Global Health Center works closely with the governments of other countries and other international health agencies (such as the World Health Organization) to address new and emerging health concerns. Measures to contain or control the international spread of a disease can be accomplished by this collaboration (Jakab et al., 2021).

Health policies begin to take shape when individuals from one of these levels identify a health problem that needs to be addressed to improve the health of a specific group. After a problem is identified, it is time to do some investigation into the background of the problem: How long has it been happening? Whom does it affect? Who has the authority to make a change? What kind of changes would be acceptable to the affected people? The data collected by asking these questions comes from the people affected by or involved with the problem, referred to simply as community partners or interested parties, and sometimes referred to as stakeholders.

Primary community partners are the people or groups that stand to be directly affected by a policy, either positively or negatively. For example, the primary partners in a decision about whether or not to close a free clinic provided by a university would be the students attending that school.

Secondary community partners are people or groups that are indirectly affected by a policy. If the campus clinic closes, students without health insurance might be forced to seek care in an ED. The ED staff are indirect partners, as closing the free clinic increases the amount of traffic through their department.

Key community partners may belong to neither of those two groups but have an interest or expertise in an area of policy. These partners may include groups that can provide or raise money for the development and implementation of a policy, influential community members, elected or appointed government officials, and more (Concannon et al., 2018).

It is necessary to understand an issue completely before making any attempts to create a solution (CDC, 2020a). Health Disparities discussed how to assess a population for health disparities in a participatory manner. A community health nurse performs these actions when doing a windshield survey: an environment is evaluated for resources and deficits, community members are asked about their concerns and perceptions of health issues, and demographic data are collected before the nurse can choose a priority problem for the group and begin to make plans to remedy the identified problem.

The development of a health policy is the next step. When a policy is being created at the meso- or macro-levels, an increased number of outside resources and key community partners may be needed to make a policy a success. This step often includes input from nongovernmental health organizations, which include nonprofits. One such group, the Robert Wood Johnson Foundation (RWJF), collects data from many sources and summarizes these findings along with recommendations for policies and suggestions of how those policies can be implemented and supported. One of the recent briefs the RWJF produced, Public Health Infrastructure—Centering Equity in a Modern Public Health System (https://openstax.org/r/rwjforgeni), was designed for use by the New Jersey state legislature. The brief outlines gaps in the current public health policies, prioritizes the gaps, provides research data about the gaps, and outlines ways that changes in current policy can close the gaps and improve overall health in New Jersey by increasing health equity (RWJF, 2023).

Once a health policy is written, it must be adopted by the institution or government body responsible for its implementation. Policies written at the local, state, and federal levels can be passed as laws with approval from the legislators at each level. Writing a policy is, at times, a more straightforward process than adopting that policy. For a policy to be adopted and implemented, it needs support from the people who will carry out its outlined tasks and support from the source funding the change.

Returning to the earlier case scenario about the public health department where Alex works as a nurse, consider what might happen if a member of management decided that for maximum accuracy when taking vital signs on clients with TB, they must use the rectal temperature method. While core temperatures are more accurate than temperatures taken with less invasive methods, this policy would be unlikely to have support for adoption.

Evaluation of policy is sometimes written into the policy law or requested as a step in the implementation of the policy (ODPHP, 2020b). Policy evaluation examines a policy's implementation, performance, and impact on the

intended target. The data gained by assessing the effect of the policy on its intended audience helps the policy developers know whether the expected outcome is happening. The evaluation results can also be used to modify the policy itself or how it is put into practice if unintended results occur. If changes are needed, the policy can go back into the cycle at the development stage so that it can be modified in an attempt to improve its effects (CDC, 2020a). If parts of the policy's original goals remain unmet or unanticipated issues have happened, evaluation helps guide any necessary changes to the policy before it is re-implemented (CDC, 2020c).

If a policy has been so successful that its targeted problem no longer exists, then the policy can be retired or terminated. Sometimes a policy effectively addresses the issue it targeted but in doing so creates a new problem that requires attention. One example was the move in the late 1950s (Mills, 2023) to deinstitutionalize clients in mental hospitals after the advent of medicines to treat depression and schizophrenia. While many clients who were formerly inpatients were able to transition to life outside the hospital, a significant proportion of clients destabilized and became unable to care for themselves, leading to homelessness. The increase in the number of individuals experiencing homelessness with mental illness was an unintended effect of the deinstitutionalization policy (Yohanna, 2013).

Returning to the public health department where Alex works, if the department wanted to improve client adherence to attending their directly observed therapy appointments, they might make a policy change that included a small incentive for compliance. Rather than waiting for the current group of clients being treated to be discharged from treatment before evaluating the policy change, they could gather and monitor data continuously. If they found a problem with the policy change, such as an unintended decrease in client adherence, the staff at the health department could make the necessary adjustments as soon as they noticed the problem.

The CDC's Policy Analytical Framework

The CDC's policy analytical framework provides standardized steps for creating a policy and consists of the following three domains (CDC, 2020c):

- Problem identification: A public health issue is identified, a likely cause is suggested, and ideas for fixing the issue are developed.
- Policy analysis: The different proposed solutions are evaluated, and one is chosen.
- Strategy and policy development: Now the steps needed to arrive at that solution are specified. This includes deciding who is responsible for implementation, data collection, and funding.

This framework can be used to create policy at any level. It is designed to help the creators think through each part of a proposed policy so that the problem being addressed is clearly identified, more than one potential solution is explored, and the solution strategy chosen is likely to be effective. The benefit of using the analytical framework is that it takes a policy writer through all the necessary steps in the correct order. Think of it as a basic recipe for how to write a policy. Because the steps are clearly delineated, even a novice can draft a policy containing all the needed components for its implementation (CDC, 2020a).

WHY POLICY MATTERS

Access multimedia content (http://openstax.org/books/population-health/pages/34-3-policy-development)
This video from the CDC explains why creating health policies can have a large impact on public health outcomes.

Watch the video, and then respond to the following questions.

1. Why do health policies have the potential for large impacts on health?
2. How can nurses be involved in the policy process?
3. What are some issues in your area that a nurse might attempt to solve by helping to create public policy?

Nurses' Role in Policy Evaluation

Community health nurses collaborate with individuals, community organizations, health facilities, and local governments to successfully implement and evaluate community health policies. Beginning with evaluating policies in their workplace, nurses can gather information on how staff perceive current policies. Another beginning step is to join and participate in a professional nursing organization. By being a part of a collective group, nurses can apply

their combined knowledge and experience to promote effective health policies.

Nurses can also participate in policy evaluation by using evidence-based research and data to contact their legislators regarding health policy issues or concerns. Unless the legislators who developed and are evaluating a health policy have a clinical background, they may not be able to understand the strengths and weaknesses found after the policy was enacted. Nurses can assist their legislators by summarizing the content of research findings (Turale & Kunaviktikul, 2019).

34.4 Advancing Health Care Policies

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 34.4.1 Identify evidence-based policies linked to social and economic improvements.
- 34.4.2 Discuss the Health in All Policies (HiAP) approach to address health needs.
- 34.4.3 Defend policies that promote health and prevent harm.
- 34.4.4 Support the development of policies based on population findings.

Health policies shape every client's interaction with a health care team member. Their influence may be invisible if they are effective or extremely visible in cases where a policy is not providing a good outcome. When a policy no longer meets the needs of the people that it was intended to help and protect, it needs revision. Sometimes policies require revision because technology and current practice have advanced beyond the scope of the issue. This section will explore how nurses can use data and community partner resources to improve health policy.

Using Evidence-Based Policies

Using evidence-based policies is especially important in health care planning to ensure that interventions are safe and effective, reach the intended population, and use available resources. **Evidence-based policies** are developed from reliable data and statistics rather than intuition and personal opinion. A wealth of free government resources for current evidence-based practice (EBP) guidelines exist, as discussed in Evidence-Based Decision Making, and these resources can be used for the development of EBP policies (National Institutes of Health [NIH], 2023). Healthy People 2030 is based on the concept that evidence-based policies can improve the country's overall health by addressing direct health needs as well as SDOH. The Healthy People 2030 website has a library of downloadable evidence-based tools and educational materials (ODPHP, 2020c). Laws and policies at the local, state, and federal levels related to Healthy People 2030 are in place to improve the safety and well-being of Americans.

Another resource for evidence-based practice is the U.S. Preventive Services Task Force (USPSTF), an independent panel of experts in primary care and prevention that systematically review the evidence of effectiveness and develop recommendations for clinical preventive services (USPSTF, 2023). The Health Resources and Services Administration's [HRSA] Bright Futures program provides evidence-based clinical guidelines for mothers and children (from birth through age 18) to help increase the quality of primary and preventive care (HRSA, 2023a).

HEALTHY PEOPLE 2030

Evidence Based Resources

Evidence-based resources (EBRs) (https://openstax.org/r/healthgovhealthypeople) are published reviews of intervention evaluations and studies to improve health. The Healthy People 2030 website has organized them into intuitive topics so you can easily find what you are looking for. There are hundreds of EBR resources for SDOH, populations, health conditions, health behaviors, settings, and symptoms.

Health in All Policies

The CDC's **Health in All Policies** (HiAP) is "a collaborative approach that integrates and articulates health considerations into policy making across sectors to improve the health of all communities and people" (CDC 2020c). The HiAP approach is a framework intended to help governmental programs and nongovernmental organizations in planning their policies and outreach campaigns. The goals of HiAP are to

- promote health, equity, and sustainability,

- support collaboration between community partners,
- benefit multiple partners,
- engage community partners, and
- create structural or process change that is long-lasting.

HiAP recognizes that health depends on SDOH—factors beyond health care—and that they are often beyond the scope of traditional community health activities. Promoting healthy communities requires addressing those SDOH, such as transportation, education, access to healthy food, economic opportunities, and more to achieve the most benefit from planned interventions (Tucker, 2014).

Using HiAP and Healthy People 2030 goals increases the potential for state, territorial, and local health departments to improve health outcomes (ODPHP, 2020c). An example of a HiAP approach is a city planning policy that creates zoning for a new retirement community for older adults. During the planning phase of construction, the project team would perform an impact assessment of the proposed location. One assessment would be the potential health implications for the residents based on possible sites for the new community. If the community is built near a swampy area of marshland that is a breeding ground for mosquitos, what is the potential for West Nile virus and other mosquito-borne illnesses? If the location is close to a busy highway, how might the increased airborne pollutants affect the residents? If the community is built on the outskirts of the town, can existing public transportation options meet the unique transportation needs of the senior residents? Is there easy access to health care in proximity to the proposed location? Asking these and other questions using the HiAP approach helps guide the project team's decision-making across all areas to maximize health-enhancing options and to minimize potential health risks for the future residents (CDC, 2020c). Leading the Way to Improving Population Health discusses HiAP in more detail.

THEORY IN ACTION

Health in All Policies (HiAP)

Access multimedia content (http://openstax.org/books/population-health/pages/34-4-advancing-health-care-policies)
This short video from the American Public Health Association discusses the application of HiAP in the context of malaria prevention.

Watch the video, and then respond to the following questions.

1. What SDOH influence the incidence of malaria?
2. How do non-health agencies play a part in HiAP?
3. How did the different groups in the video work together on the malaria reduction project?

Nurses' Role in Advancing Health Care Policies

When nurses work to defend policies that improve health care outcomes, they are ultimately advocating for their clients. Nurses experience the daily influence of policy and politics in health care. As the largest group in the global health care workforce, nurses are uniquely positioned to observe the ways in which health policy affects clients and their communities (Kovner, 2023). Nurses are crucial to defending health policy because they spend much of their time interacting with clients and understanding their needs. Nurses can relay successes and limitations to policymakers, whether directly through contact with their legislators or through the collective voice of a nursing organization like the ANA (Pollack-Porter et al., 2018).

The ANA has worked to defend provisions of the ACA since it was introduced in 2010. One of the policies it has focused on is the information technology initiative. The ANA has advocated for electronic health records (EHRs) to promote client safety, joined health information technology alliances such as the Healthcare Information and Management Systems Society and the Alliance for Nursing Informatics, and developed educational products for e-health campaigns. Not all nurses were happy about the change from paper charting to EHRs, so the ANA worked to defend that policy by educating nurses about the improvements in client safety offered through the use of computerized client charts (ANA, 2023).

The information obtained by collecting data on a group of interest can be used by policymakers to tailor planned activities and interventions to directly target the members of that group (Leal, 2022). Nurses can support this process by keeping careful records of health needs and barriers to improved health in the selected client group. As discussed in Advocating for Population Health, nurses can also act as advocates for policy development when they identify a health gap in a client population.

An example of this is nurse Judith Haber's work to create interest in policies aimed at whole-person care for people who use Medicare. Dental care is not a covered benefit for these individuals unless the issue is related to very specific effects of medical treatment (such as pulling teeth that are loosened by treatment for cancer). Sixty percent of Americans aged 65 and older are enrolled in Medicare, and unless they purchase a private dental coverage policy, they must pay for all dental treatment out of pocket. Dr. Haber and her colleagues in the Oral Health Nursing Education Practice (OHNEP) program (a national nursing oral health initiative) have worked with the Centers for Medicare and Medicaid Services to improve access to dental care for several years. While dental care is not yet completely covered, through the efforts of these nurses, Medicare has been expanded to include benefits to clients with medical conditions (like artificial heart valves) that are impacted by oral health (Kovner, 2023).

Some applicable advocacy strategies for any nurse include joining a national nursing organization to draw attention to health disparities with a collective voice. Politics and policy are at the core of health care planning and improvements to population health, and by using the power of organized lobbying, nurses can create awareness of issues that will drive the development of policies to address these issues (Brokaw, 2016).

Chapter Summary

34.1 Social Planning and Policy Change

The term *policy* most commonly refers to a formal or informal rule, law, or plan of action followed by a group, organization, or government. A family living in poverty may not have adequate food, housing, or access to services, which could be a root cause of their health problems and contributes to the continuation of the cycle of poverty.

34.2 Why Are Nurses Key Players in Health Policy?

Understanding how policies affect their practice prepares nurses to address issues in the communities in which they live and work and to improve health outcomes. Each nurse has the power to use their individual voice to influence local health policy, and collective action by nursing organizations has the power to change national policy.

34.3 Policy Development

Health policies are developed through a flexible process that encompasses issue identification, policy instrument development, consultation, coordination, decision-making, implementation, and evaluation. The CDC's Policy Analytical Framework consists of the first three segments of the policy process: problem identification, policy analysis, and strategy and policy development. Policy evaluation is the examination of a policy's implementation, performance, and impact on the intended target.

34.4 Advancing Health Care Policies

Using evidence-based policies helps to ensure that interventions are safe and effective, reach the intended population, and use the resources available. HiAP is based on the understanding that long-standing health problems such as chronic illness, drug misuse, and spiraling health care costs are highly complex and often linked. When nurses implement and defend policies that use population health data, it is a method of advocacy.

Key Terms

agenda setting the identification of an issue or issues that require resolution and bringing these issues to the attention of community partners and concerned parties

cost-benefit analysis analysis that compares the outcomes of the changes to the cost of implementing a policy

cycle of poverty a series of events that occur between generations; once a person or family becomes impoverished, it is almost impossible to change their economic status, and external intervention is needed to break the cycle

directly observed therapy (DOT) system in which medication is dispensed at a clinic or pharmacy to a client one dose at a time to ensure compliance for those who are at high risk for noncompliance (such as with clients who lack a permanent address)

evidence-based practice policies policies developed from reliable data and statistics rather than intuition and personal opinion

four spheres of political action in nursing the four areas in which nurses can effect change: workplace, government, community, and professional organizations

Health in All Policies (HiAP) a collaborative approach to policy creation that integrates and articulates health considerations into policy development across sectors to improve the health of all communities and people

health policy policies that describe a health goal and a way to accomplish it

health policy process the steps or stages that are followed as a specific issue is identified and a plan of action intended to correct it is made

health policymaking the formulation and establishment of policies and methods of achieving the policies by government bodies or other relevant organizations to address any of the varied aspects of health care, which includes public health and the health care system

institutional policy rules that an organization has developed to govern the activities of anyone employed by or associated with the institution

laws the system of rules by which a country or community regulates the behavior and actions of its members

nursing policy sets goals and boundaries for nursing practice

policy a course or principle of action adopted or proposed by a government, party, business, or individual

policy adoption the acceptance or ratification of a policy

policy development process the steps or stages that are followed as a specific problem or concern generates a plan of action intended to correct it

policy evaluation determining how a policy is working and whether the intended outcomes are happening

policy formulation creating a plan to solve a previously identified problem

policy implementation the process of putting a new policy into effect through planning and funding

preexisting conditions health problems diagnosed before an insurance policy goes into effect and will therefore not be covered under the new insurance policy

public policy local, state, or national laws and regulations

social capital resources accessed through social connections or networking that decrease barriers to health care

social justice the fair and equal treatment of individuals

social policy policy decisions that promote the general welfare of the public

social support both actual and perceived assistance from one's friends, acquaintances, coworkers, and family

stage-sequential model a process that uses five steps to create a policy; these include agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation

Review Questions

1. Which action would the nurse perform in the policy formulation phase of the stage-sequential model of policy development?
    a. Carrying out a food inspection in a restaurant
    b. Collecting data on communicable diseases
    c. Developing goals and measurable objectives
    d. Providing health status assessments

2. Which type of policy is the public health nurse engaging in when trying to reduce the speed limit around a community playground?
    a. Social policy
    b. Nursing policy
    c. Health policy
    d. Public policy

3. Which assessment finding will the nurse anticipate in a family in the cycle of poverty?
    a. The family has created the conditions that keep them impoverished.
    b. Members of the family have a low level of education.
    c. Poverty is created by the family's laziness.
    d. The family has social connections and support systems.

4. Which action by a nurse represents engagement in political action at the workplace level?
    a. Developing billboards about the dangers of teenage vaping
    b. Being a member of a committee to promote community health screenings
    c. Joining the political action committee of a professional organization
    d. Running for a local political office

5. Which action would a nurse perform when involved in the development of health policy at the meso-level?
    a. Developing free statewide vaccination clinics
    b. Performing scoliosis screenings in a local elementary school
    c. Supporting a bill to reduce out-of-pocket costs for insulin
    d. Collaborating on a county disaster relief policy

6. Which community partners would the nurse collaborate with to determine the zoning issues involved in planning a community hiking trail?
    a. Primary community partners
    b. Secondary community partners
    c. Key community partners

d. Elected community partners

7. Which type of policy brief is the public health nurse utilizing when providing city management with a summary of the latest research on how green spaces improve the health of a community?
   a. Information brief
   b. Issue brief
   c. Policy brief
   d. Policy impact brief

8. Which stage of the stage-sequential model of policy development is the nurse engaged in when determining the effectiveness of a policy?
   a. Policy evaluation
   b. Policy implementation
   c. Policy formulation
   d. Policy adoption

9. The public health nurse is involved in developing a community health program to improve nutrition using the Centers for Disease Control and Prevention's Health in All Policies (HiAP) approach. Which action will the nurse take?
   a. Engage all sectors to produce change
   b. Produce change using the local health department
   c. Present a plan for change to community partners
   d. Develop short-term goals for program development

10. Which action by the nurse is an example of influencing social justice at the state level?
   a. Raising awareness of the need for childhood vaccinations within a community
   b. Providing health information to clients in their choice of language
   c. Educating state senators about social determinants of health
   d. Working with a national organization to advocate for health care for transgender individuals

CHAPTER 35

Leading the Way to Improving Population Health



FIGURE 35.1 Public health and community health nurses play a role in gathering data to help researchers seek patterns about what affects population health. This photo shows a nurse collecting information from a volunteer as part of the National Institutes of Health All of Us Research Program, which is building a diverse database to inform thousands of studies on various health conditions. (credit: modification of work "All of Us Participant" by NIH Image Gallery/Flickr, Public Domain)

CHAPTER OUTLINE

35.1 Learning from the Past to Guide the Future

35.2 Leading Initiatives to Transform Health Systems to Reduce Health Inequities

35.3 Carving a Path Forward

INTRODUCTION Josh, a public health nurse, works in a neighborhood with significant health disparities. The community experiences high rates of chronic diseases, limited access to health care services, environmental hazards, and socioeconomic challenges. Josh recognizes the need to address these disparities and assumes an informal leadership role to mobilize resources and engage the community in promoting health equity.

The nursing profession faces significant challenges in the next decade, including caring for an aging population with complex medical needs, increasing primary care capacity, and bridging the gap between medical care and social factors affecting well-being. Overcoming these obstacles and improving population health requires substantially increasing the number, diversity, distribution, and education of nursing professionals. This chapter comprehensively analyzes the nursing profession's challenges and suggests several opportunities to address them. Each section of the chapter examines how Josh, a public health nurse, demonstrates leadership in addressing his community's needs.

35.1 Learning from the Past to Guide the Future

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 35.1.1 Describe lessons learned from the past that continue to inform population health practices and decision-making.
- 35.1.2 Discuss progress in improving health.
- 35.1.3 Explain how epidemiological principles will remain essential for the community and public health nurse to safeguard and advance public health.
- 35.1.4 Recognize how the community and public health nurses can learn from past successes and failures to address emerging health challenges
- 35.1.5 Identify emerging and persisting population health challenges.

Reflecting on past public health crises is essential to improving preparedness and response strategies and understanding disease processes. These reflections offer invaluable insights that inform decision-making, policy development, and interventions in the face of emerging or recurring health threats. Previous achievements, such as eradicating smallpox and reducing infectious diseases through vaccination programs, demonstrate the success of evidence-based interventions, robust health care systems, and coordinated efforts across the industry. Community and public health nurses have played a significant role in these accomplishments, serving as leaders, researchers, educators, advocates, and collaborative health care partners.

Lessons Learned

Studying past disease outbreaks such as bubonic plague (“Black Death”), the 1918 flu (“Great Influenza”), and HIV can provide insight into managing infectious diseases. Learning from previous public health responses can inform future preparedness, response planning, and interventions. For example, during the COVID-19 pandemic, public health officials coordinated efforts, established infection control guidelines, implemented containment measures, and conducted disease surveillance based on lessons learned from the Great Influenza (Ott et al., 2007).

Lessons from previous hemorrhagic fever outbreaks, such as the Ebola virus, also offered critical insights for effectively managing and responding to the COVID-19 pandemic. Despite their distinct characteristics and diverse pathogens, several vital takeaways from Ebola outbreaks were relevant to the COVID-19 crisis. For example, the Ebola outbreaks demonstrated the need for swift detection and prompt response (Ott et al., 2007).

Past infectious disease outbreaks have also highlighted the significant impact of stigma and discrimination on affected individuals, communities, and public health responses by discouraging individuals from seeking care, reporting symptoms, or adhering to preventive measures. Stigmatizing attitudes and behaviors can lead to fear, secrecy, and concealing information, which hinder disease surveillance, contact tracing, and timely interventions. For example, during the Ebola epidemic in Liberia (2014–2016), many Liberians avoided seeking care or reporting a loved one’s death out of fear that their cultural beliefs and practices, such as washing and touching the deceased’s body, would be scrutinized and violated (Centers for Disease Control and Prevention [CDC], 2019). Health officials deemed such practices high risk as they put individuals in direct contact with the virus during a highly infectious period. This fear and practice impeded surveillance and hindered disease containment efforts. As a result, officials recognized the need to work with communities to adapt burial practices to minimize transmission risks while respecting the freshly deceased. This involved promoting safe burial protocols that minimized direct contact with the deceased (Sencer, 2023). Figure 35.2 depicts a burial team managing the body of an individual who may have died from Ebola infection (Sencer, 2023).



FIGURE 35.2 A burial team in Sierra Leone conducts a safe, respectful burial for an individual who is suspected of having died from Ebola. Improving burial practices during the Ebola outbreak in Africa involved a multifaceted approach that recognized the importance of addressing cultural and community preferences. (credit: "The last burial: Alfred Kelfala from the roving Freetown Ebola burial team carefully lowers the corpse of a small child into its grave" by Simon Davis/DFID/Flickr, CC BY 2.0 DEED)

Building trust and engaging communities is indispensable for successful outbreak responses. Involving communities in disease surveillance, contact tracing, and outbreak control measures has proven effective in prior outbreaks and has been applied in the COVID-19 response.

As Pandemics and Infectious Disease Outbreaks discussed, disease surveillance primarily begins in local, state, and territorial public health departments. The COVID-19 pandemic exposed flaws in establishing effective disease surveillance systems worldwide. Outdated and inaccurate health information, insufficient resources, inadequate public health capacity, and leadership capabilities all hindered global efforts to improve health during the pandemic. Moreover, the pandemic highlighted the limitations of data collection and monitoring beyond the early stages of an outbreak. Therefore, timely and structured public data sharing across countries is paramount. These lessons learned will shape the future of disease surveillance, leading to policies, interventions, and programs that improve population health outcomes and shape the future of public health (Filip et al., 2022).

THEORY IN ACTION

Five Hard-Earned Lessons from Pandemics of the Past

The History.com article linked below describes strategies populations have used throughout history to survive a pandemic.

Read the article (https://openstax.org/r/history), and then respond to the following questions.

1. Define the Miasma Theory of disease spread.
2. Describe five ways people adapted to life amid disease outbreaks historically.
3. Do you think that the strategies used in the past are still relevant and effective for today and the future? Why or why not?

Gaining Insight

As noted in What Is Population Health?, population health involves the health outcomes of a group of people in a population, including how those outcomes are distributed. It considers different factors that influence health, such as social determinants, economic conditions, access to health care, and individual behaviors. Population health

takes a comprehensive approach, considering societal and environmental factors contributing to health disparities and inequalities beyond the traditional health care system.

As discussed in Foundations of Public/Community Health, public health is vital to improving population health. Public health initiatives and interventions, such as immunization campaigns, health education programs, screening and early detection efforts, and policies to reduce environmental hazards, are population health strategies. By addressing the underlying determinants of health and implementing evidence-based interventions, public health aims to improve the health outcomes of entire populations.

At the community level, community health nurses play a crucial role in implementing public health initiatives. As noted in Public/Community Health in Practice, community health nursing refers to the health status and well-being of a specific community or a group of individuals who share common characteristics, such as geographic location, cultural background, or a particular interest. It emphasizes the health of a localized group within a larger population. Community health considers the unique characteristics, needs, and challenges of the specific community being studied. It involves assessing the community's health needs, implementing interventions to address them, and evaluating their impact. It often involves collaborations with community members, local organizations, and health care providers to improve health outcomes.

Each function—population health, public health, and community health—aims to enhance the health and well-being of populations through a multifaceted, holistic approach that addresses the interplay of factors impacting health outcomes. Nurses can gain insight from past experiences, both successful and unsuccessful, to employ evidence-based practices and customize strategies to tackle new health challenges at various levels. The past has yielded valuable lessons guiding public and community health practices, particularly in epidemiology and health policy.

