Community/ Public Health Nursing

EDITION 7

Promoting the Health of Populations

MARY A. NIES | MELANIE McEWEN

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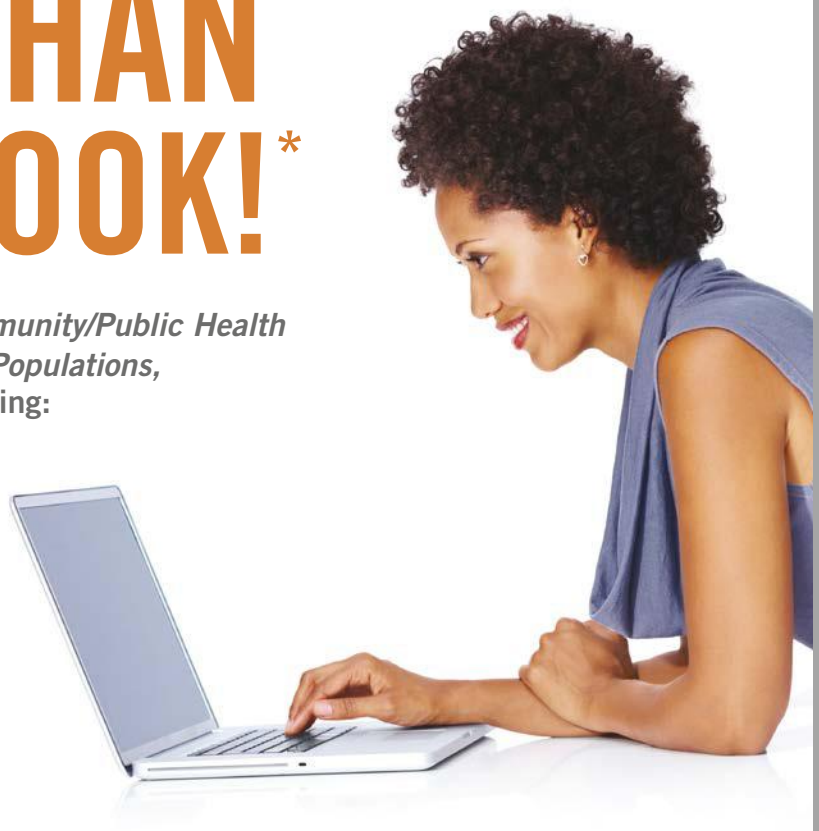

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EDITION 7

Community/ Public Health Nursing

Promoting the Health of Populations

MARY A. NIES, PhD, RN, FAAN, FAAHB
Director of Nursing Research and Professor College of Nursing
Joint Appointment MPH Program
Kasiska Division of Health Sciences
Idaho State University
Pocatello, Idaho

MELANIE McEWEN, PhD, RN, CNE, ANEF
Professor
University of Texas Health Science Center at Houston
Cizik School of Nursing
Houston, Texas

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3251 Riverport Lane
St. Louis, Missouri 63043

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Content Development Specialist: John Tomedi
Publishing Services Manager: Julie Eddy
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To Phil Yankovich, my husband, companion, and best friend, whose love, caring, and true support are always there for me. He provides me with the energy I need to pursue my dreams.

To Kara Nies Yankovich, my daughter, for whom I wish a happy and healthy life. Her energy, joy, and enthusiasm for life give so much to me.

To Earl (who passed away October 15, 2017, at the age of 92) and Lois Nies, my parents, for their never-ending encouragement and lifelong support. They helped me develop a foundation for creative thinking, new ideas, and spirited debate.

Mary A. Nies

To my husband, Scott McEwen, whose love, support, inspiration, and encouragement have been my foundation for more than 40 years. I can't wait to see what happens next!

Melanie McEwen

ABOUT THE AUTHOR

Mary A. Nies

Mary A. Nies, PhD, RN, FAAN, FAAHB, is the Director of Nursing Research and Professor College of Nursing, Joint Appointment MPH Program, Kasiska Division of Health Sciences, Idaho State University. Dr. Nies received her diploma from the Bellin School of Nursing in Green Bay, Wisconsin; her BSN from the University of Wisconsin, Madison; her MSN from Loyola University, Chicago; and her PhD in Public Health Nursing, Health Services, and Health Promotion Research at the University of Illinois, Chicago. She completed a postdoctoral research fellowship in health promotion and community health at the University of Michigan, Ann Arbor. She is a fellow of the American Academy of Nursing and a fellow of the American Academy of Health Behavior. Dr. Nies co-edited *Community Health Nursing: Promoting the Health of Aggregates,* which received the 1993 Book of the Year award from the *American Journal of Nursing.* Her program of research focuses on the outcomes of health promotion interventions for minority and nonminority populations in the community. Her research is involved with physical activity and obesity prevention for vulnerable community populations.

Melanie McEwen

Melanie McEwen, PhD, RN, CNE, ANEF, is a Professor at the University of Texas Health Science Center at Houston's Cizik School of Nursing. Dr. McEwen received her BSN from the University of Texas School of Nursing in Austin; her Master's in Community and Public Health Nursing from Louisiana State University Medical Center in New Orleans; and her PhD in Nursing from Texas Woman's University. Dr. McEwen has been a nursing educator for 30 years and is also the co-author of *Community–Based Nursing: An Introduction* (Elsevier, 2009) and co-author/editor of *Theoretical Basis for Nursing* (Wolters Kluwer, 2018).

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Mary A. Nies, PhD, RN, FAAN, FAAHB
Melanie McEwen, PhD, RN, CNE, ANEF

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- Patricia Burbank, *Chapter 7: Community Health Planning, Implementation, and Evaluation*
- Holly Cassells, *Chapter 5: Epidemiology; Chapter 6: Community Assessment*
- Susan Givens, *Chapter 16: Child and Adolescent Health*
- Jean Cozad Lyon, *Chapter 9: Case Management*

Mary A. Nies, PhD, RN, FAAN, FAAHB

CONTRIBUTORS

Cathy R. Arvidson, PhD, FNP-BC
Associate Professor
School of Nursing
Idaho State University
Pocatello, Idaho
Chapter 10: Policy, Politics, Legislation, and Community Health Nursing

Tonya Bragg-Underwood, DNP, FNP-BC, CNE
Associate Professor
School of Nursing
Western Kentucky University
Bowling Green, Kentucky
Chapter 20: Family Health

Carrie L. Buch, PhD, BSN, MS
Associate Professor
School of Nursing
Oakland University
Rochester, Michigan
Chapter 34: Home Health and Hospice

Patricia M. Burbank, DNSc, BS, MS
Associate Dean and Professor
College of Nursing
The University of Rhode Island
Kingston, Rhode Island
Chapter 7: Community Health Planning, Implementation, and Evaluation

Sarah G. Candler, MD, MPH
Assistant Professor
Baylor College of Medicine
Michael E. DeBakey Veterans Affairs Medical Center
Houston, Texas
Chapter 22: Veterans' Health

Holly B. Cassells, PhD, MPH, MN
Professor
School of Nursing and Health Professions
University of the Incarnate Word
San Antonio, Texas
Chapter 5: Epidemiology
Chapter 6: Community Assessment

Angelic Denise Chaison, PhD
Psychologist, Michael E. DeBakey Veterans Affairs Medical Center
Assistant Professor, Baylor College of Medicine
Houston, Texas
Chapter 22: Veterans' Health

Christina N. DesOrmeaux, BSN, MSN, PhD
Community Division Head
Community Nursing
The University of Texas at Houston Health Science Center
School of Nursing
Houston, Texas
Chapter 13: Cultural Diversity and Community Health Nursing
Chapter 30: School Health

Tina Doyle-Hines, LPC, NCC
U.S. Air Force, Retired
Former Veteran Counselor
UTH Cizik School of Nursing
Houston, Texas
Chapter 22: Veterans' Health

Stacy A. Drake, MSN, MPH, RN
Assistant Professor
Nursing Systems
The University of Texas Health Science Center at Houston
School of Nursing
Houston, Texas
Chapter 32: Forensic and Correctional Nursing

Allison P. Edwards, DrPH, MS, RN, CNE
Assistant Professor
Nursing Systems
The University of Texas Health Science Center at Houston
School of Nursing
Houston, Texas;
Board Member
Texas Board of Nursing
Austin, Texas
Chapter 21: Populations Affected by Disabilities

Rola El-Serag, MD
Medical Director Women Veteran's Program
Michael E. DeBakey Veterans Affairs Medical Center
Assistant Professor of Medicine
Baylor College of Medicine
Houston, Texas
Chapter 22: Veterans' Health

Melissa Domingeaux Ethington, BSN, MSN, PhD
Assistant Professor
Family Health
The University of Texas Health Science Center at Houston
School of Nursing
Houston, Texas
Chapter 16: Child and Adolescent Health

Ginette G. Ferszt, PhD, RN, PMHCNS-BC
Professor
College of Nursing
University of Rhode Island
Kingston, Rhode Island
Chapter 28: Violence

Lori A. Glenn, DNP, MS, CNM, RN
Clinical Associate Professor
McAuley School of Nursing
University of Detroit Mercy
Detroit, Michigan;
Nurse Midwife
Mid-Michigan Midwifery
Hurley Medical Center
Flint, Michigan
Chapter 17: Women's Health

Deanna E. Grimes, DrPH, RN, MSN, FAAN
Suzie Conway Endowed Professor in Nursing
Nursing Systems
The University of Texas Health Science Center at Houston
School of Nursing
Houston, Texas
Chapter 26: Communicable Diseases

Karyn Leavitt Grow, MS, BSN, RN
Director of Care Coordination Training
Clinical Development
Caravan Health
Berkeley, California;
Chief Nursing Officer
Manager, Case Management/Preadmission Screening
Sierra Surgery Hospital
Carson City, Nevada
Reno, Nevada
Chapter 9: Case Management

Jené M. Hurlbut, BSN, MSN, MS, PhD
Professor
Nursing
Roseman University of Health Sciences
Henderson, Nevada
Chapter 18: Men's Health

Joanna Lamkin, PhD
Postdoctoral Fellow
Veterans Affairs Health Services Research & Development, Houston Center of Excellence
Michael E. DeBakey Veterans Affairs Medical Center
Menninger Department of Psychiatry and Behavioral Sciences
Baylor College of Medicine
Veterans Affairs South Central Mental Illness Research, Education and Clinical Center
Houston, Texas
Chapter 22: Veterans' Health

Jean Cozad Lyon, PhD, MSN
Clinical Care Practitioner
ATOP2
HealthInsight
Reno, Nevada
Chapter 9: Case Management

Rex Marsau
U.S. Navy, Retired
Former Program Director
U.S. Vets
Houston, Texas
Chapter 22: Veterans' Health

Diane Cocozza Martins, MEd, MA, PhD
Professor
College of Nursing
University of Rhode Island
Kingston, Rhode Island
Chapter 3: Thinking Upstream: Nursing Theories and Population-Focused Nursing Practice
Chapter 7: Community Health Planning, Implementation, and Evaluation

Mary E. McBee, DNP, MSN, BSN, RN
Assistant Professor
Nursing Systems
The University of Texas Health Science Center at Houston
School of Nursing
Houston, Texas
Chapter 11: The Health Care System
Chapter 12: Economics of Health Care

Melanie McEwen, PhD, RN, CNE, ANEF
Professor
University of Texas Health Science Center at Houston
Cizik School of Nursing
Houston, Texas
Chapter 1: Health: A Community View
Chapter 2: Historical Factors: Public Health Nursing in Context
Chapter 11: The Health Care System
Chapter 12: Economics of Health Care

Cathy D. Meade, PhD, RN, FAAN
Senior Member
Population Science, Health Outcomes & Behavior
Moffitt Cancer Center;
Professor
Oncologic Sciences
University of South Florida
Tampa, Florida
Chapter 8: Community Health Education

Mary A. Nies, PhD, RN, FAAN, FAAHB
Director of Nursing Research and Professor College of Nursing
Joint Appointment MPH Program
Kasiska Division of Health Sciences
Idaho State University
Pocatello, Idaho
Chapter 1: Health: A Community View
Chapter 4: Health Promotion and Risk Reduction
Chapter 34: Home Health and Hospice

Julie Cowan Novak, DNSc, RN, CPNP
Executive Director
Neuro Developmental NICU Follow up Clinic
Sharp Mary Birch Hospital for Women and Newborns
San Diego, California;
Professor Emerita
Purdue University
West Lafayette, Indiana
Chapter 15: Health in the Global Community

Bridgette Crotwell Pullis, BSN, MS, PhD
Assistant Professor of Nursing, Director
The Veterans' Bachelor of Science in Nursing Program
Nursing Systems
The University of Texas Health Science Center at Houston
School of Nursing
Houston, Texas
Chapter 4: Health Promotion and Risk Reduction
Chapter 22: Veterans' Health

Robert Pullis
Houston, Texas
Chapter 22: Veterans' Health

Elda G. Ramirez, PhD, RN, FNP-BC
Professor of Clinical Nursing
Acute and Clinical Care
The University of Texas Health Science Center at Houston
School of Nursing
Houston, Texas
Chapter 29: Natural and Manmade Disasters

Bonnie Rogers, DrPH, COHN-S, LNCC
Director
NC Occupational Safety and Health and Education and Research Center
OHN Program
University of North Carolina
School of Public Health
Chapel Hill, North Carolina
Chapter 31: Occupational Health

Tamara Rose, BSN, MPH, PhD
Associate Dean
Nursing
Oregon Health and Science University
Klamath Falls, Oregon
Chapter 14: Environmental Health

Mary Ellen Trail Ross, DrPH, MSN, RN, GCNS-BC
Associate Professor of Clinical Nursing
Department of Nursing Systems
The University of Texas Health Science Center at Houston
Houston, Texas
Chapter 19: Senior Health

Beverly Cook Siegrist, EdD, MS, BSN, CNE
Professor
School of Nursing
Western Kentucky University
Bowling Green, Kentucky
Chapter 20: Family Health
Chapter 33: Faith Community Nursing

Alison C. Sweeney, PsyD
Clinical Psychologist
Michael E. DeBakey Veterans Affairs Medical Center,
Assistant Professor
Menninger Department of Psychiatry and Behavioral Science
Baylor College of Medicine
Houston, Texas
Chapter 22: Veterans' Health

Lisa W. Thomas, DNP, MS, BSN
Assistant Professor, Clinical
Acute and Continuing Care
University of Texas Health Science Center;
Houston Research Nurse Consultant
Nursing Administration
TIRR Memorial Herman
Houston, Texas
Chapter 21: Populations Affected by Disabilities

Patricia L. Thomas, PhD, MS, BSN, ADN
Assistant Dean for Practice
Cook DeVos Health Science Center-Kirkhof College of Nursing
Grand Valley State University
Grand Rapids, Michigan
Chapter 24: Rural and Migrant Health

Meredith Troutman-Jordan, PhD, MSN
Associate Professor
School of Nursing
University of North Carolina
Charlotte, North Carolina
Chapter 21: Populations Affected by Disabilities
Chapter 23: Homeless Populations
Chapter 25: Populations Affected by Mental Illness
Chapter 27: Substance Abuse

Lori Wightman, BSN, MSN, DNP
Chief Nursing Officer
System Administration
Regional Health
Rapid City, Michigan
Chapter 24: Rural and Migrant Health

ANCILLARY AUTHORS

Joanna E. Cain, BSN, BA, RN
President and Founder, Auctorial Pursuits, Inc.
Atlanta, Georgia
NCLEX Review Questions
Case Studies

Dulce Santacroce, DNP, RN, CCM
RN-BSN Coordinator
Touro University Nevada
Henderson, Nevada
PowerPoint Slides

Anna K. Wehling Weepie, DNP, RN, CNE, COI
Assistant Dean
Undergraduate Nursing and Professor
Allen College
Waterloo, Iowa
Test Bank

REVIEWERS

Lisa L. Capps, PhD, APN, FNP-BC
Assistant Professor
School of Nursing
Saint Xavier University
Chicago, Illinois

Michelle L. Gerrety, EdD, MSN, RN
Administrative Director, Academic Services
Director, St. Elizabeth School of Nursing
Division Coordinator, Nursing
Saint Joseph's College
Lafayette, Indiana

Jean Brewer Grantham, MSN, APRN, WHNP-BC
Instructor
Robert E. Smith School of Nursing
Delta State University
Cleveland, Mississippi

Meryle Gurmankin, PhD, RN, CSN, AHN-BC
Adjunct Faculty
School of Nursing and Health Sciences
LaSalle University
Philadelphia, Pennsylvania

Karen A. Ivantic, DNP, APRN-BC, APNP
Professor and Family Nurse Practitioner
Columbia College of Nursing
Milwaukee, Wisconsin

Susan K. Lee, PhD, MSN, RN
Nursing Consultant
Department of Education
Texas Board of Nursing
Austin, Texas

Sherry R. Lovan, PhD, MSN, RN
BSN Program Coordinator and Associate Professor
School of Nursing
Western Kentucky University
Bowling Green, Kentucky

Patricia S. Martin, MSN, RN
Assistant Professor
School of Nursing
University of Louisville
Louisville, Kentucky

Jill M. Nocella, PhD, APRN-BC
Associate Professor of Nursing
Department of Nursing
William Paterson University of New Jersey
Wayne, New Jersey

Dulce Anne Santacroce, DNP, RN, CCM
Assistant Professor
School of Nursing
Touro University Nevada
Henderson, Nevada

Marcia R. Scanlon, RN, DNP
Assistant Professor of Nursing
Department Chair of Nursing and Allied Health
Westfield State University
Westfield, Massachusetts

Terri Stone, MSN, MBA, RN
Assistant Professor of Nursing
Department of Nursing
Pennsylvania College of Technology
Williamsport, Pennsylvania

Deborah Lynn Sweeney, DNSc, RN
Associate Professor of Nursing
Division of Nursing
Baptist College of Health Sciences
Memphis, Tennessee

Dokagari Woods, PhD, RN
Assistant Professor and Undergraduate Program Director
Department of Nursing
Tarleton State University
Stephenville, Texas

More money is spent per capita for health care in the United States than in any other country ($9990 in 2015). The United States spent 17.8% of its gross domestic product on health care expenditures in 2015, reaching a record high of $3.2 trillion. It is one of the few industrialized countries in the world that lacks a program of national health services or national health insurance, so despite this spending, 8.8% of the nation lacks health insurance. In addition, many countries have far better indices of health, including traditional indicators such as infant mortality rates and longevity for both men and women, than does the United States.

