An Introduction to

Community & Public Health

NINTH EDITION

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Community & Public Health

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PREFACE

As its title suggests, *An Introduction to Community & Public Health* was written to introduce students to community and public health. Our textbook combines the power of today's electronic technology, via the Internet, with a traditional textbook presentation. We believe that your students will find *An Introduction to Community & Public Health* easy to read, understand, and use. If they read the chapters carefully, respond to the chapter scenarios, and make an honest effort to answer the review questions and to complete some of the activities, we are confident that your students will gain a comprehensive introduction to the realm of community and public health. *An Introduction to Community & Public Health* incorporates a variety of pedagogical elements that assist and encourage students to understand complex community health issues. Each chapter of the book includes

- Chapter objectives
- Scenario
- Introduction
- Marginal definitions of key terms presented in boldface type
- Chapter summary
- Scenario analysis and response
- Review questions
- Activities
- References

Carefully selected figures, tables, boxes, and photos illustrate and clarify the concepts presented in the text. Select content in each chapter refers to the *Healthy People 2020* goals and objectives.

COMMUNITY AND PUBLIC HEALTH NAVIGATE 2 ADVANTAGE ACCESS

Introduction to Community & Public Health, Ninth Edition includes learning tools for students and teaching tools for instructors to further explore the chapter's content.

WHAT IS NEW TO THIS EDITION?

Although the format of this edition is similar to previous editions, much has changed. First, the content and statistics throughout the book have been reviewed and updated with the latest information. New tables, figures, boxes, and photographs have been added. Second, where possible, we have made change requested by the reviewers of the previous edition.

Here are the chapter-specific changes made to this edition:

- The major change to **Chapter 1** was a shortening of the history section of the chapter and placing more of the information in table format. In addition, new information was added regarding influences on the health of a community, including the built environment, public health preparedness, the Affordable Care Act, opioid pain reliever abuse, and the impact of conflict on the health of people around the world.
- In **Chapter 2**, new information has been included on the World Health Organization (WHO)'s new sustainable development goals, changes to the organization of the U.S. Department of Health and Human Services, the work of the Centers for Disease Control and Prevention (CDC), and an introduction to the Whole School, Whole Community, Whole Child (WSCC) model.
- **Chapter 3** includes an updated list of notable epidemics in the United States, expanded information on avian influenza that includes H7N9, a simplified section on rates, and a simplified analytic study section that now only includes a basic overview of observational and experimental studies.
- **Chapter 4** has been retitled "Communicable and Noncommunicable Diseases: Prevention and Control of Diseases and Health Conditions." Chapter 4 now includes an example of information that may be needed to prevent the transmission of a disease (measles) using the new edition of the American Public Health Association (APHA)'s *Control of Communicable Diseases Manual*, information about how the communicable disease model (the epidemiology triangle) can be adapted for noncommunicable diseases, and new information on active and passive immunity.
- **Chapter 5** includes expanded discussions on evidence-based practice, the socio-ecological perspective, and CDC's *Framework for Program Evaluation*. The chapter also includes two new boxes—one on the increased emphasis on needs assessment and the other on sources of evidence.
- The school health education chapter—**Chapter 6**—includes a new scenario, an introduction to the *Framework for the 21st Century School Nursing Practice*, a detailed discussion on the Whole School, Whole Community, Whole Child (WSCC) model, and core competencies for school-based health centers (SBHCs).
- **Chapter 7**, in addition to being updated throughout, includes new information about the impact of the Affordable Care Act on family planning, and preconception health care and counseling, which are relatively new foci for pregnancy health; information was also added on barriers to prenatal care and the importance of nutrition and vitamin supplementation during pregnancy. A brief review was included on the recent outbreak of measles at Disneyland in California, and a discussion was added about

vaccine safety and nonvaccination due to religious and philosophical exceptions, which affect vulnerable populations.

- **Chapter 8** has been updated with the most recently available data regarding the health of adolescents, young adults, and adults. New information has been added on the leading cause of death and the impact of the Family Smoking Prevention and Control Act on the authority of the U.S. Food and Drug Administration to regulate the manufacturing, distribution, sale, labeling, advertising, and promotion of tobacco products to protect public health.
- The title of **Chapter 9**, along with other terminology in the chapter, has been changed from "Elders" to "Older Adults" to better describe those who are aged 65 years and older. In addition, information on the demography of aging in the United States has been streamlined, more connections have been made between older adults and community health programming and services, and the information on impairments and chronic conditions has been expanded.
- **Chapter 10** has been revised and updated to include new data in 16 tables and figures presented in the chapter. In addition, a new section has been included on the "Social Determinants of Health and Racial and Ethnic Disparities in Health" and the section on "Equity in Minority Health" has been expanded.
- The revision of **Chapter 11** includes new information on the relationship of mental health to general health, outpatient commitment—a practice designed to reduce risk of self-harm and protect the public, new law enforcement policies regarding how to handle people with mental health crises, a summary of supported employment services as a component of psychiatric rehabilitation, and details on the integrative medical–mental health approach to care.
- **Chapter 12** features a new scenario and new sections have been added on electronic or e-cigarettes, abuse of opioid pain relievers, and the move by some states to legalize the use of marijuana for medical or recreational use.
- **Chapter 13**, which combines the structure and function of health care delivery in the United States, includes new data throughout. In addition, new information has been added on Federally Qualified Health Centers, the National Quality Strategy, accountable care organizations, patient-centered medical homes, pay-for-performance (P4P), and comparison of select health systems throughout the world. Information about the changes to the Affordable Care Act since its inception in 2010 includes the three challenges to the law that reached the U.S. Supreme Court.
- **Chapter 14** has been thoroughly revised and updated. New information has been included about mold as an indoor pollutant, runoff and lead as water pollutants, complex disasters, the Zika virus, and emergency preparedness and response. In addition, a new box on the Flint, Michigan drinking water crisis has been included.
- A new scenario has been created for **Chapter 15**. In addition, the discussion on "Community Approaches to the Prevention of Unintentional Injuries" has been expanded. The discussion of firearms on college campuses has been updated and a new definition of intimate partner violence is introduced.
- **Chapter 16** has been updated with the most recently available nonfatal and fatal workplace injury statistics from the Bureau of Labor Statistics. The section on agricultural safety and health, particularly as it relates to families and children, has been updated and expanded. Regarding workplace-acquired respiratory disorders, the alarming increase in cases of progressive massive fibrosis, a lethal form of coal workers' pneumoconiosis occurring in certain coal mining regions, is discussed. The worksite health promotion discussion has been expanded to include descriptions of worksite health and wellness promotion programs, work–life balance approaches, and the CDC's Total Worker Health policies, programs, and practices.