Public health nurses like Josh employ a multifaceted, reflective approach. Josh works in a low-income neighborhood where residents face various health challenges, such as high rates of chronic diseases, inadequate housing, limited access to health care facilities, and food insecurity. Josh recognizes that these issues are deeply rooted in systematic inequities and that meaningful change necessitates a comprehensive approach involving population health, public health, and community health. He is aware that each function aims to improve health and well-being by addressing the complex interplay of factors that affect health outcomes. Learning from past experiences, Josh can use evidence-based practices to customize strategies to tackle these challenges at different levels through collaborations with community members, local organizations, and health care providers.

Epidemiology

As discussed in Epidemiology for Informing Population/Community Health Decisions, epidemiologists study disease patterns, causes, and risk factors in populations. Past epidemiological studies have produced valuable information regarding disease patterns, health determinants, and risk factors that continue to influence health care decisions. By analyzing biological data, nurses can recognize patterns, comprehend the effects of interventions, and predict potential health outcomes. Epidemiological studies that have made significant contributions include:

- Framingham Heart Study: Initiated in 1948, this longitudinal study has been instrumental in identifying and understanding cardiovascular disease risk factors for three generations. It has helped establish the link between smoking, high blood pressure, high cholesterol levels, and the development of heart disease. The findings from this study led to the development of preventive measures such as smoking cessation programs, blood pressure control strategies, and cholesterol-lowering interventions (Framingham Heart Study, n.d.).
- Nurses' Health Study (NHS3): Initiated in 1976, this long-term cohort study provides valuable insights into various health conditions. It has helped identify risk factors for chronic diseases, including breast cancer, colon cancer, and cardiovascular disease. In addition, the study has contributed to understanding the impact of lifestyle factors, such as diet, physical activity, and hormone use, on disease development and prevention (Nurses' Health Study, n.d.). Now in its third generation, the Nurses' Health Study continues to investigate various aspects of women's health and to identify risk factors for chronic diseases.
- Global Burden of Disease Study (GBD): The GBD study, initiated in the 1990s, is a comprehensive effort to quantify the global impact of diseases, injuries, and risk factors. It provides data on the prevalence, mortality, and disability associated with various health conditions, helping policymakers and health professionals prioritize interventions and allocate resources effectively. The GBD study has informed strategies for disease prevention, control, and health care planning worldwide (Institute for Health Metrics and Evaluation, 2020).

- Human Papillomavirus (HPV) Vaccine Trials: Epidemiological studies evaluating the safety and efficacy of HPV vaccines have been pivotal in shaping current vaccination practices. These studies demonstrated the effectiveness of HPV vaccines in preventing cervical cancer and other HPV-related diseases. In addition, the findings from these trials led to the implementation of widespread HPV vaccination programs to reduce the burden of cervical cancer and associated conditions (CDC, 2021).
- Prospective Urban Rural Epidemiological (PURE) Study: The PURE study is a large-scale global cohort study that examines the impact of lifestyle, environmental, and societal factors on cardiovascular disease and other chronic diseases. It has advanced understanding of the complex interactions between various risk factors and health outcomes, providing evidence for targeted interventions at the individual and population levels. The PURE study has involved 225,000 participants in 27 countries (Population Health Research Institute, 2023).

THEORY IN ACTION

Prospective Urban and Rural Epidemiological Study

Access multimedia content (http://openstax.org/books/population-health/pages/35-1-learning-from-the-past-to-guide-the-future)
This short video provides an overview of the PURE study.

Watch the video, and then respond to the following questions.

1. Identify three focus areas of the PURE study.
2. What is a modifiable risk factor for health that the PURE study has identified?
3. What is the expected pattern of cancer worldwide over the next decade?

In public and community health, nurses will continue to rely on epidemiological principles to study patterns within groups or communities, analyze the occurrence of diseases and injuries, and develop strategies to prevent illnesses and improve overall health. Table 35.1 illustrates how community and public health nurses will continue to utilize epidemiological principles in their practice.

Epidemiological Principle	Application
Surveillance and data analysis	• Collect and analyze data to monitor the occurrence and distribution of diseases. • Public health nurses collaborate with epidemiologists to contribute to disease surveillance efforts. In addition, they play a vital role in data collection, reporting, and analysis at the community level. • Public health nurses often work on disease incidence, prevalence, and other relevant health indicators in local health departments, clinics, or communities. This collaboration helps identify public health trends, track outbreaks, and inform targeted interventions.
Disease investigation and outbreak response	• When outbreaks or disease clusters occur, epidemiologists investigate the causes, risk factors, and modes of transmission. • Community and public health nurses work closely with epidemiologists in outbreak investigations, assisting with contact tracing, case management, and implementing control measures. In addition, they provide direct care to affected individuals, educate the community on prevention strategies, and collaborate with other health care providers to contain and manage the outbreak.

TABLE 35.1 Examples of How Community and Public Health Nurses Utilize Epidemiological Principles

Epidemiological Principle	Application
Program planning and evaluation	• Epidemiological studies provide evidence for designing effective public health interventions and programs. • Community and public health nurses contribute their program planning, implementation, and evaluation expertise. They use epidemiological data to identify priority health issues, set program goals and objectives, and develop strategies for intervention. • Community and public health nurses also assess the effectiveness and impact of programs, ensuring that they are evidence-based and meet the community's needs.
Health promotion and disease prevention	• Epidemiological findings guide public health nursing interventions in health promotion and disease prevention. Epidemiology helps identify risk factors and determinants of disease, allowing public health nurses to develop targeted interventions to address those factors. • Community and public health nurses educate individuals and communities on healthy behaviors, administer vaccinations, conduct screenings, and promote lifestyle modifications based on epidemiological evidence.
Research and evidence-based practice	• Epidemiology generates evidence that informs public health nursing practice and research. • Community and public health nurses contribute to epidemiological research by collecting data, participating in studies, and implementing evidence-based interventions. In addition, they translate epidemiological findings into practice, adapting interventions to meet the needs of diverse populations and settings.
Advocacy and policy development	• Epidemiological data are essential in advocating for public health policies and influencing health-related legislation. • Community and public health nurses use epidemiological evidence to advocate for interventions, resource allocation, and policies that promote population health. They collaborate with policymakers and community organizations to shape public health policies and strategies based on epidemiological findings.

TABLE 35.1 Examples of How Community and Public Health Nurses Utilize Epidemiological Principles

Policy and Legislative Changes

Historical public health policy and legislation changes have improved population health. For example, implementing smoking bans, seat belt laws, and food safety regulations has positively impacted health outcomes. Policy and legislative changes have improved access to health care services and health care coverage. Implementing the Affordable Care Act (ACA) expanded insurance coverage and prohibited insurers from denying coverage based on preexisting conditions. Such policies aim to ensure more individuals have affordable access to essential health care services, reducing barriers to care and improving population health.

Historical advocacy efforts have driven significant progress in improving population health. Examples include campaigns for safe working conditions and access to clean water. By learning from past advocacy successes, community and public health nurses can build on previous achievements, mobilize communities, and drive policy changes to address current and future health challenges. Understanding the impact of policy changes in the past can inform the development and implementation of effective policies in the future, addressing emerging health challenges and promoting health equity.

Looking at historical experiences allows nurses to recognize the influence of social, economic, and ecological factors on population health. Historical data can reveal disparities in health outcomes, the impact of social movements on

public health, and the effectiveness of interventions targeting social determinants of health.

Reflecting on past public health practices raises critical ethical concerns. Historical examples of unethical medical research, such as the Tuskegee syphilis study, have influenced the development of ethical guidelines and regulations in public health research and practice. Learning from the past helps ensure that future public health initiatives prioritize ethics, protect human rights, and prioritize the well-being of individuals and communities.

By drawing on the past, public community and public health nurses can learn from successes and failures, apply evidence-based approaches, and adapt strategies to address emerging health challenges. Historical experiences inform the development of effective interventions, policies, and programs, ultimately shaping the future of public health and improving population health outcomes.

Collecting and analyzing historical data is invaluable to public health nurses like Josh. Josh works in a neighborhood characterized by socioeconomic disadvantage, limited access to health care services, and various health disparities. The community faces multiple health challenges, including high rates of chronic diseases, substance use, mental health issues, and limited health literacy.

Josh recognizes the importance of evidence-based practice and the valuable insights that historical data can provide to guide his population's health initiatives. He collects historical data from various sources, including electronic health records, public health databases, and community surveys. He identifies vital health indicators such as prevalence rates of chronic diseases, immunization coverage, and social determinants of health. Josh carefully analyzes the data, looking for patterns, trends, and disparities across different populations. By disaggregating the data by demographic factors like age, gender, ethnicity, and socioeconomic status, he better understands health needs and disparities within the population. During Josh's engagement with community members, he identifies a level of mistrust of the public health system. Josh takes additional time to reflect on events from the past that may be influencing community members' attitudes and levels of fear and avoidance of the public health system.

Sustaining and Expanding Progress

As discussed in Foundations of Public/Community Health, the United States has significantly improved health outcomes and promoted population health. Although progress has been made over the last decade in improving public health and health care outcomes, there are ongoing challenges to address, and future directions must focus on sustaining and expanding these gains.

- Increased Life Expectancy: Historically, life expectancy in the United States has risen steadily over the decades. Advances in medical treatments, public health interventions, and improvements in health care access have contributed to longer lifespans (Buxbaum et al., 2020). However, since 2015, the United States has seen a decline in life expectancy, primarily driven by the opioid epidemic and the COVID-19 pandemic. Additionally, life expectancy disparities persist across different demographic groups and geographic regions. For example, between 2020 and 2021, life expectancy among Native American and Alaska Native communities was shortened by 2 years, the largest drop of any demographic group (Klobucista, 2022).
- Decline in Mortality Rates: Mortality rates for significant causes of death, such as heart disease, stroke (Mensah et al., 2017), and certain cancers, have declined in the United States (National Institutes of Health [NIH], 2022a). The decrease in the incidence of certain diseases can be attributed to the progress in medical treatments, enhanced prevention strategies, and improved management of chronic illnesses. However, it is crucial to acknowledge that there are still racial and ethnic inequalities. For instance, from 2014 to 2018, the occurrence rates of bladder cancer decreased among non-Hispanic White, non-Hispanic Black, non-Hispanic Asian/Pacific Islander, and Hispanic men. However, rates increased among non-Hispanic American Indian and Alaska Native (AI/AN) men (NIH, 2022a). Additionally, increasing maternal morbidity and mortality rates disproportionately affect Black/African American and AI/AN women (National Academies of Sciences, Engineering, and Medicine [NASEM], 2021).
- Reduction in Smoking Rates: The prevalence of smoking in the United States has significantly decreased in recent decades. This decline can be attributed to comprehensive tobacco control policies, public health campaigns, and increased awareness about the harmful effects of smoking. In addition, reducing smoking has resulted in improved cardiovascular health and decreased smoking-related diseases (NIH, 2022b). Preventing smoking initiation among youth and young adults remains a challenge. Despite progress, some young individuals are still drawn to tobacco products due to factors like peer pressure, social influences, and

aggressive marketing tactics by the tobacco industry. Smoking can be influenced by broader societal factors such as stress, mental health challenges, and socioeconomic disparities. Smoking rates continue to be higher among certain populations, including those with lower education levels and lower income. Addressing these disparities requires targeted interventions and tailored approaches. Addressing these underlying issues is critical for effective smoking cessation efforts (Chaiton et al., 2016).

- Vaccinations: Vaccinations have led to a decline in vaccine-preventable diseases. Immunization efforts, including childhood vaccination programs and targeted campaigns for specific populations, have contributed to controlling and eliminating diseases such as smallpox (Figure 35.3). However, globally, coverage has plateaued over the last decade, with an estimated 25 million children under the age of 1 year not receiving essential vaccines in 2021, which is six million more children than before the beginning of the COVID-19 pandemic in 2019. Additionally, there were 18 million children who did not receive any vaccines, called "zero-dose," which is the highest this number has been since 2005 (CDC, 2023).



FIGURE 35.3 Globally, childhood vaccination rates have plateaued over the last decade, with an estimated 25 million children under the age of 1 year not receiving essential vaccines, the highest number since before the start of the COVID-19 pandemic in 2019. (credit: "A Sailor gives a child a vaccine at the Angaur Community Center, Sept. 27, 2019" by Haley McMenamin/U.S. Marine Corps/Flickr, CC BY 2.0 DEED)

- Advances in Medical Technology: Advancements in medical technology have improved the diagnosis, treatment, and management of various health conditions in the United States. Innovations such as minimally invasive surgeries, precision medicine, telemedicine, and electronic health records have enhanced client care and health outcomes (Thomas, 2022). However, underserved communities face numerous challenges in accessing advanced medical technologies, including financial constraints, inadequate health care infrastructure, and the digital divide. The **digital divide** refers to the gap between individuals, communities, or groups who have access to and use digital technologies, such as computers, smartphones, and the internet, and those who do not. To ensure that everyone has equal access to quality health care, these challenges must be addressed. Additionally, culturally sensitive care and effective communication are essential to promote equitable health care for all (Saeed & Masters, 2021).
- Expanded Health Insurance Coverage: The ACA is a comprehensive U.S. health care reform law enacted in March 2010. It represents one of the most significant changes to the country's health care system in recent history. Its primary goals were to increase access to health care coverage, improve the quality of care, and control health care costs. Although the ACA expanded health insurance coverage to millions of previously uninsured individuals and improved access to care, several gaps and challenges persist. For example, the ACA provides subsidies to help individuals and families afford health insurance, but some people, especially those with moderate incomes who do not qualify for subsidies, still face challenges affording premiums,

deductibles, and other out-of-pocket costs.

- Increased Access to Health Care Services: Increased access has resulted in improved preventive care, early diagnosis, and management of chronic conditions (Antonisse et al., 2022). However, access to mental health and substance misuse continues to be an issue. For example, although the ACA required insurance plans to cover mental health and substance use disorder services, barriers to accessing timely and comprehensive care and disparities in coverage still exist. Additionally, some rural areas still face challenges in accessing health care services due to limited provider availability, lack of specialists, and health care facility closures. The ACA explicitly excluded undocumented immigrants from accessing its benefits, including health insurance marketplaces and Medicaid. This has resulted in a lack of coverage options for this population, which can lead to barriers in accessing timely and preventive care.
- Health Equity Initiatives: There has been a growing recognition of health disparities and efforts to address them. Initiatives focused on health equity aim to reduce differences in health outcomes across different racial, ethnic, and socioeconomic groups. This includes targeted interventions, community-based programs, and policy changes to address the social determinants of health (CDC, 2020). Despite efforts to improve access to care, barriers such as lack of insurance, geographic location, language barriers, and cultural factors continue to limit health care access for marginalized communities. Health equity initiatives often focus on health care delivery, but addressing the social determinants of health, such as income, education, housing, and employment, is crucial for achieving lasting improvements in health outcomes.

Challenges to Improving Health Outcomes

While progress has been made in improving U.S. health outcomes, several ongoing challenges and disparities contribute to differences in health outcomes among different populations. Efforts to improve health further will require investing in public health infrastructure (organizational structures and functions that support health equity), addressing social determinants of health, expanding access to health care, and promoting health equity for all populations (CDC, 2020). Looking ahead to the future, the United States is poised to confront significant health care challenges in the coming decade. These issues include access to care, health care disparities, an aging population, chronic illnesses, mental health, substance misuse, and a shortage of health care professionals. A comprehensive and collaborative approach that involves public health agencies, health care providers, policymakers, community organizations, and individuals is needed to address these challenges. Such collaboration will improve population health and promote equity in health care.

Access to Care

Despite expanding health insurance coverage through the ACA, some individuals and communities still need affordable health insurance. Lack of insurance can result in delayed or inadequate health care, leading to poorer health outcomes. Even with insurance coverage, individuals may face limitations in the services covered. Some plans may restrict specific treatments, medications, or procedures, creating barriers to accessing necessary care.

Health insurance plans often have networks of contracted health care providers. These networks may vary by state, and coverage may be limited to providers within a specific geographic area. When individuals travel or need care outside their insurance network's coverage area, they may face out-of-network costs or have limited access options. Individuals may also have limited access to certain specialists or health care facilities. Limited coverage networks can also restrict access to preferred health care providers or specialists, particularly in rural or underserved areas.

Rural communities often face challenges accessing health care due to distance, provider shortages, and limited infrastructure. This can lead to delayed or inadequate care, resulting in poorer health outcomes for rural populations. Attracting and retaining health care professionals in rural areas can be challenging, leading to a lack of health care providers. Limited transportation options can hinder individuals from reaching health care facilities, particularly in emergencies. Rural populations may have lower income levels and limited health insurance coverage, impacting their ability to afford health care services. Many rural communities have aging populations with unique health care needs, including chronic disease management and geriatric care (Teo et al., 2009). Improving rural health care requires strategic investments and innovations in nurse-led clinics, nurse-managed health centers, and mobile health care units to reach underserved areas. Public and community health nurses play a transformative role in enhancing the health and well-being of residents.

Administrative complexities, such as paperwork requirements, annual renewals, or frequent changes in coverage

options, can act as barriers to obtaining and maintaining health insurance coverage. Individuals may find it challenging to navigate bureaucratic processes, leading to gaps in coverage or delays in accessing care. For some clients, limited health literacy and inadequate health education contribute to challenges in understanding and navigating the health care system, making informed health decisions, and adopting healthy behaviors. Addressing health literacy gaps and promoting health education is essential for improving health outcomes.

Health Disparities and Social Determinants

Disparities in health outcomes exist across various demographic groups, including racial and ethnic minorities, low-income populations, rural communities, and marginalized groups such as members of the LGBTQIA+ community. The social determinants of health, such as socioeconomic status, education, access to health care, and structural racism, influence these disparities. Eliminating social inequities promotes social justice and creates a healthier environment for all. For example, maternal and infant health disparities persist, with higher rates of preterm birth, low birth weight, and infant mortality among certain racial and ethnic groups. Improving access to care, addressing social determinants of health, and promoting health equity are crucial in addressing these disparities.

Policy and legislative changes can address social determinants of health and promote health equity. This includes policies that reduce health disparities and improve health outcomes among marginalized populations. For instance, policies may target poverty reduction, education reform, affordable housing, and employment opportunities to address the root causes of health inequities. Legislation can also support programs and services targeting underserved communities and providing resources to address their unique health care needs. For example, the American Hospital Association (2016) considers these health care services essential to address heath disparities:

- Primary care
- Psychiatric and substance use treatment services
- Emergency department and observation care
- Prenatal care
- Transportation
- Diagnostic services
- Home care
- Dentistry services
- A robust referral structure to provide all individuals in the community with access to the full spectrum of health care services

Policy and legislative changes are critical in driving population health improvements. They provide a framework for allocating resources, guiding health care delivery, and addressing systemic factors influencing health outcomes. By implementing effective policies and enacting supportive legislation, governments can create an environment that fosters better health for populations, promotes health equity, and addresses the social, economic, and environmental determinants of health.

Chronic Diseases

Chronic illnesses, such as heart disease, diabetes, and certain types of cancer, significantly impact overall health, mortality rates, and health care expenses. The aging population will undoubtedly lead to a surge in the need for health care to manage chronic diseases. The management and extensive care required for age-related health issues, including cardiovascular diseases, dementia, and diabetes, will pose a considerable challenge.

A crucial step in tackling the burden of chronic diseases is shifting attention toward prevention rather than treatment. This involves targeting risk factors, promoting healthy behaviors, and implementing early detection strategies to reduce the occurrence and impact of chronic conditions. The challenge lies in prioritizing this shift toward prevention and health promotion. Investing in preventive measures, such as promoting healthy lifestyles, early detection, and screening programs, can significantly reduce the burden of chronic diseases and enhance overall population health outcomes.

Regular screenings and early detection programs play a role in preventing and managing chronic diseases. These screenings help identify potential risk factors and detect diseases in their initial stages when they are more treatable. Examples of effective screening programs include mammograms for breast cancer, colonoscopies for colorectal cancer, and blood pressure checks for hypertension. The goal is to prevent the development of chronic diseases by creating supportive environments and enabling healthy choices. Adopting a preventive approach can

impact entire populations, reducing health disparities and improving the overall health of communities.

Preventing chronic diseases requires a comprehensive approach that targets high-risk individuals, promotes health among the general population, and creates supportive environments for healthy choices. This approach necessitates improving health care systems, public health initiatives, education, policy changes, and technological advancements at each of the three prevention levels: primary, secondary, and tertiary (Table 35.2).

Enhancing Primary Prevention
• Health Education and Promotion: Invest in widespread health education campaigns using innovative digital platforms, social media, and interactive apps to reach diverse populations and promote healthy lifestyles. • Early Childhood Interventions: Focus on early childhood nutrition, education, and development to establish a strong foundation for lifelong health. Implement policies that ensure access to quality early childhood education and health care. • Environmental Policies: Advocate for policies that improve air quality, promote physical activity, and encourage healthy eating by creating walkable communities, green spaces, and healthier food environments.
Strengthening Secondary Prevention
• Innovative Screening Technologies: Invest in advanced screening technologies that enable earlier detection of diseases with higher accuracy, reducing false positives and unnecessary interventions. • Telehealth and Remote Monitoring: Utilize telehealth for remote monitoring of high-risk individuals, ensuring timely interventions and reducing the burden on health care facilities. • Personalized Risk Assessment: Develop algorithms that use individual health data to identify personalized risk factors, enabling targeted early interventions.
Advancing Tertiary Prevention
• Home-Based Care: Expand home health care services and incorporate telemedicine to monitor and support clients with chronic conditions, reducing hospital readmissions. • Palliative and Hospice Care: Increase access to high-quality palliative and hospice care services for individuals with advanced and terminal illnesses, focusing on improving their quality of life. • Rehabilitation and Support Services: Invest in advanced rehabilitation technologies and therapies to help clients regain functionality and independence after surgeries or injuries.

TABLE 35.2 Preventing Chronic Diseases: Three Prevention Levels

Mental Health and Substance Use Disorders

As noted in Caring for Populations and Communities in Crisis, the increasing number of individuals experiencing mental health and substance use disorders poses a challenge to the health care system. Mental illnesses, such as depression, anxiety disorders, bipolar disorder, and schizophrenia, are characterized as chronic diseases because they are typically long-term and persistent, impact an individual's daily functioning and quality of life, and require continual management (Park et al., 2008). Ongoing public health concerns include access to mental health care, the stigma associated with mental illness, and integrating mental health services within the broader health care system.

Improving mental health care requires a thorough approach that involves policy changes, increased funding, public education, and better access to care. Several strategies can be implemented, such as expanding insurance coverage for mental health services, providing supportive housing, increasing funding for mental health programs and workforce development, providing telehealth services to improve access, reducing stigma through education and awareness campaigns, and promoting integration between mental health and primary care services (Mental Health America, 2023).

The U.S. opioid epidemic is another persistent challenge. Prescription opioid misuse and overdose fatalities are widespread, and substance misuse issues, including alcohol and illegal drug use, pose significant risks to individuals and communities (Mental Health America, 2023). Community/public health nurses are on the front lines of responding to opioid overdoses.

Naloxone is used to rapidly reverse the effects of opioid overdose and is the standard treatment for overdose cases.

To increase access to naloxone products, the U.S. Food and Drug Administration (FDA) has taken several measures, including approving a 4 milligram (mg) naloxone hydrochloride nasal spray for over-the-counter (OTC) and nonprescription use. This is the first naloxone product approved for use without a prescription (FDA, 2023). Nurses working within community settings must be trained to administer naloxone (Narcan) and be prepared to provide immediate care to individuals who have overdosed. Ensuring timely access to naloxone and educating the community on its use is a necessity to prevent overdose deaths.

Community and public health nurses can conduct outreach programs and educational sessions to increase awareness about the availability of naloxone over the counter and the importance of calling 911 after administering the medication. Timely access to naloxone and educating the community on its use is crucial in preventing death from opioid overdoses. For example, using naloxone nasal spray on individuals dependent on opioids may result in severe withdrawal symptoms. These symptoms include body aches, diarrhea, increased heart rate, fever, runny nose, sneezing, goosebumps, sweating, yawning, nausea or vomiting, nervousness, restlessness or irritability, shivering or trembling, abdominal cramps, weakness, and increased blood pressure. Nurses must be prepared to handle and support these symptoms in a community setting. See Table 35.3.

Challenges	Nursing Implications
Shift to Synthetic Opioids: As the opioid landscape changes, synthetic opioids like fentanyl are becoming more prevalent. These substances are highly potent and pose a higher risk of overdose (Drug Enforcement Administration, 2021).	Nurses must be aware of the latest opioid-use trends, including the rise of synthetic opioids. They should be trained to recognize the signs of opioid overdose and be prepared to administer naloxone (Narcan), an opioid reversal medication, as needed.
Access to Treatment and Recovery Services: Many individuals struggling with opioid use disorder face barriers in accessing treatment and recovery services due to limited availability, stigma, and financial constraints (AACN, 2021a).	Nurses can advocate for increased funding and resources for addiction treatment and recovery programs. They can also play a role in connecting individuals to available services, providing education about treatment options, and offering support throughout the recovery process.
Co-occurring Mental Health Disorders: Opioid use disorder often co-occurs with mental health disorders such as depression and anxiety, making treatment more complex (Substance Abuse and Mental Health Services Administration, 2023).	Nurses should be skilled in assessing both substance use disorders and mental health conditions. Integrated care that addresses both aspects of a client's health is crucial for effective treatment.
Neonatal Abstinence Syndrome (NAS): Pregnant individuals who use opioids can give birth to babies with NAS, which requires specialized care (AACN, 2021a).	Nurses caring for pregnant individuals with opioid use disorder must collaborate closely with obstetricians, neonatologists, and addiction specialists to provide comprehensive care that supports the parent's well-being and the newborn's health.
Stigma and Discrimination: Stigma surrounding opioid use disorder can hinder individuals from seeking help and can affect their overall well-being.	Nurses should provide nonjudgmental, compassionate care to individuals with opioid use disorder, focusing on reducing stigma and creating a safe environment where clients feel comfortable discussing their needs.
Harm Reduction Strategies: Harm reduction approaches, such as supervised injection sites and needle exchange programs, are debated but may be essential in preventing overdose deaths and the spread of infections (Thakarar et al., 2020).	Nurses can be advocates for harm reduction strategies, engaging in public health discussions, educating communities about their benefits, and supporting initiatives that provide safe spaces for substance use.

TABLE 35.3 Challenges and Nursing Implications of the Opioid Epidemic (See Mental Health America, 2023.)

Challenges	Nursing Implications
Interdisciplinary Collaboration: Addressing the opioid epidemic requires collaboration across health care disciplines, law enforcement, public health agencies, and community organizations (The Overdose Response Strategy, 2018).	Nurses are well-positioned to serve as advocates and leaders in interdisciplinary teams. They can foster communication and cooperation among various partners to develop comprehensive prevention, treatment, and recovery strategies.
Education and Prevention: Educating the public, health care professionals, and policymakers about the risks of opioid misuse, proper pain management, and available resources is essential to curb the epidemic (AACN, 2021a).	Nurses can engage in public awareness campaigns, educate clients and families about safe medication use, and participate in policy discussions to promote evidence-based opioid prescribing practices.