Over the years, the most significant improvements in the health of the population have been achieved through advances in public health using organized community efforts, such as improvements in sanitation, immunizations, and food quality and quantity. Although access to health care services and individual behavioral changes are important, they are only components of the larger determinants of health, such as social and physical environments. The greatest determinants of health are still equated with factors in the community, such as education, employment, housing, and nutrition. The more money put into health care expenditures in the United States, the less money there is to improve these community factors.

UPSTREAM FOCUS

The traditional focus of many health care professionals, known as a *downstream focus,* has been to deliver health care services to ill people and to encourage needed behavioral change at the individual level. The focus of public/community health nursing has traditionally been on health promotion and illness prevention by working with individuals and families within the community. A shift is needed to an upstream focus, which includes working with aggregates and communities in activities such as organizing and setting health policy. This focus will help aggregates and communities work to create options for healthier environments with essential components of health, including adequate education, housing, employment, and nutrition, and will provide choices that allow people to make behavioral changes, live and work in safe environments, and access equitable and comprehensive health care.

Grounded in the tenets of public health nursing and the practice of public health nurses such as Lillian Wald, this seventh edition of *Community/Public Health Nursing: Promoting the Health of Populations* builds on the earlier works by highlighting an aggregate focus in addition to the traditional areas of family and community health, and thus promotes upstream thinking. The primary focus is on the promotion of the health of aggregates. This approach includes the family as a population and addresses the needs of other aggregates or population subgroups. It conceptualizes the individual as a member of the family and as a member of other aggregates, including organizations and institutions. Furthermore, individuals and families are viewed as a part of a population within an environment (i.e., within a community).

An aggregate is made up of a collective of individuals, be it a family or another group that, with others, makes up a community. This text emphasizes the aggregate as a unit of focus and how aggregates that make up communities promote their own health. The aggregate is presented within the social context of the community, and students are given the opportunity to define and analyze environmental, economic, political, and legal constraints to the health of these populations.

Community/public health nursing has been determined to be a synthesis of nursing and public health practice with goals to promote and preserve the health of populations. Diagnosis and treatment of human responses to actual or potential health problems comprise the nursing component. The ability to prevent disease, prolong life, and promote health through organized community effort is from the public health component. Community/public health nursing practice is responsible to the population as a whole. Nursing efforts to promote health and prevent disease are applied to the public, which includes all units in the community, be they individual or collective (e.g., person, family, other aggregate, community, or population).

PURPOSE OF THE TEXT

In this text, the reader is encouraged to become a student of the community, learn from families and other aggregates in the community how they define and promote their own health, and learn how to become an advocate of the community by working with it to initiate change. The student is exposed to the complexity and rich diversity of the community and is shown evidence of how the community organizes to meet change.

The use of language or terminology by clients and agencies varies in different parts of the United States, and it may vary from that used by government officials. The contributors to this text are a diverse group from various parts of the United States. Their terms vary from chapter to chapter and from those in use in local communities. For example, some authors refer to African Americans, some to blacks, some to European Americans, and some to whites. The student must be familiar with a range of terms and, most important, know what is used in his or her local community.

Outstanding features of this seventh edition include its provocative nature as it raises consciousness regarding the social inequalities that exist in the United States and how the market-driven health care system contributes to prevention of the realization of health as a right for all. With a focus on social justice, this text emphasizes society's responsibility for the protection of all human life to ensure that all people have their basic needs met, such as adequate health protection and income. Attention to the merits of population-focused care, or care that covers all people residing within geographic boundaries rather than only those populations enrolled in insurance plans, highlights the need for further reform of the systems of health reimbursement. Working toward providing health promotion

and population-focused care to all requires a dramatic shift in thinking from individual-focused care for the practitioners of the future. The future paradigm for health care is demanding that the focus of nursing move toward population-based interventions if we are to forge toward the goals established in *Healthy People 2020*.

This text is designed to **stimulate critical thinking and challenge students to question and debate issues.** Complex problems demand complex answers; therefore the student is expected to *synthesize prior biophysical, psychosocial, cultural, and ethical arenas of knowledge.* However, experiential knowledge is also necessary, and the student is challenged to *enter new environments within the community* and gain new sensory, cognitive, and affective experiences. The authors of this text have integrated the concept of **upstream thinking,** introduced in the first edition, throughout this seventh edition as an important conceptual basis for nursing practice of aggregates and the community. The student is introduced to the individual and aggregate roles of community health nurses as they are engaged in a collective and interdisciplinary manner, working upstream, to facilitate the community's promotion of its own health. Students using this text will be better prepared to work with aggregates and communities in health promotion and with individuals and families in illness. Students using this text will also be better prepared to see the need to take responsibility for participation in organized community action targeting inequalities in arenas such as education, jobs, and housing and to participate in targeting individual health-behavioral change. These are important shifts in thinking for future practitioners who must be prepared to function in a population-focused health care system.

The text is also designed to increase the **cultural awareness** and **competency** of future community health nurses as they prepare to address the needs of culturally diverse populations. Students must be prepared to work with these growing populations as participation in the nursing workforce by ethnically and racially diverse people continues to lag. Various models are introduced to help students understand the growing link between social problems and health status, experienced disproportionately by diverse populations in the United States, and understand the methods of assessment and intervention used to meet the special needs of these populations.

The goals of the text are to provide the student with the ability to assess the complex factors in the community that affect individual, family, and other aggregate responses to health states and actual or potential health problems and to help students use this ability to plan, implement, and evaluate community/public health nursing interventions to increase contributions to the promotion of the health of populations.

MAJOR THEMES RELATED TO PROMOTING THE HEALTH OF POPULATIONS

This text is built on the following major themes:

- A social justice ethic of health care in contrast to a market justice ethic of health care in keeping with the philosophy of public health as "health for all"
- Integration of the concept of *upstream thinking* throughout the text and other appropriate theoretical frameworks related to chapter topics
- The use of population-focused and other community data to develop an assessment, or profile of health, and potential and actual health needs and capabilities of aggregates
- The application of all steps in the nursing process at the individual, family, and aggregate levels
- A focus on identification of needs of the aggregate from common interactions with individuals, families, and communities in traditional environments
- An orientation toward the application of all three levels of prevention at the individual, family, and aggregate levels
- The experience of the underserved aggregate, particularly the economically disenfranchised, including cultural and ethnic groups disproportionately at risk of developing health problems.

Themes are developed and related to promoting the health of populations in the following ways:

- The commitment of community/public health nursing is to an equity model; therefore community health nurses work toward the provision of the unmet health needs of populations.
- The development of a population-focused model is necessary to close the gap between unmet health care needs and health resources on a geographic basis to the entire population. The contributions of intervention at the aggregate level work toward the realization of such a model.
- Contemporary theories provide frameworks for holistic community health nursing practice that help students conceptualize the reciprocal influence of various components within the community on the health of aggregates and the population.
- The ability to gather population-focused and other community data in developing an assessment of health is a crucial initial step that precedes the identification of nursing diagnoses and plans to meet aggregate responses to potential and actual health problems.
- The nursing process includes, in each step, a focus on the aggregate, assessment of the aggregate, nursing diagnosis of the aggregate, planning for the aggregate, and intervention and evaluation at the aggregate level.
- The text discusses development of the ability to gather clues about the needs of aggregates from complex environments, such as during a home visit, with parents in a waiting room of a well-baby clinic, or with elders receiving hypertension screening, and to promote individual, collective, and political action that addresses the health of aggregates.
- Primary, secondary, and tertiary prevention strategies include a major focus at the population level.
- In addition to offering a chapter on cultural influences in the community, the text includes data on and the experience of underserved aggregates at high risk of developing health problems and who are most often in need of community health nursing services (i.e., low and marginal income, cultural, and ethnic groups) throughout.

ORGANIZATION

The text is divided into seven units. *Unit 1, Introduction to Community Health Nursing*, presents an overview of the concept of health, a perspective of health as evolving and as defined by the community, and the concept of community health nursing as the nursing of aggregates from both historical and contemporary mandates. Health is viewed as an individual and collective right, brought about through individual and collective/political action. The definitions of public health and community health nursing and their foci are presented. Current crises in public health and the health care system and consequences for the health of the public frame implications for community health nursing. The historical evolution of public health, the health care system, and community health nursing is presented, as well as the evolution of humans from wanderers and food gatherers to those who live in larger groups. The text also discusses the influence of the group on health, which contrasts with the evolution of a health care system built around the individual person, increasingly fractured into many parts. Community health nurses bring to their practice awareness of the social context; economic, political, and legal constraints from the larger community; and knowledge of the current health care system and its structural constraints and limitations on the care of populations. The theoretical foundations for the text, with a focus on the concept of upstream thinking, and the rationale for a population approach to community health nursing are presented. Recognizing the importance of health promotion and risk reduction when striving to improve the health of individuals, families, groups, and communities, this unit concludes with a chapter elaborating on those concepts. Strategies for assessment and analysis of risk factors and interventions to improve health are described.

Unit 2, The Art and Science of Community Health Nursing, describes application of the nursing process—assessment, planning, intervention, and evaluation—to aggregates in the community using selected theory bases. The unit addresses the need for a population focus that includes the public health sciences of biostatistics and epidemiology as key in community assessment and the application of the nursing process to aggregates to promote the health of populations. Application of the art and science of community health nursing to meeting the needs of aggregates is evident in chapters that focus on community health planning and evaluation, community health education, and case management.

Unit 3, Factors That Influence the Health of the Community, examines factors and issues that can both positively and negatively affect health. Beginning with an overview of health policy and legislation, the opening chapter in this unit focuses on how policy is developed and the effect of past and future legislative changes on how health care is delivered in the United States. This unit examines the health care delivery system and the importance of economics and health care financing on the health of individuals, families, and populations. Cultural diversity and associated issues are described in detail, showing the importance of consideration of culture when developing health interventions in the community. The influence of the environment on the health of populations is considered, and the reader is led to recognize the multitude of external factors that influence health. This unit concludes with an examination of various aspects of global health and describes features of the health care systems and patterns of health and illness in developing and developed countries.

Unit 4, Aggregates in the Community, presents the application of the nursing process to address potential health problems identified in large groups, including children and adolescents, women, men, families, and seniors. The focus is on the major indicators of health (e.g., longevity, mortality, and morbidity), types of common health problems, use of health services, pertinent legislation, health services and resources, selected applications of the community health nursing process to a case study, application of the levels of prevention, selected roles of the community health nurse, and relevant research.

Unit 5, Vulnerable Populations, focuses on those aggregates in the community considered vulnerable: persons with disabilities, veterans of the armed forces, the homeless, those living in rural areas including migrant workers, and persons with mental illness. Chapters address the application of the community health nursing process to the special service needs in each of these areas. Basic community health nursing strategies are applied to promoting the health of these vulnerable high-risk aggregates.

Unit 6, Population Health Problems, focuses on health problems that affect large aggregates and their service needs as applied in community health nursing. These problems include communicable disease, violence and associated issues, substance abuse, and a chapter describing nursing care during disasters.

Unit 7, Community Health Settings, focuses on selected sites or specialties for community health: school health, occupational health, faith community health, and home health and hospice. Finally, forensic nursing, one of the more recently added subspecialty areas of community health nursing, is presented in this unit, combined with correctional nursing content.

SPECIAL FEATURES

The following features are presented to enhance student learning:

- **Learning objectives.** Learning objectives set the framework for the content of each chapter.
- **Key terms.** A list of key terms for each chapter is provided at the beginning of the chapter. The terms are highlighted in blue within the chapter. The definitions of these terms are found in the glossary located on the book's Evolve website.
- **Chapter outline.** The major headings of each chapter are provided at the beginning of each chapter to help locate important content.
- **Theoretical frameworks.** The use of theoretical frameworks common to nursing and public health will aid the student in applying familiar and new theory bases to problems and challenges in the community.
- ***Healthy People 2020.*** Goals and objectives of *Healthy People 2020* are presented in a special box throughout the text. (The

updated *Healthy People 2020* information is new to this edition and based on the proposed objectives.)
- **Upstream thinking.** This theoretical construct is integrated into chapters throughout the text.
- **Case studies and application of the nursing process at individual, family, and aggregate levels.** The use of case studies and **clinical examples** throughout the text is designed to ground the theory, concepts, and application of the nursing process in practical and manageable examples for the student.
- **Research highlights.** The introduction of students to the growing bodies of community health nursing and public health research literature is enhanced by special boxes devoted to specific research studies.
- **Active learning exercises.** Selected learning activities are interspersed throughout the chapter to test students' knowledge of the content they've just read, helping provide clinical application and knowledge retention.
- **Photo novellas.** Numerous stories in photograph form depicting public health care in a variety of settings and with different population groups.
- **Ethical insights boxes.** These boxes present situations of ethical dilemmas or considerations pertinent to particular chapters.

NEW CONTENT IN THIS EDITION

- An increased focus on genomics—found in new **Genetics in Public Health boxes**—reflects growing scientific evidence supporting the health benefits of using genetic tests and family health history to guide public health interventions.
- A new chapter dedicated to the care of veterans has been added, reflecting the need for enhanced education and information related to the specific needs and issues for this special population.
- Most chapters contain new or updated **Research Highlights boxes** highlighting timely, relevant examples of the topics from recent nursing literature and **Ethical Insights boxes** that emphasize specific ethical issues.

TEACHING AND LEARNING PACKAGE

Evolve website: The website at http://evolve.elsevier.com/Nies/community is devoted exclusively to this text. It provides materials for both instructors and students.
- **For Instructors:** PowerPoint lecture slides, image collection, and more than 900 test bank questions with alternative item questions, as well as TEACH for Nurses, which contains detailed chapter Lesson Plans, including references to curriculum standards such as QSEN, BSN Essentials and Concepts, BSN Essentials for Public Health, and new and unique Case Studies.
- **For Students:** NCLEX-style multiple-choice review questions with correct answer rationales, and Case Studies with questions and answers.

1

Health: A Community View

Melanie McEwen and Mary A. Nies

OUTLINE

OBJECTIVES

Upon completion of this chapter, the reader will be able to do the following:

1. Compare and contrast definitions of health from a public health nursing perspective.
2. Define and discuss the focus of public health.
3. Discuss determinates of health and indicators of health and illness from a population perspective.
4. List the three levels of prevention, and give examples of each.
5. Explain the difference between public/community health nursing practice and community-based nursing practice.
6. Describe the purpose of *Healthy People 2020* and give examples of the topic areas that encompass the national health objectives.
7. Discuss public/community health nursing practice in terms of public health's core functions and essential services.
8. Discuss public/community health nursing interventions as explained by the Intervention Wheel.