HOW TO USE THIS BOOK

Chapter Objectives

The chapter objectives identify the knowledge and competencies that students need to master as they read and study the chapter material, answer the end-of-chapter review questions, and complete the activities. To use the objectives effectively, students should review them before and after reading the chapters. This will help students focus on the major knowledge points in each chapter and facilitate answering the questions and completing the activities at the end of each chapter.

Chapter Objectives

After studying this chapter, you should be able to:

1. Explain the concept of diversity as it describes the American people.
2. Discuss the impact of a more diverse population in the United States as it relates to community and public health efforts.
3. Summarize the importance of the 1985 landmark report, *The Secretary's Task Force Report on Black and Minority Health*.
4. List the racial and ethnic categories currently used by the U.S. government in statistical activities and program administration reporting.
5. State some limitations related to collecting racial and ethnic health data.
6. Discuss selected sociodemographic characteristics of minority groups in the United States.
7. List and describe the six priority areas of the Race and Health Initiative.
8. Explain the role socioeconomic status plays in health disparities among racial and ethnic minority groups.
9. Define cultural and linguistic competence and the importance of each related to minority community and public health.

Scenarios

Short scenarios are presented at the beginning of each chapter. The purpose of these scenarios is to bridge the gap between your students' personal experiences and ideas discussed within the chapter. The chapter content will enable your students to propose solutions to the community or public health problem posed in the scenario.

Scenario

Joan is 18 years old and a recent high school graduate. She lives in a small town of about 2,700 people. Most of the town's residents rely on a larger city nearby for shopping, recreation, and health care. Joan had dated Dave the past 2 years, but there was never any talk of marriage. Just before graduation she learned that she was pregnant. At Thanksgiving, just as she was completing her seventh month of pregnancy, she went into premature labor. An ambulance rushed her to the emergency room of the hospital in the nearby city for what became the premature birth of her baby. While Joan was in recovery, doctors determined that her baby was not only premature, it also appeared to have other "developmental abnormalities." When asked whether she had received any prenatal care, Joan replied, "No, I couldn't afford it; besides, I didn't know where to go to get help."

Introduction

Each chapter begins with a brief introduction that informs the reader of the topics to be presented and explains how these topics relate to others in the book.

Introduction

Creating a health profile of Americans requires a clear understanding of the health-related problems and opportunities of all Americans. Elsewhere in the text we discussed the role of descriptive epidemiology in understanding the health of populations. In describing the personal characteristics of a population, age is the first and perhaps the most important population characteristic to consider when describing the occurrence of disease, injury, and/or death in a population. Because health and age are related, community and public health professionals look at rates for specific age groups when comparing the amount of disease between populations. When they analyze data by age, they use groups that are narrow enough to detect any age-related patterns, which may be present as a result of either the natural life cycle or behavioral patterns. Viewing age-group profiles in this manner enables community and public health workers to identify risk factors for specific age groups within the population and to develop interventions aimed at reducing these risk factors. Health promotion and disease prevention programs that are successful in reducing exposure to such risk factors within specific age groups can improve the health status of the entire population.

Marginal Definitions

Understanding the key terms helps drive stronger comprehension of the core knowledge and competencies contained within the chapter. These terms are presented in **boldface** type in the text and defined in the margin. Before reading each chapter, we suggest that students review the chapter's key terms in preparation for encountering them in the text. The boldfaced terms also appear in the glossary at the end of the book.

Fetal alcohol syndrome (FAS) a group of abnormalities that may include growth retardation, abnormal appearance of face and head, and deficits of central nervous system function, including mental retardation, in babies born to mothers who have consumed heavy amounts of alcohol during their pregnancies

Chapter Summary

At the end of each chapter are several bulleted points that review the major concepts contained in each chapter. These provide a great way to review knowledge and comprehension of the material.

Chapter Summary

- Adolescence and young adulthood (10–24 years old) and adulthood (25–64 years old) are the most productive periods of people's lives. Although most people enjoy good health during these years, there is substantial room for improvement.
- The overall health status of these age groups could be improved by reducing the prevalence of high-risk behaviors (e.g., cigarette smoking, excessive alcohol consumption, and physical inactivity), increasing participation in health screenings, institutionalizing preventive health care, and making environments more health-enhancing in our society.
- Approximately 75% of adolescent and young adult mortality can be attributed to motor vehicle crashes, other unintentional injuries, homicide and legal intervention, and suicide.
- Adolescents and young adults remain at considerable risk for STD morbidity.
- College students are at considerable risk for STDs due to unprotected sexual activity and the use of alcohol and other drugs.
- Mortality rates for older adults (45–64 years old) have declined in recent years, but cancer is still the overall leading cause of death, followed by cardiovascular disease.
- Reductions in deaths from cardiovascular diseases in adults have been substantial, but health problems resulting from unhealthy behaviors—such as smoking, poor diet, and physical inactivity—can be reduced further if environments are created to help support healthy behaviors (e.g., increased access to fruits and vegetables, the creation of more walkable communities, etc.)
- No matter how the health of adolescents and young adults and adults in the United States is broken down and described, it can be summarized by saying that the health of Americans in these age groups has come a long way in the past 50 years, but there is still room for improvement.