TABLE 35.3 Challenges and Nursing Implications of the Opioid Epidemic (See Mental Health America, 2023.)

Addressing these challenges and disparities requires a multi-faceted approach that includes improving access to health care, addressing social determinants of health, promoting health equity, expanding preventive services, and investing in public health infrastructure. Collaboration among health care providers, policymakers, community organizations, and individuals is needed to create meaningful, sustainable change (Mental Health America, 2023).

Health Care Workforce Shortages

The scarcity of health care professionals, including doctors, nurses, and allied health workers, will escalate in the coming years. A **workforce shortage** arises when the availability of skilled workers in a specific location at the required time is inadequate to meet the target audience's demands (Lopes et al., 2015). These shortages could easily overload the health care system's ability and significantly restrict health care access, particularly in underprivileged regions. It is, therefore, imperative to boost the health care workforce, enhance recruitment and retention efforts, and explore innovative care delivery models to address this pressing issue.

According to the Association of American Medical Colleges (AAMC) (2021), the United States will face a shortage of up to 124,000 physicians by 2034. A workforce analysis of registered nurses (RNs) projects a shortage throughout the United States through 2030. The analysis shows that almost 30 states will face a significant deficit of RNs (American Association of Colleges of Nursing [AACN], 2022). California, Florida, and Texas will have the highest shortage in terms of RN job numbers. In contrast, New Mexico, Arizona, and Nevada will have the most substantial shortages based on the ratio of RNs per 100,000 individuals. Massachusetts and South Dakota are the only states projected to show an RN surplus in 2030 (Juraschek et al., 2019; World Health Organization [WHO], 2023).

Shortages in the health care workforce can result from factors such as demographics, education, training, work environment, and economics. The aging population significantly contributes to the increased demand for health care services, as older individuals need more medical care and chronic disease management. The limited number of qualified educators can create a bottleneck in education, leading to fewer health care professionals (AACN, 2021b). Shortages are usually more prominent in specific specialties or geographic locations, resulting in disparities in access to care (AAMC, 2021). High-stress environments and heavy workloads can cause burnout and attrition among health care professionals. Public health emergencies can also strain health care systems, leading to workforce shortages as health care professionals face increased demands (NASEM, 2019).

The nursing shortage can lead to errors and higher morbidity and mortality rates. In medical facilities with a high client-to-nurse ratio, nurses often experience burnout and dissatisfaction, and clients face increased mortality and failure-to-rescue rates compared to facilities with lower ratios. Although a few states have implemented laws to limit client-to-nurse ratios, when staffing is insufficient, ratios tend to rise to meet demand (Haddad et al., 2023).

The COVID-19 pandemic revealed a lack of adequate public health infrastructure and workforce in several regions (Pittman & Park, 2021). The decline in RNs employed in clinic- and non-clinic-based community/public health jobs undoubtedly impacted the lack of a public health workforce. Clinic-based jobs fell from 3.5 percent (76,127) in 2000 to 1.6 percent (53,084) in 2018. At the same time, non-clinic-based community/public health jobs dropped from 3.2 percent (69,837) in 2000 to just 1.4 percent (47,226) in 2018 (Pittman & Park, 2021). Figure 35.4 illustrates the drop in employment among RNs working in community and public health sectors.

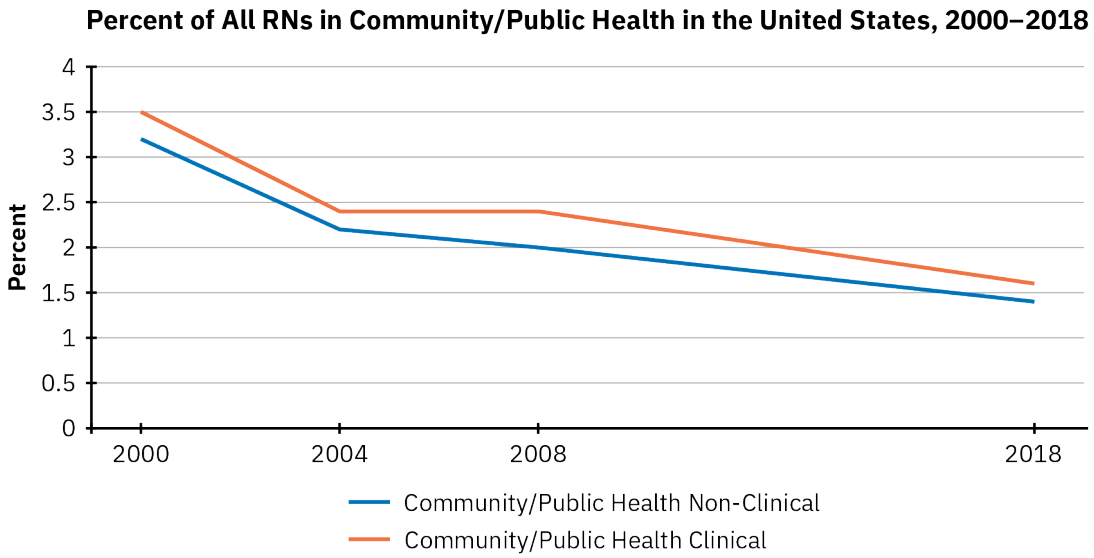


FIGURE 35.4 This graph demonstrates the drops in employment among RNs working in community public health sectors. (data source: National Center for Health Workforce Analysis, 2018; attribution: Copyright Rice University, OpenStax, under CC BY NC-SA 4.0 license)

Diversity in the nursing workforce is crucial for effective health care delivery. Recruiting and retaining nurses from diverse backgrounds, including different races, ethnicities, cultures, genders, sexual orientations, and socioeconomic statuses, can help establish client trust and enhance cultural competency, ultimately reducing health care disparities. Per the U.S. Census Bureau, nursing supply and demand aligns with demographic changes in the population. Notably, there has been a significant increase in the supply of Hispanic nurses, meeting the demand for nursing care for Hispanic clients among both registered nurses (RNs) and licensed practical nurses (LPNs) (Health Resources and Services Administration, 2017).

THE ROOTS OF HEALTH INEQUITIES

The Need for a More Diverse Nursing Workforce

The lack of diversity in the nursing workforce can lead to disparities in health care access, quality, and outcomes for marginalized and underserved populations, contributing to health inequities. This is especially true for underrepresented minority groups facing poorer health and higher mortality rates.

- A diverse nursing workforce is crucial for providing culturally competent care that considers diverse client populations' unique needs, beliefs, and practices.
- Clients from marginalized communities often have higher trust in health care providers who share their cultural backgrounds and experiences.
- A diverse nursing workforce can help bridge language gaps between clients and health care providers, improving communication and understanding.
- Diverse nursing teams provide a broader perspective on client needs and experiences, leading to more client-centered care.
- Nursing professionals from diverse backgrounds can advocate for policies that address health disparities and promote health equity.

(See AACN, 2023.)

35.2 Leading Initiatives to Transform Health Systems to Reduce Health Inequities

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 35.2.1 Describe leadership behaviors that foster the attainment of health equity.
- 35.2.2 Describe technology's role in transforming care in public and community health practice.
- 35.2.3 Identify initiatives for reshaping community and public health practice.
- 35.2.4 Describe what population health will look like in the future.

By demonstrating certain leadership behaviors, nurses can create equitable health care environments, reduce health disparities, and improve health outcomes for all individuals and communities. In addition, they play a vital role in advocating for health equity and inspiring others to pursue equitable health care for all. This section considers nurses' roles as leaders, explores technology's role in transforming public and community health, examines three initiatives that are reshaping public and community health care, and imagines what population health will look like in the future.

Leadership Behaviors That Foster Health Equity

This text has emphasized social justice and health equity. Nurse leaders have an opportunity and an obligation to lend their skills as scientists, innovators, advocates, and educators to lead efforts to advance health equity for all (Azar, 2021). A nurse leader does not have to be in a position of authority; instead, they can carry an informal role of influence. For example, nurses can act as role models by embodying equity, inclusivity, and cultural competence principles. They can demonstrate respectful and compassionate care for all individuals regardless of their backgrounds or social determinants of health. By modeling inclusive behavior, nurses inspire others to follow suit. Nurses can lead initiatives to ensure the nursing staff receives ongoing training and education in cultural humility and sensitivity and advocate for language services and interpreter services to ensure effective communication and understanding. Table 35.4 demonstrates how nurses, as informal leaders, can use their influence and expertise to improve the population's health. Refer to additional strategies presented in Advocating for Population Health and Engagement in the Policy Development Process for specifics.

Practice Focus	Application
Practice advocacy	• Advocate for evidence-based practice that promotes health equity and social justice. • Ensure care is sensitive, respectful, and inclusive. • Advocate for changes within health care systems to eliminate bias and discrimination, promote equitable access to care, and address social determinants of health.
Client advocacy	• Advocate for individual clients, ensuring they receive equitable, respectful, and culturally appropriate care. • Empower clients to participate in their care decisions, educate them on health disparities, and address barriers to accessing health care services. • Advocate for clients. • Contribute to improved health outcomes and equity in care delivery.

TABLE 35.4 Examples of How Nurses Can Impact the Population's Health

Practice Focus	Application
Policy engagement	• Actively engage in local, regional, and national policy discussions. • Join nursing organizations, participate in policy committees, and collaborate with policymakers to influence health care policies that promote social justice and health equity. • Provide expertise and advocate for policies that address health disparities, support vulnerable populations, and prioritize health equity. • Write letters and communicate with local, state, and national representatives.
Research and evidence generation	• Contribute to research that explores social justice issues and health equity. • Inform policy development and drive change by generating evidence on the impact of policies, interventions, and practices on population outcomes. • Participate in interdisciplinary research teams to ensure a holistic approach to addressing health disparities. Nurse leaders utilize data to identify health disparities and inform decision-making processes. • Collect, analyze, and disseminate data on health outcomes, social determinants of health, and health care disparities. • Use this information to identify priority areas, track progress, and develop evidence-based health interventions.
Education and mentorship	• Serve as educators and mentors to future generations of health care professionals. • Incorporate social justice and health equity topics into nursing curricula, ensuring students understand the underlying determinants of health disparities and their importance. • Engage in ongoing professional development to enhance their knowledge and skills related to health equity. • Stay up-to-date on current research, evidence-based practices, and emerging trends in health care disparities. • Seek learning and professional growth opportunities to advance their leadership in promoting health equity.
Collaborative partnerships	• Foster collaborations with other health care professionals, community organizations, advocacy groups, and policymakers to address social justice and health equity. • Leverage collective expertise, share resources, and develop innovative solutions to tackle systemic issues contributing to health disparities. • Build collaborative partnerships with health care providers, community organizations, and other concerned parties to identify barriers and develop strategies to improve access to care, resources, and health promotion initiatives. • Engage clients and communities in decision-making by ensuring community members are represented in designing, implementing, and evaluating health care services. • Encourage open dialogue, seek feedback, and effectively incorporate client and community perspectives to address health disparities.

TABLE 35.4 Examples of How Nurses Can Impact the Population's Health

Technology's Role in Transforming Care in the Public and Community Health Practice

Technology has revolutionized public health by improving health data collection, analysis, and sharing. Electronic records, data analytics, and digital surveillance systems have enabled faster responses to outbreaks and other health threats. Telehealth and mobile health apps have expanded access to health care services and facilitated remote monitoring and self-management (Figure 35.5). Integrating digital tools into health care delivery can enhance population health and the factors that impact health outcomes, including medical care. COVID-19 has highlighted the significance of integrating technology into health care delivery (Abernethy et al., 2022).

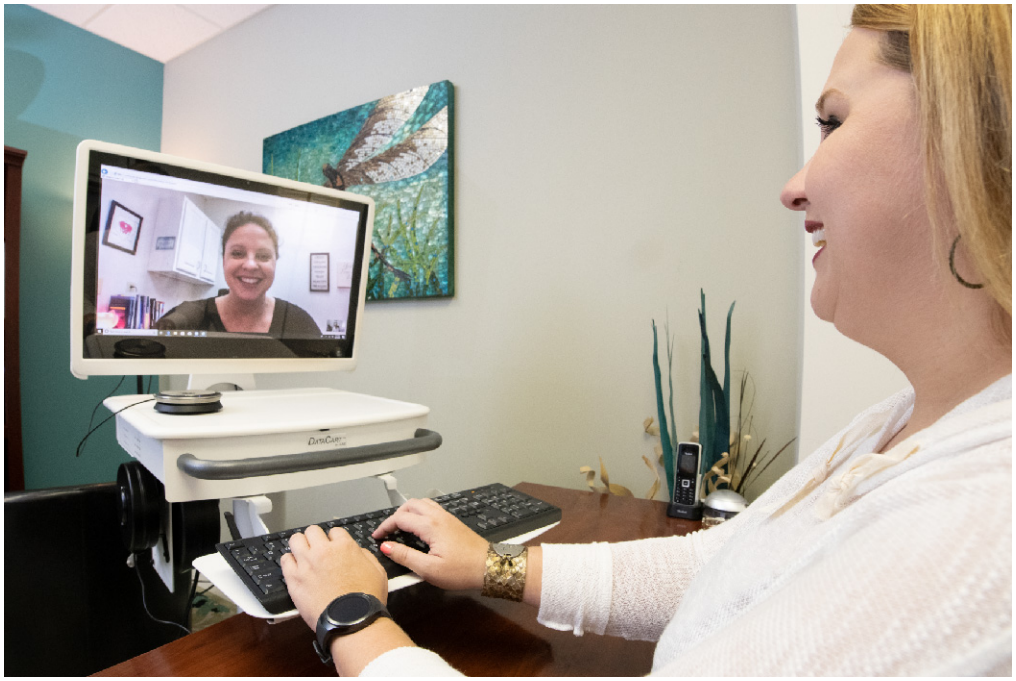


FIGURE 35.5 Telemedicine makes virtual visits with clients who live in rural areas or who lack access to transportation possible. This photo shows a licensed professional mental health counselor meeting with a client. (credit: Lance Cheung/USDA/Flickr, Public Domain)

Technology will continue to shift care from hospital-centric care to community-based care. This transition is driven by the potential to improve client outcomes, reduce health care costs, and enhance the overall well-being of individuals by leveraging technology's capabilities for remote monitoring, education, early intervention, and data-driven decision-making. Table 35.5 outlines current and emerging technological advancements that will continue to influence care delivery.

Current and Emerging Technology	Application	Nurse's Role & Responsibilities
Telehealth and telemedicine	Virtual visits, remote monitoring, and teleconsultations enable health care professionals to provide care and support remotely.	Nurses must understand telehealth platforms to assist in client education and ensure effective communication during virtual visits. Nurses play a role in developing telehealth systems and new virtual care models (Booth et al., 2021) and develop competency to deliver care using remote technology (AACN, 2021a).
Electronic health records (EHRs)	EHR systems allow health care providers to store and access client information electronically.	Nurses are responsible for maintaining ERH records and ensuring accurate and up-to-date client data is available to the entire care team. Nurses play a role in developing low-cost devices and software and promoting integration with existing mobile, internet, and other digital technologies (Booth et al., 2021).
Wearable health devices	Devices like smartwatches and fitness trackers can monitor various health metrics such as heart rate, sleep patterns, and activity levels. Wearable data can be incorporated into the plan of care to help improve client outcomes (Bowe et al., 2023).	Nurses can assist clients in understanding how to use these devices and the data generated and provide context for its significance.
Internet of medical things (IoMT)	The **internet of medical things (IoMT)** integrates medical devices and wearables with internet connectivity for remote monitoring, real-time data collection, and better communication between clients and health care providers (Junaid et al., 2022).	Nurses can utilize this information to track vital signs, medication adherence, and health behaviors, providing essential information for personalized care and early intervention.
Mobile health apps	Many mobile apps are focused on health management, medication reminders, and chronic disease management.	Nurses can recommend suitable apps to clients, provide guidance on using them, and interpret the information generated.
Artificial intelligence (AI)	AI has the potential to analyze large data sets, diagnose medical conditions, predict outcomes, and personalize treatment plans while eliminating inefficiencies in clinical workflows. This branch of computer science has many subfields striving to mimic human intelligence (Tiase & Cato, 2021).	Nurses must understand their role in collaborating with AI systems to enhance decision-making and client care. Nurses should take responsibility for advocating for policies needed on professional accountability in using AI (Booth et al., 2021).
Robotics	Technological advancements have led to the development of robots as potential partners in nursing to supplement understaffing and provide efficient health care for people with disabilities, older adults, and vulnerable individuals (Clancy, 2020; Khan et al., 2020; Miyagawa et al., 2020; Soriano et al., 2022). Robots can assist with medication delivery, client transportation, and even surgery.	As robotics becomes more involved in health care delivery, nurses will need to evaluate their proficiency and expand their role to ensure health care robots' safe and empathetic functioning (Soriano et al., 2022).

TABLE 35.5 Current and Emerging Technologies Designed to Complement and Enhance Client Care, and the Nurse's Role

Current and Emerging Technology	Application	Nurse's Role & Responsibilities
Genomic medicine	Genomic medicine uses an individual's genomic information in clinical care for diagnosis or treatment decisions, impacting oncology, pharmacology, rare/undiagnosed diseases, and infectious disease outcomes and policies (National Human Genome Research Institute, 2020). Genetic advances have led to personalized medicine based on individuals' genetic makeup.	Nurses can educate clients about genetic testing, help them understand the results, and support decision-making (Booth et al., 2021).
Augmented reality (AR), virtual reality (VR)	AR and VR technologies are used in various areas, from medical training to pain management, to supplement the real world with virtual objects and transform client education from static text-based material to interactive website-based systems (Adapa et al., 2020).	Nurses must ensure that AR and VR incorporate evidence-based client teaching materials, considering health literacy, vision, hearing, and cultural sensitivity (AACN, 2021a).
Internet of Things (IoT)	IoT is "a self-configuring and adaptive system consisting of networks of sensors and smart objects whose purpose is to interconnect 'all' things, including everyday and industrial objects, in such a way as to make them intelligent, programmable, and more capable of interacting with humans" (Laplante et al., 2018). IoT devices can connect medical equipment and enable real-time data monitoring and analysis. For example, "smart beds" can detect when they are occupied and when a client tries to get up, sending this information to nurses via the network/internet (Babu & Jayashree, 2015).	In planning IoT health care applications, nurses and engineers must collaborate to combine domain expertise and technological insights to benefit clients and providers (Laplante et al., 2018).
Workflow management software	Workflow management software can aid in improving client safety and reduce documentation or data access time. These tools can help nurses manage tasks, assignments, and schedules, optimizing their daily workflow and ensuring that client care tasks are timely.	Nurses must ensure that the software aligns with their workflow, ultimately enhances decision-making, and improves client care quality.
Smart homes	Homes equipped with sensors and wearable devices can track vital signs, activity levels, and health metrics. This data can be sent to health care providers in real time for remote client monitoring. Smart homes can help remind occupants to take their medications and perform other health-related tasks, as well as detecting falls or unusual movements.	In collaboration with family members, nurses can use this technology to tailor care decisions, such as supporting older adults with memory problems to remain in their homes (Booth et al., 2021).

TABLE 35.5 Current and Emerging Technologies Designed to Complement and Enhance Client Care, and the Nurse's Role

THE FUTURE OF HEALTH CARE

Access multimedia content (http://openstax.org/books/population-health/pages/35-2-leading-initiatives-to-transform-health-systems-to-reduce-health-inequities)
This short video introduces far-reaching changes that will transform every facet of health care.

Watch the video, and then respond to the following questions.

1. What is a digital twin? How can a digital twin be used to promote health?
2. Describe how precision medicine impacts care.
3. How will AI-powered decision models be used?
4. What is anticipatory health care?

Nurses are responsible for ensuring that technology facilitates efficient, safe, client-centered care delivery (Booth et al., 2021). Nurses must respect their clients' values and uphold technology's ethical and safe use. To achieve this, nurses can implement the following strategies:

- Educate clients about the benefits, risks, and potential implications of using specific technologies in their care. This empowers clients to make informed decisions based on their values and preferences.
- Ensure clients provide informed consent before implementing a new technology or procedure involving technology. This involves explaining the purpose, procedures, potential benefits, and potential risks.
- Consider clients' cultural, religious, and personal values when integrating technology into their care plans. Tailor the technology used to align with clients' unique needs.
- Respect the client's autonomy and explore alternative care options if a client chooses not to use certain technologies due to personal beliefs.
- Promote transparency by explaining how client data will be used, stored, and shared using technology. Clients should be aware of how their privacy is being safeguarded.
- Ensure that communication is secure and protected to maintain client confidentiality.
- Advocate for concerns within the care team. Collaborate with other health care professionals to find solutions that align with clients' values.
- Use technology to empower clients to take an active role in their care decisions.
- Establish channels for clients to provide feedback on their technology experiences. This feedback can drive improvements and enhance client-centered technology solutions.
- Remain updated on technological advancements and ethical considerations related to health care technology to guide clients effectively.
- Join groups and organizations focusing on health care technology ethics to gain valuable insights and resources.

Initiatives for Reshaping Community and Public Health Practice

A variety of initiatives are reshaping public and community health care by emphasizing prevention, community engagement, and care coordination and addressing the social determinants of health. These initiatives aim to improve health outcomes, enhance access to care, and promote equity in health care delivery by focusing on holistic and client-centered approaches. This section examines three initiatives: community-based participatory research, Health in All Policies, and community health workers.

Community-Based Participatory Research

Community-based participatory research (CBPR) involves collaborative research partnerships among community members, researchers, and public health practitioners. This approach ensures that communities are actively involved in the research process, from identifying research questions to interpreting and disseminating findings. CBPR helps to address community priorities, build trust, and promote sustainable interventions (Agency for Healthcare Research and Quality [AHRQ], 2020).

At the core of CBPR lies collaboration, highlighting the significance of partnerships between researchers and community members. This approach recognizes communities' immense knowledge and expertise regarding their health concerns. CPBR highly values community engagement and empowerment, involving community partners in

all phases of the research process. Community members are active participants, co-researchers, and co-implementers of interventions. The ultimate goal of CBPR is to empower communities to take charge of the research process and use the findings to advocate for change and enhance their health outcomes (AHRQ, 2020).

CBPR is committed to producing actionable outcomes that lead to positive change in the community. It aims to translate research findings into interventions and policies that address community health concerns. CBPR considers sustainability, ensuring that research efforts have a lasting impact and support long-term improvements in community health (AHRQ, 2020).

In conducting community-based participatory research, ethical considerations are given the utmost importance, such as respecting community autonomy, cultural sensitivity, and informed consent and protecting human subjects. Adherence to ethical guidelines and protocols ensures the welfare and rights of all participants.

The research process has been extensively utilized in public health, health care, and social sciences to tackle health inequities, advance community health outcomes, and promote health equity. CBPR aims to create culturally appropriate, contextually relevant knowledge and significantly impact communities' health and well-being by involving community members as active partners (AHRQ, 2020).

THEORY IN ACTION

Community-Based Participatory Research

Access multimedia content (http://openstax.org/books/population-health/pages/35-2-leading-initiatives-to-transform-health-systems-to-reduce-health-inequities)
This short video illustrates a collaborative approach to conducting CBPR.

Watch the video, and then respond to the following questions.

1. Define community-based participatory research.
2. How does the CBPR approach promote shared power?

Health in All Policies

Health in All Policies (HiAP) seeks to incorporate health considerations into policymaking across various sectors and government agencies. As described in Engagement in the Policy Development Process, HiAP is "a collaborative approach that integrates and articulates health considerations into policymaking across sectors to improve the health of all communities and people" (CDC, 2016a). It recognizes that health outcomes are influenced by various social, economic, and environmental factors extending beyond the health care sector. HiAP aims to ensure that health is considered and integrated into decision-making processes and policies at all levels of government.

HiAP emphasizes addressing health inequities and the underlying SDOH, given that health disparities often stem from unequal access to resources, opportunities, and power. HiAP strongly encourages collaboration among various sectors, including health care, education, transportation, housing, environment, and agriculture. This approach recognizes that addressing SDOH requires a comprehensive, coordinated effort. When these sectors work together, they can align policies, strategies, and actions to promote health and well-being. HiAP aims to address the social, economic, and environmental factors contributing to health inequities and achieve equitable health outcomes for all populations. HiAP stresses integrating health impact assessments, epidemiological data, and research findings into policy development processes, as evidence and data are crucial to informing policymaking (CDC, 2016b).

Collaboration between community and public health nurses and professionals from various sectors and government agencies is crucial for promoting HiAP. By engaging in intersectoral partnerships, community and public health nurses can work with policymakers, community organizations, schools, transportation departments, and housing authorities, and other concerned parties to advocate for policies that address social determinants of health. Community and public health nurses can provide expertise on health promotion, disease prevention, and community needs to inform policy discussions. They can also support the implementation of health impact assessments (HIAs), which evaluate the potential health effects of proposed policies, plans, and projects across different sectors. Nurses can contribute their understanding of local health needs, data, and community perspectives to ensure that HIAs are comprehensive and reflect the specific community context. Additionally, they

can collect and analyze data on health outcomes, SDOH, and the impact of policies on population health to provide evidence for the effectiveness of HiAP interventions. HIA and HiAP are policy tools that include health considerations in decision-making processes across sectors such as transportation, education, criminal justice, and equity (Rogerson et al., 2020). By sharing this evidence with partners, the community, and public health, nurses can advocate for evidence-based policy changes that promote healthier communities.

Public health nurse Josh can use the data analysis he performed to identify areas within his community to be the focus of intervention. For example, the data revealed a high prevalence of obesity and related chronic conditions, and Josh has identified significant health disparities and inequities, with limited health care, education, and healthy food options characterizing the community. Josh's examination of interventions attempted in the past reveals that traditional approaches to improving health have not been sufficient and decides to adopt the HiAP framework to address the underlying social determinants of health.

Josh works with the local government and initiates a HiAP team to promote cross-sector collaboration involving representatives from various health, transportation, housing, education, and urban planning departments. Regular meetings and working groups facilitate communication, collaboration, and information sharing. This collaboration ensures that health considerations are integrated into policy discussions across sectors. The HiAP team collects and analyzes a wide range of data related to health outcomes, social determinants of health, and existing policies.

The HiAP team identifies critical health indicators, disparities, and areas where policy interventions can significantly impact health equity. This data-driven approach provides the necessary evidence to guide policy development and implementation. The HiAP team reviews existing policies and identifies opportunities for alignment with health goals. They identify policies that have the potential to impact health determinants, such as transportation infrastructure, affordable housing, access to parks and recreation, and healthy food options. The team works with relevant departments to integrate health considerations into policy development, ensuring that decisions prioritize health equity.