KEY TERMS

aggregates
community
community health
community health nursing
disease prevention
health
health promotion
health-related quality-of-life (HRQOL)
population
population-focused nursing
primary prevention
public health
public health nursing
secondary prevention
tertiary prevention

As a result of recent and anticipated changes related to health care reform, community/public health nurses are in a position to assist the U.S. health care system in the transition from a disease-oriented system to a health-oriented system. Costs of caring for the sick account for the majority of escalating health care dollars, which increased from 5.7% of the gross domestic product in 1965 to 17.8% in 2015 (National Center for Health Statistics [NCHS], 2017). Alarmingly, national annual health care expenditures reached $2.7 trillion in 2015, or an astonishing $8500 per person.

HEALTHY PEOPLE 2020

Topic Areas

- Access to health services
- Adolescent health
- Arthritis, osteoporosis, and chronic back conditions
- Blood disorders and blood safety
- Cancer
- Chronic kidney disease
- Dementias, including Alzheimer
- Diabetes
- Disability and health
- Early and middle childhood
- Educational and community-based programs
- Environmental health
- Family planning
- Food safety
- Genomics
- Global health
- Health communication and health information technology
- Health care–associated infections
- Health-related quality of life and well-being
- Hearing and other sensory or communication disorders
- Heart disease and stroke
- HIV
- Immunization and infectious diseases
- Injury and violence prevention
- Lesbian, gay, bisexual, and transgender health
- Maternal, infant, and child health
- Medical product safety
- Mental health and mental disorders
- Nutrition and weight status
- Occupational safety and health
- Older adults
- Oral health
- Physical activity
- Preparedness
- Public health infrastructure
- Respiratory diseases
- Sexually transmitted diseases
- Social determinants of health
- Substance abuse
- Tobacco use
- Vision

From U.S. Department of Health and Human Services. *Healthy People 2020 topics & objectives—objectives A-Z.* Retrieved from <http://www.healthypeople.gov/2020/topicsobjectives2020/default.aspx>.

Health expenditures in the U.S. reflect a focus on the care of the sick. In 2015, $0.38 of each health care dollar supported hospital care, $0.23 supported physician/professional services, and $0.12 was spent on prescription drugs (more than double the proportion since 1980). The vast majority of these funds were spent providing care for the sick, and less than $0.03 of every health care dollar was directed toward preventive public health activities (NCHS, 2017). Despite high hospital and physician expenditures, U.S. health indicators such as life expectancy and infant mortality rate remain considerably below the health indicators of many other countries. This situation reflects a relatively severe disproportion of funding for preventive services and social and economic opportunities. Furthermore, the health status of the population within the United States varies markedly across areas of the country and among groups. For example, the economically disadvantaged and many cultural and ethnic groups have poorer overall health status compared with middle-class Caucasians.

Nurses constitute the largest segment of health care workers; therefore they are instrumental in creating a health care delivery system that will meet the health-oriented needs of the people. According to a survey of registered nurses (RNs) conducted by the National Council of State Boards of Nursing (NCSBN, 2016), about 54.4% of approximately 2.5 million RNs employed full-time in the United States worked in hospitals during 2015 (down from about 66.5% in 1992). This survey also found that about 16%, or approximately 470,000, of all RNs worked in home, school, public/community health, or occupational health settings; 11% worked in ambulatory care settings; and 5.5% worked in nursing homes or other extended care facilities (NCSBN, 2016).

Between 1980 and 2015, the number of nurses employed in community, health, and ambulatory care settings more than doubled (NCSBN, 2016; USDHHS, HRSA, BHP, 2010). The decline in the percentage of nurses employed in hospitals and the subsequent increase in nurses employed in community settings suggests a shift in focus from illness and institutional-based care to health promotion and preventive care. This shift will likely continue into the future as alternative delivery systems, such as ambulatory and home care, employ more nurses (ANA, 2016; IOM, 2011; Rosenfeld & Russell, 2012).

Community/public health nursing is the synthesis of nursing practice and public health practice. The major goal of community/public health nursing is to preserve the health of the community and surrounding populations by focusing on health promotion and health maintenance of individuals, families, and groups within the community. Thus community/public health nursing is associated with health and the identification of populations at risk rather than with an episodic response to patient demand.

Public Health is often described as the art and science of preventing disease, prolonging life and promoting health through organized community efforts to benefit each citizen (Winslow, 1920). **The mission of public health is social justice, which entitles all people to basic necessities such as adequate income and health protection and accepts collective burdens to make it possible**. Public health, with its egalitarian tradition and vision, often conflicts with the predominant U.S. model of market justice that largely entitles people to what they have gained through individual efforts. Although market justice respects individual rights, collective action and obligations are minimal. An emphasis on technology and curative medical services within the market justice system has limited the evolution of a health system designed to protect and preserve the health of the population. Public health assumes that it is society's responsibility to meet the basic needs of the people. Thus there is a greater need for public funding of prevention efforts to enhance the health of our population.

Current U.S. health policies advocate changes in personal behaviors that might predispose individuals to chronic disease

or accidents. These policies promote exercise, healthy eating, tobacco use cessation, and moderate consumption of alcohol. However, simply encouraging the individual to overcome the effects of unhealthy activities lessens focus on collective behaviors necessary to change the determinants of health stemming from such factors as poor air and water quality, workplace hazards, unsafe neighborhoods, and unequal access to health care. Because living arrangements, work/school environment, and other sociocultural constraints affect health and well-being, public policy must address societal and environmental changes, in addition to lifestyle changes, that will positively influence the health of the entire population.

With ongoing and very significant changes in the health care system and increased employment in community settings, there will be greater demands on community and public health nurses to broaden their population health perspective. The Code of Ethics of the American Nurses Association (ANA) (2015) promotes social reform by focusing on health policy and legislation to positively affect accessibility, quality, and cost of health care. Community and public health nurses therefore must align themselves with public health programs that promote and preserve the health of populations by influencing sociocultural issues such as human rights, homelessness, violence, disability, and stigma of illness. This principle allows nurses to be positioned to promote the health, welfare, and safety of all individuals.

This chapter examines health from a population-focused, community-based perspective. Therefore it requires understanding of how people identify, define, and describe related concepts. The following section explores six major ideas:

1. Definitions of "health" and "community"
2. Determinants of health and disease
3. Indicators of health and disease
4. Definition and focus of public and community health
5. Description of a preventive approach to health
6. Definition and focus of "public health nursing," "community health nursing," and "community-based nursing"

DEFINITIONS OF HEALTH AND COMMUNITY

Health

The definition of **health** is evolving. The early, classic definition of health by the World Health Organization (WHO) set a trend toward describing health in social terms rather than in medical terms. Indeed, the WHO (1958, p. 1) defined health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."

Social means "of or relating to living together in organized groups or similar close aggregates" (American Heritage College Dictionary, 1997, p. 1291) and refers to units of people in communities who interact with one another. "Social health" connotes community vitality and is a result of positive interaction among groups within the community, with an emphasis on health promotion and illness prevention. For example, community groups may sponsor food banks in churches and civic organizations to help alleviate problems of hunger and nutrition. Other community groups may form to address problems of violence and lack of opportunity, which can negatively affect social health.

In the mid-1980s, the WHO expanded the definition of health to emphasize recognition of the social implications of health. Thus health is:

> *the extent to which an individual or group is able, on the one hand, to realize aspirations and satisfy needs; and, on the other hand, to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living; it is a positive concept emphasizing social and personal resources, and physical capacities.*
>
> ***(WHO, 1986, p. 73)***

Saylor (2004) pointed out that the WHO definition considers several dimensions of health. These include physical (structure/function), social, role, mental (emotional and intellectual), and general perceptions of health status. It also conceptualizes health from a macro perspective, as a resource to be used rather than a goal in and of itself.

The nursing literature contains many varied definitions of health. For example, health has been defined as "a state of well-being in which the person is able to use purposeful, adaptive responses and processes physically, mentally, emotionally, spiritually, and socially" (Murray, Zentner, & Yakimo, 2009, p. 53); "The individual's total well-being. the regular patterns of people and their environments that result in maintaining wholeness and human integrity" (Roy, 2009, p. 3); "realization of human potential through goal-directed behavior, competent self-care, and satisfying relationships with others" (Pender, Murdaugh, & Parsons, 2011, p. 22); and a "state of physical, mental, spiritual and social functioning that realizes a person's potential and is experienced within a developmental context" (Greiner, 2014, p. 3).

The variety of characterizations of the word illustrates the difficulty in standardizing the conceptualization of health. Commonalities involve description of "goal-directed" or "purposeful" actions, processes, responses, functioning, or behaviors and the possession of "integrity," "wholeness," and/or "well-being." Problems can arise when the definition involves a unit of analysis. For example, some writers use the individual or "person" as the unit of analysis and exclude the community. Others may include additional concepts, such as adaptation and environment, in health definitions, and then present the environment as static and requiring human adaptation rather than as changing and enabling human modification.

For many years, community and public health nurses have favored Dunn's (1961) classic concept of wellness, in which family, community, society, and environment are interrelated and have an impact on health. From his viewpoint, illness, health, and peak wellness are on a continuum; health is fluid and changing. Consequently, within a social context or environment, the state of health depends on the goals, potentials, and performance of individuals, families, communities, and societies.

ACTIVE LEARNING EXERCISE

Interview several community/public health nurses and several clients regarding their definitions of health. Share the results with your classmates. Do you agree with their definitions? Why or why not?

Community

The definitions of *community* are also numerous and variable. Baldwin and colleagues (1998) outlined the evolution of the definition of community by examining community health nursing textbooks. They determined that, before 1996, definitions of community focused on geographic boundaries combined with social attributes of people. Citing several sources from the later part of the decade, the authors observed that geographic location became a secondary characteristic in the discussion of what defines a community.

In recent nursing literature, community has been defined as "a collection of people who interact with one another and whose common interests or characteristics form the basis for a sense of unity or belonging" (Rector, 2017, p. 6); "a group of people who share something in common and interact with one another, who may exhibit a commitment with one another and may share a geographic boundary" (Lundy & Janes, 2016, p. 13); and "a locality-based entity, composed of systems of formal organizations reflecting society's institutions, informal groups and aggregates" (Shuster, 2012, p. 398).

Maurer and Smith (2013) further addressed the concept of community and identified three defining attributes: people; place; and social interaction or common characteristics, interests, or goals. Combining ideas and concepts, in this text, **community** is seen as a group or collection of individuals interacting in social units and sharing common interests, characteristics, values, and goals.

Maurer and Smith (2013) noted that there are two main types of communities: geopolitical communities and phenomenological communities. Geopolitical communities are those most traditionally recognized or imagined when the term *community* is considered. *Geopolitical communities* are defined or formed by natural and/or man-made boundaries and include cities, counties, states, and nations. Other commonly recognized geopolitical communities are school districts, census tracts, zip codes, and neighborhoods. *Phenomenological communities,* on the other hand, refer to relational, interactive groups. In phenomenological communities, the place or setting is more abstract, and people share a group perspective or identity based on culture, values, history, interests, and goals. Examples of phenomenological communities are schools, colleges, and universities; churches, synagogues, and mosques; and various groups and organizations, such as social networks.

A community of solution is a type of phenomenological community. A *community of solution* is a collection of people who form a group specifically to address a common need or concern. The Sierra Club, whose members lobby for the preservation of natural resource lands, and a group of disabled people who challenge the owners of an office building to obtain equal access to public buildings, education, jobs, and transportation are examples. These groups or social units work together to promote optimal "health" and to address identified actual and potential health threats and health needs.

Population and *aggregate* are related terms that are often used in public health and community health nursing. **Population** is typically used to denote a group of people with common personal or environmental characteristics. It can also refer to all of the people in a defined community (Williams, 2016). **Aggregates** are subgroups or subpopulations that have some common characteristics or concerns (Gibson & Thatcher, 2016). Depending on the situation, needs, and practice parameters, community health nursing interventions may be directed toward a community (e.g., residents of a small town), a population (e.g., all elders in a rural region), or an aggregate (e.g., pregnant teens within a school district).

DETERMINANTS OF HEALTH AND DISEASE

The health status of a community is associated with a number of factors, such as health care access, economic conditions, social and environmental issues, and cultural practices, and it is essential for the community health nurse to understand the determinants of health and recognize the interaction of the factors that lead to disease, death, and disability. It has been estimated that individual behaviors are responsible for about 50% of all premature deaths in the United States (Cassidy, Trujillo, & Orleans, 2015). Indeed, individual biology and behaviors influence health through their interaction with each other and with the individual's social and physical environments. Thus policies and interventions can improve health by targeting detrimental or harmful factors related to individuals and their environment. Fig. 1.1 shows the model of *Healthy People 2020,* which depicts the interaction of these determinants and shows how they influence health.

In a seminal work, McGinnis and Foege (1993) described what they termed "actual causes of death" in the United States, explaining how lifestyle choices contribute markedly to early deaths. Their work was updated a decade later (Mokdad et al., 2004). Leading the list of "actual causes of death" was tobacco, which was implicated in almost 20% of the annual deaths in the United States—approximately 435,000 individuals. Poor diet and physical inactivity were deemed to account for about 16.6% of deaths (about 400,000 per year), and alcohol consumption was implicated in about 85,000 deaths because of its association with accidents, suicides, homicides, and cirrhosis and chronic liver disease. Other leading causes of death were microbial agents (75,000), toxic agents (55,000), motor vehicle crashes (43,000), firearms (29,000), sexual behaviors (20,000), and illicit use of drugs (17,000).

Although all of these causes of mortality are related to individual lifestyle choices, they can also be strongly influenced by population-focused policy efforts and education. For example, the prevalence of smoking has fallen dramatically during the past two decades, largely because of legal efforts (e.g., laws prohibiting sale of tobacco to minors and much higher taxes), organizational policy (e.g., smoke-free workplaces), and education. Likewise, concerns about the widespread increase in incidence of overweight and obesity have led to population-based measures to address the issue (e.g., removal of soft drink and candy machines from schools, regulations prohibiting the use of certain types of fats in processed foods).

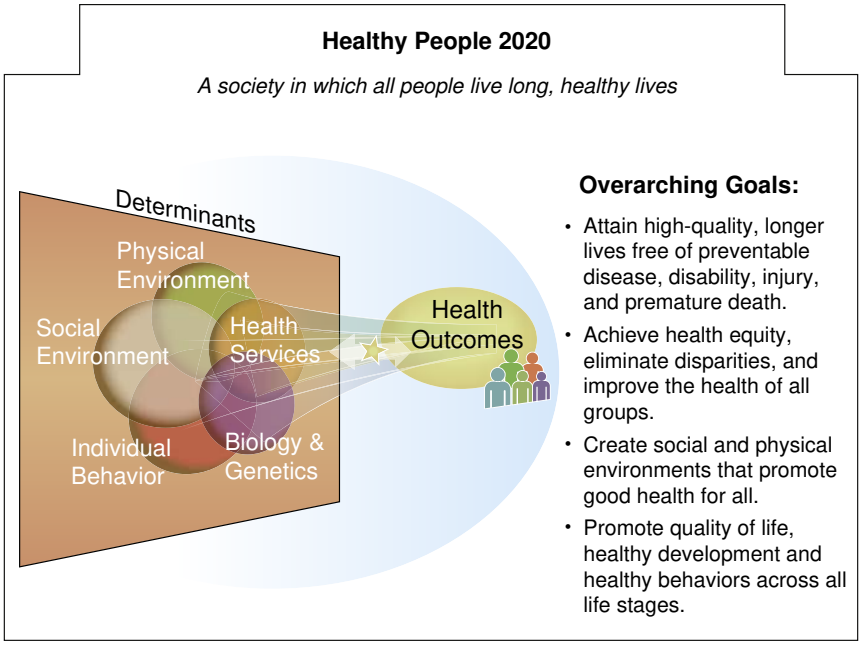

FIG. 1.1 Model: Healthy People 2020. (From U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion: *Federal interagency workgroup: the vision, mission, and goals of healthy people 2020, n.d.,* Retrieved from: https://www.healthypeople.gov/sites/default/files/HP2020Framework.pdf)

Public health experts have observed that health has improved over the past 100 years largely because people become ill less often (McKeown, 2003; Russo, 2015). Indeed, at the population level, better health can be attributed to higher standards of living, good nutrition, a healthier environment, and having fewer children. Furthermore, public health efforts, such as immunization and clean air and water, and medical care, including management of acute episodic illnesses (e.g., pneumonia, tuberculosis) and chronic disease (e.g., cancer, heart disease), have also contributed significantly to the increase in life expectancy.

Community and public health nurses should understand these concepts and appreciate that health and illness are influenced by a web of factors, some that can be changed (e.g., individual behaviors such as tobacco use, diet, physical activity) and some that cannot (e.g., genetics, age, gender). Other factors (e.g., physical and social environment) may require changes that will need to be accomplished from a policy perspective. Public health nurses must work with policy makers and community leaders to identify patterns of disease and death and to advocate for activities and policies that promote health at the individual, family, aggregate, and population levels.