Scenario: Analysis and Response

Following the chapter summary, students are provided with an opportunity to respond to the scenario presented earlier in the chapter. The content presented in the chapter will help the students to formulate their responses or solutions.

Scenario: Analysis and Response

1. What are the primary reasons that Annie stated Dayna might have developed diabetes?
2. Comment on the attitudes of Annie and Connor about Dayna's recent diabetes diagnosis. Do you agree with Connor that the only way for Dayna to be healthy is to move away from the neighborhood where she lives? Why or why not?
3. If you were a community health worker in this urban community that has limited places where residents can purchase healthy food and safely exercise outside, what could you do to help adolescents like Dayna?
4. Do high schools have an obligation to develop prevention programs, including offering physical activity opportunities at school, to keep students healthy? Why or why not?
5. Say you were friends with Annie. She got so concerned with Dayna's health problem that she wanted to take action, especially to figure out how to help the local corner store that Dayna visits every day offer healthy foods for her. She thought that maybe she would do an online search to see if there are any corner stores that offer healthy foods and how they do it. You told her that you would help her see if there is anything on the Internet. Go online and use a search engine (e.g., Google, Bing) and enter "healthy corner stores." What did you find that might be of help to Annie?

Review Questions

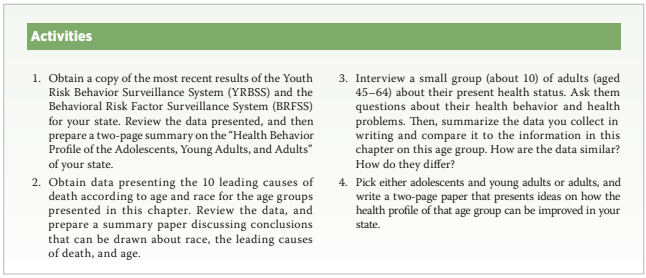
Review questions at the end of each chapter provide students with feedback regarding their mastery of the chapter's content. The questions reinforce the chapter objectives and key terms.

Review Questions

1. Why is it important for community and public health workers to be aware of the significant health problems of the various age groups in the United States?
2. What ages are included in the following two age groups: adolescents and young adults and adults? What are the ages of the two subgroups of adults?
3. Why are the number of adolescents and young adults, living arrangements, and employment status such key demographic characteristics of young people in regard to community health? Briefly summarize the data available on these characteristics.
4. What are the leading causes of death for adolescents and young adults, and for adults?
5. What are the Youth Risk Behavior Surveillance System (YRBSS) and the Behavioral Risk Factor Surveillance System (BRFSS), and what type of data do they generate?
6. What are the behaviors that put each of these cohorts—adolescents, college students, and adults—at greatest risk, and how does a person's environment impact these behaviors?
7. How would you summarize the health profile of the two cohorts (adolescents and young adults and adults) presented in this chapter?

Activities

The activities at the end of each chapter provide an opportunity for students to apply new knowledge in a meaningful way. The activities, which are presented in a variety of formats, should appeal to the varying learning styles of students.



Activities

1. Obtain a copy of the most recent results of the Youth Risk Behavior Surveillance System (YRBSS) and the Behavioral Risk Factor Surveillance System (BRFSS) for your state. Review the data presented, and then prepare a two-page summary on the "Health Behavior Profile of the Adolescents, Young Adults, and Adults" of your state.
2. Obtain data presenting the 10 leading causes of death according to age and race for the age groups presented in this chapter. Review the data, and prepare a summary paper discussing conclusions that can be drawn about race, the leading causes of death, and age.
3. Interview a small group (about 10) of adults (aged 45–64) about their present health status. Ask them questions about their health behavior and health problems. Then, summarize the data you collect in writing and compare it to the information in this chapter on this age group. How are the data similar? How do they differ?
4. Pick either adolescents and young adults or adults, and write a two-page paper that presents ideas on how the health profile of that age group can be improved in your state.

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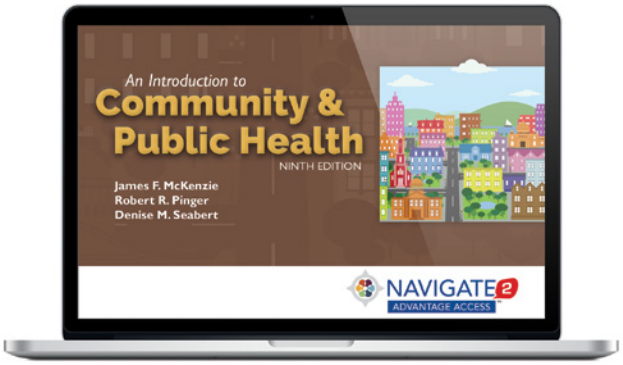