The HiAP team establishes mechanisms to assess the impact of policies on health outcomes and health equity. They track vital indicators, collect data, and evaluate the effects of policy changes on various population groups. This evaluation process helps to identify successes, challenges, and areas for improvement. The findings are shared with policymakers and community partners to inform future decision-making processes.

The local government actively engages with the community throughout the HiAP process. They conduct community consultations, focus groups, and public hearings to ensure that community members' voices are heard and their health needs are considered in policy development.

Community feedback and perspectives are integrated into policy decisions to ensure relevance and responsiveness to local needs. Through the implementation of HiAP, the city government has witnessed several positive outcomes and impacts. Policies and interventions are designed and implemented with health equity in mind, resulting in improved access to health care services, increased availability of healthy food options, enhanced public transportation systems, and revitalized neighborhoods. Health disparities begin to narrow, and community members report improved health outcomes and a sense of well-being.

IMPLEMENTING A HIAP APPROACH IN A LOCAL COMMUNITY

Community and public health nurses can work with community members to implement a Health in All Policies (HiAP) approach to address health disparities and promote well-being in the chosen community.

- Step 1: Community Selection
  - Choose a local community you are personally connected to or are interested in working with.
  - Consider demographics, health disparities, existing policies, and community resources when selecting your community.
- Step 2: Understanding the Situation
  - Research and gather data on the health issues affecting your chosen community.
  - Analyze the social determinants of health that contribute to these issues.
  - Identify existing policies, programs, and partners related to health and well-being in the community.

    - What are the key health issues affecting the community?
    - How are social determinants of health contributing to these health issues?
- Step 3: Identifying Partners
    - Who are the key groups in the community who should be involved in a HiAP approach?
    - How can you engage community members, local businesses, and other sectors to collaborate?
- Step 4: Policy Analysis
    - What are the current policies that might impact the health and well-being of the community?
    - Which policies might inadvertently contribute to health disparities or unequal access to resources?
- Step 5: Developing a HiAP Strategy
    - How can you unite diverse sectors such as housing, transportation, education, and health care to address health disparities collaboratively?
    - What strategies could you use to advocate for policy changes prioritizing health and well-being?
- Self-Reflection
    - How do your values and cultural background influence the way you work with diverse communities?
    - What challenges might you face in navigating cultural differences and engaging various partners in the HiAP process?
    - How can you ensure the HiAP approach is inclusive and respects the community's cultural diversity?

Community Health Workers

As introduced in Implementation and Evaluation Considerations, **community health workers** (CHWs) are essential public health workers who serve as a critical link between communities, health care systems, and state health departments. CHWs are trusted liaisons between the health care system and its communities. They provide culturally appropriate education, outreach, and support to individuals and families, particularly those facing health care difficulties. They significantly enhance health literacy, facilitate care coordination, and promote preventive health behaviors (CDC, 2022).

For example, CHWs conduct community outreach activities to connect individuals with health care resources and services. They may assist community members in navigating the health care system, scheduling appointments, completing paperwork, accessing insurance coverage, and understanding their rights and responsibilities. CHWs provide emotional support, encourage self-advocacy, and help individuals overcome barriers to health care access (CDC, 2022).

As collaborators with health care providers and other community organizations, the CHW facilitates care coordination for individuals with complex health needs. They help individuals understand their treatment plans, adhere to medications, and navigate the health care system. CHWs also make referrals to resources, such as social services, mental health providers, substance misuse treatment programs, and support groups (CDC, 2022).

CHWs serve as advocates for the health needs of their communities. They raise awareness of health disparities, promote policy changes to address social determinants of health, and engage in community organizing activities. CHWs empower community members to participate in decision-making that actively affects their health and well-being (CDC, 2022).

Community and public health nurses frequently collaborate with CHWs, offering training, supervision, and assistance. This partnership enables public health agencies to utilize CHWs' cultural proficiency, valuable insights, and strong community ties to develop targeted interventions, enhance health care accessibility, and tackle health disparities effectively. When these groups work together, public health efforts can have a broader reach and more significant impact, ensuring that interventions are tailored to meet the specific needs of the communities they serve.

Some states require certification or training for CHWs, which may be implemented by the Department of Health, Department of Public Health, Department of Human Services, board of nursing, or third-party entities. Certification is often necessary for reimbursement, and some CHWs view it as a tool for career advancement, while others may not see it as necessary for their role or community connection (Rural Health Information Hub, 2023).

COMMUNITY HEALTH WORKER SAW ME AS HUMAN

Access multimedia content (http://openstax.org/books/population-health/pages/35-2-leading-initiatives-to-transform-health-systems-to-reduce-health-inequities)
This short video introduces Magdalena, a client at Loma Linda University Health's Diabetes Treatment Center. She was depressed and immobile, having difficulty navigating the complex health system—but a community health worker was able to help.

Watch the video, and then respond to the following questions.

1. Describe the role of community health worker.
2. How does a community health worker bridge the gap in care?
3. How might a population health nurse work with a community health worker?

Public health nurses like Josh recognizes CHWs as a critical link between communities, health care systems, and state health departments. Josh advocates for funding to support hiring a CHW to serve the county. Josh and CHW Tawana conduct a comprehensive needs assessment to identify the health needs and concerns of the community. They engage community members through surveys, interviews, and focus groups to understand their specific challenges, cultural beliefs, and preferences. Based on the findings, Josh and Tawana developed a joint plan that aligns with the community's priorities and addresses the identified health issues.

They collaborate to design and deliver health education programs tailored to the community's needs. They also develop culturally sensitive materials and workshops on chronic disease prevention, healthy lifestyle choices, and disease management. The CHW is vital in bridging cultural and language barriers, ensuring the information is accessible and relatable to community members.

Josh and Tawana work together to reach out to community members, particularly those who are underserved or face barriers to health care access. They conduct home visits, organize community health fairs, and partner with local organizations and faith-based groups. Their combined efforts raise awareness about available health care resources, facilitate access to services, and empower community members to take control of their health. Josh leverages his clinical expertise to develop care plans, provide health assessments, and offer specialized services. Meanwhile, Tawana serves as a trusted advocate, assisting with appointment scheduling and medication management and connecting individuals to social services. Together, they ensure continuity of care and support for individuals throughout their health journey.

Josh and Tawana regularly evaluate the effectiveness of their collaborative efforts. They track key indicators, such as health care utilization rates, client satisfaction, and health outcomes. By analyzing the data, they identify areas of improvement, make necessary adjustments to their interventions, and measure the impact of their work on community health. The collaborative work of Josh and Tawana yields several positive outcomes and impacts in the community. Through their joint efforts, they increase health literacy and empower individuals to make informed decisions about their health. The collaborative approach also strengthens community engagement, fosters trust, and promotes cultural competence in health care delivery. As a result, community members experience improved health outcomes, reduced health disparities, and a sense of empowerment and ownership over their well-being.

Population Health in the Future

To provide optimal care for populations, nurses must continue meticulously monitoring crucial metrics such as mortality and morbidity rates, vaccination rates, and lifestyle habits, including smoking, physical activity, and nutrition. This enables them to accurately assess their clients' overall health status and quality of life.

With the rise of data analytics, nurses will collaborate with health care professionals, researchers, policymakers, and community leaders to develop comprehensive population health approaches. They will use data to identify health trends, allocate resources, and customize interventions to specific populations.

Addressing SDOH, such as socioeconomic status, education, and housing, will become crucial to enhancing overall population health outcomes. Nurses must reduce health disparities by addressing inequalities in health care access and outcomes among different population groups, utilizing technology for remote monitoring, telehealth, and health

education, promoting health literacy, and empowering individuals to actively manage their health.

Nurses must consider genetic, environmental, and lifestyle factors when planning interventions for effective population health strategies. Additionally, they will be called upon to advocate for policies promoting a healthier environment in response to climate change influencing client health status and safety.

Addressing mental health disparities and promoting mental wellness will gain more prominence in population health initiatives. Public and community health nurses will lead the way in improving the health and well-being of residents in rural communities. They will work across borders to address global health challenges and promote health equity worldwide.

Community and public health nurses will continue prioritizing health promotion, disease prevention, and education with health care technology enhancing their role. However, hospital-centered care will shift to community-based care, improving client outcomes, reducing costs, and enhancing well-being through remote monitoring, education, early intervention, and data-driven decision-making.

Overall, the future of nursing in the community will be characterized by a proactive, technology-driven, client-centered, and collaborative approach. Community nurses will work as educators, advocates, and health partners, striving to improve the health and well-being of diverse populations and promote equitable access to care.

CASE REFLECTION

The Future of Population Health Nursing

Read the scenario, and then respond to the questions that follow.

Tania is a registered nurse working in a community health center who has observed significant changes in her role and responsibilities, with a growing emphasis on population health. Tania is curious about nurses' evolving role in addressing the health needs of diverse populations and the challenges and opportunities associated with this shift.

1. What are the key metrics that nurses like Tania should monitor to assess the overall health status and quality of life for populations?
2. How can data analytics enhance the role of nurses in population health initiatives? What are the potential benefits of data-driven approaches?
3. What are some of the social determinants of health that nurses should address when working on population health? How can they reduce health disparities among different population groups?
4. How can technology, such as remote monitoring and telehealth, be leveraged by nurses to promote health literacy and empower individuals to manage their health actively?
5. How can nurses consider genetic, environmental, and lifestyle factors when planning population health interventions? Provide examples of how these factors can impact health outcomes.
6. How might climate change influence client health status and safety, and how can nurses advocate for policies to respond to this challenge?
7. How can nurses address mental health disparities and promoting mental wellness within populations?
8. How might rural communities benefit from the leadership of public and community health nurses? What challenges may they face in these settings?
9. How is health care evolving from hospital-centered care to community-based care, and what are the potential advantages of this shift for client outcomes and costs?
10. What approaches, roles, and responsibilities will define the future of nursing in the community?

35.3 Carving a Path Forward

LEARNING OUTCOMES

By the end of this section, you should be able to:

- 35.3.1 Explain the importance of population health in nursing education and practice.
- 35.3.2 Discuss ways to transform nursing practice to provide diverse populations safe, quality, and equitable care.
- 35.3.3 Describe how nurses may lead change to advance health across the continuum from public health prevention to disease management of populations.
- 35.3.4 Discuss the key to achieving positive health outcomes.

The nursing workforce must be prepared to rise to the challenge of adapting to changing health care and social support systems. With the increasing demand for nurses and the need for diverse and intensive nursing care across multiple settings, nurses must be equipped to address the negative impacts of social determinants of health on well-being (NASEM, 2021). The American Association of Colleges of Nurses (AACN) recognizes the importance of population health in nursing education and practice. AACN promotes and supports the integration of population health concepts and competencies into nursing curricula to prepare nurses to address the health needs of diverse populations. According to AACN (2021a), population care requires proficiency in six core areas as outlined in Table 35.6.

Competency	Proficiency
Manage population health	• Define a target population, including its functional and problem-solving capabilities, throughout the continuum of care. • Assess population health data. • Assess the community's priorities and the affected clinical population. • Compare and contrast local, regional, national, and global benchmarks to identify health population health patterns. • Apply an understanding of the public health system and its interfaces with clinical health care in addressing population health needs. • Develop an action plan to meet an identified need(s), including evaluation methods. • Participate in the implementation of sociocultural and linguistically responsive interventions. • Describe general principles and practices for the clinical management of populations across the age continuum. • Identify ethical principles to protect the health and safety of diverse populations.
Engage in effective partnerships	• Engage with other health professionals to address population health issues. • Demonstrate effective collaboration and mutual accountability with relevant parties. • Use culturally and linguistically responsive communication strategies.
Consider the socioeconomic impact of the delivery of health care	• Describe access and equity implications of proposed intervention(s). • Prioritize safe, effective, and efficient client-focused and community action plans in the context of available resources.

TABLE 35.6 The Six Core Areas of Population Health Proficiency (See AACN, 2021a.)

Competency	Proficiency
Advance equitable population health policy	• Describe policy development processes. • Describe the impact of policies on population outcomes, including social justice and health equity. • Identify the best evidence to support policy development. • Propose modifications to or development of policy based on population findings. • Develop an awareness of the interconnectedness of population health across borders.
Demonstrate advocacy strategies	• Articulate a need for change. • Describe the intent of the proposed change. • Define interested parties(stakeholders), including members of the community and clinical populations, and their level of influence • Implement messaging strategies appropriate to the audience and other interested parties. • Evaluate the effectiveness of advocacy actions.
Advance preparedness to protect population health during disasters and public health emergencies	• Identify changes in conditions that might indicate a disaster or public health emergency. • Understand the impact of climate change on environmental and population health. • Describe the health and safety hazards of disasters and public health emergencies. • Describe the principles and methods regarding personal safety measures, including personal protective equipment (PPE). • Implement infection control measures and proper use of personal protective equipment.

TABLE 35.6 The Six Core Areas of Population Health Proficiency (See AACN, 2021a.)

Population care requires the nurse to be prepared to promote health and prevent disease across the health care continuum, including public health, community health, acute care, ambulatory care, and long-term care. Population health also encompasses collaborative activities among all relevant individuals and organizations involved in care, including clients and communities, to improve a population's health status (AACN, 2021a).

To deliver safe, equitable, and high-quality care to diverse client populations, nursing practice must prioritize a holistic approach that considers clients in the context of their families and communities. This involves recognizing how social, political, and economic factors impact health, focusing on what is most essential for well-being, fostering a compassionate and healing relationship, and always upholding personal dignity, choice, and meaning (AACN, 2021a).

Transforming Nursing Practice

The Future of Nursing 2020–2030 (https://openstax.org/r/namedu) report by the National Academies of Sciences, Engineering, and Medicine (2021) has identified several crucial areas where the nursing profession must improve to overcome the challenges of the next decade. These areas include the nursing workforce, leadership, nursing education, nurse well-being, emergency preparedness and response, and the nursing profession's responsibilities concerning the determinants of health at both the structural and individual levels. Table 35.7 highlights the obstacles that need to be addressed to achieve health equity in the next decade. The ultimate goal is to achieve health equity in the United States, which can be accomplished by strengthening nursing capacity and expertise.

Area for Improvement	Challenges
Addressing systematic issues	• Systemic issues such as poverty, discrimination, and unequal distribution of resources can hinder progress toward health equity. Addressing these structural barriers is complex and requires policy changes. • Disparities in health care access and outcomes, often linked to socioeconomic factors, remain significant challenges. Closing these gaps necessitates systemic changes and increased resources. • Socioeconomic disparities in health information access and health literacy can impede clients' ability to make informed decisions about their care. Efforts should be made to bridge this gap. • Access to technology and health care infrastructure can be limited in certain areas, hindering the adoption of telehealth and other advancements in health care delivery. • Bias and discrimination within health care systems can affect clients' quality of care. Efforts to combat bias and promote culturally competent care are essential.
Lifting barriers to expand the contributions of nursing	• A shortage of health care professionals, including nurses, hinders achieving health equity. Addressing this requires investments in education, training, and incentives to retain nurses in underserved areas. • Twenty-seven states restrict practice for advanced practice nurses (APRNs), limiting care for complex needs. • There is a need to eliminate state-level regulations and grant full practice authority to nurse practitioners. • Institutional barriers limit APRNs, RNs, and LPNs from practicing to their full education and training.
Designing better payment models	• Current payment systems need improvement to address social needs and promote health equity. • Health care organizations can adopt new payment models to address social needs and drive forward health equity.
Strengthening nursing education	• Nursing students must have the necessary knowledge and skills to promote health equity, reduce health inequalities, and improve the population's overall well-being. • This can be achieved through coursework and hands-on learning experiences that expose them to different care environments, such as community settings (e.g., schools, workplaces, home health care, and public health clinics) and telework.
Valuing community and public health nursing	• Promoting health equity is a critical responsibility of community and public health nurses. • With the onset of the COVID-19 pandemic, the significance of team-based care, infection control and prevention, person-centered care, and other population-based skills has been underscored, highlighting the capabilities of community and public health nurses.

TABLE 35.7 Areas for Improvement and Corresponding Obstacles to Achieve Health Equity in the Next Decade (See NASEM, 2021.)

Area for Improvement	Challenges
Fostering nurses' roles as leaders and advocates	• The nursing profession requires a new generation of leaders who prioritize diversity and equity and recognize the crucial link between social determinants of health and overall health status. • Nurse leaders can also play a critical role in addressing the legacy of racism in health care and the nursing profession and taking steps to reduce the negative impact of discrimination and implicit bias on clients' health outcomes.
Preparing nurses to respond to disasters	• The COVID-19 pandemic has highlighted the divisions in an already fractured U.S. health care system, causing a significant increase in mortality and illness rates and exposing stark health disparities. • The communities most severely impacted are people of color, who face the combined challenges of discrimination, financial hardship, dangerous work environments, restricted health care access, and preexisting medical issues. • It is crucial to define the responsibilities and duties of nurses in disaster response and public health emergency management to enhance the country's ability to prepare for and react to such occurrences.
Supporting the health and well-being of nurses	• The workplace demands placed on nurses can significantly impact their well-being, compromising the quality and safety of their care. • To prevent burnout and poor health among nursing staff, it's crucial to address the root causes of workplace hazards and stressors. • Ultimately, the impact on nurses' health and well-being goes beyond their personal lives, directly affecting the quality, safety, and cost of care and the overall health care system.

TABLE 35.7 Areas for Improvement and Corresponding Obstacles to Achieve Health Equity in the Next Decade (See NASEM, 2021.)

Social Responsibility as a Global Citizen

The role of nurses as global citizens goes beyond providing local health care. Nurses must embrace their responsibility to contribute to positive global health outcomes, promote health equity, and address global health challenges. Nurses are prepared to interact with populations from around the world. Being culturally competent and sensitive allows nurses to provide care that respects cultural beliefs, practices, and values. Global citizenship in nursing involves advocating for equal access to quality health care for all individuals regardless of their geographical location, socioeconomic status, or cultural background. Nurses can advocate for policies that address health disparities and promote health equity globally. They also promote global health by educating individuals and communities about disease prevention, hygiene, nutrition, and healthy lifestyles. This knowledge can have a positive impact on public health outcomes worldwide. Additionally, nurses are often at the forefront of responding to disasters and humanitarian crises around the world, providing emergency medical care, supporting displaced populations, and delivering essential health care services.

Global citizenship encourages nurses to collaborate with health care professionals and policymakers across borders, fostering international partnerships that facilitate knowledge-sharing, capacity-building, and skill-sharing projects. Nurses can contribute to global health by participating in educational initiatives and training programs in underserved areas such as third-world communities, helping to strengthen health care systems and empower local health care professionals (Figure 35.6). They can also engage in global public health initiatives, such as promoting sanitation, safe drinking water, and hygiene practices to prevent spreading infectious diseases. Above all, nurses must prioritize the well-being of clients and communities, even in challenging and resource-limited environments.



FIGURE 35.6 This global health initiative by the CDC educates men in Mozambique about voluntary medical male circumcision (VMMC) at a health clinic. (credit: "VMMC in Mozambique" by Ricardo Franco/CDC/Flickr, CC BY 2.0 DEED)

Nurses must continuously learn about and adapt to global health issues, emerging diseases, and evolving health care practices. They should advocate for health equity, promote global health initiatives, collaborate internationally, and provide health care services in diverse settings to improve global health outcomes.

Key to Achieving Positive Health Outcomes

Population health covers public health, acute care, ambulatory care, and long-term care for local, regional, national, and global communities. It involves collaboration between individuals and organizations involved in care, including clients and communities, with a focus on achieving health equity and improved health for all and an emphasis on diversity, equity, inclusion, and ethics. Everyone involved shares accountability for outcomes, as various factors can influence the health of a specific group. Ultimately, a population health perspective is essential in promoting the health and well-being of the community (AACN, 2021a).

Population health encompasses a broad range of health care services, from public health initiatives aimed at preventing diseases to managing the health of entire communities. Population health management involves systems thinking and incorporating health promotion and illness prevention to achieve population health goals.

Nurses advocate for and implement policies that impact population health on a global and local level, and they respond to emergencies, crises, epidemics, or pandemics. This requires a particular focus on surveillance, prevention, and containment of factors contributing to the emergency, with competencies tailored to each situation.

A skilled community/public health nurse carries out many essential functions in community organizations or state and local public health organizations. These functions range from providing clinical services, home visits, and population-based services to conducting health promotion programs at all levels of prevention. The community/public health nurse works directly with at-risk populations, using their population-level competencies to provide services to individuals, families, or groups. Additionally, they perform critical tasks such as primary data collection and analysis, fieldwork, program planning, outreach activities, programmatic support, and other organizational tasks. Although their focus is primarily on population-level competencies and community/public health, nurses apply these skills and competencies across all levels of prevention, making them indispensable members of the health care infrastructure (Quad Council Coalition Competency Review Task Force, 2018).

Community and public health nurses hold the key to achieving positive health outcomes in an era of increasing challenges. By working together and fostering a culture of inclusivity, nurses can create a society where everyone has equal access to health care and can attain their best possible state of wellness.

Chapter Summary

35.1 Learning from the Past to Guide the Future

Nurses can draw insights from past public health achievements. Nurses have been instrumental in spearheading endeavors to enhance client well-being and medical outcomes and will continue to shape the trajectory of health care.

35.2 Leading Initiatives to Transform Health Systems to Reduce Health Inequities

Nurse leaders can play an important role in promoting health equity. They can serve as role models for inclusivity and cultural competence and can create a more inclusive and equitable health care system by inspiring others to embrace compassionate care and by advocating for ongoing training in cultural sensitivity and language services.

35.3 Carving a Path Forward

Nurses collaborate to promote health and prevent disease. Nursing practice should prioritize a holistic approach that considers the client's family and community context; recognizes the social, political, and economic factors that affect health; prioritizes well-being; fosters compassionate relationships; and respects personal dignity and choice.

Key Terms

community health workers (CHWs) essential public health workers who link communities, health care systems, and state health departments

community-based participatory research (CBPR) collaborative research partnerships between community members, researchers, and public health practitioners

digital divide the gap between those who have ready access to and use digital technologies, such as computers, smartphones, and the internet, and those who do not

Health in All Policies (HiAP) an approach that seeks to incorporate health considerations into policymaking across various sectors and government agencies

internet of medical things (IoMT) integrates medical devices and wearables with internet connectivity for remote monitoring, real-time data collection, and communication between clients and health care providers

workforce shortage arises when the availability of skilled workers is inadequate to meet the target audience's needs

Review Questions

1. A community/public health nurse is organizing an outreach program to educate the community on the availability of over-the-counter naloxone. Which response by a community member indicates to the nurse that the person understands the indication for naloxone?

a. "Naloxone is a long-term treatment for opioid addiction."
b. "Naloxone prevents opioid cravings in individuals with substance use disorders."
c. "Naloxone is used to rapidly reverse the effects of an opioid overdose."
d. "Naloxone is a preventive medication to reduce the risk of opioid misuse."

2. A community health nurse has been assigned to develop health promotion and disease prevention interventions for the local community. Which of the following is an example of a primary prevention?

a. Scheduling mammogram screenings for uninsured women
b. Assessing medication adherence during home visits
c. Offering free breakfasts to school-age children
d. Instructing clients with arthritis how to modify their home to decrease the risk of falls

3. A nurse is advocating for policies that create walkable communities, green spaces, and healthier food environments. Which level of prevention does this target?

a. Primary prevention
b. Secondary prevention
c. Tertiary prevention
d. Quaternary prevention

4. A nurse working in a community health clinic is caring for a middle-aged client who is being seen for a routine check-up. The nurse assesses the clients' vital signs, height, and weight and performs point-of-care glucose and cholesterol tests. After reviewing the results with the provider, the client is identified as being at an increased risk for developing diabetes. Which level of prevention does this visit reflect?
    a. Primary
    b. Secondary
    c. Tertiary
    d. Quaternary

5. A community health nurse who lobbies for the local transit system to add additional bus routes between a low-income neighborhood and the local clinic is demonstrating which type of leadership behavior?
    a. Education and mentorship
    b. Client advocacy
    c. Policy engagement
    d. Practice advocacy

6. Which action will the nurse take to ensure the ethical and safe use of a mobile health app by a client who needs help in managing their medications?
    a. Clarifying for the client the potential risks and benefits of this technology
    b. Ensuring that this technology will protect the client's confidentiality
    c. Explaining that this is the only way to monitor the client's medication regimen
    d. Reinforcing that this technology will reduce the time the nurse needs to monitor the client

7. Which of the following is the best example of a Health in All Policies approach?
    a. The local health department plans to expand its services to additional locations in the community.
    b. A school system expands its school nursing staff to offer more services to students.
    c. The nurse helps a manufacturing plant collaborate with the local health system to expand its employee assistance program.
    d. The nurse lobbies community leaders to collaborate with the transportation board to add sidewalks and bike paths to road maintenance projects.

8. Which of the following actions would improve health care access for clients?
    a. Shifting health care reimbursement models to focus on health promotion initiatives
    b. Implementing strategies to address health care provider burnout
    c. Expanding a team-based approach to health care
    d. Allowing advanced practice nurses full practice authority in all 50 states

9. A community health nurse works in a clinic that treats clients who lack insurance and have a history of opioid use disorder. Which of the following approaches should the nurse use when working with these clients?
    a. The nurse should treat these clients the same as other clients.
    b. The nurse should recognize these clients are at high risk for having symptoms related to both mental illness and substance use disorders.
    c. The nurse should focus only on the client's physical needs related to the opioid use disorder.
    d. The nurse should discourage the use of harm reduction approaches such as needle exchange programs and help the client focus on eliminating their drug use.

10. A nurse is conducting a health promotion campaign aimed at reducing smoking rates in a community with a high prevalence of smoking among teenagers and young adults. Which intervention is more likely to be effective with this population?
    a. Distributing informational pamphlets about the harmful effects of smoking
    b. Hosting a community event for families to raise awareness about the dangers of smoking
    c. Implementing a social media campaign that discourages smoking
    d. Providing financial incentives to teens who quit smoking

APPENDIX A

Assessment Tools

The following Evidence-Based Resources (https://openstax.org/r/healthgovhealtha) are tools that will help population health, public health, and community health nurses effectively engage in public health practice. These tools are intended to guide clinicians in various aspects of community assessment. All community health initiatives should be in alignment with the goals of Healthy People 2030.