INDICATORS OF HEALTH AND ILLNESS

A variety of health indicators are used by health providers, policy makers, and community health nurses to measure the health of the community. Local or state health departments, the Centers for Disease Control and Prevention (CDC), and the National Center for Health Statistics (NCHS) provide morbidity, mortality, and other health status–related data. State and local health departments are responsible for collecting morbidity and mortality data and forwarding the information to the appropriate federal-level agency, which is often the CDC. Some of the more commonly reported indicators are life expectancy, infant mortality, age-adjusted death rates, and cancer incidence rates.

Indicators of mortality in particular illustrate the health status of a community and/or population because changes in mortality reflect a number of social, economic, health service, and related trends (Shi & Singh, 2016). These data may be useful in analyzing health patterns over time, comparing communities from different geographic regions, or comparing different aggregates within a community.

When the national health objectives for *Healthy People 2020* were being developed, a total of 12 leading health indicators were identified that reflected the major public health concerns in the United States (see *Healthy People 2020* box). They are individual behaviors (e.g., tobacco use, nutrition, physical activity, and obesity), physical and social environmental factors (e.g., environmental quality, injury, and violence), and health systems issues (e.g., access to health services). Each of these indicators can affect the health of individuals and communities and can be correlated with leading causes of morbidity and mortality. For example, tobacco use is linked to heart disease, stroke, and cancer; substance abuse is linked to accidents, injuries, and violence; irresponsible sexual behaviors can lead to unwanted pregnancy as well as sexually transmitted diseases, including human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS); and lack of access to health care can contribute to poor pregnancy outcomes, untreated illness, and disability.

HEALTHY PEOPLE 2020

Leading Health Indicator Topics

- Access to Health Services
- Clinical Preventive Services
- Environmental Quality
- Injury and Violence
- Maternal, Infant, and Child Health
- Mental Health
- Nutrition, Physical Activity, and Obesity
- Oral Health
- Reproductive and Sexual Health
- Social Determinants
- Substance Abuse
- Tobacco

From U.S. Department of Health and Human Services. *Healthy People 2020 leading health indicator topics.* Retrieved from https://www.healthypeople.gov/2020/Leading-Health-Indicators

Public health nurses should be aware of health patterns and health indicators within their practice. Each nurse should ask relevant questions, including the following: What are the leading causes of death and disease among various groups served? How do infant mortality rates and teenage pregnancy rates in my community compare with regional, state, and national rates? What are the most serious communicable disease threats in my neighborhood? What are the most serious environmental risks in my city?

The public health nurse may identify areas for further investigation and intervention through an understanding of health, disease, and mortality patterns. For example, if a school nurse learns that the teenage pregnancy rate in their community is higher than regional and state averages, the nurse should address the problem with school officials, parents, and students. Likewise, if an occupational health nurse discovers an apparent high rate of chronic lung disease in an industrial facility, the nurse should work with company management, employees, and state and federal officials to identify potential harmful sources. Finally, if a public health nurse works in a state-sponsored AIDS clinic and recognizes an increase in the number of women testing positive for HIV, the nurse should report all findings to the designated agencies. The nurse should then participate in investigative efforts to determine what is precipitating the increase and work to remedy the identified threats or risks.

DEFINITION AND FOCUS OF PUBLIC HEALTH AND COMMUNITY HEALTH

C. E. Winslow is known for the following classic definition of public health:

> *Public health is the Science and Art of (1) preventing disease, (2) prolonging life, and (3) promoting health and efficiency through organized community effort for:*
> *(a) sanitation of the environment,*
> *(b) control of communicable infections,*
> *(c) education of the individual in personal hygiene,*
> *(d) organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and*
> *(e) development of the social machinery to ensure everyone a standard of living adequate for the maintenance of health, so organizing these benefits as to enable every citizen to realize his birthright of health and longevity.*
> ***(Hanlon, 1960, p. 23)***

BOX 1.1 Core Public Health Functions

Assessment: Regular collection, analysis, and information sharing about health conditions, risks, and resources in a community.

Policy development: Use of information gathered during assessment to develop local and state health policies and to direct resources toward those policies.

Assurance: Focuses on the availability of necessary health services throughout the community. It includes maintaining the ability of both public health agencies and private providers to manage day-to-day operations and the capacity to respond to critical situations and emergencies.

From Institute of Medicine: *The future of public health,* Washington, DC, 1988, National Academy Press.

A key phrase in this definition of public health is "through organized community effort." The term *public health* connotes organized, legislated, and tax-supported efforts that serve all people through health departments or related governmental agencies.

The public health nursing tradition, begun in the late 1800s by Lillian Wald and her associates, clearly illustrates this phenomenon (Wald, 1971; see Chapter 2). After moving into the immigrant community in New York City to provide care for individuals and families, these early public health nurses saw that neither administering bedside clinical nursing nor teaching family members to deliver care in the home adequately addressed the true determinants of health and disease. They resolved that collective political activity should focus on advancing the health of aggregates and improving social and environmental conditions by addressing the social and environmental determinants of health, such as child labor, pollution, and poverty. Wald and her colleagues affected the health of the community by organizing the community, establishing school nursing, and taking impoverished mothers to testify in Washington, DC (Wald, 1971).

In a key action, the National Academy of Medicine (NAM), formerly called the Institute of Medicine (IOM) (1988) identified the following three primary functions of public health: *assessment, assurance,* and *policy development*. Box 1.1 lists each of the three primary functions and describes them briefly. All nurses working in community settings should develop knowledge and skills related to each of these primary functions.

The term **community health** extends the realm of public health to include organized health efforts at the community level through both government *and* private efforts. Participants include privately funded agencies such as the American Heart Association and the American Red Cross. A variety of private and public structures serves community health efforts.

Public health efforts focus on prevention and promotion of population health at the federal, state, and local levels. These efforts at the federal and state levels concentrate on providing support and advisory services to public health structures at the

BOX 1.2 Essential Public Health Services

- Monitor health status to identify and solve community health problems
- Diagnose and investigate health problems and health hazards in the community
- Inform, educate, and empower people about health issues
- Mobilize community partnerships and actions to identify and solve health problems
- Develop policies and plans that support individual and community health efforts
- Enforce laws and regulations that protect health and ensure safety
- Link people to needed personal health services and assure the provision of health care when otherwise unavailable
- Assure a competent public health and personal health care workforce
- Evaluate effectiveness, accessibility, and quality of personal and population-based health services
- Research for new insights and innovative solutions to health problems

From Centers for Disease Control and Prevention, Office of the Director, Office of the Chief of Public Health Practice, National Public Health Performance Standards Program: *10 essential public health services*, 2014. Retrieved from: https://www.cdc.gov/nphpsp/essentialservices.html.

local level. The local-level structures provide direct services to communities through two avenues:

- Community health services, which protect the public from hazards such as polluted water and air, tainted food, and unsafe housing
- Personal health care services, such as immunization and family planning services, well-infant care, and sexually transmitted disease (STD) treatment

Personal health services may be part of the public health effort and often target the populations most at risk and in need of services. Public health efforts are multidisciplinary because they require people with many different skills. Community health nurses work with a diverse team of public health professionals, including epidemiologists, local health officers, and health educators. Public health science methods that assess biostatistics, epidemiology, and population needs provide a method of measuring characteristics and health indicators and disease patterns within a community. In 1994 the American Public Health Association drafted a list of 10 essential public health services, which the U.S. Department of Health and Human Services later adopted. The updated list of essential services (CDC, 2014) appears in Box 1.2.

PREVENTIVE APPROACH TO HEALTH

Health Promotion and Levels of Prevention

Contrasting with "medical care," which focuses on disease management and "cure," public health efforts focus on health promotion and disease prevention. **Health promotion** activities enhance resources directed at improving well-being, whereas **disease prevention** activities protect people from disease and the effects of disease. Leavell and Clark (1958) identified three levels of prevention commonly described in nursing practice: primary prevention, secondary prevention, and tertiary prevention (Fig. 1.2 and Table 1.1).

Primary prevention relates to activities directed at preventing a problem before it occurs by altering susceptibility or reducing exposure for susceptible individuals. Primary prevention consists of two elements: general health promotion and specific protection. Health promotion efforts enhance resiliency and protective factors and target essentially well populations. Examples include promotion of good nutrition, provision of adequate shelter, and encouraging regular exercise. Specific protection efforts reduce or eliminate risk factors and include such measures as immunization, seat belt use, and water purification.

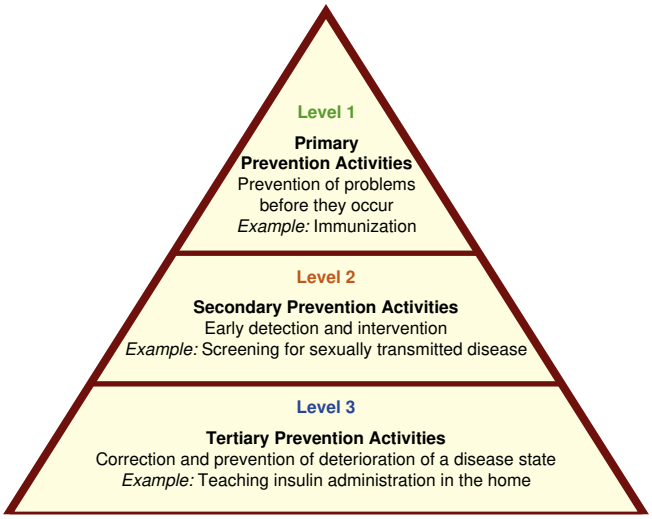

FIG. 1.2 The three levels of prevention.

Secondary prevention refers to early detection and prompt intervention during the period of early disease pathogenesis. Secondary prevention is implemented after a problem has begun, but before signs and symptoms appear, and targets those populations that have risk factors. Mammography, blood pressure screening, scoliosis screening, and Papanicolaou tests are examples of secondary prevention.

Tertiary prevention targets populations that have experienced disease or injury and focuses on limitation of disability and rehabilitation. Aims of tertiary prevention are to keep health problems from getting worse, to reduce the effects of disease and injury, and to restore individuals to their optimal level of functioning. Examples include teaching how to perform insulin injections and disease management to a patient with diabetes, referral of a patient with spinal cord injury for occupational and physical therapy, and leading a support group for grieving parents.

Much of public health nursing practice is directed toward preventing the progression of disease at the earliest period or phase feasible using the appropriate level(s) of prevention. For example, when applying "levels of prevention" to a client with HIV/AIDS, a nurse might perform the following interventions:

- Educate students on the practice of sexual abstinence or "safer sex" by using barrier methods (primary prevention)
- Encourage testing and counseling for clients with known exposure or who are in high-risk groups; provide referrals for follow-up for clients who test positive for HIV (secondary prevention)
- Provide education on management of HIV infection, advocacy, case management, and other interventions for those who are HIV positive (tertiary prevention)

TABLE 1.1 Examples of Levels of Prevention and Clients Served in the Community

	LEVEL OF PREVENTION		
Definition of Client Served*	**Primary (Health Promotion and Specific Prevention)**	**Secondary (Early Diagnosis and Treatment)**	**Tertiary (Limitation of Disability and Rehabilitation)**
Individual	Dietary teaching during pregnancy Immunizations	HIV testing Screening for cervical cancer	Teaching new clients with diabetes how to administer insulin Exercise therapy after stroke Skin care for incontinent patients
Family (two or more individuals bound by kinship, law, or living arrangement and with common emotional ties and obligations [see Chapter 20])	Education or counseling regarding smoking, dental care, or nutrition Adequate housing	Dental examinations Tuberculin testing for family at risk	Mental health counseling or referral for family in crisis (e.g., grieving or experiencing a divorce) Dietary instructions and monitoring for family with overweight members
Group or aggregate (interacting people with a common purpose or purposes)	Birthing classes for pregnant teenage mothers AIDS and other STI education for high school students	Vision screening of a first-grade class Mammography van for screening of women in a low-income neighborhood Hearing tests at a senior center	Group counseling for grade-school children with asthma Swim therapy for physically disabled elders at a senior center Alcoholics Anonymous and other self-help groups Mental health services for military veterans
Community and populations (aggregate of people sharing space over time within a social system [see Chapter 6]; population groups or aggregates with power relations and common needs or purposes)	Fluoride water supplementation Environmental sanitation Removal of environmental hazards	Organized screening programs for communities (e.g., health fairs) Lead screening for children by school district	Shelter and relocation centers for fire or earthquake victims Emergency medical services Community mental health services for chronically mentally ill Home care services for chronically ill

AIDS, Acquired immunodeficiency syndrome; *HIV,* human immunodeficiency virus; *STI,* sexually transmitted infection.
*Note that terms are used differently in literature of various disciplines. There are not any clear-cut definitions; for example, families may be referred to as an aggregate, and a population and subpopulations may exist within a community.

Thinking Upstream

The concepts of prevention and population-focused care figure prominently in a conceptual orientation to nursing practice referred to as *thinking upstream.* This orientation is derived from an analogy of patients falling into a river upstream and being rescued downstream by health providers overwhelmed with the struggle of responding to disease and illness. The river as an analogy for the natural history of illness was first coined by McKinlay (1979), with a charge to health providers to refocus their efforts toward preventive and "upstream" activities. In a description of the daily challenges of providers to address health from a preventive versus curative focus, McKinlay differentiates the consequences of illness (*downstream* endeavors) from its precursors (*upstream* endeavors). The author then charges health providers to critically examine the relative weights of their activities toward illness response versus the prevention of illness.

A population-based perspective on health and health determinants is critical to understanding and formulating nursing actions to prevent disease. By examining the origins of disease, nurses identify social, political, environmental, and economic factors that often lead to poor health options for both individuals and populations. The call to refocus the efforts of nurses "upstream, where the real problems lie" (McKinlay, 1979) has been welcomed by community health nurses in a variety of practice settings. For these nurses, this theme provides affirmation of their daily efforts to prevent disease in populations at risk in schools, work sites, and clinics throughout their local communities and in the larger world.

ETHICAL INSIGHTS

Inequities: Distribution of Resources

In the United States, inequities in the distribution of resources pose a threat to the common good and a challenge for community and public health nurses. Factors that contribute to wide variations in health disparities include education, income, and occupation. Lack of health insurance is a key factor in this issue and a major rationale for health care reform efforts. Lack of insurance is damaging to population health, as low-income, uninsured individuals are much less likely than insured individuals to receive timely primary health care and preventive dental care.

Public health nurses are regularly confronted with the consequences of the fragmented health care delivery system. They diligently work to improve the circumstances for populations who have not had adequate access to resources largely because of who they are and where they live.

Ethical questions commonly encountered in community and public health nursing practice include the following: Should resources (e.g., free or low-cost immunizations) be offered to all, even those who have insurance that will pay for the care? Should public health nurses serve anyone who meets financial need guidelines, regardless of medical need? Should the health department provide flu shots to persons of all ages or just those most likely to be affected by the disease? Should nonresidents in the United States illegally or persons working on "green cards" receive the same level of health care services that are available to citizens? Who should have free or reduced-cost access to extremely expensive drugs such as those that treat hepatitis C, multiple sclerosis, or many forms of cancer, and who should bear the financial burden?

Access to health care is a goal for all. To this end, community and public health nurses must face the challenges and dilemmas related to these and other questions as they assist individuals, families, and communities dealing with the uneven distribution of health resources and the associated costs of health care.

Prevention versus Cure

Spending additional dollars for cure in the form of health care services does little to improve the health of a population, whereas spending money on prevention does a great deal to improve health. Getzen (2013) and others (Russo, 2015; Shi & Singh, 2016) note that there is an absence of convincing evidence that the amount of money expended for health care improves the health of a population. The real determinants of health, as mentioned, are prevention efforts that provide education, housing, food, a decent minimal income, and safe social and physical environments, as well as encouraging positive lifestyle choices. The United States spends more than one sixth of its wealth on health care or "cure" for individuals, likely diverting money away from the needed resources and services that would make a greater impact on health (NCHS, 2017 Shi & Singh, 2016).

U.S. policy makers must become committed to achieving improved health outcomes for the poor and vulnerable populations. With a limited health workforce and monetary resources, the United States cannot continue to spend vast amounts on health care services when the investment fails to improve health outcomes. In industrialized countries, life expectancy at birth is not related to the level of health care expenditures; in developing countries, longevity is closely related to the level of economic development and the education of the population (Russo, 2015; Shi & Singh, 2016).