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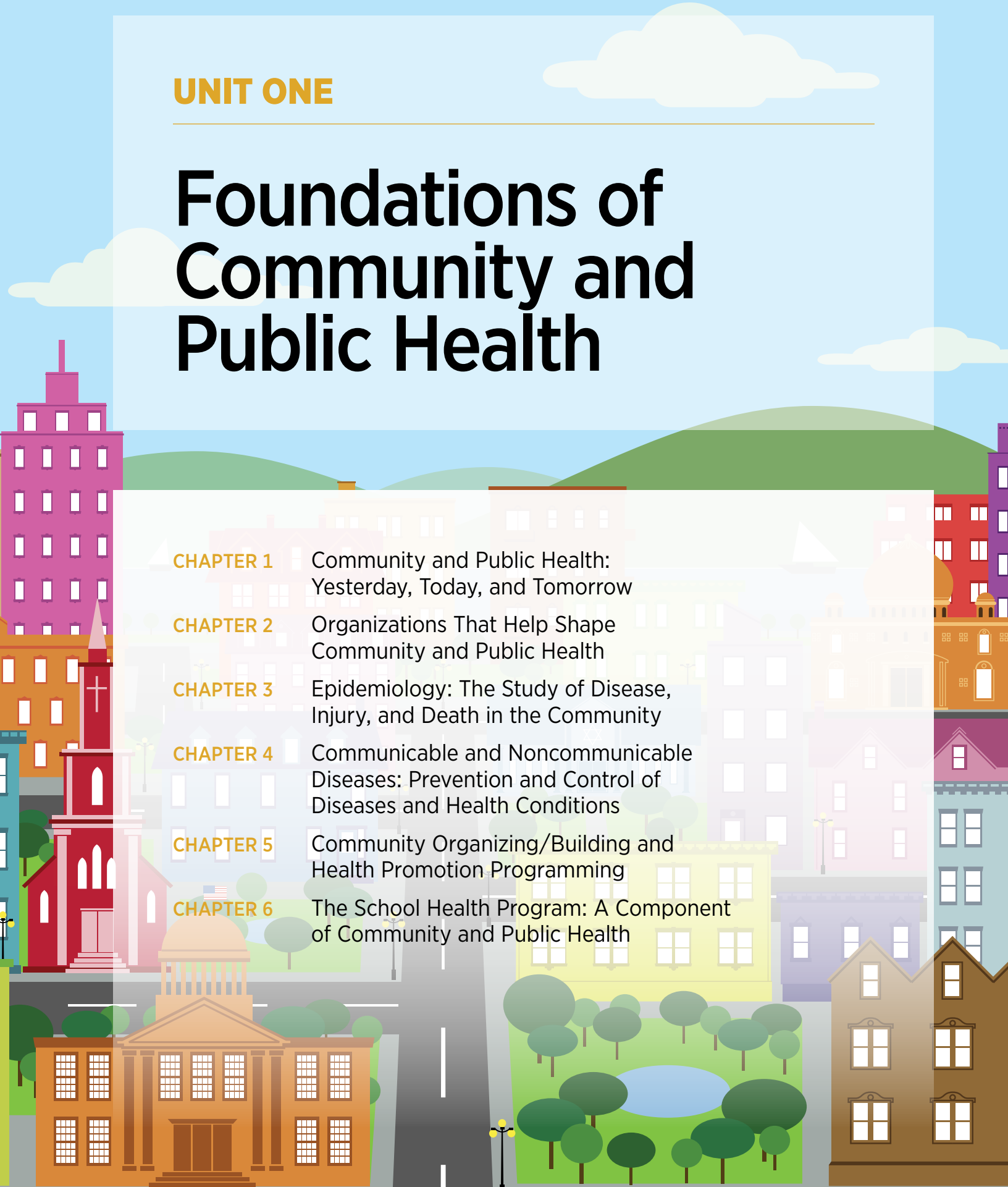
UNIT ONE

Foundations of Community and Public Health



CHAPTER 1 Community and Public Health: Yesterday, Today, and Tomorrow

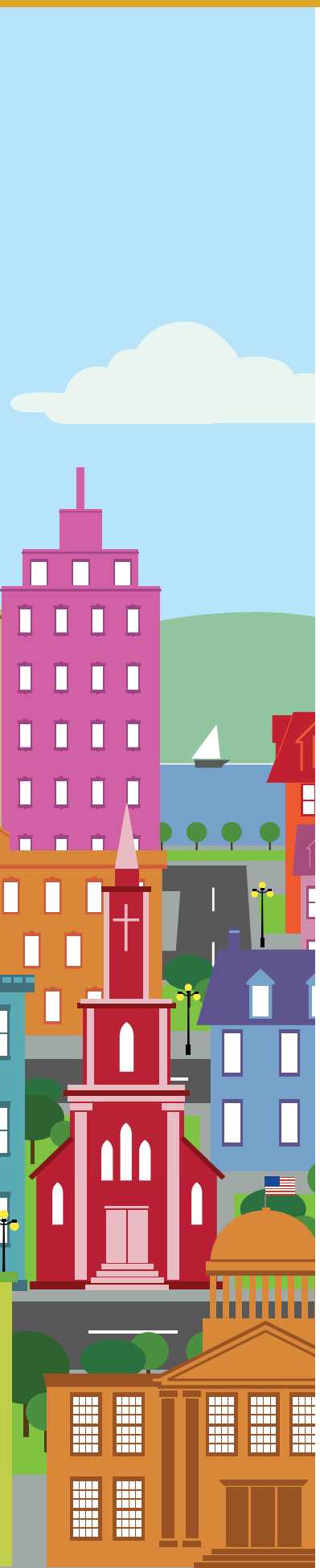
CHAPTER 2 Organizations That Help Shape Community and Public Health

CHAPTER 3 Epidemiology: The Study of Disease, Injury, and Death in the Community

CHAPTER 4 Communicable and Noncommunicable Diseases: Prevention and Control of Diseases and Health Conditions

CHAPTER 5 Community Organizing/Building and Health Promotion Programming

CHAPTER 6 The School Health Program: A Component of Community and Public Health



CHAPTER 1

Community and Public Health: Yesterday, Today, and Tomorrow

Chapter Outline

Scenario
Introduction
- Definitions
- Factors that Affect the Health of a Community

A History of Community and Public Health
- Earliest Civilizations
- The Eighteenth Century
- The Nineteenth Century
- The Twentieth Century
- The Twenty-First Century

Chapter Summary
Scenario: Analysis and Response
Review Questions
Activities
References

Chapter Objectives

After studying this chapter, you will be able to:

1. Define the terms *health, community, community health, population health, public health, public health system,* and *global health*.
2. Briefly describe the five major determinants of health.
3. Explain the difference between personal and community health activities.
4. List and discuss the factors that influence a community's health.
5. Briefly relate the history of community and public health, including the recent U.S. history of community and public health in the twentieth and early twenty-first centuries.
6. Provide a brief overview of the current health status of Americans.
7. Describe the purpose of the *Healthy People 2020* goals and objectives as they apply to the planning process of the health of Americans.
8. Summarize the major community and public health problems facing the United States and the world today.