1. Windshield Surveys: The first step in community assessment is an overview of the community, commonly called a windshield survey. The following resource from the Community Tool Box provides information on conducting a windshield survey (https://openstax.org/r/ctbkuedu).
    a. Community asset mapping offers a visual representation of the community. Key steps in this process are to identify the community assets, such as the human, social, cultural, financial, political, and environmental aspects related to health promotion. Key steps include the following:
        i. Defining community boundaries
        ii. Identifying and involving people and organizations with shared interests
        iii. Determining what assets to include
        iv. Listing the assets of various community groups and individuals
        v. Organizing these assets on a map
    b. Several tools are available to measure the social determinants of health:
        i. Instructions on how to begin to map a community are available in this Mapping Community Assets Workbook (https://openstax.org/r/digitalcommons), which provides definitions and strategies to include in the mapping of a community.
        ii. The Neighborhood Atlas (https://openstax.org/r/neighborhoodatlas) offers mapping of disadvantaged areas within specific census blocks in each U.S. county, called the Area Deprivation Index (ADI).
2. The American Hospital Association's Community Health Assessment Toolkit provides hospitals and health systems with a nine-step guide on how to best collaborate with communities and strategic partners to meet the requirements of the community served. This toolkit was revised following the COVID-19 pandemic to reflect a strong commitment to racial and social justice. It provides a visual representation of the nine-step process and details each step of a community health assessment. Specific elements of the toolkit are available at the Community Health Assessment Toolkit (https://openstax.org/r/healthycommunitiesa).
3. The Centers for Disease Control and Prevention (CDC) Public Health Professionals Gateway (https://openstax.org/r/cdcgovpublic) offers various resources to conduct a community health needs assessment and initiate change.
4. The University of Kansas has developed a Community Toolbox (https://openstax.org/r/ctbkuedue) that helps community-based nurses to:
    - assist in defining the root cause of community issues,
    - set priorities,
    - develop a plan for community assessment,
    - generate solutions to community-based problems,
    - conduct a SWOT analysis,
    - use a logic model to create effective change, and
    - evaluate the effectiveness of change (https://openstax.org/r/ctbkuedua).
5. Health statistics to aid community health nurses in community-based assessments are publicly available:
    - Centers for Disease Control and Prevention: National Center for Health Statistics (https://openstax.org/r/cdcgovnchshus)
    - County Health Rankings and Roadmaps (https://openstax.org/r/countyhealthrankingsa)
    - U.S. Census Bureau: Census data (https://openstax.org/r/censusgov), community demographics to help

guide decision-making
- U.S. Census Bureau: QuickFacts (https://openstax.org/r/censusgovqu), the most recent up-to-date information on U.S. census data

6. In 1994, Wright and Leahy developed the Calgary Family Intervention Model to assess and develop knowledge, skills, and competencies in three categories: structural, developmental, and functional. This tool is used to design education and improve overall client and family outcomes.
   - Wright, L. M., & Leahey, M. (1994). Calgary Family Intervention Model: One way to think about change. *Journal of Marital and Family Therapy, 20*, 381_395. https://doi.org/10.1111/j.1752-0606.1994.tb00128.x
   - The Calgary Intervention Model has been used in the community in various populations to improve client and family outcomes: Sari, A., & Duman, Z. (2022). Effects of the family support and psychoeducation program based on the Calgary Family Intervention Model on the coping, psychological distress, and psychological resilience levels of the family caregivers of chronic psychiatric clients, *Archives of Psychiatric Nursing, 41*, 1–10. https://doi.org/10.1016/j.apnu.2022.07.014
   - Nursing students may use the Calgary Family Intervention Model to perform a family unit assessment to identify the family's interaction within the subsystems (e.g., parent–child or marital) or the interactions between the family and to the larger units within the community, such as health care professionals, schools, and community organizations. By using elements of the model, nursing students can assess the structural, developmental, and functional components and identify opportunities at the family level and formulate interventions to positively impact family functioning. Depending on the assessment, nursing interventions may involve improving available resources or improving the coping ability of the family related to the acute or chronic illness of one of its members.
7. The intervention wheel (https://openstax.org/r/healthstatemn) (IW) provides a visual representation of the specialty of public health nursing, as it provides a framework to facilitate 17 public health nursing intervention practices according to the level of practice (individual/family, community, system) and the level of the intervention.

   The intervention wheel has been utilized by many countries due to its direct applicability to nursing public health practice. The IW identifies 17 interventions, organized by five distinct wedges in distinct colors, and identifies three levels of practice: systems focused, community focused, and individual focused. The IW identifies nursing activities in each of the five colored wedges at each of the three levels of practice.

   The colors of the wheel represent various public health interventions:
   - Red wedge: Surveillance, disease and health event investigation, outreach, screening, and case finding
   - Green wedge: Referral and follow-up, case management, and delegated functions
   - Blue wedge: Health teaching, counseling, and consultation
   - Orange wedge: Collaboration, coalition building, and community organizing
   - Yellow wedge: Advocacy, social marketing, and policy development and enforcement

   Public health nurses and nursing students can use the intervention wheel to establish targeted health services at various levels of practice and specific intervention levels.

   For example, in one area of the country, it was determined that the rate of colorectal cancer was nearly twice that of the rest of the United States. The red wedge in the intervention wheel (surveillance, disease and health event investigation, outreach, and screening at the community and systems level as well as case finding at the individual level) was used to identify a specific American Indian tribe with a particularly high rate of colorectal cancer. A public health nurse and a nursing student partnered with a company to offer free colorectal cancer screenings for the tribe to investigate the reasons for the high rates of cancer and to identify those in the early stages, thereby reducing cancer mortality rates.

   Nurses and nursing students have identified specific uses for the intervention wheel that are relevant to geriatric care, child health, school health, and primary care in the context of public health. For example, a team of nursing students and nurses used the wheel to assess food security concerns among people over the age of 65 with disabilities during the COVID-19 pandemic. Using the IW, the team identified concerns in this

population surrounding loneliness and isolation and assembled community-based interventions to address this isolation and loneliness (Shaffer et al., 2022).

Recent publications that outline how the intervention wheel has been used in practice include the following:

- Anderson, L. J. W., Schaffer, M. A., Hiltz, C., O'Leary, S. A., Luehr, R. E., & Yoney, E. L. (2018). Public health interventions: School nurse practice stories. *The Journal of School Nursing, 34*(3), 192–202. doi:10.1177/1059840517721951
- Leahy-Warren, P., Day, M. R., Philpott, L., Glavin, K., Gjevjon, E. R., Steffenak, A. K. M., Egge, H., & Mulcahy, H. (2018). A falls case summary: Application of the public health nursing intervention wheel. *Public Health Nursing, 35*(4), 307–316. doi:10.1111/phn.12408
- Schaffer, M., Strohschein, S., & Glavin, K. (2022). Twenty years within public health intervention wheel: Evidence for practice. *Public Health Nursing, 39,* 195–201. https://doi.org/10.1111/phn.12941
- Schoon, P. M., Porta, C. M., & Schaffer, M. A. (2019). *Population-based public health clinical manual: The Henry Street model for nurses* (3rd ed.). Sigma Theta Tau International Society of Nursing.

8. Loyola University (https://openstax.org/r/hsdlucedu) has created an interprofessional list of national and state-level resources.

9. The World Health Organization (WHO) developed The Health Impact Assessment (HIA) (https://openstax.org/r/whointhe).

   This tool is designed to evaluate the impact of a policy, project, or program on populations, especially those who are disadvantaged or vulnerable. The HIA helps decision-makers discern the best improvements to prevent injury or disease and to actively promote population health.

   The HIA is based on four values:
   - Democracy
   - Equity
   - Sustainable development
   - Ethical use of evidence

10. The EveryONE Project by the American Academy of Family Physicians developed the Social Needs Screening Tool (https://openstax.org/r/aafporgfamily). The EveryONE Project tool addresses the social determinants of health within communities and includes an assessment of the following social determinants of health:
    - Housing
    - Food
    - Transportation
    - Utilities
    - Childcare
    - Employment
    - Education
    - Finances
    - Personal Safety

APPENDIX B

Community/Public Health Nursing [C/PHN] Competencies

The core competencies of public health nursing are defined as the fundamental knowledge, skills, and attitudes that a person holds that allow for growth and success and guide all public health professionals. The definition and practice of public health nursing were updated in 2013 to address the evolving trends in the U.S. economy as well as the changing landscape of health practices, politics, and society.

According to public health professionals, the key elements of public health nursing practice include a focus on population-based health care needs with attention to many of the social determinants of health (SDOH), a comprehensive and systematic approach to assess populations with an emphasis on preventative strategies, and key interventions at the level of individuals, families, communities, countries, and across the globe.

American Association of Colleges of Nursing (https://openstax.org/r/aacnnursing)

The American Association of Colleges of Nursing (AACN) defines a population as a "discrete group that the nurse and others care for across settings at local, regional, national, and global levels."

The AACN defines nursing competencies for managing the health of populations at the level of the entry-level nurse as well as for advanced practice nurses, called The Essentials.

American Nurses Association

The American Nurses Association (ANA) has defined the scope and standards for public health nursing. The ANA has published the third edition of its scope and standards for public health nursing, available for purchase at this link (https://openstax.org/r/nursingworldor).

American Public Health Association (https://openstax.org/r/aphaor)

The American Public Health Association defines public health practice and public health nursing in its official statement.

Quad Council Coalition of Public Health Organizations

The Quad Council Coalition of Public Health Organizations was founded in 1988 to provide a united voice for the specialty of public health nursing practice. The coalition represents the joint efforts of the Alliance of Nurses for Healthy Environments (AHNE), the Association of Community Health Nursing Educators (ACHNE), the Association of Public Health Nurses (APHN), and the American Public Health Association – Public Health Nursing Section (APHA-PHN).

A thorough description of the Quad Council Coalition competencies is available at Quad Council Coalition Competency Review Task Force (2018) Community/Public Health Nursing Competencies (https://openstax.org/r/cphnoor).

These competencies are defined as the combination of observable and measurable knowledge, skills, abilities, and personal attributes that contribute to enhanced employee performance and ultimately result in organizational success. Core competencies are detailed in three tiers.

- Tier 1 competencies are those performed by the generalist public health nurse.
- Tier 2 competencies apply to public health nurses involved in management activities.
- Tier 3 competencies apply to public health nurses in executive or senior management roles.

The core competencies are described by the Quad Council within the following eight domains:

1. Assessment and analytic skills
2. Policy development/program planning skills

3. Communication skills
4. Cultural competency skills
5. Community dimensions of practice skills
6. Public health sciences skills
7. Financial planning
8. Evaluation and management skills
9. Leadership and systems thinking skills

For example, assessment and analytic skills are included as competencies in domain 1 for the entry-level public nurse and include the following:

1A1: Assessing the health status and health literacy of individuals and families, including determinants of health, using multiple sources of data.

1A2a: Use of an ecological perspective and epidemiological data to identify health risks for a population.

1A2b. Identifying individual and family assets, needs, values, beliefs, resources and relevant environmental factors.

1A3. Selecting variables that measure health and public health conditions.

1A4. Using a data collection plan that incorporates valid and reliable methods and instruments for collection of qualitative and quantitative data to inform the service for individuals, families, and a community.

1A5. Interpreting valid and reliable data that impacts the health of individuals, families, and communities to make comparisons that are understandable to all who were involved in the assessment process.

The Council on Linkages between Academia and Public Health Practice

The Council on Linkages between Academia and Public Health Practice is a collaborative formed by 24 national organizations, including the American Nursing Association (ANA). This council developed core competencies for public health professionals in 2021. The core competencies were developed in eight domains that include specific responsibilities at three levels: front line, program management, and senior management. Complete mapping of these competencies is available at this link (https://openstax.org/r/phfor). The eight domains are as follows:

1. Data Analytics and Assessment Skills
2. Policy Development and Program Planning Skills
3. Communication Skills
4. Health Equity Skills
5. Community Partnership Skills
6. Public Health Sciences Skills
7. Management and Finance Skills
8. Leadership and Systems Thinking Skills

For public health nurses seeking to build their competencies through graduate education with a master's degree, this link provides (https://openstax.org/r/publichealthdegr) important considerations regarding the roles and competencies of the public health practitioner, a public health physician, and a public health nurse.

Community-Based Participatory Research: In order to engage and collaborate with communities, specific competencies include the following (adapted from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9219558/):

1. Involving community partners as members of the research team when identifying the research problem
    - For example, public health nurses may request discussion of a health concern at a city chamber of commerce meeting.
2. Collaborating with the community during the creation of a study design as well as implementation to ensure accordance with local values and challenges
    - When planning to assess a community, respected local leaders in the community can provide clarity in how to best access individuals, families, and sub-communities.
3. Building upon strengths and challenges in the community to help build capacity within the community as well the opportunities for the researcher
    - This competency may involve identifying and accessing current community organizations in order to build

a coalition.

4. The researchers and community partners convening to plan how a community-based health initiative will be disseminated and communicated to relevant audiences within the community served
    - While flyers in local restaurants may be helpful, some communities may be better accessed through local television or a particular form of social media.

APPENDIX C

Theories and Models Applicable to Practice

Nurse scholars have developed theories of nursing to define the profession and guide data collection and interpretation using a structured approach. The use of theory when planning nursing care guides the nurse in planning effective interventions and connects theory to nursing practice and research. Historically, many nurse theorists sought an individual approach to change. Theorists in public health take a broader approach, including the social, economic, and environmental factors that impact the development of health problems at the population, community, or family levels. For example, when planning care for a community that treats a high percentage of children with asthma in the local school systems, an individual approach would include specific medications to treat symptoms and planning for self-care. However, a broader perspective may consider how symptoms may be linked to environmental factors, such as allergens or irritants, as well as the quality of housing (e.g., the presence of pet dander, rugs, food additives, cigarette or cigar smoke, fragrances, temperature, humidity, dust mites or cockroaches, or air pollution).

C.1 Relevance of Theories and Models

Population health nurses use theory to plan and implement care at the family, local, regional, or national level. For example, a public health nurse may work within a local community to assess a virus outbreak in a school, while a nurse epidemiologist might assess a communicable disease incidence in a larger population. This appendix reviews a sample of nursing theories related to the individual, family, community, and population levels of care.

C.2 Nursing Theories at the Individual Level

While community-based models generally focus on the family, community, and population levels of care, serious illness care programs are often driven by the goals and priorities of the person directly affected and their family. Therefore, Table C1 in this section includes individual-level theories. Services should be culturally and linguistically responsive, and careful attention must be paid to social risks such as poverty, mental illness, insecure housing, food, and transportation, which create unique challenges, as do past or present traumatic events. Comprehensive assessments at the individual level offer insight into collaboration with colleagues and community partners.

Theorist/ Year	Focus	Concepts	Nursing's Role
Orem's Self-Care Deficit 1971	Nursing care is required if a client cannot fulfill biological, psychological, developmental, or social needs.	Assumes that people can exert purposeful control over their environments in the pursuit of health. Three related constructs: 1. Theory of self-care (dependent care) 2. Theory of self-care deficit 3. Nursing systems Includes six major concepts and one peripheral concept.	Patient self-care is accomplished with assistance that compensates for the patient's limitations when the patient cannot perform these functions independently. Nurses support and protect the patient. *Example:* A home care client who has become paraplegic following a spinal cord injury may require that nurses assist in performing intermittent urinary catheterization and ensuring that the client has supplies at home until the patient and/or family are able to independently address this health care need.
Pender's Health Promotion Model 1982	Health is "a positive dynamic state, not merely the absence of disease." Each person has unique characteristics and experiences that affect subsequent actions.	*Health promotion* is behavior motivated by the desire to increase well-being and actualize human health potential. *Health protection* is behavior motivated by a desire to avoid illness. *Behavior-specific cognitions and affect* are perceived benefits of action, barriers to action, self-efficacy, activity-related affect, interpersonal influences, and situational influences. *Behavioral outcomes* are a commitment to a plan of action.	The community health care setting is the best avenue for promoting health and preventing illnesses. The focus is on activities that can improve people's well-being. Health promotion and disease prevention can more easily be carried out in the community. *Example:* An older client who successfully recovered following an acute care hospital admission for an acute respiratory infection has scheduled an RSV vaccination at a local clinic and wears an N95 mask when in public spaces where close interpersonal contact is anticipated. The client states, "I am now more selective about my social engagements due to the risk of exposure."

TABLE C1 Nursing Theories at an Individual Level

Theorist/ Year	Focus	Concepts	Nursing's Role
Bandura's Social Cognitive Theory (SCT) 1986	Not specific to nursing. Opportunities for social support become available by instilling expectations, self-efficacy, and observational learning. This will achieve behavior change.	Describes individual health behaviors as influenced by the actions of others and by environmental factors. Key components that relate to individual behavior change: 1. Self-efficacy 2. Behavioral capability 3. Expectations 4. Expectancies 5. Self-control 6. Observational learning 7. Reinforcements	Nurses and other health professionals utilize the SCT framework in a wide variety of settings and populations to guide behavioral change by creating an understanding of the influences of the social determinants of health and the individual's past experiences on current behavior. *Example:* A senior-level college student who is the first person in the family to graduate college applies for opportunities post-graduation in job roles that include a comprehensive health insurance program, relocation expenses and subsidized housing, and a support plan that includes tuition remission for graduate school.

TABLE C1 Nursing Theories at an Individual Level

Theorist/ Year	Focus	Concepts	Nursing's Role
Neuman's Systems Model 1995	A broad, holistic, and system-based method to nursing. Nursing care is based on the person's relationship to stress, response, and reconstitution factors that are progressive in nature.	The client as a system is in dynamic, constant energy exchange with the environment in which there is a continuous flow of input and process and output and feedback. All elements are in interaction. • Intrapersonal stressors occur within the client system boundary and correlate with the internal environment. • Interpersonal stressors occur outside the client system boundary, are proximal to the system, and impact the system. • Extra-personal stressors also occur outside the client system boundaries but are at a greater distance from the system than are interpersonal stressors. An example is a social policy.	Nursing's primary concern is to define the appropriate action in situations that are stress-related or concerning possible reactions of the client or client system to stressors. Nursing interventions aim to help the system adapt or adjust and retain, restore, or maintain some degree of stability between the client system variables and environmental stressors, focusing on conserving energy. *Example:* A nurse struggled with the demands of working in an inner-city emergency department following treating clients who were involved in a mass shooting. One of the clients that the emergency room treated that day was a young member of the nurse's suburban community who unfortunately passed away due to the injuries sustained. The nurse spoke with the nurse manager and obtained mental health services and was granted time away from work to rest and recover from the trauma. The nurse subsequently returned to work with a renewed perspective of service and commitment to the many members of the community that are effectively treated annually in the emergency department.

TABLE C1 Nursing Theories at an Individual Level

C.2 Nursing Theories at the Family/Community/Population Level

Table C2 in this section includes family/community/population-level theories.

Theorist/Year	Focus	Concepts	Nursing's Role
Nightingale's Environmental Theory 1860	The goal of nursing is to put the patient in the best possible condition for nature to act. Nursing is "the activities that promote health in any caregiving situation. Nursing is the act of utilizing the patient's environment to assist him in his recovery."	Seven environmental factors that affect health: 1. Fresh air 2. Pure water 3. Efficient drainage 4. Bed and bedding 5. Cleanliness/ sanitation 6. Nutrition and food 7. Light/direct sunlight	Nurses can modify patients' environments according to their 10 canons (*nursing interventions*) to restore health/recovery: 1. Ventilation and warming 2. Light and noise 3. Cleanliness of the area 4. Health of houses 5. Bed and bedding 6. Personal cleanliness 7. Variety 8. Offering hope/advice 9. Food 10. Observation *Example:* Collaboration with the community to ensure that a migrant population has access to clean and healthy housing, bedding, access to sanitation services, and culturally congruent foods will offer hope for a brighter future.

TABLE C2 Nursing Theories at the Family/Community/Population Level

Theorist/Year	Focus	Concepts	Nursing's Role
Milio's Framework for Prevention 1976	Health deficits often result from an imbalance between a population's health needs and health-sustaining resources.	1. *Health status* is the result of deprivation and/or excess of critical health-sustaining resources. 2. *Behavior patterns* of populations are a result of limited choices, and these habits of choice are related to a. actual and perceived options available; and b. beliefs and expectations developed and refined over time by socialization, education, and experience. 3. *Organizational behavior* (governmental /nongovernmental) dictates the range of options available to individuals 4. *Individual choices* concerning health-promoting or health-damaging selections are affected by their effort to maximize valued resources. 5. *Social change* occurs as a result of changes in patterns in the choice-making of significant numbers of people within a population.	Nurses must examine the determinants of a community's health and attempt to influence those determinants through public policy. Use an upstream approach toward preventing diseases and conditions rather than waiting until illness occurs and then treating it. *Example:* Ensuring access to vaccinations and sanitary facilities to wash hands and making sure people use masks correctly to prevent the spread of airborne viruses and bacteria will improve the health of communities.

TABLE C2 Nursing Theories at the Family/Community/Population Level

Theorist/Year	Focus	Concepts	Nursing's Role
		6. *Health education* can have little impact on personal choice-making of groups of people without the availability of alternative health-promoting options for investing personal resources.	

TABLE C2 Nursing Theories at the Family/Community/Population Level

Theorist/Year	Focus	Concepts	Nursing's Role
Roy's Adaptation Model 1976	*Adaptation* occurs when people respond positively to environmental changes, and it is the process and outcome of individuals and groups who use conscious awareness, self-reflection, and choice to create human and environmental integration.	Concepts within the model are made of four components: 1. Health 2. Person 3. Environment 4. Nursing *Ten explicit assumptions:* 1. The person is a bio-psycho-social being. 2. The person is in constant interaction with a changing environment. 3. To cope with a changing world, a person uses coping mechanisms, which are biological, psychological, and social in origin. 4. Health and illness are inevitable dimensions of a person's life. 5. In order to respond positively to environmental changes, a person must adapt. 6. A person's ability to adapt is a function of the stimulus they are exposed to and their adaptation level. 7. The person's adaptation level comprises a zone indicating the range of stimulation that will lead to a positive response.	*The goal of nursing is to promote adaptation in the four adaptive modes.* Nurses promote adaptation for individuals and groups in the four adaptive modes, thus contributing to health, quality of life, and dying with dignity, by assessing behaviors and factors that influence adaptive abilities and by intervening to enhance environmental interactions. *Example:* Health concerns change across the lifespan. Providing communities with knowledge regarding the options to change when health concerns change is an important aspect of awareness, self-reflection, and personal choices.

TABLE C2 Nursing Theories at the Family/Community/Population Level

Theorist/Year	Focus	Concepts	Nursing's Role
		8. Each person has four modes of adaptation: physiologic needs, self-concept, role function, and interdependence. 9. Nursing values others' opinions and perspectives. Interpersonal relations are an integral part of nursing. 10. The objective for existence is achieving dignity and integrity.	
Salmon White's Construct for Public Health Nursing 1982	*Public health* is an organized societal effort to protect, promote, and restore people's health, and public health nursing is focused on achieving and maintaining public health.	*Three practice priorities:* 1. Prevention of disease and poor health 2. Protection against disease and external agents 3. Promotion of health Scope of prevention spans individual, family, community, and global care. *Targeted interventions are in four categories:* 1. Human/biological 2. Environmental 3. Medical/ technological/ organizational 4. Social	*Nursing Interventions* 1. Education is directed toward voluntary change in the attitudes and behaviors of the subjects. 2. Engineering is directed at managing risk-related variables. 3. Enforcement is directed at mandatory regulation to achieve health.

TABLE C2 Nursing Theories at the Family/Community/Population Level

Theorist/Year	Focus	Concepts	Nursing's Role
Block & Josten's Ethical Theory of Population-Focused Nursing	*Foundational values and beliefs reflected in the community health nursing process:* 1. Caring 2. Principles of primary health care 3. Multiple ways of knowing 4. Individual and community partnerships and empowerment	*Population-focused nursing's three essential elements:* 1. Obligation to population 2. Primacy of prevention 3. Centrality of relationship-based care	*Relationship-based care* is central to the provision of community-based nursing care. Public health nursing care will improve outcomes by understanding and by developing community-based relationships when providing care for a family, community, or population. Example: A nurse realized that health care in her home community was lacking in both primary and tertiary care. The nurse learned that there were not enough registered nurses in the region to care for the community. For many years, the nurse traveled back home to perform stroke screenings and maintained relationships with many members of the community. Several years later, this same nurse completed a doctoral degree and became the director of a bachelor's degree program. Given this experience, the nurse was asked to consult with a local university and community health partners to develop a successful Bachelor of Science Nursing program and obtained a grant to assist students with tuition and other support resources.

TABLE C2 Nursing Theories at the Family/Community/Population Level

Theorist/Year	Focus	Concepts	Nursing's Role
Social Ecological Model of Health: World Health Organization 1947	Not specific to nursing; the focus is the complex interplay between individual, relationship, community, and societal factors.	Health is affected by the interaction between the individual, the group/ community, and the physical, social, and political environments.	Create engaged partnerships and identify a comprehensive list of factors that contribute to poor health among individuals. Encourage the possibility of interpersonal relationships and community resources and for society to eliminate harm from the environment. Example: The Nightingale Initiative for Global Health (NIGH) was created to engage and empower the world's 27 million nurses and student nurses to advocate for global health by efforts. NIGH seeks to reach the United Nations (UN) Sustainable Development Goals and to promote the UN Declaration on the Rights of Indigenous Peoples. NIGH encourages self-care by working together in the global community. https://www.nighvision.net/our-vision-mission--values.html

TABLE C2 Nursing Theories at the Family/Community/Population Level

Theorist/Year	Focus	Concepts	Nursing's Role
PRECEED PROCEED Model (PPM) Crosby & Noar 2011	Designed for creating, implementing, and evaluating public health programs. PRECEDE = Predisposing, Reinforcing, and Enabling Constructs in Educational Diagnosis and Evaluation PROCEED = Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development	An ecological approach to health promotion. Two key aspects of intervention are planning and evaluation. The planning process is arranged by objectives and sub-objectives.	This is a medical perspective to public health even though its focus is health promotion rather than treatment of disease.
County Health Rankings Model (https://openstax.org/r/healthranking)	Explores the measures that influence the quality and quantity of life by showing how policies and programs influence health factors that affect a community's health outcomes.	The physical environment accounts for 10 percent (air and water quality, housing, and transit). Social and economic factors account for 40 percent (education, employment, income, family and social support, and community safety). Clinical care accounts for 20 percent (access to and quality of care). Health behaviors account for 30 percent (tobacco use, diet and exercise, alcohol and drug use, and sexual activity).	Not nursing-specific but helps nurses to define the factors in the county that affect health outcomes.

TABLE C2 Nursing Theories at the Family/Community/Population Level

APPENDIX D

Frequently Used and Misused Substances

The most commonly used drugs are:

- marijuana,
- cocaine,
- opiates,
- methamphetamines, and
- alcohol.

The National Institutes of Health (NIH) National Institute on Drug Abuse (NIDA) provides current information on substance use and misuse along with a Commonly Used Drugs Chart (https://openstax.org/r/nidanih.govre) with links to information about each drug.

NIDA also provides a PDF of commonly used substances and principles of drug addiction treatment: Commonly Abused Drugs (https://openstax.org/r/nidanihgovsi).