The current health care system is currently in a flux following implementation of the Affordable Care Act (ACA) and subsequent efforts to "repeal and replace" it. These endeavors could actually be detrimental to the health of the population, as the focus on obtaining health insurance for more people may defer a large investment of the country's wealth from education and other developmental efforts that would positively affect the health of the population as a whole. Managed care organizations (MCOs) focus on prevention and have determined that the rate of health care cost increases have slowed among employees of large firms (Kongstvedt, 2013). Prevention programs may help reduce costs for those enrolled in MCOs, but it remains unclear who will provide services for those who are required to purchase insurance, those who are currently uninsured and may remain so, the poor, and other vulnerable populations. In addition, still to be determined is who will provide adequate schooling, housing, meals, wages, and a safe environment for the disadvantaged. Increasing health care spending may negatively affect efforts to address economic disparities by reducing investments in sufficient housing, employment, education, nutrition, and safe environments.

Healthy People 2020

In 1979, the U.S. Department of Health and Human Services published a national prevention initiative titled *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention*. The 1979 version established goals that would reduce mortality among infants, children, adolescents and young adults, and adults and increase independence among older adults. In 1990, the mortality of infants, children, and adults declined sufficiently to meet the goal. Adolescent mortality did not reach the 1990 target, and data systems were unable to adequately track the target for older adults (USDHHS, 2000).

Published in 1989, *Healthy People 2000* built on the first surgeon general's report. *Healthy People 2000* contained the following broad goals (USDHHS, 1989):

1. Increase the span of healthy life for Americans.
2. Reduce health disparities among Americans.
3. Achieve access to preventive services for all Americans.

The purpose of *Healthy People 2000* was to provide direction for individuals wanting to change personal behaviors and to improve health in communities through health promotion policies. The report assimilated the broad approaches of health promotion, health protection, and preventive services and contained more than 300 objectives organized into 22 priority areas. Although many of the objectives fell short, the initiative was extremely successful in raising providers' awareness of health behaviors and health promotional activities. States, local health departments, and private-sector health workers used the objectives to determine the relative health of their communities and to set goals for the future.

Healthy People 2010 emerged in January 2000. It expanded on the objectives from *Healthy People 2000* through a broadened prevention science base, an improved surveillance and data system, and a heightened awareness of and demand for preventive health services. This reflects changes in demographics, science, technology, and disease. *Healthy People 2010* listed two broad goals:

Goal 1: Increase quality and years of healthy life.
Goal 2: Eliminate health disparities.

The first goal moved beyond the idea of increasing life expectancy to incorporate the concept of **health-related quality of life (HRQOL)**. This concept of health includes aspects of physical and mental health and their determinants and measures functional status, participation, and well-being. HRQOL expands the definition of health—beyond simply opposing the negative concepts of disease and death—by integrating mental and physical health concepts (USDHHS, 2000).

The final review and analysis of the *Healthy People 2010* objectives showed decidedly mixed progress for the nation. Some 23% of the objectives were met or exceeded, and another 48% "moved toward target." Conversely, 24% of the objectives "moved away from target" (i.e., the indicators were worse than in the previous decade), and another 5% showed no change. Particularly concerning were the poor responses in two of the focus areas: Arthritis, Osteoporosis and Chronic Back conditions (Focus Area 2) and Nutrition and Overweight (Focus Area 19) "moved toward" or "achieved" less than 25% of their targets (USDHHS, 2012).

The fourth version of the nation's health objectives, *Healthy People 2020,* was published in 2010. *Healthy People 2020* is divided into 42 topic areas and contains numerous new objectives and updates for hundreds of objectives from the previous editions. The topic areas are listed in the "Healthy People 2020" box. The objectives and related information and materials can help guide health promotion activities and can be used to aid in community-wide initiatives (USDHHS, 2017). All health care practitioners, particularly those working in the community, should review the *Healthy People 2020* objectives and focus on the relevant areas in their practice. Practitioners should incorporate these objectives into programs, events, and publications

whenever possible and should use them as a framework to promote healthy cities and communities. Selected relevant objectives are presented throughout this book to acquaint future community health nurses with the scope of the *Healthy People 2020* initiative and to enhance awareness of current health indicators and national goals (see www.healthypeople.gov for more information).

ACTIVE LEARNING EXERCISE

Become familiar with *Healthy People 2020* (www.healthypeople.gov). Review objectives from several of the topic areas covered. How does your community compare with the groups, aggregates, and populations described? What objectives should be targeted for your community?

DEFINITION AND FOCUS OF PUBLIC HEALTH NURSING, COMMUNITY HEALTH NURSING, AND COMMUNITY-BASED NURSING

The terms *community health nursing* and *public health nursing* are often used synonymously or interchangeably. Like the practice of community/public health nursing, the terms are evolving. In past debates and discussions, definitions of "community health nursing" and "public health nursing" have indicated similar yet distinctive ideologies, visions, or philosophies of nursing. These concepts and a third related term—*community-based nursing*—are discussed in this section.

Public and Community Health Nursing

Public health nursing has frequently been described as the synthesis of public health and nursing practice. Freeman (1963) provided a classic definition of public health nursing:

> *Public health nursing may be defined as a field of professional practice in nursing and in public health in which technical nursing, interpersonal, analytical, and organizational skills are applied to problems of health as they affect the community. These skills are applied in concert with those of other persons engaged in health care, through comprehensive nursing care of families and other groups and through measures for evaluation or control of threats to health, for health education of the public, and for mobilization of the public for health action. (p. 34)*

Through the 1980s and 1990s, most nurses were taught that there was a distinction between "community health nursing" and "public health nursing." Indeed, "public health nursing" was seen as a subspecialty nursing practice generally delivered within "official" or governmental agencies. In contrast, "community health nursing" was considered to be a broader and more general specialty area that encompassed many additional subspecialties (e.g., school nursing, occupational health nursing, forensic nursing, home health). In 1980, the American Nurses Association (ANA) defined **community health nursing** as "the synthesis of nursing practice and public health practice applied to promoting and preserving the health of populations" (ANA, 1980, p. 2). This viewpoint noted that a community health nurse directs care to individuals, families, or groups; this care, in turn, contributes to the health of the total population.

The ANA has revised the standards of practice for this specialty area (ANA, 2013). In the updated standards, the designation was again "public health nursing," and the ANA used the definition presented by the American Public Health Association (APHA) Committee on Public Health Nursing (1996). Thus, public health nursing is defined as "the practice of promoting and protecting the health of populations using knowledge from nursing, social, and public health sciences" (APHA, 1996, p. 5). The ANA (2013) elaborated by explaining that public health nursing practice "is population-focused, with the goals of promoting health and preventing disease and disability for all people through the creation of conditions in which people can be healthy" (p. 5).

Some nursing writers will continue to use *community health nursing* as a global or umbrella term and *public health nursing* as a component or subset. Others, as stated, use the terms interchangeably. This book uses the terms interchangeably.

ACTIVE LEARNING EXERCISE

Ask several neighbors or consumers of health care about their views of the role of public health and community health nursing. Share your results with your classmates.

RESEARCH HIGHLIGHTS

Public Health Nursing Research Agenda

In 2010, a national conference was held to set a research agenda that would advance the science of public health nursing (PHN). The conference employed a multistage, multimethod, participatory developmental approach, involving many influential PHN leaders. Following numerous meetings and discussions, an agenda was proposed. The agenda was structured around four "High Priority Themes": (1) public health nursing interventions models, (2) quality of population-focused practice, (3) metrics of/for public health nursing, and (4) comparative effectiveness and public health nursing outcomes. The aim of the agenda is to help PHN scholars contribute to an understanding of how to improve health and reduce population health disparities by advancing the evidence base regarding the outcomes of practice and by influencing related health policy. The group encouraged the agenda's use to guide and inform programs of research, to influence funding priorities, and to be incorporated into doctoral PHN education through course and curriculum development. Ultimately, it is anticipated that PHN research will proactively contribute to the effectiveness of the public health system and create healthier communities.

Data from Issel, L. M., Bekemeier, B., & Kneipp, S. (2012). A public health nursing research agenda, *Public Health Nursing 29*, 330–342.

Community-Based Nursing

The term *community-based nursing* has been identified and defined in recent years to differentiate it from what has traditionally been seen as community and public health nursing practice. Community-based nursing practice refers to "application of the nursing process in caring for individuals, families and groups where they live, work or go to school or as they move through the health care system" (McEwen & Pullis, 2009, p. 6). Community-based nursing is setting specific, and the emphasis

BOX 1.3 The Scope and Standards of Practice for Public Health Nursing

The Scope and Standards of Practice for Public Health Nursing is the result of the collaborative effort between the American Nurses Association and the Quad Council of Public Health Nursing Organizations. The standards were originally developed in 1999 and were updated in 2013. The Scope and Standards of Practice, which are divided into Standards of Practice and Standards of Professional Performance, describe specific competencies relevant to the public health nurse and the public health nurse in advanced practice.

The Standards of Practice include six standards that are based on the critical thinking model of the nursing process, with competencies addressing each nursing process step. The implementation step is further broken down into specific public health areas, including coordination of services, health education and health promotion, consultation, and regulatory activities. The Standards of Professional Performance include the leadership competencies necessary in the professional practice of all registered nurses, but with additional standards specific to the public health nurse and advanced public health nurse roles. These standards include evidence-based practice and research, collaboration, resource utilization, and advocacy, with competencies specific to public health, such as building coalitions and achieving consensus in public health issues, assessing available health resources within a population, and advocating for equitable access to care and services.

Data from American Nurses Association: *Public health nursing: scope and standards of practice*, ed 2, Silver Spring, MD, 2013, Author.
The standards can be purchased at: http://www.nursesbooks.org/Homepage/Hot-off-the-Press/Public-Health-Nursing-2nd.aspx

is on acute and chronic care and includes such practice areas as home health nursing and nursing in outpatient or ambulatory settings.

Zotti, Brown, and Stotts (1996) compared community-based nursing and community health nursing and explained that the goals of the two are different. Community health nursing emphasizes preservation and protection of health, and community-based nursing emphasizes managing acute or chronic conditions. In community health nursing, the primary client is the community; in community-based nursing, the primary clients are the individual and the family. Finally, services in community-based nursing are largely direct, but in community health nursing, services are both direct and indirect (Williams, 2016).

Community and Public Health Nursing Practice

Community and public health nurses practice disease prevention and health promotion. It is important to note that public health nursing practice is collaborative and is based in research and theory. It applies the nursing process to the care of individuals, families, aggregates, and the community. Box 1.3 provides an overview of the Standards for Public Health Nursing (ANA, 2013).

As discussed, the core functions of public health are assessment, policy development, and assurance. In 2003, the Quad Council of Public Health Nursing Organizations (Quad Council) closely examined the core functions and used them to develop a set of public health nursing competencies. These competencies were updated in 2011 and are summarized in Table 1.2 (Quad Council, 2011). Current and future community health nurses should study these competencies to understand the practice parameters and skills required for public health nursing practice.

ACTIVE LEARNING EXERCISE

Interview several community/public health nurses regarding their opinions on the focus of community/public health nursing. Do you agree?

POPULATION-FOCUSED PRACTICE AND COMMUNITY/PUBLIC HEALTH NURSING INTERVENTIONS

Community/public health nurses must use a population-focused approach to move beyond providing direct care to individuals and families. **Population-focused nursing** concentrates on specific groups of people and focuses on health promotion and disease prevention, regardless of geographic location (Baldwin et al., 1998). The goal of population-focused nursing is "provision of evidence-based care to targeted groups of people with similar needs in order to improve outcomes" (Curley, 2016, p. 4). In short, population-focused practice (Minnesota Department of Health, 2003):

- Focuses on the entire population
- Is based on assessment of the population's health status
- Considers the broad determinants of health
- Emphasizes all levels of prevention
- Intervenes with communities, systems, individuals, and families

Whereas community and public health nurses may be responsible for a specific subpopulation in the community (e.g., a school nurse may be responsible for the school's pregnant teenagers), population-focused practice is concerned with many distinct and overlapping community subpopulations. The goal of population-focused nursing is to promote healthy communities.

Population-focused public health nurses would not have exclusive interest in one or two subpopulations, but instead would focus on the many subpopulations that make up the entire community. A population focus involves concern for those who do, and for those who do not, receive health services. A population focus also involves a scientific approach to community health nursing. Thus a thorough, systematic assessment of the community or population is necessary and basic to planning, intervention, and evaluation for the individual, family, aggregate, and population levels.

Public health nursing practice requires the following types of data for scientific approach and population focus: (1) the epidemiology, or body of knowledge, of a particular problem and its solution and (2) information about the community. Each type of knowledge and its source appear in Table 1.3. To determine the overall patterns of health in a population, data collection for assessment and management decisions within a community should be ongoing, not episodic.

Public Health Interventions

Public health nurses focus on the care of individuals, groups, aggregates, and populations in many settings, including homes, clinics, worksites, and schools. In addition to interviewing

TABLE 1.2 Summary of Tier 1 Public Health Nursing (PHN) Competencies (Generalist Public Health Nurses)

Domain	Community and Public Health Nursing Competencies
1. Analytic assessment skills	Identifies determinants of health and illness
	Uses epidemiological data and ecological perspective to identify health risks, needs, values, beliefs, resources, and relevant environmental factors
	Identifies variables that measure health and health conditions
	Uses valid and reliable methods and instruments for collecting data; develops data collection plan
	Identifies sources of public health data and information; collects, interprets, and documents data in understandable terms
	Uses valid and reliable data sources for comparisons
	Identifies gaps and redundancies in data sources
	Applies ethical, legal, and policy guidelines and principles in data collection, use, and dissemination
	Practices evidence-based public health nursing to promote the health of individuals, families, and groups
2. Policy development/program planning skills	Identifies policy issues relevant to health; describes the structure of the public health system and its impact on health
	Identifies the implications of policy options on public health programs
	Identifies outcomes of health policy relevant to PHN practice
	Collects information that will inform policy decisions; describes the legislative policy development process; identifies outcomes of current health policy
	Describes the structure of the public health system; identifies public health laws and regulations relevant to practice
	Participates as a team member to implement programs and policies
	Participates in teams to assure compliance with organizational policies
	Assists in design of evaluation plans
3. Communication skills	Assesses health literacy
	Communicates effectively in writing, orally, and electronically; communicates in a culturally responsive and relevant manner
	Solicits input when planning and delivering health care
	Uses a variety of methods to disseminate public health information
	Communicates effectively as a member of interprofessional team(s)
4. Cultural competency skills	Utilizes the social and ecological determinants of health to work effectively
	Uses concepts, knowledge, and evidence of the social determinants of health in the delivery of services
	Adapts PHN care on the basis of cultural needs and differences
	Explains factors contributing to cultural diversity
	Articulates benefits of a diverse public health workforce
	Demonstrates culturally appropriate public health nursing practice
5. Community dimensions of practice skills	Utilizes an ecological perspective in health assessment, planning, and interventions
	Identifies research issues at a community level; functions as a member of a participatory research team
	Identifies community partners for PHN practice
	Collaborates with community partners to promote health
	Partners effectively with key stakeholders and groups in care delivery
	Participates effectively in activities that facilitate community involvement
	Describes the role of government and the private and nonprofit sectors in the delivery of health services
	Utilizes community assets and resources to promote health and deliver care
	Seeks input into plans of care
	Supports public health policies, programs, and resources
6. Public health sciences skills	Incorporates public health and nursing science in the delivery of care
	Describes the historical foundation of public health and public health nursing
	Describes how programs contribute to meeting the core public health functions and the 10 essential services
	Uses basic descriptive epidemiological methods when conducting a health assessment
	Interprets research relevant to public health interventions
	Accesses public health and other sources of information using informatics and information technologies
	Identifies gaps in research evidence to guide public health nursing practice
	Complies with requirements of patient confidentiality and human subject protection
	Participates in research at the community level to build the scientific base of PHN

TABLE 1.2 Summary of Tier 1 Public Health Nursing (PHN) Competencies (Generalist Public Health Nurses)—cont'd

Domain	Community and Public Health Nursing Competencies
7. Financial planning and management skills	Describes the interrelationships among local, state, tribal, and federal public health and health care systems Describes the structure, function, and jurisdictional authority of organizational units within federal, state, tribal, and local public health agencies Adheres to the organization's policies and procedures Provides data for inclusion in a programmatic budget Describes the impact of budget constraints on the delivery of public health nursing care Provides input into budget priorities Provides data to evaluate care and services Adapts the delivery of PHN care on the basis of evaluation results Provides input into proposals for funding from external sources Applies basic human relations and conflict management skills in interaction with peers Utilizes public health informatics skills Provides input into contracts and other agreements for the provision of services Delivers PHN care within budgetary guidelines
8. Leadership and systems thinking skills	Incorporates ethical standards of practice as the basis of all interactions Applies systems theory to PHN practice Participates with stakeholders to identify vision, values, and principles of community action Identifies internal and external factors affecting PHN practice and services Uses individual, team, and organizational learning opportunities for personal and professional development Acts as a mentor, coach, or peer advisor for PHN staff; maintains personal commitment to lifelong learning and professional development Participates in quality initiatives Adapts the delivery of PHN care in consideration of changes in the health system and the larger social, political, and economic environment; maintains knowledge of current public health laws and policies

Modified from Quad Council of Public Health Nursing Organizations: *Public health nursing competencies*, Washington, DC, 2011, Author.