Scenario

Amy and Eric are a young working couple who are easing into a comfortable lifestyle. They have good-paying jobs, drive nice cars, have two healthy preschool children, and, after living in an apartment for several years, are now buying a home in a good neighborhood. When Amy picked her children up from day care earlier in the day she was told that another parent had reported that his child was diagnosed with hepatitis. This news frightened Amy and made her begin to question the quality of the day care center. Amy told Eric of this situation when he got home. As the couple discussed whether or not they should take their children to day care as usual the following day, they discovered that they had many unanswered questions. How serious is hepatitis? What is the likelihood that their children will be at serious risk for getting the disease? What steps are being taken to control the outbreak? Is any state or local agency responsible for standardizing health practices at private day care centers in the community? Does the city, county, or state carry out any type of inspection when they license these facilities? And, if the children do not attend day care, which parent will stay home with them?

Introduction

Since 1900, tremendous progress had been made in the health and life expectancy of those in the United States (see **Box 1.1**) and of many people of the world since 1900. Infant mortality dropped, many of the infectious diseases have been brought under control, and better family planning became available. However, much still needs to be done to improve health especially when it comes to health disparities found in certain ethnic and racial groups. Individual health behaviors, such as the use of tobacco, poor diet, and physical inactivity, have given rise to an unacceptable number of cases of illness and death from noninfectious diseases such as cancer, diabetes, and heart disease. Continued use of an outdated infrastructure, such as the old water pipes in Flint, Michigan, has exposed many to unnecessary health risks. New and emerging infectious diseases, such as Zika virus disease and those caused by superbugs (i.e., drug-resistant pathogens), are stretching resources available to control them. And events stemming from natural disasters such as floods, tornadoes, and hurricanes; human-made disasters such as the Gulf oil spill; and terrorism, such as the 2013 bombings at the Boston Marathon have caused us to refocus our priorities. All of these events have severely disrupted Americans' sense of security[1] and sense of safety in the environment. In addition, many of these events revealed the vulnerability of the United States' and the world's ability to respond to such circumstances and highlighted the need for improvement in emergency response preparedness and infrastructure of the public health system.

Even with all that has happened in recent years in the United States and around the world, the achievement of good health remains a worldwide goal of the twenty-first century. Governments, private organizations, and individuals throughout the world are working to improve health. Although individual actions to improve one's own personal health certainly contribute to the overall health of the community, organized community actions are often necessary when health problems exceed the resources of any one individual. When such actions are not taken, the health of the entire community is at risk.

This chapter introduces the concepts and principles of community and public health, explains how community and public health differ from personal health, and provides a brief history of community and public health. Some of the key health problems facing Americans are also described, and an outlook for the twenty-first century is provided.

Definitions

The word health means different things to different people. Similarly, there are other words that can be defined in various ways. Some basic terms we will use in this book are defined in the following paragraphs.

BOX 1.1 Ten Great Public Health Achievements—United States, 1900–1999 and 2001–2010

As the twentieth century came to a close, the overall health status and life expectancy in the United States were at all-time highs. Between 1900 and 2000 life expectancy at birth of U.S. residents increased by 62% from 47.3 years to 76.8 years;[2] 25 of these years have been attributed to advances in public health.[3] U.S. life expectancy is now at 78.8 years.[2] Many public health achievements can be linked to this gain in life expectancy, however. The Centers for Disease Control and Prevention (CDC), the U.S. government agency charged with protecting the public health of the nation, singled out "Ten Great Public Health Achievements" in the United States between 1900 and 1999. Here is the list[4]:

1. *Vaccination*
2. *Motor vehicle safety*
3. *Safer workplaces*
4. *Control of infectious diseases*
5. *Decline of deaths from coronary heart disease and stroke*
6. *Safer and healthier foods*
7. *Healthier mothers and babies*
8. *Family planning*
9. *Fluoridation of drinking water*
10. *Recognition of tobacco use as a health hazard*

At the conclusion of 2010, public health scientists at CDC were asked to nominate noteworthy public health achievements that occurred in the United States during 2001–2010. Below, in no specific order, are the ones selected from the nominations.[5]

- *Vaccine-Preventable Deaths*. Over the 10-year period there was a substantial decline in cases, hospitalizations, deaths, and health care costs associated with vaccine-preventable diseases.
- *Prevention and Control of Infectious Diseases*. Improvements in public health infrastructure along with innovative and targeted prevention efforts yielded significant progress in controlling infectious diseases (e.g., tuberculosis cases).
- *Tobacco Control*. Tobacco still remains the single largest preventable cause of death and disease in the United States but the adult smoking prevalence dropped to 16.8% in 2014[6] and approximately half of the states have comprehensive smoke-free laws.
- *Maternal and Infant Health*. During the 10-year period there were significant reductions in the number of infants born with neural tube defects and an expansion of screening of newborns for metabolic and other heritable disorders.
- *Motor Vehicle Safety.* There were significant reductions in motor vehicle deaths and injuries, as well as pedestrian and bicyclist deaths. All attributed to safer vehicles, roads, and safer road use.
- *Cardiovascular Disease Prevention*. Death rates for both stroke and coronary heart disease continue to trend down. Most can be attributed to reduction in the prevalence of risk factors, and improved treatments, medications, and quality of care.
- *Occupational Safety*. Much progress was made in improving working conditions and reducing the risk for workplace-associated injuries over the 10 years.
- *Cancer Prevention.* A number of death rates due to various cancers dropped during the 10 years and much of the progress can be attributed to the implementation of the evidence-based screening recommendations.
- *Childhood Lead Poisoning Prevention*. There was a steep decline in the percentage of children ages 1–5 years with blood levels $\geq$ 10 micrograms/dL. Much of the progress can be traced to the 23 states in 2010 that had comprehensive lead poisoning prevention laws. As of 2016, experts now use a reference level of 5 micrograms/dL to identify children with high blood lead levels.[7]
- *Public Health Preparedness and Response*. Following the terrorists' attacks of 2001 on the United States great effort was put into both expanding and improving the capacity of the public health system to respond to public health threats.