As a population health nurse, your role in screening clients for a substance use disorder could save their life. However, it may be challenging to start the conversation. See this link (https://openstax.org/r/cdcgovop) from the CDC on talking about drug use with your clients.

Your words will matter when discussing addiction; use person-first language. This guide (https://openstax.org/r/nidanihgovni) offers tips to remember in order to reduce the stigma and negative bias surrounding addiction.

APPENDIX E

Nurse-Designed Models of Care

To recognize the work, leadership, determination, and contributions of nurses who are at the forefront of innovations in population health, the American Academy of Nursing (AAN, 2023) created the Edge Runners program (https://openstax.org/r/runnersprofiles). The AAN annually recognizes nurse-designed models of care that reduce cost, improve care quality, promote health equity, and increase client satisfaction. Table E1 lists population health programs across care areas that were invented by nurses. Please note, the table is a comprehensive listing as of June 2023.

Program Name	Nurse Innovators
10 Steps to Promote and Protect Human Milk and Breastfeeding in Vulnerable Infants	Diane L. Spatz PhD, RN-BC, FAAN
11th Street Family Health Services	Patricia Gerrity PhD, RN, FAAN
A Caring Science Model of Specialized Dementia Care for Transforming Practice and Advancing Health Equity	María de los Ángeles Ortega (formerly Ordóñez), DNP, APRN, GNP-BC, PMHNP-BC, CDP, FAANP, FAAN
Accountable Community of Health	Billie Lynn Allard, MS, RN
The Aging in Place Project	Marilyn Rantz, PhD, RN, FAAN
The American Association of Critical Care Nurses (AACN) Clinical Scene Investigator (CSI) Academy	Karen Cox, PhD, RN, FAAN; Susan R. Lacey, PhD, RN, FAAN
Angel Eye Web-Camera System	Sarah Rhoads, PhD, DNP, WHNP-BC
Arkansas Aging Initiative	Claudia J. Beverly, PhD, RN, FAAN
Canines Providing Assistance to Wounded Warriors (C-P.A.W.W.)	Cheryl Krause-Parello, PhD, RN, FAAN
Caregiver Skill Building Intervention (CSBI)	Carol J. Farran, DNSc, RN, FAAN
Center for Midwifery – CU College of Nursing	Jessica Anderson, DNP, CNM, WHNP, FACNM
Centering Healthcare Institute	Sharon Schindler Rising, CNM, MSN
The Chicago Parent Program	Deborah Gross, DNSc, RN, FAAN; Susan Breitenstein, PhD, RN, FAAN; Christine Garvey, PhD, RN; Wrenetha Julion, PhD, MPH, RN, FAAN
Collaborative Alliance for Nursing Outcomes	Nancy Donaldson, DNS, RN, FAAN; Diane Storer Brown, PhD, RN, FNAHQ, FAAN
Collaborative KMC Care Model	John N. Cranmer, DNP, MPH, MSN, BSN, ANP, CPH, EBP(CH); Lynn M. Sibley, CNM, RN, PhD, FACNM, FAAN; Abebe Gebremariam Gobezayehu, MD; Lamesgin Alamnih, BSc, MPH; Mulusew Lijalem Belew, MHS, BS, AD
Community Aging in Place: Advancing Better Living for Elders (CAPABLE)	Sarah Szanton, PhD, ANP, FAAN

TABLE E1 AAN Edge Runners Population Health Programs

Program Name	Nurse Innovators
Community-Based Smoking Cessation Program (CSCP)	Man Ping Wang, PhD, MPH, MPhil, BNurs, RN, FAAN
Community Health Education, Advocacy, and Empowerment: Promotores de la Salud	Connie Vance, EdD, RN, FAAN; Mary Healey-Sedutto, MPA, PhD
Complex Care Center	Lauran Hardin, MSN, RN-BC, CNL
Coping Skills Training	Margaret Grey, DrPH, RN, FAAN
Creating Opportunities for Parent Empowerment (COPE)	Bernadette Mazurek Melnyk, PhD, RN, CPNP/PMHNP, FAAN, FNAP
Creating Opportunities for Personal Empowerment (COPE) for Children, Teens, and College-Age Students	Bernadette Mazurek Melnyk, PhD, RN, CPNP/PMHNP, FAAN, FNAP
¡Cuídate!	Antonia M. Villaruel, PhD, FAAN; Loretta Sweet Jemmott, PhD, RN, FAAN
Danger Assessment: An Instrument to Help Abused Women Assess Their Risk of Homicide	Jacquelyn Campbell, PhD, RN, FAAN
Durham Homeless Care Transitions	Julia Gamble, MPH, NP, RN; Donna Biederman, DrPH, MN, RN, CPH, FAAN; Sally Wilson, MDiv
Fall Tailoring Interventions for Patient Safety (TIPS)	Patricia C. Dykes PhD, MA, RN, FAAN, FACMI; Ann Hurley, DNSc FAAN, FGSA; Diane Carroll, PhD, RN, FAAN, FAHA, FESC
Family Health and Birth Center in the Developing Families Center	Ruth Watson Lubic, EdD, RN, CNM, FAAN
Family Practice and Counseling Network	Donna Torrisi, MSN, CRNP
Family Presence During Invasive Procedures and Cardiopulmonary Resuscitation	Cathie Guzzetta, PhD, RN, FAAN; Angela Clark, PhD, RN, FAAN, FAHA
Families Talking Together	Vincent Guilamo-Ramos, PhD, MPH, LCSW, RN, ANP-BC, PMHNP-BC, FAAN
Farm Dinner Theatre	Deborah B. Reed, PhD, MSPH, RN, FAAOHN, FAAN
The Harambee Nursing Center	Kay T. Roberts, EdD, MSN, ARNP, FAAN
The Harriet Lane Compassionate Care Program	Cynda Hylton Rushton, PhD, RN, FAAN
Immersion Model for Diversifying Nurse Anesthesia Programs	Wallena Gould, EdD, CRNA, FAANA, FAAN
Improving the Accuracy of Linear Growth Assessment in Children	Terri Lipman, PhD, CRNP, FAAN; Karen D. Hench, MS, RN
INSIGHTS into Children's Temperament	Sandee McClowry, PhD, RN, FAAN
Integrated Health Care (IHC)	Judith Storfjell, PhD, RN, FAAN
Interprofessional Practice at the Vine School Health Center: A School-Based Nurse-Managed Clinic	Nan M. Gaylord, PhD, RN, CPNP- PC, PMHS, FAANP, FAAN

TABLE E1 AAN Edge Runners Population Health Programs

Program Name	Nurse Innovators
Kentucky Racing Health Services Center	Whitney Nash, PhD, APRN; Sara Robertson, DNP, APRN, FNP
Living Independently for Elders Center (LIFE)	Eileen M. Sullivan-Marx, PhD, RN, FAAN
Los trastornos del sueño y la promoción del sueño saludable [Sleep disorders and the promotion of healthy sleep]	Carol M. Baldwin, PhD, RN, CHTP, CT, AHN-BC, FAAN; Cipriana Caudillo Cisneros, MS, RN; Luxana Reynaga Ornelas, PhD, MSN, RN
Making Transitional Care More Effective & Efficient	Mary D. Naylor, PhD, RN, FAAN
Mantram Repetition Program: Mind-Body-Spiritual Approach to Symptom and Stress Management	Jill E. Bormann, PhD, RN, FAAN
Marquette Model of Natural Family Planning and Fertility Awareness Based Method	Richard J. Fehring, PhD, RN, FAAN; Mary Schneider, PhD, APRN, FNP-BC; Susana Crespo, BSN, RN, NFPI; MaryLee (Kiene) Barron, PhD, APRN, FNP-BC; Qiyan Mu, PhD, RN; Thomas Bouchard, MD, Family Medicine; Kathleen Raviele, MD, Ob/Gyn
Mental Health Integration at Intermountain Healthcare, UT	Brenda Reiss-Brennan, PhD, APRN
The Mount Sinai Primary Care Hepatitis C Clinical and Research Program	Donald Gardenier, DNP, FNP-BC, FAANP, FAAN; Jeffrey J. Weiss, PhD, MS
National University Nurse Managed Clinic	Gloria J. McNeal, PhD, MSN, ACNS-BC, FAAN; Arneta Finney, PhD, APRN, FNP-C, APWHc, CNL; Angela Williams, PhD, FNP-C, APRN, CNL; Patricia L. Humbles, PhD, RN (Ret.)
Nurse Managed Health Centers	Tine Hansen-Turton, FAAN; Joanne M. Pohl, PhD, ANP-BC, FAAN
Nurse-Family Partnerships Helping First-Time Parents Succeed	Harriet Kitzman, PhD, RN, FAAN
Nurses Improving Care for Healthsystems Elders (NICHE)	Mattia J. Gilmartin PhD, RN, FAAN; Jennifer L. Pettis, MSN, RN, CNE; Eugenia Bachaleda, MA; Louise Simon, BS, LLM, ICBB; Joanna Melendez, BS; Eileen Sullivan-Marx, PhD, RN, FAAN; Terry Fulmer, PhD, RN, FAAN
On Lok Senior Health Services	Jennie Chin Hansen, MS, RN, FAAN
One Year Post-Baccalaureate Nurse Residency	Colleen J. Goode, PhD, RN, FAAN, NEA-BC; Cathleen Krsek, MSN, MBA, RN, FAAN
Oral Care in Mechanically Ventilated Adults	Cindy Munro, PhD, RN, ANP-BC, FAANP, FAAN, FAAAS
Oral Health Nursing Education and Practice Program	Judith Haber, PhD, APRN, FAAN; Erin Hartnett, DNP, PNPPC-BC, CPNP
PATHways Prenatal Program and Beyond Birth Comprehensive Treatment and Recovery Program	Kristin Ashford, PhD, WHNP-BC, FAAN; John O'Brien, MD, MFM; Seth Himelhoch, MD, MPH
Perioperative Pressure Ulcer Prevention Program	Susan M. Scott, MSN, RN, WOCN
Quality Improvement Program for Missouri (QIPMO)	Marilyn J. Rantz, PhD, RN, FAAN
Quiet4Healthy Farm	Marjorie McCullagh, PhD, RN, APHN-BC, COHN-S, FAAOHN, FAAN

TABLE E1 AAN Edge Runners Population Health Programs

Program Name	Nurse Innovators
Reducing Depressive Symptoms & Enhancing Parenting in Low-Income & Newly-Immigrated Mothers of Infants & Toddlers	Linda S. Beeber, PhD, PMHCNS-BC, FAAN
RightCare Solutions	Kathryn H. Bowles, PhD, RN, FAAN, FACMI
Senior ASSIST	Diane McGee, MSN, RN
SeniorWISE	Graham J. McDougall, Jr., PhD, RN, FAAN, FGSA
Special Care Unit for the Critically Ill	Barbara Daly, PhD, RN, FAAN
Suicide Prevention in Nursing: Breaking the Silence	Judy E. Davidson, DNP, RN, MCCM, FAAN
Talking Circle Intervention	John Lowe, PhD, RN, FAAN
TelEmergency: Distance Emergency Care Using Nurse Practitioners	Kristi Henderson, MSN, FAEN
Tobacco Free Nurses	Linda Sarna, PhD, RN, FAAN; Stella Aguinaga Bialous, DrPH, RN, FAAN
Training in the Assessment of Depression	Ellen L. Brown, EdD, RN
Transforming Care at the Bedside	Susan B. Hassmiller, PhD, RN, FAAN; Patricia Rutherford, MS, RN
Transforming the Alzheimer's Experience with an App: Dementia Guide Expert	Valerie Gruss, PD, APRN, GNP-BC, FAAN
Transforming Post-Hospitalization, Newborn Circumcision Care Through a Nurse Practitioner-Led Care Delivery Model	Vivian W. Williams, MSN, RN, CPN
UCLA Alzheimer's and Dementia Care (ADC) Program	Leslie Chang Evertson, GNP-BC; Mihae Kim, AGPCNP-BC; Michelle Panlilio, GNP-BC; Kelsey Stander, AGNP-BC
Wise Health Decisions	Nancy E. Dayhoff, EdD, RN, CNS; Patricia S. Moore, MSN, RN, CNS, CDE

TABLE E1 AAN Edge Runners Population Health Programs

ANSWER KEY

Chapter 1

Review Questions

1. b. Population health aims to improve health outcomes for groups of people, with a special focus on public policy and environmental, social, and behavioral factors that impact health for all.
2. c. Individual-level interventions work to improve the health of one client at a time.
3. a. A central tenet of population health is emphasizing preventive efforts and proactively facilitating health instead of reacting to diseases as they come.
4. b. A midstream approach to improving health outcomes involves activities that happen in a specific organization, such as a lunchtime walking program.
5. b. Health education workshops can reach a large group of clients in a community and provide them with knowledge and skills to support their own health, prevent disease, and even promote health among their families and friends.
6. d. General mortality is the number of deaths across a large population. Reports of general mortality include information about the leading causes of death across the population and estimates of years of potential life lost when people die prematurely.
7. b. Siloed health care is also the practice of treating one condition or disease at a time without consideration of other diagnoses or the client's living environment, education, social situation, and family, among other characteristics.
8. a. Population-based practices in nursing focus on improving the health of populations through proactive, not reactive, approaches to health and wellness.
9. d. Transitional care involves coordination of clients as they move between different care settings of the health care continuum. It should facilitate a smooth transition for the client and minimize the risk for errors.
10. b. Ambulatory care provides health services on an outpatient basis in clinics and health centers. Ambulatory care can meet health needs through targeted clinics or specialized health services, such as for a chronic condition.

Chapter 2

Review Questions

1. b. Notifiable infectious diseases, such as hepatitis A, require health care providers to report the disease to public health officials. Reporting is mandated by law at state and local levels, whereas reporting to the CDC is voluntary.
2. c. Upstream interventions target the root causes or sources of health issues instead of focusing on symptom management or consequences of disease. Obtaining funding for a walking trail addresses a deficit in the community that may contribute to sedentary lifestyles.
3. d. Public health focuses on improving the health of the entire public and supports population health, which focuses on the health of a group of people. The public health nurse recommends and organizes efforts in public policy, governance, and health services to protect and advance the health of the population.
4. b. Reform movements concerning child labor, working conditions, and overcrowding of cities led to policies and regulations aiming to protect the health of the public. This period in U.S. history, and the efforts of workers to reform practices, are credited with establishing the modern public health system.
5. c. Illness surveillance and monitoring is one example of public health supporting population health. Public health departments collect data on the health of the population through various channels. They may use formal surveillance systems, such as requesting hospital or county reports, or they may conduct targeted surveys. Data is collected and analyzed to obtain a complete picture on rates of disease, injury, contamination, contagiousness, health impact, and other variables or indicators.
6. b. The three core functions of public health include assessment, policy development, and assurance. When

engaged in the core function of assessment, the public health nurse monitors a community's health trends, health disparities and injustices, and health problems requiring intervention and resource support.

7. d. The three core functions of public health include assessment, policy development, and assurance. The assurance function aims to promote justice and equity in health care and actively works to make health attainable for all.
8. d. Quaternary prevention refers to actions taken to protect individuals from health interventions that may be unnecessary or potentially harmful. Clients should not be subjected to tests that will ultimately not change the treatment plan. Similarly, clients should not undergo treatments or procedures that may do more harm than good.
9. c. The goal of tertiary prevention strategies is to reduce the negative impact of a health condition and prevent complications.
10. d. Primary prevention activities focus on preventing adverse health outcomes by targeting populations or groups at high risk of a disease, disorder, or condition. Providing education to adolescents on reducing the risk of sexually transmitted infections can address lifestyle factors and promote healthy behaviors.

Chapter 3

Review Questions

1. b. Community health refers to a community's physical, mental, and social well-being and involves health promotion, risk reduction, and disease prevention efforts to support health. Promoting a weekly farmer's market of locally grown produce provides the opportunity for the community to engage in healthy eating practices to reduce the risk for heart disease.
2. b. Following WWII, nurses sought professional roles with greater autonomy and found that public/community health nursing met this need. In this public/community health role, nurses provided education to raise public awareness of health issues, including the promotion of vaccinations to increase the proportion of the population receiving a vaccination.
3. c. Scope of practice refers to the professional activities involved in the role of registered nurse. Defining a scope of practice helps nurses work within and to their level of qualification, expertise, and competence. Standards of practice are the principles and guidelines professionals must adhere to in their role.
4. b. The ANA has identified nine core concepts of practice based on the dynamic and complex work of public health nursing: social determinants of health, community collaboration, population health, ecological model of health, culturally congruent practice, levels of prevention, ethics, social justice, and health equity.
5. c. The public health sciences domain of the Quad Council Coalition's Community/Public Health Nursing Competencies focuses on understanding the foundation and prominent events of public health, applying public sciences to practice, critiquing and developing research, using evidence when developing policies and programs, and establishing academic partnerships.
6. b. The Quad Council Coalition's Community/Public Health Nursing Competencies were developed to guide the professional development of community health nurses. Cultural competency skills include understanding and responding to diverse needs, assessing organizational cultural diversity and competence, assessing effects of policies and programs on different populations, and taking action to support a diverse public health workforce.
7. b. Downstream interventions include responses to health issues without focusing on solving or preventing health problems, such as assisting clients in the management of their diagnoses.
8. c. Social prescribing involves referring clients and families to community resources, activities, and groups other than those traditionally thought of as being related to the health care setting. Volunteering is an example of social prescribing that can improve a client's emotional health, social connectedness, and feelings of empowerment.
9. b. Promoting health via a television news interview about bike safety tips for children represents primary prevention, as viewers will receive health education to prevent accidents and injury.
10. a. Secondary prevention activities are those aimed at early disease detection, such as educating the public about the signs and symptoms of influenza.

Chapter 4

Review Questions

1. c. Mortality is the number of deaths in a certain group of people during a certain period of time.
2. d. The social determinants of health (SDOH) are the conditions of the environments in which an individual is born, lives, learns, works, plays, and worships. They include economic stability, education access and quality, health care access and quality, neighborhood and built environment, and social and community context.
3. d. Vital statistics—the records of birth, death, marriages, health, and disease—are a critical national information resource for understanding public health.
4. c. Increased lifespan has largely been attributed to improvements in sanitation, water supplies, workplace safety, food and drug safety, immunization rates, nutrition, hygiene, and housing.
5. d. Health can be defined as the absence of disease or impairment, as a state of being that allows the individual to adequately cope with all the demands of daily life, or as a state of balance that an individual has established within themselves and with their social and physical environment. The client who perceives that they are in good health despite being treated for high blood pressure is displaying an internal balance in which chronic illness is not negatively affecting well-being.
6. c. The years of reasonable quality of life that the client will gain after quitting smoking are referred to as quality-adjusted life years.
7. c. The combined measure of mortality and morbidity rates is referred to as the burden of disease, an indication of the effects of disease on a population. The burden of disease is measured by disability-adjusted life years.
8. a. Heart disease has been the leading cause of death globally for more than 20 years and is the most common cause of death for both men and women overall and for most racial and ethnic groups in the United States.
9. a. United Nations member countries established sustainable development goals to create a more fair, just, and equitable world. Goals related to the planet address climate change and managing natural resources.
10. a. Life expectancy in the United States has increased over the past 100 years, and the rate of death has decreased.

Chapter 5

Unfolding Case Study

1. a. Underrepresented populations, such as ethnic minorities, tend to be impacted the most by chronic health conditions such as hypertension and heart disease.
2. c. Jose's unstable financial situation makes it likely he will experience a health disparity or a preventable difference in disease experienced by members of a vulnerable population.
3. b. The nurse should be open with the client when communicating to establish trust.
4. d. Frequently clients do not take medications as prescribed due to costs. In this situation, with a client who has lost his job and has limited financial resources, the most effective strategy to encourage him to take the medication to make sure he can afford it.

Review Questions

1. b. As baby boomers born from 1946 to 1964 continue to age, the United States will have an increased need for health care services in nursing homes, long-term care, and home health care facilities.
2. a. The working poor are individuals who make too much to qualify for public health insurance programs such as Medicaid but do not make enough money to afford health insurance premiums. These clients tend to have poor health outcomes because they often wait to seek care until their disease processes are more advanced.
3. a. Health disparities overwhelmingly affect ethnic minorities and are defined as "preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations" (CDC, 2020, para. 1).
4. c. Telehealth allows for improved communication and ease of communication between the client and provider, especially for the client who lives far from the provider.
5. c. Many nurses reported that, because the stress of working through the COVID-19 epidemic adversely affected their emotional health and well-being, they chose to leave their jobs.

6. a. Asian/Pacific Islanders experience the highest rate of hepatitis B when compared with other ethnic groups.
7. b. Vulnerable populations, including transgender individuals, often face discrimination and stigma by health care providers and, therefore, may have a lack of trust in the health care system.
8. b. To increase trust with clients from underrepresented populations, the nurse should be attuned to the client's access to resources, such as transportation, and work to address any barriers.
9. b. The ACA lowered Medicaid eligibility requirements, increasing opportunities for those who need it.
10. b. Telehealth allows for increased access to health care services, especially for those living in rural areas. Home monitoring is often paired with telehealth to allow for the long-term and continuous monitoring of chronic diseases, such as hypertension. When upward trends in blood pressure are observed, the health care team can more readily address the issue.

Chapter 6

Review Questions

1. a. Racism refers to the unfair treatment of individuals based on race. Race is a social construct, a way of categorizing or dividing individuals based on physical traits, social factors, and cultural backgrounds; it is not biologically based. Structural racism, also called institutional racism, is a process resulting in a gap in access to societal opportunities based on race, including differential access to quality education, housing, employment, medical care, and limited power and voice.
2. b. Microaggressions are common, everyday slights, snubs, or insults directed toward minorities that may be intentional or not, but they communicate derogatory or negative messages to individuals based upon their minority group status, such as complimenting an Asian client on their English.
3. a. Racial profiling refers to assuming or suspecting a person of criminal behavior based on race alone.
4. b. While many safety-net programs were developed for underrepresented and vulnerable populations such as older adults, children, individuals with limited income, or individuals with disabilities, some government policies have been written in a way that locks out many individuals who would otherwise qualify. For example, some states have attempted to impose eligibility restrictions on Medicaid expansion, including work-reporting requirements rooted in racist assumptions about the work ethic of Black individuals.
5. b. Allostatic load is the body's physiologic "wear and tear" due to an individual's exposure to stressors that accumulate throughout the lifespan. Allostatic load has been studied extensively in the setting of structural discrimination and racism and can be measured from biomarkers such as blood pressure, albumin, hormone levels, cholesterol levels, and C-reactive protein levels among others. High allostatic load is associated with increased adverse cardiac outcomes and chronic diseases, such as hypertension.
6. b. Red lines were often drawn around communities with large Black populations, effectively labeling them as hazardous investment areas. The term *redlining* came to mean a system of denying borrowers access to mortgage loans based on the location of properties in disadvantaged neighborhoods that were often comprised of minority populations. Such changes paved the way for industry to move in with coal-fired power plants, bus garages, and hazardous waste disposal plants, mostly in low-income BIPOC communities. Most redlined neighborhoods were in urban areas where widespread community disinvestment resulted in less green space and tree canopies and increased urban heat exposure.
7. d. Historically, BIPOC communities distrust health care systems due to the egregious harms they have experienced throughout history.
8. b. Implicit bias refers to an unconscious bias, or negative attitude against a specific individual or group based on race. It often manifests as nurses administering less pain medication to their BIPOC clients in comparison to their White clients. The nurse is treating the pain and not ignoring it but is letting the unconscious bias that Black individuals experience less pain than White individuals interfere with appropriate and equitable care.
9. a. Food deserts are often located in lower-income neighborhoods due to factors such as redlining and the marginalization of BIPOC and low-income communities. Redlining is a prime example of the structural nature of racism.
10. c. While health insurance coverage and access and income level are implicated in health care disparities, studies have demonstrated that when these items are controlled for (or considered equal), studies have continued to demonstrate BIPOC women are less likely to receive routine medical care and overall experience a lower quality of care, highlighting the prominent role of provider discrimination.

Chapter 7

Review Questions

1. d. Medicare is a government health insurance program that covers Americans 65 years of age and older, regardless of their health. It may also cover some individuals with disabilities, end-stage renal disease, and amyotrophic lateral sclerosis.
2. c. The Hospital Value-Based Purchasing Program bases Medicare payments on quality of care rather than services performed. The development of a pressure injury while in the hospital is considered a negative outcome, leading to decreased reimbursement. Therefore, hospitals are incentivized to focus on health care quality.
3. c. The use of telehealth can provide care remotely to individuals who live in care deserts where there is limited access to health care services.
4. b. Care delivery models refer to how health care providers work together to provide health care to clients. In the integrated service lines, hospitals and health care systems organize around specific disease states such as heart failure throughout the continuum of client care.
5. c. A marginalized community is one that is excluded from the dominant group's cultural, economic, educational, or social life. Marginalized communities are likely to face barriers to accessing health care, such as a lack of health insurance or a paucity of health care providers within the community.
6. c. LHIs are a subset of high-priority Healthy People 2030 objectives aimed at improving health and well-being across the lifespan and topic areas.
7. c. Community health nurses need to recognize the impact of high drug prices on their clients who may not take their medications if they cannot afford them. Among other options, nurses should contact the prescribers to identify less costly alternatives for the client.
8. b. Mechanisms for delivering public health policy interventions include fiscal policy, regulation, education, preventative treatment, and screening. Screening involves testing to detect diseases or other issues before symptoms are apparent, such as screening for elevated lipid levels that can detect coronary artery disease before symptoms of heart disease develop.
9. c. The medical home model of care uses an integrated team approach to provide care for the whole person, including physical and social needs.
10. b. The IHI Triple Aim is a framework developed by the IHI that aims to improve health care system performance using five components. The component of Population Health Management is involved in prevention and health promotion.

Chapter 8

Review Questions

1. a. The social determinants of health are the conditions in environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.
2. c. Stable employment with a living wage is the key to economic stability.
3. d. Exposure to crime and violence is an adverse childhood experience, as it is a traumatic event that undermines a child's sense of safety, security, and bonding.
4. b. A higher education is associated with higher-paying jobs and therefore a higher socioeconomic position (SEP). SEP is a main driver of better health outcomes. Individuals with higher levels of educational attainment are more likely to live longer and healthier lives.
5. a. Volunteering and giving back to the community is a prime example of building social capital. This is a form of civic participation and benefits both the individual and community.
6. a. By providing mobile health screenings for individuals who are unable to make it to the clinic, the health care team is thinking from a health equity lens, recognizes that everyone is not the same, and distributes the exact resources or opportunities (in this case, a mobile health screening unit) needed by each individual to reach an equal outcome among individuals.
7. a. Health disparities are preventable differences in health between groups of individuals, usually as a result of social or economic factors, geographic location, and environment. BIPOC clients who are pregnant

experience the highest rates of infant mortality due to a myriad of social and economic disadvantages including racism.