TABLE 1.3 Information Useful for Population Focus

Type of Information	Examples	Sources
Demographic data	Age, gender, race/ethnicity, socioeconomic status, education level	Vital statistic data (national, state, county, local); census
Groups at high risk	Health status and health indicators of various subpopulations in the community (e.g., children, elders, those with disabilities)	Health statistics (morbidity, mortality, natality); disease statistics (incidence and prevalence)
Services/providers available	Official (public) health departments; health care providers for low-income individuals and families; community service agencies and organizations (e.g., Red Cross, Meals on Wheels)	City directories; phone books; local or regional social workers; low-income providers' lists; local community health nurses (e.g., school nurses)

clients and assessing individual and family health, public health nurses must be able to assess a population's health needs and resources and identify its values. Public health nurses must also work with the community to identify and implement programs that meet health needs and to evaluate the effectiveness of programs after implementation. For example, school nurses were once responsible only for running first-aid stations and monitoring immunization compliance. Now they are actively involved in assessing the needs of their population and defining programs to meet those needs through activities such as health screening and group health education and promotion. The activities of school nurses may be as varied as designing health curricula with a school and community advisory group, leading support groups for elementary school children with chronic illness, advocating for emergency equipment (e.g., automatic external defibrillators) in gyms and athletic fields, and monitoring the health status of teenage mothers.

Similarly, occupational health nurses are no longer required to simply maintain an office or dispensary. They are involved in many different types of activities. These activities might include maintaining records of workers exposed to physical or chemical risks, monitoring compliance with Occupational Safety and Health Administration standards, teaching classes on health issues, acting as case managers for workers with chronic health conditions, and leading support group discussions for workers with health-related problems.

Private associations, such as the American Diabetes Association or the Red Cross, employ public health nurses for their organizational ability and health-related skills. Other public health nurses work with multidisciplinary groups of professionals, serve on boards of voluntary health associations such as the American Heart Association, work as case managers for insurance companies, and are members of health planning agencies and councils.

GENETICS IN PUBLIC HEALTH

Community-Based Research for the Prevention of Cardiovascular Disease

Cardiovascular disease (CVD) is the leading cause of death among Americans, and prevention of CVD should be a priority for all nurses. It has been established that CVD results from a complex interaction among modifiable factors including lifestyle choices and environmental influences, and non-modifiable factors such as age and race/ethnicity or genetics. A group of nurse researchers led by Fletcher (2011) presented a "call to action for nursing" to promote community-based research that focuses on the genetic factors that contribute to CVD. The team described the need to build capacity for participation in genetics research within communities through community engagement, particularly among vulnerable ethnic minority groups. The importance of identifying the genetic-environmental interactions that may led to clinical manifestation of CVD was stressed and a number of community-based interventions to prevent CVD were described.

Fletcher BJ, Himmelfarb CD, Lira MT, Meininger JC, Pradhan SR, Sikkema J: Global cardiovascular disease prevention: A call to action for nursing. *Journal of Cardiovascular Nursing*, 26, 45, 535-545.

The Public Health Intervention Wheel

The Public Health Intervention Model was initially proposed in the late 1990s by nurses from the Minnesota Department of Health to describe the breadth and scope of public health nursing practice (Keller et al., 1998). This model was later revised and termed the *Intervention Wheel* (Fig. 1.3) (Keller et al., 2004a; Keller et al., 2004b), and it has become increasingly recognized as a framework for community and public health nursing practice.

The Intervention Wheel contains three important elements: (1) it is population based; (2) it contains three levels of practice (community, systems, and individual/family); and (3) it identifies and defines 17 public health interventions. The levels of practice and interventions are directed at improving population health (Keller et al., 2004a). Within the Intervention Wheel, the 17 health interventions are grouped into five "wedges." These interventions are actions taken on behalf of communities, systems, individuals, and families to improve or protect health status. Table 1.4 provides definitions.

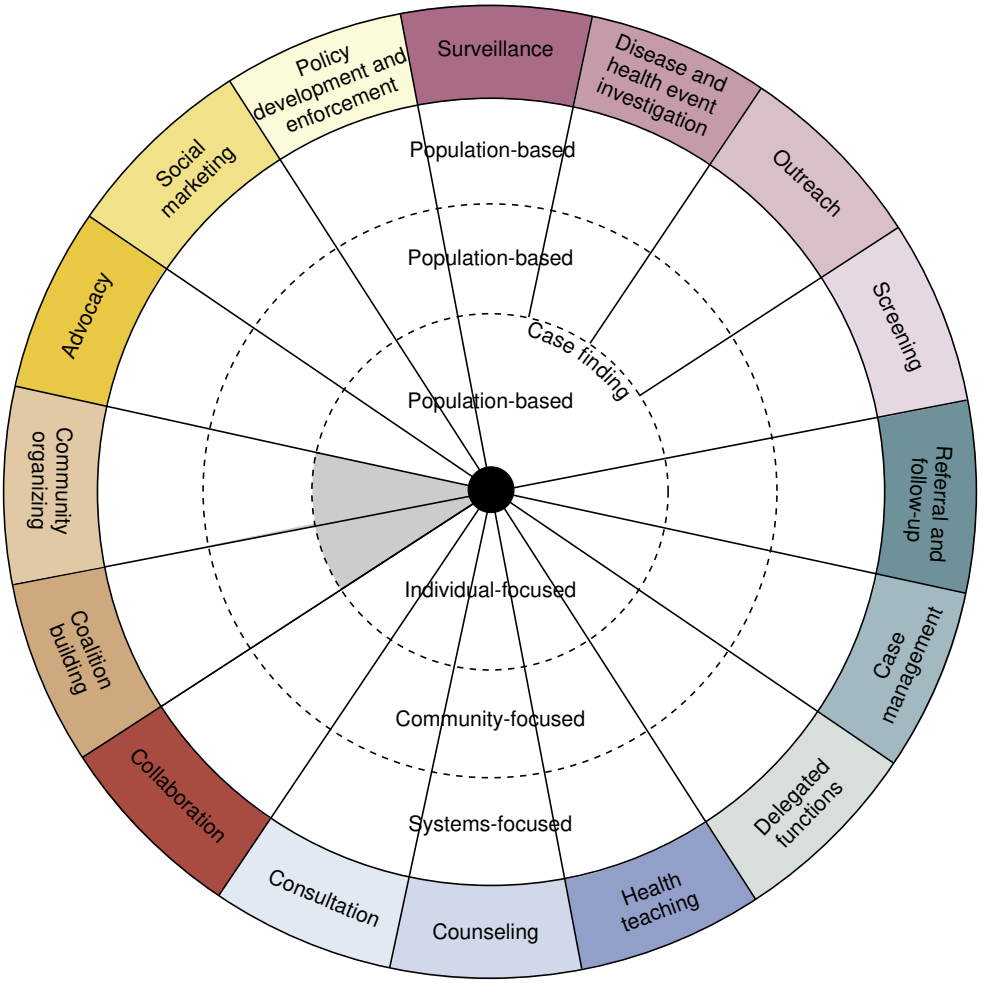

FIG. 1.3 Public Health Intervention Wheel. (Modified from Section of Public Health Nursing, Minnesota Department of Health: *Public health interventions*, 2001. Retrieved from: http://www.health.state.mn.us/divs/opi/cd/phn/docs/0301wheel_manual.pdf,)

The Intervention Wheel is further dissected into levels of practice, in which the interventions may be directed at an entire population within a community, a system that would affect the health of a population, and/or the individuals and families within the population. Thus each intervention can and should be applied at each level. For example, a systems-level intervention within "disease investigation" might be the community health nurse working with the state health department and federal vaccine program to coordinate a response to an outbreak of measles in a migrant population. An example of a population- or community-level intervention for "screening" would be public health nurses working with area high schools to give each student a profile of his or her health to promote nutritional and physical activity lifestyle changes to improve the student's health.

Finally, an individual-level implementation of the intervention "referral and follow-up" would occur when a nurse receives a referral to care for an individual with a diagnosed mental illness who would require regular monitoring of his or her medication compliance to prevent rehospitalization (Keller et al., 2004b).

PUBLIC HEALTH NURSING, MANAGED CARE, AND HEALTH REFORM

Shifts in reimbursement, the growth of managed care, and implementation and revision of the ACA have revitalized the notion of population-based care. Health insurance companies, governmental financing entities (e.g., Medicare, Medicaid), and MCOs use financial incentives and organizational structures in an attempt to increase efficiency and decrease health care costs. The foundation for managed care is management of health care for an enrolled group of individuals. This group of enrollees is the population covered by the plan who receive health services from managed care plan providers (Kongstvedt, 2013).

An understanding of enrolled populations and health care patterns is essential for managing health care services and resources effectively. Most MCOs have become sophisticated in identifying key subgroups within the population of enrollees at risk for health problems. Typically, managed care systems target subgroups according to characteristics associated with risk or use of expensive services, such as selected

TABLE 1.4 Public Health Interventions and Definitions

Public Health Intervention	Definition
Surveillance	Describes and monitors health events through ongoing and systematic collection, analysis, and interpretation of health data for the purpose of planning, implementing, and evaluating public health interventions
Disease and other health event investigation	Systematically gathers and analyzes data regarding threats to the health of populations, ascertains the source of the threat, identifies cases and others at risk, and determines control measures
Outreach	Locates populations of interest or populations at risk and provides information about the nature of the concern, what can be done about it, and how services can be obtained
Screening	Identifies individuals with unrecognized health risk factors or asymptomatic disease conditions
Case finding	Locates individuals and families with identified risk factors and connects them with resources
Referral and follow-up	Assists individuals, families, groups, organizations, and/or communities to identify and access necessary resources to prevent or resolve problems or concerns
Case management	Optimizes self-care capabilities of individuals and families and the capacity of systems and communities to coordinate and provide services
Delegated functions	Carries out direct care tasks under the authority of a health care practitioner as allowed by law
Health teaching	Communicates facts, ideas, and skills that change knowledge, attitudes, values, beliefs, behaviors, and practices of individuals, families, systems, and/or communities
Counseling	Establishes an interpersonal relationship with a community, a system, and a family or individual, with the intention of increasing or enhancing their capacity for self-care and coping
Consultation	Seeks information and generates optional solutions to perceived problems or issues through interactive problem solving with a community system and family or individual
Collaboration	Commits two or more persons or organizations to achieve a common goal by enhancing the capacity of one or more of the members to promote and protect health
Coalition building	Promotes and develops alliances among organizations or constituencies for a common purpose
Community organizing	Helps community groups to identify common problems or goals, mobilize resources, and develop and implement strategies for realizing the goals they collectively have set
Advocacy	Pleads someone's cause or acts on someone's behalf, with a focus on developing the community, system, and individual or family's capacity to plead their own cause or act on their own behalf
Social marketing	Utilizes commercial marketing principles and technologies for programs designed to influence the knowledge, attitudes, values, beliefs, behaviors, and practices of the population of interest
Policy development and enforcement	Places health issues on decision makers' agendas, acquires a plan of resolution, and determines needed resources, resulting in laws, rules, regulations, ordinances, and policies. Policy enforcement compels others to comply with laws, rules, regulations, ordinances, and policies

Modified from Keller LO, Strohschein S, Lia-Hoagberg B, Schaffer MA: *Population-based public health interventions: practice-based and evidence-supported. Part I*, St. Paul, MN, 2004a, Minnesota Department of Health, Center for Public Health Nursing.

clinical conditions, functional status, and past service use patterns.

In March 2010, President Obama signed the Patient Protection and Affordable Care Act (ACA) (PL 111-148) into law. The ACA served to expand insurance coverage for those uninsured and to help control health care costs. Expansion of coverage was accomplished by requiring individuals to purchase health insurance for themselves and their families, implementation of "exchanges" to increase options for individuals to purchase health insurance, and requiring more employers to offer health insurance to employees. Public programs (e.g., Medicaid and State Children's Health Insurance Program) were expanded to cover health care for those who could not afford to buy their own insurance. With the change of administration in 2017, it is anticipated that there will be significant revisions of the ACA with new federal and state-sponsored initiatives. Public health nurses must stay informed of these changes and work with groups and organizations to support legislation that will promote population health, reduce disparities, and better manage the costs of care.

The purpose of public health is to improve the health of the public by promoting healthy lifestyles, preventing disease and injury, and protecting the health of communities. In the past, shrinking public health resources have supported personal health services over community health promotion. In public health practice, the community is the population of interest. With the proposed changes to health care financing, the personal health care system will be under increasing pressure to provide the services that health departments previously provided. Traditionally served by public health, the most vulnerable populations will pose tremendous challenges for private health care providers. Public health agencies and providers will be responsible for partnering with private providers to care for these populations.

Providing population-based care requires a dramatic shift in thinking from individual-based care. Some of the practical demands of population-based care are the following:

1. It must be recognized that populations are not homogeneous; therefore it is necessary to address the needs of special subpopulations within populations.
2. High-risk and vulnerable subpopulations must be identified early in the care delivery cycle.
3. Nonusers of services often become high-cost users; therefore it is essential to develop outreach strategies.
4. Quality and cost of all health care services are linked together across the health care continuum. (Kaiser Family Foundation, 2013)

Nurses in community and public health have an opportunity to share their expertise regarding population-based approaches to health care for groups of individuals across health care settings. Today, health care practitioners require additional skills in assessment, policy development, and assurance to provide community public health practice and population-based service. Health care professionals should focus attention on promoting healthy lifestyles, providing preventive and primary care, expanding and ensuring access to cost-effective and technologically appropriate care, participating in coordinated and interdisciplinary care, and involving patients and families in the decision-making process. Public health nurses must work in partnership with colleagues in managed care settings to improve community health. Partnerships may address information management, cultural values, health care system improvement, and the physical environment roles in health and may require complex negotiations to share data. The partners may need to develop new community assessment strategies to augment epidemiological methods that often mask the context or meaning of the human experience of vulnerable populations.

SUMMARY

The health care system has been evolving from focusing on individuals in acute care settings to being more community based and population health directed. Nursing practice has changed in response, and today a growing proportion of nurses is working outside of hospitals. Public and community health nursing practice includes population-focused interventions that seek to improve the health and well-being of groups, aggregates, and communities.

This chapter has presented information on key concepts, including "health" and "community," and described the vital importance of addressing societal needs in order to improve population health. With widely recognized changes in population demographics, it is necessary that nurses be attuned to the determinants and indicators of health, health-promoting activities, and changes in the health care system. This includes efforts to promote access to more individuals and to understand the need to contain costs. With this knowledge and skills, public and community health nurses can influence health practices and policies that will positively affect the future health of individuals, families, groups, and communities.

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2

Historical Factors: Public Health Nursing in Context

*Melanie McEwen**

OUTLINE

OBJECTIVES

Upon completion of this chapter, the reader will be able to do the following:

1. Describe the impact of aggregate living on population health.
2. Identify approaches to population health promotion from prerecorded historic to present times.
3. Understand historical events that have influenced population health.
4. Compare the application of public health principles to the nation's major health problems at the turn of the twentieth century (i.e., acute disease) with that at the beginning of the twenty-first century (i.e., chronic disease).
5. Describe two leaders in nursing who had a profound impact on addressing population health.
6. Discuss major contemporary issues facing community/public health nursing, and trace the historical roots to the present.

KEY TERMS

district nursing
Edward Jenner
Edwin Chadwick
Elizabethan Poor Law
endemic
epidemic
Flexner Report
Florence Nightingale
health visiting
House on Henry Street
John Snow
Joseph Lister
Lemuel Shattuck
Lillian Wald
Louis Pasteur
pandemic
Robert Koch
Sanitary Revolution
stages in disease history

An understanding of the historical factors that have influenced the evolution of population health may help explain current health challenges. This chapter examines the health of Western populations from early historic times to recent times and describes the evolution of modern health care. The role of public health nurses and concurrent challenges for improving the health of groups, aggregates, and communities are also discussed.