Data from: Centers for Disease Control and Prevention (1999). "Ten Great Public Health Achievements—United States, 1900–1999." *Morbidity and Mortality Weekly Report, 48*(12): 241–243; and U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (2011). "Ten Great Public Health Achievements—United States, 2001–2010." *Morbidity and Mortality Weekly Report*, 60(19): 619–623.

Health

Health a dynamic state or condition of the human organism that is multidimensional in nature, a resource for living, and results from a person's interactions with and adaptations to his or her environment; therefore, it can exist in varying degrees and is specific to each individual and his or her situation

The word *health* is derived from *hal*, which means "hale, sound, whole." When it comes to the health of people, the word health has been defined in a number of different ways—often in its social context, as when a parent describes the health of a child or when an avid fan defines the health of a professional athlete. The most widely quoted definition of health was the one created by the World Health Organization (WHO) in 1946, which states "health is a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity."[8] Further, the WHO has indicated that "health is a resource for everyday life, not the object of living, and is a positive concept emphasizing social and personal resources as well as physical capabilities."[8] Others have stated that health cannot be defined as a state because it is ever changing. Therefore, we have chosen to define **health** as a dynamic state or condition of the

human organism that is multidimensional (i.e., physical, emotional, social, intellectual, spiritual, and occupational) in nature, a resource for living, and results from a person's interactions with and adaptations to his or her environment. Therefore, it can exist in varying degrees and is specific to each individual and his or her situation. "A person can have a disease or injury and still be healthy or at least feel well. There are many examples, but certainly Olympic wheelchair racers fit into this category."[9]

A person's health status is dynamic in part because of the many different factors that determine one's health. It is widely accepted that health status is determined by the interaction of five domains: gestational endowments (i.e., genetic makeup), social circumstances (e.g., education, employment, income, poverty, housing, crime, and social cohesion), environmental conditions where people live and work (e.g., toxic agents, microbial agents, and structural hazards), behavioral choices (e.g., diet, physical activity, substance use and abuse), and the availability of quality medical care.[10] "Ultimately, the health fate of each of us is determined by factors acting not mostly in isolation but by our experience where domains interconnect. Whether a gene is expressed can be determined by environmental exposures or behavioral patterns. The nature and consequences of behavioral choices are affected by social circumstances. Our genetic predispositions affect the health care we need, and our social circumstances affect the health care we receive"[11] (see **Figure 1.1**).

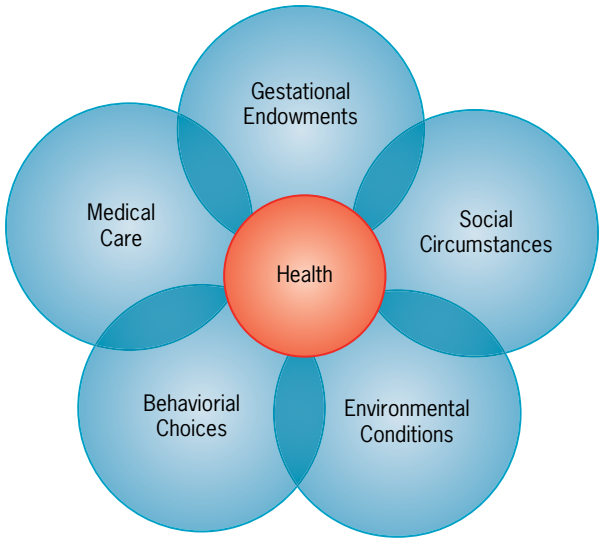


FIGURE 1.1 Interconnections of the determinants of health.

Community

Traditionally, a community has been thought of as a geographic area with specific boundaries—for example, a neighborhood, city, county, or state. However, in the context of community and public health, a **community** is "a collective body of individuals identified by common characteristics such as geography, interests, experiences, concerns, or values."[12] Communities are characterized by the following elements: (1) membership—a sense of identity and belonging; (2) common symbol systems—similar language, rituals, and ceremonies; (3) shared values and norms; (4) mutual influence—community members have influence and are influenced by each other; (5) shared needs and commitment to meeting them; and (6) shared emotional connection—members share common history, experiences, and mutual support.[13] Examples of communities include the people of the city of Columbus (location), the Asian community of San Francisco (race), the Hispanic community of Miami (ethnicity), seniors in the church (age), the business or the banking communities (occupation), the homeless of Indiana (specific problem), those on welfare in Ohio (particular outcome), local union members (common bond), or those who are members of an electronic social network (cyber). A community may be as small as the group of people who live on a residence hall floor at a university or as large as all of the individuals who make up a nation. "A healthy community is a place where people provide leadership in assessing their own resources and needs, where public health and social infrastructure and policies support health, and where essential public health services, including quality health care, are available."[14]

Public, Community, Population, and Global Health

Prior to defining the four terms public health, community health, population health, and global health, it is important to note that often the terms are used interchangeably by both laypeople and professionals who work in the various health fields. When the terms are used interchangeably, most people are referring to the collective health of those in society and the actions or activities taken to obtain and maintain that health. The definitions provided here for the four terms more precisely define the group of people in question and the origin of the actions or activities.

Community a collective body of individuals identified by common characteristics such as geography, interests, experiences, concerns, or values

Public health actions that society takes collectively to ensure that the conditions in which people can be healthy

Public health system the organizational mechanism of those activities undertaken within the formal structure of government and the associated efforts of private and voluntary organizations and individuals

Community health the health status of a defined group of people and the actions and conditions to promote, protect, and preserve their health

Population health "the health outcomes of a group of individuals, including the distribution of such outcomes within the group."[16]

Global health describes health problems, issues, and concerns that transcend national boundaries, may be influenced by circumstances or experiences in other countries, and are best addressed by cooperative actions and solutions

Of the four terms, public health is the most inclusive. The Institute of Medicine (IOM) defined **public health** in 1988 in its landmark report *The Future of Public Health* as "what we as a society do collectively to assure the conditions in which people can be healthy."[15] The **public health system**, which has been defined as "activities undertaken within the formal structure of government and the associated efforts of private and voluntary organizations and individuals,"[15] is the organizational mechanism for providing such conditions. Even with these formal definitions, some still see public health activities as only those efforts that originate in federal, state, and local governmental public health agencies such as the Centers for Disease Control and Prevention and local (i.e., city and county) health departments.