8. c. Clinical care impacts only 20 percent of health outcomes.
9. a. The SDOH affect the health and wellness of individuals and contribute to many risk factors for disease and premature death. There is a large inequity in the distribution of disease in this country, and the way to address these disparities is by being equitable and not just focusing on equality.
10. c. Upstream thinking refers to looking beyond lifestyle choices and instead addressing the root causes of some of the health style choices. For this scenario, having a lack of safe places to exercise is the main driver of the low levels of physical activity.

Chapter 9

Unfolding Case Study

1. d. The clients' physical environment is most likely hindering their ability to attend their appointments, resulting in inadequate prenatal care and ultimately poor outcomes.
2. b. All of these choices could potentially affect someone's ability to access health care, but having adequate insurance coverage is most likely to facilitate clients' access to health care.
3. b. Residential segregation is a form of systemic racism that keeps minority groups living in certain disadvantaged areas.
4. c. Tracking pregnancy-related complications is a more accurate measure of the effectiveness of interventions to address maternal health disparities.

Review Questions

1. d. Health determinants are nonmedical factors that influence health outcomes. Individuals can be exposed to environmental factors such as pollution that affect their health.
2. a. A health disparity is a health difference that adversely affects disadvantaged populations in comparison to a reference population based on one or more health outcomes.
3. c. Encouraging families to share healthy recipes with one another incorporates the effects of the families' sociocultural environment and their interpersonal levels of influence on their health.
4. a. Intersectionality occurs when one type of discrimination intersects with other factors of discrimination, such as gender, ethnicity, socioeconomic status, disability, age, geographic location, gender identity, and sexual orientation, among others.
5. b. Discrimination results from prejudices. Prejudice can contribute to members of disadvantaged groups experiencing poor health outcomes—in this situation, poor pain control.
6. d. Inadequate availability of culturally competent providers can limit health care access for non-English-speaking clients.
7. b. Race is a determinant of health that can lead to health disparities. For example, Black people are at a greater risk of developing certain diseases than their non-minority counterparts because they have less access to health care and experience greater levels of poverty.
8. c. Medicaid expansion, part of the Affordable Care Act, expanded the number of people eligible for Medicaid. Insured clients are more likely to report a regular source of health care. Differences in Medicaid eligibility vary among the states, which can account for differences in insurance coverage–related outcomes.
9. d. Gender norms are social and cultural principles that influence ideas on how different genders are supposed to behave in society. Among these factors, social norms related to masculinity are most likely to affect the adherence rates of men performing testicular exams.
10. a. Rural residents are more likely to engage in riskier health behavior and have poorer health outcomes than residents of urban areas.

Chapter 10

Review Questions

1. b. Genetic associations are only one component of a client's health, which includes lifestyle, environment, and social factors.

2. b. Pender's Health Promotion Model helps nurses understand the determinants of health behavior to promote health through effective behavioral counseling. The model directs nurses to assess for eight beliefs when planning for behavior change and health intervention. The belief of perceived self-efficacy is the personal capability to organize and execute a particular health behavior and self-confidence in performing the health behavior successfully, such as this client's verbalization of confidence in developing a healthy weekly meal plan for the family.
3. d. The Socio-Ecological Model considers how human growth and behavior can accommodate and change given the environment and systems that exist around people and how people interact with such environments and systems. The five systems identified in this model are the microsystem, mesosystem, exosystem, macrosystem, and chronosystem. The macrosystem includes codified laws, regulations, and rules as well as economic, social, educational, and legal systems.
4. b. The UNICEF Socio-Ecological Model uses a socio-ecological approach as a conceptual framework for many health-promoting initiatives at the individual/interpersonal, community, organizational/institutional, and policy/system enabling environments levels. The nurse is effecting change at the community level by focusing on social beliefs and norms about breastfeeding.
5. b. The Socio-Ecological Model considers how human growth and behavior can accommodate and change given the environment and systems that exist around people. Looking for causative factors for an increase in asthma diagnoses is an example of the environment that may be contributing to rising rates of asthma among grade-school children.
6. b. Family health history helps identify strong risk factors or predictors for acquiring certain conditions and disorders, such as diabetes. However, family history alone does not mean a person will develop a disease. Although genetic associations can be robust, genetics are still only one component in an overall health picture. As heritability and the presence of certain genes or attributes are measurable, scientists can calculate the impact of genetics versus lifestyle, social, and other factors on specific health risks.
7. c. Treating all clients regardless of their ability to pay is an example of how health care can be affected by decisions made at the organizational level.
8. a. The Socio-Ecological Model considers how human growth and behavior can accommodate and change given environments, systems, and how people interact with them. The five systems identified in this model are the microsystem, mesosystem, exosystem, macrosystem, and chronosystem. The exosystem includes informal and formal social structures that do not contain the individual but encompass the settings where the individual lives, such as limited healthy food choices in a neighborhood.
9. d. The Theory of Planned Behavior explains how intention, attitudes, subjective norms, perceived behavioral control, and risk perception influence behaviors. Risk perception include a person's thoughts about the benefits and hazards of acting or not acting, such as the belief that smoking is unhealthy.
10. d. The Transtheoretical Model, also called the Stages of Change, explains how individuals progress through different phases of behavior change. In the precontemplation stage, the client does not intend to take action in the next 6 months.

Chapter 11

Unfolding Case Study

1. b. The components of an effective PICOT question are population, intervention, comparison, outcome, and time.
2. c. The intervention refers to the change or treatment that will be implemented for the identified population. The intervention in this PICOT is daily exercise.
3. c. After the PICOT question has been developed, the next step is to search the literature for research evidence to support the proposed intervention of exercise to reduce anxiety in adolescents.
4. d. Though all of the above databases could be used, Medline Full Text specifically highlights articles regarding public health and public policy.
5. d. Critically appraising each study for relevance and credibility is necessary to ensure the information provided is meaningful, trustworthy, and relevant. Information is considered trustworthy based on its confirmability and the reviewer's confidence in the believability of the information produced in the literature.
6. a. Researchers use a pyramid to rank the evidence. At the highest level of the pyramid, randomized controlled

studies should be used first to compile the most effective evidence.

Review Questions

1. c. EBDM provides a concrete, objective, and replicable process to ensure that interventions are supported by data.
2. b. The applicability of a research article refers to how well the results and data can pertain to broad or specific populations.
3. a. Case reports and case studies are the lowest levels of the hierarchy of evidence or research.
4. b. Zinc supplementation is the intervention in this PICOT question. Intervention is the change or treatment that will be implemented for the identified client (population).
5. b. Synthesizing the data involves compiling the information to determine what the research is saying about the concern/issue and identifying common trends in the data.
6. a. Databases, collections of information organized in a systematic method, are helpful during the process of searching for sources of existing literature related to the topic of one's inquiry. The Cochrane Library database is a core source for EBP, including systematic reviews that are regularly updated.
7. d. Each participant in a research study should receive fully transparent information regarding the intent of the research and how the information will be used.
8. d. The population of a PICOT question is the individuals, community, or population being studied. In this research question, the nurse is studying high school students in a specific rural community who smoke.
9. a. Qualitative research deals with nonnumerical data such as experiences, attitudes, and behaviors.
10. c. During the evaluation phase, the final step in EBDM, the nurse determines the effectiveness of the implemented plan by determining if the plan accomplished what was intended and, if not, what may need to be changed moving forward.

Chapter 12

Review Questions

1. c. Epidemiology includes assessment of the distribution (including describing demographic characteristics of an affected population), determinants (including a study of possible risk factors), and application to control health problems (such as closing a restaurant).
2. a. The epidemiologic triad of disease causation refers to agent-host-environment.
3. a. Direct transmission occurs when an infectious agent is transmitted by direct contact or droplet spread. Droplet spread is considered direct transmission as the particles travel only a short distance and do not remain suspended in the air for long periods of time or distance.
4. a. Endemic refers to the continual and constant presence of a disease within a given geographic area. It may also be referred to as the usual rate of disease at any given time.
5. c. A study that assesses exposure and documents subsequent occurrence of disease in a group who all have the same disease is an observational cohort study.
6. a. The hallmark feature of an analytic epidemiologic study is use of an appropriate comparison group.
7. a. A study in which subjects are randomized into two intervention groups and monitored to identify health outcomes is a clinical trial, which is a type of experimental study.
8. b. Nightingale, the founder of professional nursing, engaged in epidemiological work by using statistics to identify a connection between poor sanitation and negative health outcomes. Nightingale gathered data to demonstrate that her sanitation reforms reduced deaths in military hospitals in Crimea.
9. b. In the subclinical stage, individuals have no overt symptoms. In infectious diseases, this stage includes an incubation period during which the pathogen multiplies to produce clinical symptoms. In noninfectious disease, it includes a latency period.
10. c. The prevalence rate is the proportion of a population with a health condition, such as pneumonia, at a certain point in time or time interval, such as the winter months.

Chapter 13

Review Questions

1. a. Public health surveillance is a method that a community has available to monitor the health among its population by detecting problems, communicating alerts as needed, guiding the appropriate response, and evaluating the effect of the response.
2. a. The epidemiological triad includes the host, agent, and environment. The greater the pathogenicity, the greater the ability of the agent to cause disease in a susceptible host. Pathogenicity is dependent upon the infectivity of the agent—its ability to invade the host, destroy host body cells, and produce toxins resulting in virulence, or severity of the infectious disease.
3. a. Measles is a highly contagious disease that is transmitted via airborne particles.
4. b. The epidemiological triad features the host, agent, and environment and describes the *who, what*, and *where* of the infectious process, while the chain of infection builds on this triad, including a portal of exit from the host, an environmental reservoir, transmission, and a portal of entry into a susceptible host. Pathogenicity refers to the potential ability of an agent to cause disease in a host.
5. a. Mantoux TST testing is the preferred test for children under the age of 5, but prior vaccination with bacilli Calmette-Guérin (BCG) may cause false positive reactions to the Mantoux TB skin test, in which case either QFT-Plus or T-Spot blood testing is recommended.
6. d. Since hepatitis C is transmitted by direct contact with infected blood, the primary prevention strategy to reduce the risk of transmission is to avoid sharing contaminated equipment, such as syringes and needles.
7. d. The signs of mild to moderate food poisoning are fever, diarrhea, stomach pain or cramps, and nausea or vomiting. The signs of severe food poisoning include fever higher than 102°F, bloody diarrhea, diarrhea for 3 days or more, frequent vomiting, and evidence of dehydration.
8. c. The rash of erythema migrans is erythematous, annular, and homogenous at the site of the actual tick bite, expanding over several days, often to sizes greater than 5 centimeters in diameter with a central clearing that develops as the rash expands, resulting a "bull's eye" appearance. Erythema migrans occurs in up to 80 percent of those infected with Lyme, but the classic rash is not always present.
9. a. The CDC helps to track and investigate foodborne illnesses through the following surveillance systems: PulseNet, Foodborne Diseases Active Surveillance Network (FoodNet), System for Enteric Disease Response, Investigation, and Coordination (SEDRIC), and Foodborne Disease Outbreak Surveillance System.
10. b. Contact tracing is a means of secondary prevention to identify those at risk of infection or those already infected in order to isolate and treat them as early as possible to prevent the spread of the disease and to prevent complications in the client.

Chapter 14

Review Questions

1. c. Environmental justice refers to the fair and equitable treatment and meaningful engagement of every individual, irrespective of race, color, national origin, or socioeconomic status, in the development, execution, and enforcement of environmental laws and policies. Nurses play a crucial role in promoting and advocating for environmental justice.
2. c. The EPA uses a four-step risk assessment to evaluate potential pollution and hazards, evaluate the likelihood of exposure-related health threats, and develop standards. The third step of the risk assessment, Exposure Assessment, quantifies the extent, frequency, and length of human contact with an environmental agent or predicts the potential impact of future contact.
3. d. Nightingale's Environmental Theory viewed nursing as the process of using the client's environment to assist them in their recovery.
4. c. The goals of environmental justice are to offer equal protection from hazards and to ensure equal involvement of communities in making decisions about policies and regulations that impact them. Removing lead-based paint from public housing is an example of providing equal protection regardless of socioeconomic status.
5. b. Biomonitoring assesses the presence and concentration of specific substances, such as chemicals and pollutants, in living organisms through samples of blood, urine, saliva, hair, and nails.

6. c. Mold, a biological in-home health hazard, can produce burning eyes, skin rash, stuffy nose, and sore throat as well as coughing and wheezing.
7. a. The text emphasizes that pollution prevention strategies should be implemented to reduce exposure levels to environmental contaminants.
8. b. Efforts to address the impact of climate change can be divided into two categories: mitigation and adaptation. Mitigation, or the reduction of greenhouse gas emissions and pollutants to slow the rate of change, aims to prevent the planet from warming beyond critical thresholds. Improving and increasing the use of public transportation is an example of mitigation to reduce gas emissions.
9. a. Public health nurses perform the core functions of assessment, policy development, and assurance to serve as a framework for addressing environmental health issues and promoting healthier communities. While performing the core function of assurance, the nurse monitors and evaluates the implementation and effectiveness of environmental policies and programs and ensures that actions are taken when hazards are identified, such as educating the public about the need to boil contaminated drinking water.
10. b. The goal of tertiary prevention is to reduce the severity of the impact of an environmental health risk, such as developing an emergency response plan to manage environmental hazards.

Chapter 15

Unfolding Case Study

1. a. Deanna is predisposed to developing hypertension due to her family history; therefore, she is in the susceptible stage. Given that Deanna has only had one elevated blood pressure reading, it is not yet clear if she is in the clinical stage. Deanna is not in the recovery stage, as she has not yet been diagnosed with a disease.
2. c. If Deanna is diagnosed with hypertension and prescribed medication, the medication is given to control or prevent worsening of the hypertension as well as to prevent complications or other diseases as a result of hypertension, which involves tertiary prevention.
3. c. The manager is demonstrating their perception that health promotion and disease prevention are not as important as timeliness.
4. c. The nurse is encouraging secondary prevention by giving the client the tools needed to lower her blood pressure before it causes negative health outcomes.

Review Questions

1. a. The role of the nurse as advocate involves helping to create environments that support better health. In this scenario, the nurse is advocating not only for their two specific clients, but also the community of the apartment as a whole.
2. c. The subclinical stage of disease stays below the surface of clinical detection and has no recognizable clinical findings. The client has no symptoms because they are in the subclinical stage of disease.
3. d. The client's vertigo is an internal condition directly related to the skills needed in that exercise class and is leading them to reject particular interventions. Therefore, it is an issue-related skill that is negatively influencing their behavior.
4. b. Cues to action are events, people, or things that trigger people to change behavior. Because the individual has been mindful of their weight loss, this cue is likely to influence their food choices.
5. d. The principal is considering the key attributes affecting an innovation's adoption, including compatibility and complexity.
6. a. Primordial prevention involves social and environmental activities that reduce risk factors in a community.
7. b. To develop a community-wide health promotion program, the community health nurse needs to view health promotion as an obligation of multiple sectors, not just the responsibility of the health sector, in order to encourage the health of all citizens.
8. a. The public health nurse recognizes the limited access to health care services in the rural community and takes action to address this issue by establishing a mobile clinic. By establishing a regular visitation schedule, the nurse aims to improve the availability of health care services, ensuring that community members have access to timely medical care.
9. d. A lack of financial resources is a common barrier that arises from the health care system itself. The other

three options are not system-related barriers.

10. d. The app likely does not fit with the intended audience, leading to a lack of widespread acceptance, which would indicate an issue with compatibility.

Chapter 16

Review Questions

1. b. When the community is the client, the nurse addresses the health needs of a community or population instead of one or more individual clients. Conducting health screenings for individuals in a specific town or city would help the nurse assess the health needs in the community.
2. a. Healthy People 2030 identifies voting, volunteering, participating in group activities and activities like community gardening, and participating in a recreational sports team as methods of civic participation. Such activities can benefit the health of individuals and populations.
3. c. Nurses should involve community members in community assessments to increase the likelihood that the community will embrace the change and participate in health programs.
4. d. The self-perception–self-concept pattern focuses on how community members perceive themselves and the role of the community.
5. b. During the diagnosis stage of the nursing process, the nurse analyzes the data collected to identify areas of opportunity in the community in the context of health. The nurse will identify patterns, trends, or key problems in the data that point to a need for intervention in order to improve health.
6. b. The RWJF Culture of Health initiative was developed to promote a shared understanding that good health is a fundamental right and essential to well-being and prosperity across the United States. Cross-sector collaboration involves organizations outside of those traditionally or directly associated with health care, such as schools and law enforcement, working together to support better health across communities.
7. d. Making health a shared value requires society as a whole to commit to developing power structures and social systems that allow access to health for all. The mindset and expectations, sense of community, and civic engagement of a community are all drivers of change toward making health a shared value.
8. a. The first stage of the nursing process is assessment. Data collected in this stage informs community health interventions. Without actual data from the community, the nurse would not be able to identify patterns, trends, or problems that indicate health risk or a need for support.
9. c. Holism is the concept that all parts of a whole are interconnected and do not exist or function without each other. When applied to community-based nursing, holism means that the nurse must consider that the whole community comprises multiple dimensions of health.
10. b. When applied to community health, Gordon's health perception–health management pattern assesses the health and safety of a community, including its disaster plans and public safety.

Chapter 17

Unfolding Case Study

1. d. Focus groups gather qualitative data from participants who have experience with the topic. Participants provide their perspectives of the issue in a discussion-based setting. It would be appropriate to gather this information from local emergency responders because they have firsthand experience responding to drug overdoses. Additionally, these data are not consistently reported by methods that the team could easily access in another way.
2. a. A drug rehabilitation center is located in the community. Enabling factors are characteristics of the environment and community that make it easier for community members to change their behavior or their environment. This includes community programs, services, and resources. Media is a reinforcing factor to motivate specific behaviors. Knowledge, beliefs, values, and attitudes of the individual are predisposing factors. Attaining knowledge in high school and values learned from family are predisposing factors.
3. a. The nursing diagnosis includes all parts. The other responses do not contain all parts and/or do not align with community perceptions and needs.
4. b. Availability of appointments at the local drug rehabilitation center could be a barrier to program implementation. Promoting drug rehabilitation would be ineffective if appointments were not available.

Review Questions

1. b. A client with interactive health literacy has skills that have advanced beyond the functional, or basic, health literacy level. This client is able to use a variety of sources to answer health questions and apply that information to real-life scenarios.
2. a. Benchmarking involves comparing local information to other measures or standards. Healthy People 2030 provides national objectives to improve health and well-being over the next decade.
3. d. Community nursing diagnoses must include "risk of" to describe the health need or problem, "among" to describe the aggregate or population that is affected, and "related to" to describe community characteristics or factors that influence the health need.
4. c. Community systems are services and resources that are available to community members. The number and location of health care providers falls under community systems and is used to determine access to health care providers.
5. b. After data is collected and reviewed, the team analyzes the data in order to prioritize community health problems. The team plans implementation strategies after the top health priorities are chosen. Results are shared with the community after the data is analyzed. Evaluation occurs after the CHIP has been implemented.
6. a. A client with functional health literacy has basic health literacy skills and is able to obtain relevant information and apply it to prescribed activity, such as reading a prescription label and taking the medication accordingly.
7. c. The psychomotor domain is the performance of skills that require neuromuscular coordination. An example is self-administration of insulin.
8. b. In constructivist learning theory, learners actively use experiences and reflection to build upon preexisting knowledge rather than passively taking in information.
9. d. Auditory learners process information and learn best through listening; appropriate educational methods are verbal lecture, discussion, music, podcasts, and reading aloud.
10. a. During the Continuously Improve the Community phase of MAPP, power analyses and partner profiles are completed.

Chapter 18

Review Questions

1. b. The client in the preparation stage is planning for behavior change in the next 30 days. Setting realistic goals is appropriate at this stage.
2. a. The nurse selects activities in Step 3 of the Intervention Mapping framework. Step 4, develop program materials, includes writing program communication, messaging, and resources.
3. c. Proportionality states the program or action is equitable and fair. It also refers to decreasing inequities that already exist so that health outcomes are more proportional.
4. c. A conference room is an example of a physical resource.
5. b. SMART goals are specific, measurable, attainable, realistic, and time-bound. The program objective of "Reported alcohol use by county youth will decrease from five percent to four percent by December 31, 2025" meets all of these requirements.
6. b. Step 3, develop partnership agreements, includes determining the roles and responsibilities of all partners and creating a contract or agreement specifying each.
7. d. Process objectives direct activities to be completed in a specific time frame and describes participants, interactions, and activities.
8. a. The Institutional Review Board (IRB) ensures that participants in a research study have the choice to participate or withdraw from a study at any time and that they must give informed consent to participate.
9. d. Determinants of health are factors that affect the health of individuals and communities. Social determinants of health include economic stability, education access and quality, health care access and quality, neighborhood and built environment, and social and community context.
10. a. An individual is ready for a change in health behavior when they believe they are susceptible to the health problem, they believe the health problem has serious consequences, they believe taking action will reduce the risk of the health problem, they believe the benefits of change outweigh the costs, they are exposed to

factors that prompt change, and they are confident in their ability to make a change.

Chapter 19

Review Questions

1. b. Learning material should be presented in an organized manner from simple to complex.
2. d. A needs assessment is an important first step in planning a community health program. This assessment will identity strengths, resources, and current needs of the community.
3. a. Adult learning theory builds upon what is already known about a topic and applies new knowledge to past and current experiences.
4. c. A lack of trust among team members can be a barrier to team communication. A lack of trust impedes communication and planning because team members feel like they cannot have an open dialogue.
5. c. The six steps for planning health education interventions include identify learning needs, establish goals and objectives, select appropriate education methods, design and implement the educational program, evaluate the educational process and effects of the program, and determine if revisions to the plan are needed. During the evaluation step, the nurse determines the extent to which learners have met the program objectives of identifying and reducing cardiac risk factors.
6. d. TeamSTEPPS® is an evidence-based program that aims to eliminate preventable medication errors related to unproductive team communication, thus improving client safety. The five key principles in this program are team structure, communication, leadership, situation monitoring, and mutual support. The team structure consists of multiple backgrounds and disciplines.
7. a. Maslow's hierarchy of needs begins with basic human needs and moves up to higher levels of achievement: physiological, security, social, esteem, and self-actualization. Providing a safe space for teenagers after school addresses the need for security.
8. c. Behaviorism considers behavior as learned from the environment and focuses on observable behavior; it often develops a contract for behavior change.
9. d. One principle of planning a community health education program is to include members of the target audience as part of the planning.
10. d. Nurses should consider how developmental level may affect how the population receives information. Peer influence is stronger as adolescents' autonomy increases, so nurses may incorporate peer activities into the learning process for this population.

Chapter 20

Review Questions

1. b. The nurse will see increased participation if activities are scheduled during regular school hours. Youth often have conflicts related to athletics, academics, work, or provision of sibling care after school hours.
2. b. A process evaluation focuses on the implementation process to determine if the program has been implemented as planned and in the most efficient way.
3. d. The nurse will prepare tools to gather data from multiple sources after the evaluation design is chosen.
4. d. The nurse should use images and language that represent the target population to promote an inclusive environment.
5. c. Earned income is an internal funding stream the organization uses to support programs. Earned income includes funds earned through fee for service, consultation, reimbursement, and product sales.
6. c. Including members of the target population in program planning, recruitment, implementation, and evaluation is the best method to ensure sociocultural and linguistic needs are met.
7. d. Community lack of interest in the program may indicate that the program no longer meets community needs.
8. c. Impact evaluation measures the degree that the community health program achieves its primary goal. Most often, community health assessment data is used to evaluate the impact of existing community health programs. Pre-program CHA data and CHA data collected after the program was implemented are used to determine long-term impact.
9. a. Sustainability is defined as the continuation of community health programs by decreasing dependence on

one source of funding and shifting to a new funding stream because the program is valued, cost and resource efficient, effective, and supported by the community.

10. b. Billboards reach a broad audience quickly and are used to increase community awareness of health issues and events.

Chapter 21

Review Questions

1. b. Cultural dietary practices are complex and multifaceted. Therefore, the nurse should approach cultural dietary practices with respect and cultural sensitivity and ask the client about their unique dietary needs and preferences. The nurse should not make assumptions.
2. c. Features of holistic medicine include a balance between physical, psychological, and spiritual health and between nature and humanity to produce wholeness.
3. a. Culture consists of visible and invisible elements. Invisible elements are the intangible parts of a culture, such as communication styles, rules, etiquette, views of time and space, and handling of emotions.
4. c. Nonverbal communication conveys messages without words. Cultures use different nonverbal cues to convey meaning or express emotion. The nurse should pay attention to the client's use of nonverbal cues and not force nonverbal communication on the client.
5. a. The microsystem consists of the immediate environment in which an individual interacts, including family, friends, and other close relationships. Cultural factors at this level may include family traditions and beliefs, cultural values, and customs related to health and wellness.
6. b. Present-oriented people focus on the moment and respond to immediate needs. They live in the here and now, with future consequences playing a less significant role.
7. a. Values and beliefs are non-visible aspects of culture that shape a client's perspective. The nurse should acknowledge this and listen to the client's concerns.
8. b. Nurses should be prepared to ask clients questions that encourage them to share their health beliefs and cultural practices. Asking if the client has used any medications, herbs, or home treatments recognizes that there are other remedies, outside of traditional medical treatments, that clients may use when sick.
9. b. Locus of control refers to an individual's beliefs about the extent of their control over the environment and what happens to them. An individual with an external locus of control believes that external forces, such as luck or fate, determine outcomes.
10. b. Collectivist cultures encourage interdependence and promote the interests of the collective over the individual. Interdependence and fitting in to maintain harmony are preferred.

Chapter 22

Review Questions

1. b. Understanding transcultural models and frameworks can help the nurse in this situation by guiding them to respect the client's cultural beliefs and find an alternative medication that aligns with the client's cultural values. This approach promotes culturally sensitive care and supports the client's autonomy and decision making in their health care journey.
2. b. Leininger's Culture Care Diversity and Universality Theory is an example of a transcultural nursing model. This model emphasizes the importance of cultural competence in nursing, recognizing that culture influences an individual's health beliefs, practices, and outcomes. It guides nurses in providing care that respects and integrates the cultural values, traditions, and preferences of clients.
3. c. Collaborating with the client and health care team to assess the safety and potential interactions between herbal remedies and prescribed medications is the most appropriate approach for ensuring the older adult client's safety while respecting their cultural beliefs. This approach aligns with the principles of person-centered care and cultural sensitivity, allowing for the integration of evidence-based care with the client's cultural practices.
4. c. In this scenario, the key component of culturally responsive care is collaborating with the client to identify traditional healing practices that are safe and effective to use alongside medications. As a nurse, it is essential to acknowledge, respect, and understand the client's cultural beliefs and values and work together

with him to find a treatment plan that aligns with his culture and promotes his well-being. This approach demonstrates cultural competence and supports client-centered care.