EVOLUTION OF HEALTH IN WESTERN POPULATIONS

Medical anthropologists use paleontological records and disease descriptions of primitive societies to speculate on the interrelationship of early humans, probable diseases, and their environment. Historians have also documented the existence of public health activity (i.e., an organized community effort to prevent disease, prolong life, and promote health) since before recorded historical times. This section describes how aggregate living patterns and early public health efforts have affected the health of Western populations.

Aggregate Impact on Health

Polgar (1964) defined the following **stages in disease history**: hunting and gathering stage, settled villages stage, preindustrial cities stage, industrial cities stage, and present stage (Fig. 2.1). In these stages, growing populations, increased population density, and imbalanced human ecology resulted in changes in cultural adaptation. In each stage, humans created an ecological imbalance by altering their environment to

* The author would like to acknowledge the contribution of Tom H. Cook, who wrote this chapter for the previous edition.

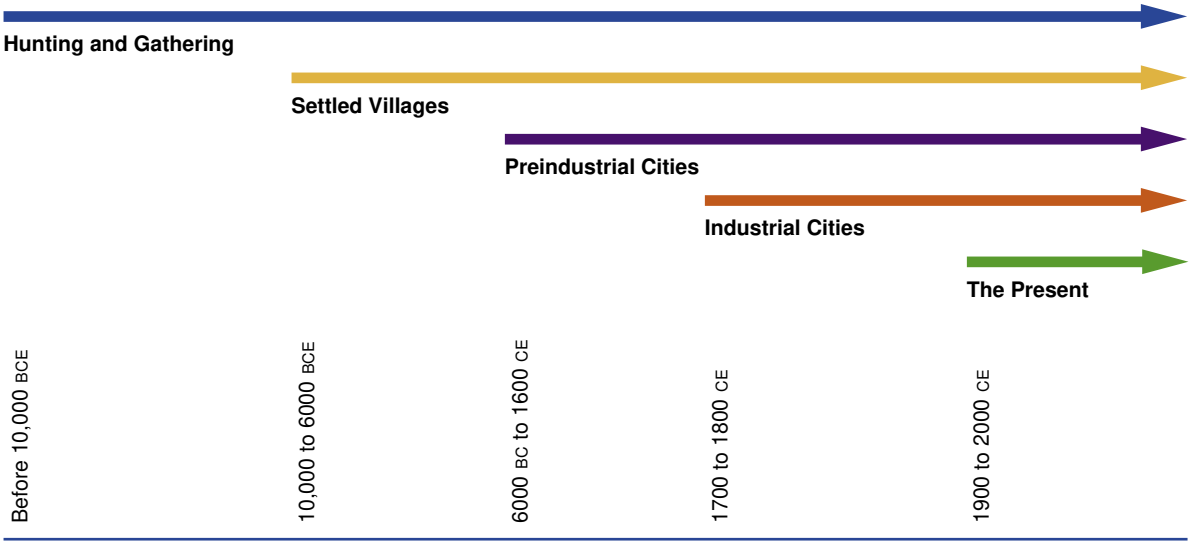


FIG. 2.1 Stages in the disease history of humankind. Stages overlap, and time periods are widely debated in the field of anthropology. Some form of each stage remains evident in the world today.

accommodate group living. This imbalance subsequently had a significant effect on aggregate health.

Although these stages are associated with the evolution of civilization, it is important to note that the information is limited by cultural bias. The stages depict the evolution of civilization from the perspective of the Western world. They consist of overlapping historical time periods, which anthropologists widely debate. However, the stages of human disease can provide a frame of reference to aid in determining the relationship among humans, disease, and environment from early historical times to the present. Furthermore, although the stages chronicle the general evolution in the Western world, it is important to realize that each stage still exists in civilization today. For example, Australian aborigines continue to hunt and gather food, and "settled villages" can readily be found in developing countries.

Public health nurses should be aware that populations from each stage consist of a variety of people with distinct cultural traditions and a broad range of health care practices and beliefs. For example, a nurse currently practicing in an American community may need to plan care for immigrants or refugees from a settled village or a preindustrial city. Public and community health nurses must recognize that the environment, the population's health risks, and the host culture's strengths and challenges affect the health status of each particular group.

Hunting and Gathering Stage

During the Paleolithic period, or Old Stone Age, nomadic and semi-nomadic people engaged in hunting and gathering, with generations of small aggregate groups wandering in search of food. Armelagos and Dewey (1978) reviewed how the size, density, and relationship to the environment of such people probably affected their health. These groups may have avoided many contagious diseases because the scattered groups were small, nomadic, and separated from other groups. Under these conditions, diseases would not spread among the groups. Evidently the disposal of human feces and waste was not a great problem; the nomadic people most likely abandoned the caves they used for shelter once waste accumulated.

Settled Village Stage

Small settlements were characteristic of the Mesolithic period, or Middle Stone Age, and the Neolithic period, or New Stone Age. Wandering people became more sedentary and formed small encampments and villages. The concentration of people in these small areas caused new health problems. For example, people began to domesticate animals and live close to their herds, a practice that probably transmitted diseases such as salmonella, anthrax, Q fever, and tuberculosis (TB) (Polgar, 1964). These stationary people also domesticated plants, a change that may have reduced the range of consumable nutrients and may have led to deficiency diseases. They had to secure water and remove wastes, often leading to the cross-contamination of the water supply and the spread of waterborne diseases such as dysentery, cholera, typhoid, and hepatitis A.

Preindustrial Cities Stage

In preindustrial times, large urban centers formed to support the expanding population. Populations inhabited smaller areas; therefore exposure to preexisting problems expanded. For example, the urban population had to resource increased amounts of food and water and remove increased amounts of waste products. Some cultures developed elaborate water systems. However, waste removal via the water supply led to diseases such as cholera. Further, with the development of towns, rodent infestation increased and facilitated the spread of plague. People had more frequent close contact with one another; therefore the transmission of diseases spread by direct contact increased, and diseases such as mumps, measles, influenza, and smallpox became endemic (Polgar, 1964). Of significance,

TABLE 2.1 Disease Definitions

Types of Disease	Definition
Endemic	Diseases that are always present in a population (e.g., colds and pneumonia)
Epidemic	Diseases that are not always present in a population but flare up on occasion (e.g., diphtheria and measles)
Pandemic	The existence of disease in a large proportion of the population: a global epidemic (e.g., human immunodeficiency virus, acquired immunodeficiency syndrome, and annual outbreaks of influenza type A)

a population must reach a certain size to maintain a disease in endemic proportions (Table 2.1); for example, approximately 1 million people are needed to sustain measles at an endemic level (Cockburn, 1967).

Industrial Cities Stage

Industrialization caused urban areas to become denser and even more heavily populated. Increased industrial wastes, air and water pollution, and harsh working conditions took a toll on health. During the eighteenth and nineteenth centuries, there was an increase in respiratory diseases such as TB, pneumonia, and bronchitis and in epidemics of infectious diseases such as diphtheria, smallpox, typhoid fever, typhus, measles, malaria, and yellow fever (Armelagos and Dewey, 1978). Furthermore, exploration and imperialism spread epidemics of many diseases to susceptible populations throughout the world because settlers, traders, and soldiers moved from one location to another, introducing communicable diseases into native population groups.

Present Stage

Although infectious diseases no longer account for a majority of deaths in the Western world, they continue to cause many deaths in the non-Western world. They also remain prevalent among low-income populations and some ethnic minority groups in the West. Western diseases such as cancer, heart disease, obesity, hypertension, and diabetes are less common among populations from nonindustrial communities. These diseases typically appear when cultures adopt Western customs and transition into urban environments. Epidemiological studies suggest that common risk factors that contribute to chronic health conditions are changes in diet (e.g., increases in refined sugar and fats and lack of fiber), environmental alterations (e.g., use of motorized transportation and climate-controlled living and work sites), and occupational hazards. A rise in population and greater population density also increase mental and behavioral disorders.

In summary, disease patterns and environmental demands changed when wandering, hunting, and gathering aggregates grew into large populations and became sedentary. Humans had to adapt to more densely populated, largely urban existence with marked consequences for health. As a result, over time, the leading causes of death changed from infectious disease to chronic illness.

Evolution of Early Public Health Efforts

Traditionally, historians believed that organized public health efforts were eighteenth- and nineteenth-century activities associated with the Sanitary Revolution. However, modern historians have shown that organized community health efforts to prevent disease, prolong life, and promote health have existed since early human history.

Public health efforts developed slowly over time. The following sections briefly trace the evolution of organized public health and highlight the periods of prerecorded historical times (i.e., before 5000 BCE), classical times (i.e., 3000 to 200 BCE), the Middle Ages (i.e., 500 to 1500 CE), the Renaissance (i.e., fifteenth, sixteenth, and seventeenth centuries), the eighteenth century, the nineteenth century, and into the present day. It is important to note that, like the disease history of humankind, public health efforts exist in various stages of development throughout the world, and this brief history suggests a Western viewpoint.

Prerecorded Historic Times

From the early remains of human habitation, anthropologists recognize that early nomadic humans became domesticated and tended to live in increasingly larger groups. Aggregates ranging from extended families to larger communities inevitably shared episodes of life, health, sickness, and death. Whether based on superstition or sanitation, health practices evolved to ensure the survival of many aggregates. For example, primitive societies used elements of medicine (e.g., voodoo), isolation (e.g., banishment), and fumigation (i.e., use of smoke) to manage disease and thus protect the community for thousands of years (Hanlon and Pickett, 1990).

Classical Times

In the early years of the period 3000 to 1400 BCE, the Minoans devised ways to flush water and construct drainage systems. Circa 1000 BCE, the Egyptians constructed elaborate drainage systems, developed pharmaceutical preparations, and embalmed the dead. Pollution is an ancient problem. The biblical book of Exodus reported that "all the waters that were in the river stank," and in the book of Leviticus (believed to be written around 500 BCE), the Hebrews formulated the first written hygiene code. This hygiene code protected water and food by creating laws that governed personal and community hygiene such as contagion, disinfection, and sanitation.

Greece. Greek literature contains accounts of communicable diseases such as diphtheria, mumps, and malaria. The Hippocratic book *On Airs, Waters and Places,* a treatise on the balance between humans and their environment, may have been the only volume on this topic until the development of bacteriology in the late nineteenth century (Rosen, 2015). Diseases that were always present in a population, such as colds and pneumonia, were called **endemic**. When diseases such as diphtheria and measles presented fairly widespread outbreaks, the diseases were termed **epidemic**.

In practice, the Greeks emphasized the preservation of health, or good living, which the goddess Hygeia represented, and curative medicine, which the goddess Panacea personified.

BOX 2.1 Romans Provided Public Health Services

The ancient Romans provided public health services that included the following:

- A water board to maintain the aqueducts
- A supervisor of the public baths
- Street cleaners
- Supervision of the sale of food

Data from Rosen G: *A history of public health, expanded edition,* Baltimore, MD, 2015, Johns Hopkins Press.

Human life had to be in balance with environmental demands; therefore the Greeks weighed the importance of exercise, rest, and nutrition according to age, sex, constitution, and climate (Rosen, 2015).

Rome. Although the Romans readily adopted Greek culture, they far surpassed Greek engineering by constructing massive aqueducts, bathhouses, and sewer systems. For example, at the height of the Roman Empire, Rome provided its 1 million inhabitants with 40 gallons of water per person per day, which is comparable to modern consumption rates (Rosen, 2015). Inhabitants of the overcrowded Roman slums, however, did not share in public health amenities such as sewer systems and latrines, and their health suffered accordingly.

The Romans also observed and addressed occupational health threats. In particular, they noted the pallor of the miners, the danger of suffocation, and the smell of caustic fumes (Rosen, 2015) (Box 2.1). For protection, miners devised safeguards by using masks made of bags, sacks, membranes, and bladder skins.

In the early years of the Roman Republic, priests were believed to mediate diseases and often dispensed medicine. Public physicians worked in designated towns and earned money to care for the poor. In addition, they were able to charge wealthier patients a service fee. Much as in a modern health maintenance organization or group practice, several families paid a set fee for yearly services. Hospitals, surgeries, infirmaries, and nursing homes appeared throughout Rome. In the fourth century, a Christian woman named Fabiola established a hospital for the sick poor. Others repeated this model throughout medieval times (Donahue, 2011).

Middle Ages

The decline of Rome, which occurred circa 500 CE, led to the Middle Ages. Monasteries promoted collective activity to protect public health, and the population adopted protective measures such as building wells and fountains, cleaning streets, and disposing of refuse. The commonly occurring communicable diseases were measles, smallpox, diphtheria, leprosy, and bubonic plague. Physicians had little to offer in the management of diseases such as leprosy. The church took over by enforcing the hygienic codes from Leviticus and establishing isolation and leper houses, or leprosaria (Rosen, 2015).

A **pandemic** is the existence of disease in a large proportion of the population. One such pandemic, the bubonic plague, ravaged much of the world in the fourteenth century. This plague, or Black Death, claimed close to half the world's population at that time (Hanlon and Pickett, 1990). For centuries, medicine and science did not recognize that fleas, which were attracted to the large number of rodents inhabiting urban areas, were the transmitters of plague. Modern public health practices such as isolation, disinfection, and ship quarantines emerged in response to the bubonic plague (Box 2.2).

BOX 2.2 Human Plague Cases in the United States

Between 1900 and 2012, more than 1000 cases of human plague occurred in the United States (CDC, 2015). A recent analysis of the historical epidemiology of the disease described how it evolved over the 113 years, changing from an illness that was largely located in port cities of California and the Gulf Coast between 1900 and 1925, to being primarily found in the "four corners" regions of the American Southwest, with periodic outbreaks in the mid-1980s and mid-1990s. Although many of the very early (pre-1925) cases affected Asian immigrants and sailors and were believed to have been transmitted person to person, the later outbreaks (post-1965) affected a high percentage of American Indians and were most commonly associated with working with animals and known flea bites.

Recently, two cases of plague were reported to have occurred after visits to Yosemite National Park in 2015 (CDC, 2016). A comprehensive investigation indicated that the two individuals likely contracted the disease from rodent droppings, but from different locations within the park. Significant changes and interventions were undertaken by park staff and education initiatives for the public were proposed to reduce the risk for further plague transmission.

Data from Centers for Disease Control and Prevention: Epidemiology of human plague in the United States, 1900–2012, *Emerg Infect Diseases* 21(1):16–22, 2015. Retrieved from: https://wwwnc.cdc.gov/eid/article/21/1/pdfs/14-0564.pdf
Centers for Disease Control and Prevention: Investigation of and response to 2 plagues cases, Yosemite National Park, California, USA, 2015, *Emerg Infect Diseases* 22(12):2045–2053, 2016. Retrieved from: https://wwwnc.cdc.gov/eid/article/22/12/pdfs/16-0560.pdf

During the Middle Ages, clergymen often acted as physicians and treated kings and noblemen. Monks and nuns provided nursing care in small houses designated as structures similar to today's small hospitals. Medieval writings contained information on hygiene and addressed such topics as housing, diet, personal cleanliness, and sleep (Rosen, 2015). Box 2.3 presents an account of living conditions in the sixteenth century.

The Renaissance

Although the cause of infectious disease remained undiscovered, two events important to public health occurred during the Renaissance. In 1546, Girolamo Fracastoro presented a theory that infection was a cause and epidemic a consequence of the "seeds of disease." Then, in 1676, Anton van Leeuwenhoek described microscopic organisms, although he did not associate them with disease (Rosen, 2015).

The **Elizabethan Poor Law**, enacted in England in 1601, held the church parishes responsible for providing relief for the poor. This law governed health care for the poor for more than two centuries and became a prototype for later U.S. laws.

BOX 2.3 Life in an English Household in the Sixteenth Century

In the following account, Erasmus described how life in the sixteenth century must have affected health. Such accounts appeared in literature throughout the sixteenth century.

> *As to floors, they are usually made with clay, covered with rushes that grow in the fens and which are so seldom removed that the lower parts remain sometimes for twenty years and has in it a collection of spittle, vomit, urine of dogs and humans, beer, scraps of fish and other filthiness not to be named.*

Quotation from Hanlon JJ, Pickett GE: *Public health administration and practice*, ed 9, St. Louis, MO, 1990, Mosby, p 25.

Eighteenth Century

Great Britain. The eighteenth century was marked by imperialism and industrialization. Unsanitary conditions remained a huge problem. During the Industrial Revolution, a gradual change in industrial productivity occurred. The industrial boom sacrificed many lives for profit. In particular, it forced poor children into labor. Under the Elizabethan Poor Law, parishes established workhouses to employ the poor. Orphaned and poor children were wards of the parish; therefore the parish forced these young children to labor in parish workhouses for long hours (George, 1925). At 12 to 14 years of age, a child became a master's apprentice. Those apprenticed to chimney sweeps reportedly suffered the worst fate because their masters forced them into chimneys at the risk of being burned and suffocated.