Community health refers to the health status of a defined group of people and the actions and conditions to promote, protect, and preserve their health. For example, the health status of the people of Elizabethtown, Pennsylvania, and the private and public actions taken to promote, protect, and preserve the health of these people would constitute community health.

The term population health is similar to community health. Although the term has been around for a number of years, it is appearing more commonly in the literature today. As such it has been defined in several different ways. The most common definition used for **population health** is "the health outcomes of a group of individuals, including the distribution of such outcomes within the group."[16]

Another term that has been used increasingly more in recent years is global health. **Global health** is a term that describes "health problems, issues, and concerns that transcend national boundaries, may be influenced by circumstances or experiences in other countries, and are best addressed by cooperative actions and solutions."[17] Therefore, an issue such as Zika virus disease can be viewed as a global health issue. Much of the rise in concern about global health problems comes from the speed of international travel and how easy it is for people who may be infected with a disease to cross borders into another country.

Personal Health Activities versus Community and Public Health Activities

To further clarify the definitions presented in this chapter, it is important to distinguish between the terms personal health activities and community and public health activities.

Personal Health Activities

Personal health activities are individual actions and decision-making that affect the health of an individual or his or her immediate family members or friends. These activities may be preventive or curative in nature but seldom directly affect the behavior of others. Choosing to eat wisely, to regularly wear a safety belt, and to visit the physician are all examples of personal health activities.

Community and Public Health Activities

Community and public health activities are activities that are aimed at protecting or improving the health of a population or community. Maintenance of accurate birth and death records, protection of the food and water supply, and participating in fund drives for voluntary health organizations such as the American Lung Association are examples of community health activities.

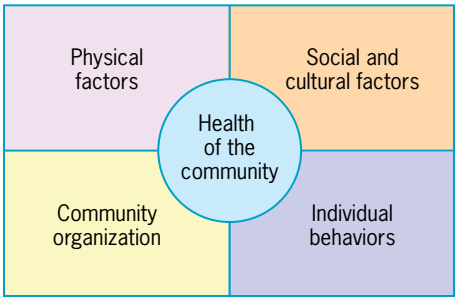


FIGURE 1.2 Factors that affect the health of the community.

Factors That Affect the Health of a Community

Many factors affect the health of a community. As a result, the health status of each community is different. These factors may be physical, social, and/or cultural. They also include the ability of the community to organize and work together as a whole as well as the individual behaviors of those in the community (see **Figure 1.2**).

Physical Factors

Physical factors include the influences of geography, the environment, community size, and industrial development.

Geography

A community's health problems can be directly influenced by its altitude, latitude, and climate. In tropical countries where warm, humid temperatures and rain prevail throughout the year, parasitic and infectious diseases are a leading community health problem (see **Figure 1.3**). In many tropical countries, survival from these diseases is made more difficult because poor soil conditions result in inadequate food production and malnutrition. In temperate climates with fewer parasitic and infectious diseases and a more than adequate food supply, obesity and heart disease are important community and public health problems.

FIGURE 1.3 In tropical countries, parasitic and infectious diseases are leading community health problems.

Courtesy of Lian Bruno.

Environment

The quality of our natural environment is directly related to the quality of our stewardship of it. Many experts believe that if we continue to allow uncontrolled population growth and continue to deplete nonrenewable natural resources, succeeding generations will inhabit communities that are less desirable than ours. Many feel that we must accept responsibility for this stewardship and drastically reduce the rate at which we foul the soil, water, and air.

When speaking about the environment we must also consider the impact the built environment has on community and public health. The term **built environment** refers to "the design, construction, management, and land use of human-made surroundings as an interrelated whole, as well as their relationship to human activities over time."[18] It includes but is not limited to: transportation systems (e.g., mass transit); urban design features (e.g., bike paths, sidewalks, adequate lighting); parks and recreational facilities; land use (e.g., community gardens, location of schools, trail development); building with health-enhancing features (e.g., green roofs, stairs); road systems; and housing free from environmental hazards.[18, 19, 20] The built environment can be structured to give people more or fewer opportunities to behave in health enhancing ways.

Community Size

The larger the community, the greater its range of health problems and the greater its number of health resources. For example, larger communities have more health professionals and better health facilities than smaller communities. These resources are often needed because communicable diseases can spread more quickly and environmental problems are often more severe in densely populated areas. For example, the amount of trash generated by the approximately 8.5 million people in New York City is many times greater than that generated by the entire state of Wyoming, with its population of 584,153.

It is important to note that a community's size can have both a positive and negative impact on that community's health. The ability of a community to effectively plan, organize, and utilize its resources can determine whether its size can be used to good advantage.

Industrial Development

Industrial development, like size, can have either positive or negative effects on the health status of a community. Industrial development provides a community with added resources for community health programs, but it may bring with it environmental pollution and occupational injuries and illnesses. Communities that experience rapid industrial development must eventually regulate (e.g., laws and ordinances) the way in which industries (1) obtain raw materials, (2) discharge by-products, (3) dispose of wastes, (4) treat and protect their employees, and (5) clean up environmental accidents. Unfortunately, many of these laws are usually passed only after these communities have suffered significant reductions in the quality of their life and health.

Built environment "the design, construction, management, and land use of human-made surroundings as an interrelated whole, as well as their relationship to human activities over time."[18]

Social and Cultural Factors

Social factors are those that arise from the interaction of individuals or groups within the community. For example, people who live in urban communities, where life is fast paced, experience higher rates of stress-related illnesses than those who live in rural communities, where life is more leisurely. On the other hand, those in rural areas may not have access to the same quality

or selection of health care (i.e., hospitals or medical specialists) that is available to those who live in urban communities.