5. d. In this scenario, the culturally responsive intervention is to discuss the client's concerns and work collaboratively with her to find a solution that respects her cultural preferences. This approach acknowledges and respects the client's cultural background, promotes client-centered care, and ensures her comfort and satisfaction with the prenatal care she receives.
6. b. In this scenario, the aim of conducting a cultural assessment for the client is to promote cultural sensitivity and understanding in the health care setting. By assessing the client's cultural background and beliefs, health care providers can provide client-centered care that respects her values, preferences, and unique needs, leading to improved communication, trust, and outcomes.
7. c. The nurse can create a safe and open environment by actively encouraging the client to ask questions, actively listening, validating their concerns, and promoting shared decision making.
8. c. This approach allows the client to feel more comfortable and trusting with their health care provider, resulting in improved client satisfaction and outcomes.
9. a. The nurse should consider the component of biological variation when providing care for the client according to the Giger and Davidhizar model. This component acknowledges that individuals from different cultural backgrounds may have unique biological variations and genetic traits that can influence their health status and response to health care treatments and interventions.
10. c. The component of cultural skill emphasizes the need for health care providers to possess the necessary knowledge and abilities to effectively understand and communicate with individuals from diverse backgrounds, such as the client with a visual impairment. The nurse should have the cultural skill to provide medication information in accessible formats, such as braille or audio recordings, to ensure effective communication and culturally congruent care.

Chapter 23

Review Questions

1. a. Communities that are "food deserts" lack grocery stores and available transportation. Moreover, residents may not have the financial resources to afford healthy food and may rely on fast food and convenience stores. These conditions place residents at risk for obesity, diabetes, and heart disease.
2. a. Nurses provide culturally congruent care when they use evidence-based nursing practice that recognizes and is consistent with the values, beliefs, worldviews, and practices of their clients. Culturally congruent care involves recognizing the client's beliefs; providing care that takes into account a client's use of a traditional healer; and creating individualized care plans that are consistent with the client's values, beliefs, worldviews, and practices.
3. a. This nurse has engaged in a stereotyping behavior, ascribing certain characteristics or behaviors, such as following a kosher diet, to a person based on their membership in a particular group.
4. b. An organizational barrier is one that exists within an organization. It includes the provision of linguistically competent services, such as medical interpreters. Structural inequities are systemic barriers and disparities in a health care system that block individuals or groups from receiving high-quality care, such as an insufficient number of primary care providers and the inability of individuals to afford health care or obtain health care insurance.
5. c. Cultural awareness occurs when nurses reflect on their own cultural backgrounds, beliefs, and biases.
6. d. The nurse demonstrates valuing of diversity by volunteering at a clinic that provides free care to immigrants. This practice allows the nurse to learn about the culture of the immigrant group and to establish relationships within the community. Discussing diversity with individuals from the same cultural background, comparing other cultures to one's own culture, and treating everyone from the same culture in a like manner do not demonstrate that the nurse values diversity.
7. c. Observing how the client uses eye contact demonstrates the nurse's awareness that clients may have different, culture-related perceptions of eye contact. Some clients consider it rude to make eye contact with a health care professional, whereas others consider eye contact a sign of attention or respect. Following this observation, the nurse may use another method to ensure the client understands the preoperative instruction, such as the teach-back method.

8. c. The nurse should pay attention to and use the terms the client uses to describe illness or body parts, rather than using medical terminology. Speaking in a louder voice than normal will not help a client understand what the nurse is saying, and the client may construe this behavior as condescending. The nurse should reinforce verbal instruction with the use of pictures, models, or demonstrations.
9. a. Best practice is to use a trained medical translator who not only knows the client's language but also understands cultural sensitivity.
10. c. The nurse should ask members of the community to review the written materials to ensure appropriateness and to enhance community buy-in. Because various colors can convey different meanings in diverse cultural groups, the nurse should determine the cultural significance of the chosen colors. All commuinity members may not understand medical terminology; therefore, the nurse should use terminology the target group will understand, and the material should be written at a reading level appropriate for most group members. A high school reading level may be too difficult for many clients.

Chapter 24

Review Questions

1. c. To assess health literacy in culturally diverse clients, the nurse should perform a health literacy assessment using a validated tool before developing a teaching plan.
2. a. This self-assessment checklist is designed to enhance one's awareness and sensitivity of cultural and linguistic diversity and to provide concrete examples of practices that foster an environment of cultural and linguistic competence, allowing the nurse to reflect and engage in self-improvement.
3. a. Leadership commitment refers to the active involvement and support of organizational leadership in promoting cultural competence. This includes developing and implementing policies and practices that prioritize cultural competence and diversity, such as developing policies for the use of trained interpreters.
4. c. Creating a welcoming environment is part of the Promoting Cultural and Linguistic Competency Self-Assessment Checklist. The nurse can help create a welcoming environment by displaying posters, brochures, and other materials that represent the diversity of the client population.
5. b. The ACCESS model consists of six key components: assessment, communication, cultural negotiation and compromise, establishing respect and rapport, sensitivity, and safety. In this model, the nurse tailors the plan of care so it is respectful of the client's beliefs and values. This is accomplished by developing the plan of care with the client.
6. b. Developing partnerships to support organizational cultural and linguistic competence is a dynamic and multifaceted process that involves collaborating with key community partners to determine their needs, goals, and resources.
7. c. When evaluating the effectiveness of a cultural competence training program, a nurse is likely to measure for an improvement in client satisfaction scores because that is an indication if clients feel heard, understood, and respected.
8. a. To show its strong commitment to cultural competence, the organization should have a mission statement that reflects its commitment to cultural and linguistic competence.
9. b. According to National CLAS Standards, clients with LEP should be offered language assistance in their preferred language in a timely manner and at no cost to them.
10. b. One way that health care facilities can be made more welcoming to LGBTQIA+ individuals to include nonbinary choices on all forms, allowing individuals to identify in their own way.

Chapter 25

Review Questions

1. c. Completing the Social Identity Wheel is a strategy to promote self-awareness and recognize the various facets of one's identity. By understanding how one's own identity influences viewpoints and actions, the nurse can become more culturally competent and address any unconscious biases that might impact client interactions.
2. c. Adapting care practices to align with the client's cultural preferences and needs demonstrates cultural humility. It recognizes the importance of valuing the client's cultural background and adjusting care to ensure

it is respectful and appropriate based on the client's cultural beliefs and practices.

3. c. Decolonization in nursing practice entails acknowledging and addressing the historical impact of colonial ideologies. It involves challenging privilege, embracing cultural humility, and promoting equitable care that respects diverse perspectives and backgrounds.
4. c. Acknowledging privilege is crucial to promoting fairness and advocating for change. Nurses should recognize their social privileges and actively work to address disparities and inequalities within the health care system. According to the ANA, nurses must acknowledge their social privileges and take responsibility to address unjust systems and structures.
5. b. Conscious impermeability refers to being aware of the importance of cultural humility but facing challenges in applying it in practice. The nurse recognizes power imbalances but may struggle to demonstrate cultural humility effectively.
6. c. In nursing, power imbalances can create conflicts and hinder effective communication between nurses and clients due to differing roles, knowledge, and authority. Power imbalances can lead to unequal treatment, where nurses may make decisions without considering client preferences. This compromises client autonomy and can result in decisions that may not align with the client's wishes or values.
7. d. The "E" in the mnemonic stands for encounters. This question prompts the nurse to reflect on their commitment to engaging in meaningful interactions and resolving conflicts with individuals from different cultures.
8. a. Mindful awareness involves actively listening to others and seeking to understand their perspectives without interruptions or judgments.
9. c. In-group favoritism refers to individuals' preference for members of their own social identity groups, leading to positive evaluations within the group.
10. c. Reflection and critical thinking about one's values, beliefs, and cultural heritage can help nurses understand how their background influences their perceptions, decisions, and interactions.

Chapter 26

Review Questions

1. c. Primary prevention for childbearing clients refers to activities aimed at preventing health problems before they occur, such as providing education about healthy nutrition and exercise.
2. b. Promoting self-care involves providing the client with the ability to take an active role in maintaining or improving their own health. Education allows the client to actively address their gestational diabetes.
3. a. To prevent SUID, the nurse teaches parents to place the baby on their back on a firm sleep surface that is free from pillows, blankets, or other soft bedding.
4. b. Effective family engagement involves actively involving the family in the planning and implementation of health promotion interventions. By collaborating with each family, the nurse can gain a deeper understanding of their cultural practices, values, and beliefs related to health. This understanding enables the nurse to tailor interventions that are respectful, culturally appropriate, and aligned with the family's preferences, leading to better engagement and improved health outcomes.
5. c. Drowning is one of the leading causes of death in children age 5 to 9 years.
6. b. Support from family is a relationship factor that can protect against suicide.
7. b. When comparing health outcomes between adult men and adult women in the United States, it is important to consider potential disparities. Cerebrovascular disease is a major disease in both genders, but adult women tend to have higher rates compared to adult men.
8. a. Prevention of the onset of disease occurs through primary prevention, such as vaccinating according to the recommended schedules.
9. c. A particular area of focus by Healthy People 2030 is reducing falls in older adults. One way the nurse can work to prevent falls in this population is by reducing use of inappropriate medication.
10. d. Elder abuse is an intentional act or failure to act that causes or creates a risk of harm to an older adult. Older adults with mental illness are at increased risk for elder abuse due to their diminished capacity to recognize and report mistreatment, understand their rights, or protect themselves from harm.

Chapter 27

Review Questions

1. c. Homelessness refers to individuals or families who lack a regular, fixed, and adequate nighttime residence. This includes those living in shelters or in public or private locations not designed for regular sleeping, such as in cars, parks, abandoned buildings, transportation stations, and campgrounds.
2. b. Advocating for affordable health care is the only upstream intervention and is a primary method to prevent individuals from becoming homeless by addressing contributing factors.
3. b. Agent Orange is a tactical herbicide that is associated with cancer.
4. a. Heteronormativity is a form of implicit bias. Discussing oral contraception with all women of childbearing age regardless of their sexual orientation is a classic example of heteronormativity. Other examples of implicit bias include referring to same-sex partners as "friends" or intentionally excluding same-sex partners from health conversations.
5. c. Secondary prevention measures include screening activities to identify and treat diseases as early as possible to prevent complications.
6. d. Many children are required to work alongside their parents to help increase the family's income. These families often live in poverty and need the extra money to survive.
7. a. Individuals with disabilities face frequent barriers to care. Aspects of care that create barriers to providing optimal and equitable care are an inaccessible physical environment, a lack of assistive technology for communication, programmatic barriers of lack of time for medical examinations, negative attitudes toward individuals with disabilities, and social and transportation barriers. Allotting 15 minutes per client encounter is a barrier to providing comprehensive care to individuals who require modifications due to mobility, hearing, or vision difficulties.
8. c. The underlying theme of universal design is ensuring access for everyone. It refers to the design of spaces, communication modalities, environments, and products that are accessible and usable by all individuals including those with disability needs and chronic illness.
9. b. ACEs are traumatic events occurring in childhood that can have a lifelong negative impact on health. Traumatic events may include experiencing violence or neglect, witnessing violence in the home or community, or having a family member attempt or die by suicide. Additionally, growing up in an environment that undermines a sense of safety, stability, or bonding also contributes to ACEs.
10. c. Disadvantaged populations are groups of individuals with a higher risk for adverse health outcomes. Individuals experiencing homelessness, veterans, LGBTQIA+ populations, migrant workers, individuals with disabilities, and those who have experienced ACEs are all considered disadvantaged populations that increase their risk for significant health disparities.

Chapter 28

Review Questions

1. b. Nurses should not assume that an adult with a child is the child's parent. The nurse should first confirm the type of relationship between Jackson and the adult.
2. c. Positive family interactions, intimacy, and a sense of belonging are social needs according to Maslow's hierarchy.
3. a. According to general systems theory, the family is one whole system comprised of subsystems where family members are connected by emotional bonds. The parents' divorce will alter their subsystem.
4. d. The most effective nursing interventions address all three functional domains: cognitive, behavioral, and affective. Incorporating reading labels into their shopping routine indicates the family understands what was taught (cognitive), changed their behavior when shopping (behavioral), and recognized its importance and incorporated it into their family's routine (affective).
5. a. A primary level health promotion intervention involves implementing measures that prevent a disease or condition from occurring—in this case, falls.
6. b. Home health nurses can face unpredictable and unsafe conditions. They should remain vigilant of their surroundings and recognize potential safety concerns.
7. c. There are three different types of abuse: physical, sexual, and emotional. Emotional abuse harms a

person's self-worth or emotional well-being.

8. d. Genograms show family connections and include health-related information such as health conditions.
9. c. The abuser acting lovingly toward the client is consistent with the honeymoon phase of the IPV cycle.
10. a. Taking the time to listen to the older adult client and the family is one of the first strategies that can be used to prevent abuse. Providing resources to families can alleviate burdens and reduce the risk of a crisis.

Chapter 29

Review Questions

1. a. Promoting a healthy school environment involves activities that emphasize healthy choices and behaviors, such as planning healthy school meals.
2. b. Advocating for fluoridation of drinking is an example of a community-level intervention as it affects everyone within the community.
3. c. A role of the nurse working in a local public health department includes educating the community on a variety of health topics to assist the community members in making healthy choices.
4. d. *Estelle v. Gamble* established the constitutional obligation to provide health care to any individual in the custody of the government, guaranteeing health care for individuals who were incarcerated.
5. b. There is a lack of privacy when caring for incarcerated individuals since corrections officers oversee all aspects of the health care delivery system within correctional centers. Balancing the conflicting roles of public safety and security by the corrections department and the professional nursing mission to promote the well-being of all clients is at the heart of corrections nursing.
6. d. Infectious diseases are a major concern in correctional facilities where the environmental conditions make the spread of infectious disease more likely. The CDC recommends primary prevention for hepatitis A in correctional setting by beginning the hepatitis A for all unvaccinated juveniles under the age of 18 and all adults who are at increased risk for hepatitis A infection such as men who have sex with men, those who use IV drugs, and individuals experiencing homelessness. The CDC also recommends beginning the hepatitis B vaccine series for juveniles and unvaccinated adults.
7. b. The Nurse Practice Act is the state's governing law that determines the scope of practice of nursing that school nurses must follow.
8. a. Secondary prevention activities include screening activities to identify disease before the onset of signs and symptoms, such as screening to identify early hearing loss to mitigate complications from a later diagnosis.
9. a. Ergonomic hazards increase strain and the risk for musculoskeletal injury and include repetitive motions, such as typing or working on an assembly line.
10. c. The most common long-term conditions in incarcerated individuals are hypertension, arthritis, asthma, and hepatitis. Tertiary health promotion reduces the severity of disease, such as providing low-sodium dietary options for those with hypertension.

Chapter 30

Review Questions

1. c. Transitional care refers to the provision of care to clients during transitions between different health care settings, ensuring continuity and safety. Medication reconciliation is an important intervention during transitional care to review and reconcile medication lists, address changes in medications, provide education, and promote adherence to prevent medication errors and adverse events during transitions.
2. c. Limited health literacy increases the risk for a poor transition of care outcome. When clients struggle to understand health care instructions, medication regimens, or follow-up care, it can lead to misunderstandings, nonadherence, and suboptimal outcomes.
3. b. Medication reconciliation is the process of comparing a client's medication orders to all the medications the client has been taking and ensuring that the client has access to necessary medications during transitions to prevent medication errors. Since it also involves checking that the client has a clear understanding of their medication regimen, the nurse should follow up with this client to make sure that the "blue pill" is a current order and that the client understands what it is for and how to take it.

4. c. Care transition models are designed to support seamless transitions between health care settings. They provide frameworks and guidelines to ensure coordinated and client-centered care during transitions, minimizing disruptions and improving outcomes.
5. b. The IDEAL Discharge Planning guide engages clients and their families in the discharge planning process. Involving clients and their support systems ensures that the discharge plan aligns with their preferences, needs, and capabilities, ultimately improving client satisfaction and outcomes.
6. d. The TCM emphasizes the use of advanced practice nurses (APRNs) to coordinate care, educate clients and caregivers, and facilitate communication among various health care providers. It is designed to ensure the health and safety of high-risk older clients. TCM emphasizes client and caregiver education, promoting self-management and improving communication among health care providers.
7. c. Community health nurses play a key role in coordinating care and advocating for clients across different health care settings. They ensure continuity of care, facilitate effective communication among health care providers, and support clients throughout their health care journey.
8. c. Research suggests that medication adherence is improved when clients are given their medications in the hospital at the time of discharge compared to needing to pick up prescriptions at a pharmacy.
9. a. Ensuring effective communication among health care providers is a strategy to improve safety and continuity of care for clients during the transition from behavioral health hospitalization to outpatient care. This helps prevent miscommunication, enhances coordination, and ensures a smooth transition for clients.
10. b. Mobile health applications can facilitate self-care by allowing clients to share data such as blood glucose levels with their health care providers to help manage their condition.

Chapter 31

Review Questions

1. b. This question best reflects a nonjudgmental approach to discussing a client's substance use.
2. a. In the 1990s, health care professionals' increased prescribing of prescription opioids marked the start of the opioid epidemic.
3. d. By assigning tasks and maintaining boundaries, the nurse is applying the principle of trustworthiness and transparency.
4. c. By introducing themself and explaining their role in the session, the nurse is incorporating trauma-informed care into their practice.
5. d. Recent research indicates more than half of this age group experiences suicidal ideations or thoughts of self-harm.
6. a. Public stigma involves negative attitudes others have about mental illness.
7. d. Common types of labor trafficking include people forced to work as farmworkers, domestic servants, and factory workers.
8. b. The language people use, including by health care professionals (HCPs), can contribute to stigma and discrimination against people with SUDs.
9. c. Human traffickers will attempt to keep the victims isolated and try to control their actions.
10. c. Refugees' health status is influenced by conditions in their home countries, conditions during their travel, and conditions present in their camp.

Chapter 32

Unfolding Case Study

1. a. Older adults are more likely to have chronic conditions or mobility, sensory, cognitive, social, and economic limitations that can hinder their response to disaster and negatively affect their health (Humanitarian Global, 2021).
2. b. Educational classes on family safety planning and other educational interventions prior to hurricane season can assist families in preventing injury and minimizing the impact of the disaster.
3. c. The verification that the scene is safe prior to first responders providing care prevents secondary incidents and subsequent injuries (Alpert & Kohn, 2023).
4. b. The nurse working in a disaster shelter should expect to monitor physical and mental health of victims.

Stress is common for all victims of a disaster due to displacement from homes, loss of possessions, loss of employment, fear of the future, and living closely with strangers. Signs of stress include headache, nausea, worry, fatigue, insomnia, irritability, nervousness, fear, and racing thoughts.

Review Questions

1. b. Mitigation is an action that reduces the severity of a disaster, such as stacking sandbags along a river's edge to prevent flooding.
2. d. The START algorithm places this victim in the red category, in need of immediate care. The victim in the red category can be helped by immediate intervention and transport, requires medical attention within minutes for survival (up to 60 minutes), and has a compromised airway, breathing, or circulation. This client with tachypnea (rapid respiratory rate) and a flail chest has breathing difficulties that require immediate intervention.
3. d. During the Sort stage of the Sort, Assess, Life-saving Interventions, and Triage/treatment (SALT), the nurse asks the victims at the scene to walk to a designated casualty collection area if possible and wave an arm or leg if they need help. Those who cannot move or follow commands are assessed first.
4. c. During step 3, vulnerability assessment, the nurse determines the probability that the community will be negatively affected by a hazard. This includes an estimation of damages and the community's capacity to reverse or combat those damages.
5. b. A Category A biological agent is highly transmissible, easy to disperse, and associated with high mortality rates.
6. a. The Logistics Section Chief provides resources and services to support an incident, such as facilities, transportation, communications, supplies, equipment maintenance, food services for responders, and medical services for responders. Providing boats to rescue survivors from flooded waters would fall under the duties of the Logistics Section Chief.
7. d. JumpSTART is a modification to the START system to assess and triage pediatric victims up to 8 years old. This method considers the difference in normal respiratory rates for children up to 8 years old. Respirations of more than 15 and less than 45 breaths/minute are considered normal. Since this child's respiratory rate is 14 breaths/minute, it is abnormal, and the child should be given a red tag indicating they require immediate attention.
8. a. In primary prevention for bioterrorism preparedness and response, the community health nurse engages in disease surveillance and preparation. Creating, updating, and implementing a disaster plan and participating in tabletop exercises and disaster simulations are strategies the community health nurse can take to mitigate injury and mortality from biological attacks.
9. b. Warning signs of potential school violence include having behavioral problems or difficulty connecting with others, being noncommunicative, having aggressive or violent verbalizations, being withdrawn, harming self or others, and being emotionally labile.
10. c. Nursing assessment and intervention during the recovery stage include monitoring and screening for communicable and infectious diseases, educating on water and food safety, educating on clean-up and disposal of debris and deceased livestock/animals, eliminating safety risks, and screening and treatment for mental health issues.

Chapter 33

Unfolding Case Study

1. c. Tanesha may be developing a respiratory infection. However, managing her hypertension, blood sugar, and mental health should also be rapidly assessed. When working with communities, it is important to address their most pressing issues first. When there are many issues, it is important to identify and manage the most life-threatening conditions first.
2. d. Clients like Tanesha require medical care to regulate their immediate health concerns. They also need social services to help them obtain housing, food, mental health care, and Medicaid insurance to help them to meet their health care needs.
3. b. Tanesha has experienced domestic and intimate partner trauma, and the shelter may ignite fear related to a possible recurrence. Nutritional and sleep assessments are also important. She has not shown signs of

potential suicide risk.

4. d. Knowledge and access to health care could have prevented Tanesha's situation from devolving into homelessness.

Review Questions

1. b. Nurses can advocate for the profession by talking about their work and the scope of nursing practice so the public learns about the professional role of nursing. A good place for new nurses to begin this advocacy is by educating their clients and families about the nursing profession.
2. b. Research shows that during the COVID-19 pandemic a lack of adequate nurse staffing led to an increase in hospital mortality, length of stay, and readmissions.
3. a. When speaking with community partners about a need for change, the nurse should stay on point and succinctly communicate key information within the first minute of a conversation.
4. c. Global disparities in maternal and infant mortality are higher among BIPOC populations, with Black women five times more likely to die from pregnancy-related cardiomyopathy and eclampsia than White women.
5. a. A coalition is a group of people with shared vision or concerns who collaborate to support a cause. Nurses may form coalitions to maximize resources to improve the chances of successfully achieving these goals.
6. c. The National Academy of Medicine developed the Future of Nursing Report 2020–2030, which set goals for public health and emerging health policies. One of its goals is to attain high-quality, longer lives free of preventable disease, disability, injury, and premature death.
7. a. PACs form to generate and spend funds to elect political candidates that align with a particular agenda.
8. c. NOBC collaborates with other associations and health care and business partners to provide nursing leadership as members on the boards of directors for organizations. NOBC provides mentors to help nurses develop leadership skills and advance in organizations.
9. d. A coalition is a formal group with a defined leadership team, such as a chairperson, facilitator, individual members, staff, a steering committee, a lead agency, and member organizations.
10. b. The Campaign for Action coalition brings together nurses, providers, consumers, educators, and businesses at the state level to implement strategies that support the Future of Nursing report, such as increasing diversity in the nursing profession.

Chapter 34

Review Questions

1. c. The stage-sequential model of policy development is a process that uses five steps to create a policy: agenda setting, policy formulation, policy adoption, policy implementation, and policy evaluation. In the policy formulation stage, the nurse is involved in making a plan and setting goals and objectives to solve an identified problem.
2. d. Public policies are aimed at improving health through local, state, or national regulations.
3. b. The cycle of poverty is a series of events that occur between generations. The main idea is that once a person or family becomes impoverished, it is almost impossible to change their economic status, and an external intervention is needed to break the cycle. One characteristic of a family in the cycle of poverty is the low level of education among the family members.
4. b. In the workplace, the nurse can engage in political action by serving on a committee that promotes a healthy community through screenings.
5. a. Three generalized groups participate in the creation of health policies: private institutions (micro-level), state- and regional-level agencies and lawmakers (meso-level), and federal agencies and lawmakers (macro-level). At the meso-level, health care policies concern the county, state, or larger geographical region, such as developing vaccination clinics at the state level.
6. c. Key community partners have an interest or expertise in an area of policy, such as a zoning official who can help the nurse with zoning regulations in the development of a hiking trail.
7. a. An information brief provides a concise summary of the current research on a policy method, approach, or other related concerns.
8. a. The nurse determines a policy's effectiveness during the policy evaluation stage of the stage-sequential model of policy development.

9. a. The CDC's HiAP is a collaboration across all sectors to integrate and articulate health considerations into policymaking to improve the health of all communities.
10. c. Nurses can influence local, state, and national social justice policies. At the state level, the nurse can influence social justice policies by educating members of Congress about the health needs of transgender individuals.

Chapter 35

Review Questions

1. c. Naloxone is specifically used to rapidly reverse the effects of an opioid overdose. It works by binding to opioid receptors in the brain, displacing other opioids and restoring normal breathing in individuals experiencing an overdose. This knowledge is crucial for community nurses involved in overdose response.
2. c. Primary prevention involves interventions that promote health and prevent the onset of diseases. Focusing on early childhood nutrition, education, and development is a primary prevention strategy aimed at establishing a strong foundation for lifelong health. This approach addresses health promotion and disease prevention from the early stages of life.
3. a. The nurse advocating for policies that improve air quality, promote physical activity, and encourage healthy eating is focusing on primary prevention. Primary prevention aims to prevent the onset of diseases by addressing risk factors and promoting healthy behaviors in the community.
4. b. Using assessment data to identify clients at risk for health problems so interventions may be implemented is an example of a secondary prevention strategy.
5. b. Working with the transit system to add bus routes to serve a disadvantaged population is an example of client advocacy.
6. a. Nurses must respect their clients' values and uphold technology's ethical and safe use. To achieve this, the nurse should educate clients about the benefits, risks, and potential implications of using specific technologies in their care. This empowers clients to make informed decisions based on their values and preferences.
7. d. The nurse working with community leaders as well as the transportation board to add sidewalks and bike paths to encourage physical activity is an example of a Health in All Policies approach
8. d. The shortage of health care providers hinders health equity and client access to care. Allowing advanced practice nurses full authority to practice expands the capacity of the health care workforce to treat clients.
9. b. Opioid use disorder often co-occurs with mental health disorders, making assessment and treatment complex.
10. c. Young people are drawn to tobacco products through peer pressure, social influences, and aggressive advertising. Launching a social media campaign that discourages smoking can use this social influence to promote positive health behaviors.

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Chapter 10 Socio-Ecological Perspectives and Health

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Chapter 27 Caring for Vulnerable Populations and Communities

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Chapter 31 Caring for Populations and Communities in Crisis

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Chapter 35 Leading the Way to Improving Population Health

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