Cultural factors arise from guidelines (both explicit and implicit) that individuals "inherit" from being a part of a particular society. Some of the factors that contribute to culture are discussed in the following sections.

Beliefs, Traditions, and Prejudices

The beliefs, traditions, and prejudices of community members can affect the health of the community. The beliefs of those in a community about such specific health behaviors as exercise and smoking can influence policy makers on whether or not they will spend money on bike lanes on the roads and recreational bike trails and work toward no-smoking ordinances. The traditions of specific ethnic groups can influence the types of food, restaurants, retail outlets, and services available in a community. Prejudices of one specific ethnic or racial group against another can result in acts of violence and crime. Racial and ethnic disparities will continue to put certain groups, such as black Americans or certain religious groups, at greater risk.

Economy

Both national and local economies can affect the health of a community through reductions in health and social services. An economic downturn means lower tax revenues (fewer tax dollars) and fewer contributions to charitable groups. Such actions will result in fewer dollars being available for programs such as welfare, food stamps, community health care, and other community services. This occurs because revenue shortfalls cause agencies to experience budget cuts. With fewer dollars, these agencies often must alter their eligibility guidelines, thereby restricting aid to only individuals with the greatest need. Obviously, many people who had been eligible for assistance before the economic downturn become ineligible.

Employers usually find it increasingly difficult to provide health benefits for their employees as their income drops. Those who are unemployed and underemployed face poverty and deteriorating health. Thus, the cumulative effect of an economic downturn significantly affects the health of the community.

Politics

Those who happen to be in political office can improve or jeopardize the health of their community by the decisions (i.e., laws and ordinances) they make. In the most general terms, the argument is over greater or lesser governmental participation in health issues. For example, there has been a longstanding discussion in the United States on the extent to which the government should involve itself in health care. Historically, Democrats have been in favor of such action while Republicans have been against it. State and local politicians also influence the health of their communities each time they vote on health-related measures brought before them, such as increasing the minimum legal sales age (MLSA) for tobacco products to 21 years.

FIGURE 1.4 Religion can affect a community's health either positively or negatively.

Religion

A number of religions have taken a position on health care and health behaviors. For example, some religious communities limit the type of medical treatment their members may receive. Some do not permit immunizations; others do not permit their members to be treated by physicians. Still others prohibit certain foods. For example, kosher dietary regulations permit Jews to eat the meat only of animals that chew cud and have cloven hooves and the flesh only of fish that have both gills and scales, while still others, like the Native American Church of the Morning Star, use peyote, a hallucinogen, as a sacrament.

Some religious communities actively address moral and ethical issues such as abortion, premarital intercourse, and homosexuality. Still other religions teach health-promoting codes of living to their members. Obviously, religion can affect a community's health positively or negatively (see **Figure 1.4**).

Social Norms

The influence of social norms on community and public health can be positive or negative and can change over time. Cigarette smoking is a good example. During the 1940s, 1950s, and 1960s, it was socially acceptable to smoke in most settings. As a matter of fact, in 1965, 51.2% of American men and 33.7% of American women smoked. Thus, in 1965 it was socially acceptable to be a smoker, especially if you were male. Now, in the second decade of the twenty-first century, those percentages have dropped to 18.8% (for males) and 14.8% (for females),[6] and in most public places it has become socially unacceptable to smoke. The lawsuits against tobacco companies by both the state attorneys general and private citizens provide further evidence that smoking has fallen from social acceptability. Because of this change in the social norm, there is less secondhand smoke in many public places, and in turn the health of the community has improved.

Unlike smoking, alcohol consumption represents a continuing negative social norm in America, especially on college campuses. The normal expectation seems to be that drinking is fun (and almost everyone wants to have fun). Despite the fact that most college students are too young to drink legally, approximately 59.5% of college students drink.[21] In the same survey, when college students were asked what percentage of other college students consumed alcohol the mean response was 92.1%.[21] It seems fairly obvious that the American alcoholic-beverage industry has influenced our social norms.

Socioeconomic Status

Differences in socioeconomic status (SES), whether "defined by education, employment, or income, both individual- and community-level socioeconomic status have independent effects on health."[22] There is a strong correlation between SES and health status—individuals in lower SES groups, regardless of other characteristics, have poorer health status. This correlation applies both across racial groups and within racial groups.[23]

Community Organizing

The way in which a community is able to organize its resources directly influences its ability to intervene and solve problems, including health problems. **Community organizing** is "the process by which community groups are helped to identify common problems or change targets, mobilize resources, and develop and implement strategies for reaching their collective goals."[24] It is not a science but an art of building consensus within a democratic process.[25] If a community can organize its resources effectively into a unified force, it "is likely to produce benefits in the form of increased effectiveness and productivity by reducing duplication of efforts and avoiding the imposition of solutions that are not congruent with the local culture and needs."[14] For example, many communities in the United States have faced community-wide drug problems. Some have been able to organize their resources to reduce or resolve these problems, whereas others have not.

Individual Behavior

The behavior of the individual community members contributes to the health of the entire community. It takes the concerted effort of many—if not most—of the individuals in a community to make a program work. For example, if each individual consciously recycles his or her trash each week, community recycling will be successful. Likewise, if each occupant would wear a safety belt, there could be a significant reduction in the number of facial injuries and deaths from car crashes for the entire community. In another example, the more individuals who become immunized against a specific communicable disease, the slower the disease will spread and the fewer people will be exposed. This concept is known as **herd immunity**.

Community organizing the process by which community groups are helped to identify common problems or change targets, mobilize resources, and develop and implement strategies for reaching their collective goals

Herd immunity the resistance of a population to the spread of an infectious agent based on the immunity of a high proportion of individuals

A History of Community and Public Health

The history of community and public health is almost as long as the history of civilization. This summary provides an account of some of the accomplishments and failures in community and public health. It is hoped that knowledge of the past will enable us to better prepare for future challenges to our community's health.