Vaccination was a major discovery of the times. In 1796, **Edward Jenner** observed that people who worked around cattle were less likely to contract smallpox. He concluded that immunity to smallpox resulted from an inoculation with the cowpox virus. Jenner's contribution was significant because approximately 95% of the population suffered from smallpox and approximately 10% of the population died of smallpox during the eighteenth century. Frequently, the faces of those who survived the disease were scarred with pockmarks.

The **Sanitary Revolution**'s public health reforms were beginning to take place throughout Europe and England. In the eighteenth century, scholars used survey methods to study public health problems (Rosen, 2015). These surveys mapped "medical topographies," which were geographic factors related to regional health and disease. A health education movement provided books and pamphlets on health to the middle and upper classes, but it neglected "economic factors" and was not concerned with the working classes.

Nineteenth Century

Europe. During the nineteenth century, communicable diseases ravaged the population that lived in unsanitary conditions, and many lives were lost. For example, in the mid-1800s, typhus and typhoid fever claimed twice as many lives each year as the Battle of Waterloo (Hanlon and Pickett, 1990).

Edwin Chadwick called attention to the consequences of unsanitary conditions that resulted in health disparities that shortened life spans of the laboring class in particular. Chadwick contended that death rates were high in large industrial cities such as Liverpool, where more than half of all children born of working-class parents died by age 5. Laborers lived an average of 16 years. In contrast, tradesmen lived 22 years, and the upper classes lived 36 years (Richardson, 1887). In 1842, Chadwick published his famous *Report on an Inquiry Into the Sanitary Conditions of the Labouring Population of Great Britain*. The report furthered the establishment of the General Board of Health for England in 1848. Legislation for social reform followed, addressing prevailing concerns such as child welfare; factory management; education; and care for the elderly, sick, and mentally ill. Clean water, sewers, fireplugs, and sidewalks emerged as a result.

In 1849, a German pathologist named Rudolf Virchow argued for social action—bettering the lives of the people by improving economic, social, and environmental conditions—to attack the root social causes of disease. He proposed "a theory of epidemic disease as a manifestation of social and cultural maladjustment" (Rosen, 2015, p. 62). He further argued that the public was responsible for the health of the people; that social and economic conditions heavily affected health and disease; that efforts to promote health and fight disease must be social, economic, and medical; and that the study of social and economic determinants of health and disease would yield knowledge to guide appropriate action.

These principles were embodied in a public health law submitted to the Berlin Society of Physicians and Surgeons in 1849 (Rosen, 2015). According to this document, public health has as its objectives (1) the healthy mental and physical development of the citizen, (2) the prevention of all dangers to health, and (3) the control of disease.

A very critical event in the development of modern public health occurred in 1854, when an English physician, anesthetist, and epidemiologist named **John Snow** demonstrated that cholera was transmissible through contaminated water. In a large population afflicted with cholera, he shut down the community's water resource by removing the pump handle from a well on Broad Street and carefully documented changes as the number of cholera cases fell dramatically (Rosen, 2015).

United States. In the United States during the nineteenth century, waves of epidemics continued to spread. As in Europe, diseases such as yellow fever, smallpox, cholera, typhoid fever, and typhus particularly affected the poor. These illnesses spread because cities grew and the poor crowded into inadequate housing with unsanitary conditions.

Lemuel Shattuck, a Boston bookseller and publisher with an interest in public health, organized the American Statistical Society in 1839 and issued a *Census of Boston* in 1845. The census showed high overall mortality and very high infant and maternal mortality rates. Living conditions for the poor were inadequate, and communicable diseases were widely prevalent (Rosen, 2015). Shattuck's 1850 *Report of the Sanitary Commission of Massachusetts* outlined the findings and recommended modern public health reforms that included

keeping vital statistics and providing environmental, food, drug, and communicable disease control information. Shattuck called for well-infant, well-child, and school-aged–child health care; mental health care; vaccination; and health education. Unfortunately, the report fell on deaf ears, and little was done to improve population health for many years. For example, a state board of health was not formed until 19 years after the report was issued.

ADVENT OF MODERN HEALTH CARE

Early public health efforts evolved slowly throughout the mid-nineteenth century. Administrative efforts, initial legislation, and debate regarding the determinants of health and approaches to health management began to appear on a social, economic, and medical level. The advent of "modern" health care occurred around this time, and nursing made a large contribution to the progress of health care. The following sections discuss the evolution of modern nursing, the evolution of modern medical care and public health practice, the evolution of the community caregiver, and the establishment of public health nursing.

Evolution of Modern Nursing

Florence Nightingale, the woman credited with establishing "modern nursing," began her work during the mid-nineteenth century. Historians remember Florence Nightingale for contributing to the health of British soldiers during the Crimean War and establishing nursing education. However, many historians failed to recognize her remarkable use of public health principles and distinguished scientific contributions to health care reform (Cohen, 1984; Grier and Grier, 1978).

Nightingale was from a wealthy English family, was well educated, and traveled extensively. She studied with Adolphe Quetelet, a Belgian statistician who taught her the discipline of social inquiry (Goodnow, 1933). Nightingale also had a passion for hygiene and health, and in 1851, at the age of 31 years, she trained in nursing at Kaiserswerth Hospital in Germany. She later studied the organization and discipline of the Sisters of Charity in Paris. Nightingale wrote extensively and published analyses of the nursing systems she studied in France, Austria, Italy, and Germany (Dock and Stewart, 1925).

In 1854, Nightingale responded to distressing accounts of a lack of care for wounded soldiers during the Crimean War. She and 40 other nurses traveled to Scutari, which was then a part of the Ottoman Empire. Nightingale was accompanied by lay nurses, Roman Catholic sisters, and Anglican sisters. Upon their arrival, the nurses learned that the British army's methods for treating the sick and wounded had created conditions that resulted in extraordinarily high death rates among soldiers. Indeed, one of Nightingale's greatest achievements was improving the management of these ill and wounded soldiers (Dossey, 2010).

During the Crimean War, cholera and "contagious fever" were rampant. Equal numbers of men died of disease and battlefield injury (Cohen, 1984). Nightingale found that allocated supplies were bound in bureaucratic red tape; for example, supplies were "sent to the wrong ports or were buried under munitions and could not be got" (Goodnow, 1933, p. 86).

Nightingale encountered problems reforming the army's methods for care of the sick because she had to work through eight military affairs departments related to her assignment. She sent reports of the appalling conditions of the hospitals to London. In response to her actions, governmental and private funds were donated to set up kitchens and a laundry and provided food, clothing, dressings, and laboratory equipment (Dock and Stewart, 1925).

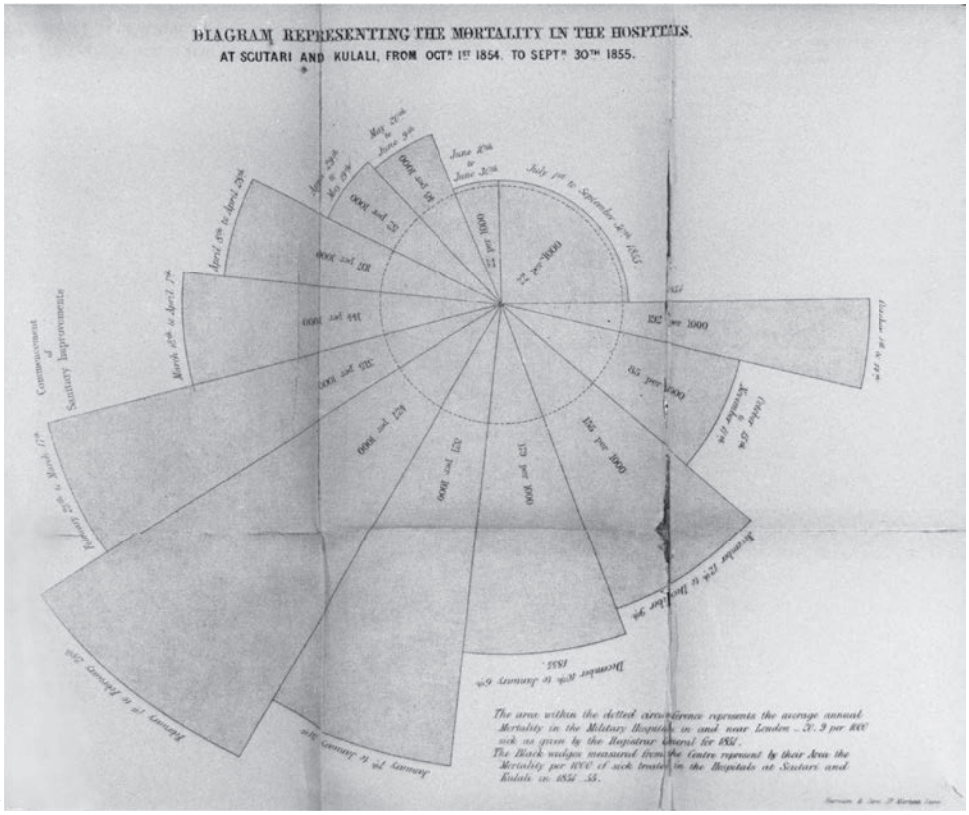
Major reforms occurred during the first two months of her assignment. Aware that an interest in keeping social statistics was emerging, Nightingale realized that her most forceful argument would be statistical in nature. She reorganized the methods of keeping statistics and was the first to use shaded and colored coxcomb graphs of wedges, circles, and squares to illustrate the preventable deaths of soldiers. Nightingale compared the deaths of soldiers in hospitals during the Crimean War with the average annual mortality in Manchester and with the deaths of soldiers in military hospitals in and near London at the time (Fig. 2.2). Through her statistics she also showed that, by the end of the war, the death rate among ill soldiers during the Crimean War was no higher than that among well soldiers in Britain (Cohen, 1984). Indeed, Nightingale's careful statistics revealed that the death rate for treated soldiers decreased from 42% to 2%. Furthermore, she established community services and activities to improve the quality of life for recovering soldiers. These included rest and recreation facilities, study opportunities, a savings fund, and a post office. She also organized care for the families of the soldiers (Dock and Stewart, 1925).

After returning to London at the close of the war in 1856, Nightingale devoted her efforts to sanitary reform. At home, she surmised that if the sanitary neglect of the soldiers existed in the battle area, it probably existed at home in London. She prepared statistical tables to support her suspicions (Table 2.2).

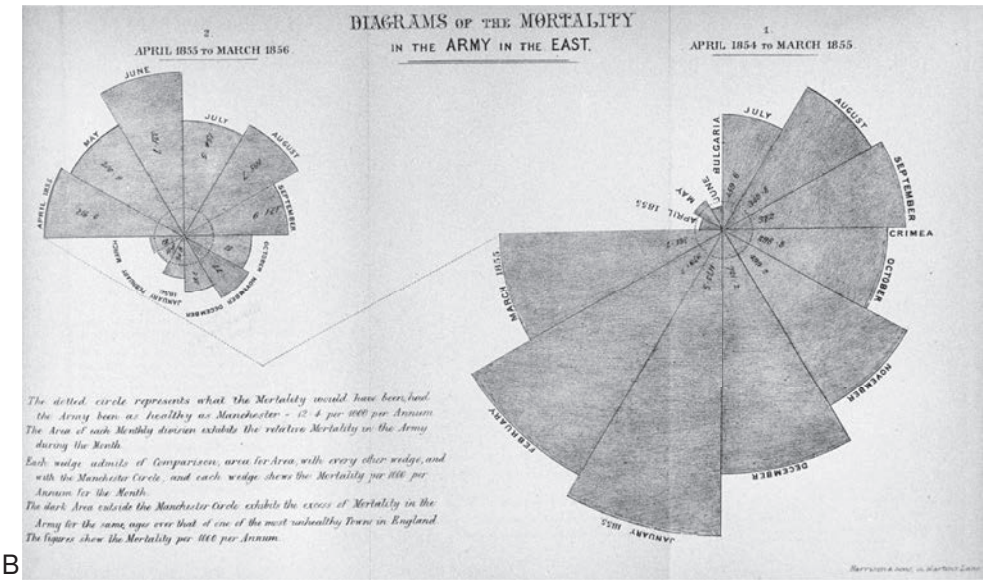
In one study comparing the mortality of men aged 25 to 35 years in the army barracks of England with that of men the same age in civilian life, Nightingale found that the mortality of the soldiers was nearly twice that of the civilians. In one of her reports, she stated that "our soldiers enlist to death in the barracks" (Kopf, 1978, p. 95). Nightingale was very political and distributed her reports to members of Parliament and to the medical and commanding officers of the army (Kopf, 1978). Prominent leaders of the time challenged her reports. Undaunted, she rewrote them in greater depth and redistributed them.

In her efforts to compare the hospital systems in European countries, Nightingale discovered that each hospital kept incomparable data and that many hospitals used various names and classifications for diseases. She noted that these differences prevented the collection of similar statistics from larger geographic areas. These statistics would create a regional health–illness profile and allow for comparison with other regions. She printed common statistical forms that some hospitals in London adopted on an experimental basis. A study of the tabulated results revealed the promise of this strategy (Kopf, 1978) (Box 2.4).

Nightingale also stressed the need to use statistics at the administrative and political levels to direct health policy. Noting



A



B

FIG. 2.2 **(A)** Coxcomb charts by Florence Nightingale. **(B)** Photographs of large, foldout charts from an original preserved at the University of Chicago Library. (**A** from Nightingale F: *Notes on matters affecting the health, efficiency and hospitalization of the British army,* London, 1858, Harrison and Sons; **B,** Public domain; courtesy University of Chicago Library.)

the ignorance of politicians and those who set policy regarding the interpretation and use of statistics, she emphasized the need to teach national leaders to use statistical facts. Nightingale continued the development and application of statistical procedures, and she won recognition for her efforts. The Royal Statistical Society made her a fellow in 1858, and the American Statistical Association made her an honorary member in 1874 (Kopf, 1978).

It is interesting to note that the paradigm for nursing practice and nursing education that evolved through Nightingale's work did not incorporate her emphasis on statistics and a sound research base. It is also curious that nursing education did not consult her writings and did not stress the importance of determining health's social and environmental determinants until much later.

TABLE 2.2 Nightingale's Crimean War Mortality Statistics: Nursing Research That Made a Difference*

Year	Deaths That Would Have Occurred in Healthy Districts Among Males of the Soldiers' Ages†	Actual Deaths of Noncommissioned Officers and Men	Excess of Deaths Among Noncommissioned Officers and Men
1839	763	2914	2151
1840	829	3300	2471
1841	857	4167	3310
1842	888	5052	4164
1843	914	5270	4356
1844	920	3867	2947
1845	911	4587	3676
1846	930	5125	4195
1847	981	4232	3251
1848	987	3213	2226
1849	954	4052	3098
1850	919	3119	2200
1851	901	2729	1828
1852	915	3120	2205
1853	920	3392	2472
Total	13,589	58,139	44,550

*Number of deaths of noncommissioned officers and men also shows the number of deaths that would have occurred if the mortality were 7.7 per 1000—such as it was among Englishmen of the soldiers' age in healthy districts, in the years 1849 to 1853—which fairly represent the average mortality.

†The exact mortality in the healthy districts is 0.0077122, with use of the logarithm of 3.8871801.

From Grier B, Grier M: Contributions of the passionate statistician, *Res Nurs Health* 1:103–109, 1978. Copyright ©1978 by John Wiley & Sons, Inc. Reprinted by permission of John Wiley & Sons, Inc.

ACTIVE LEARNING EXERCISE

Find two recent articles about Florence Nightingale. After reading the articles, list Nightingale's contributions to public health, public health nursing, and community health nursing.

Establishment of Modern Health Care and Public Health Practice

To place Nightingale's work in perspective, it is necessary to consider the development of health care in light of common education and practice during the late nineteenth and early twentieth centuries. Goodnow (1933) called this time a "dark age." Health sciences were underdeveloped, and bacteriology was unknown. Few medical schools existed at the time, thus apprenticeship was the path to medical education. The majority of physicians believed in the "spontaneous generation" theory of disease causation, which stated that disease organisms grew from nothing (Najman, 1990). Typical medical treatment included bloodletting, starving, using leeches, and prescribing large doses of metals such as mercury and antimony (Goodnow, 1933).

BOX 2.4 Nightingale's Use of Statistical Methods in Community Assessment

London's Southeastern Railway planned to remove St. Thomas' Hospital to enlarge the railway's right of way between London Bridge and Charing Cross. Nightingale applied her statistical method to the health needs of the community by conducting a community assessment. She plotted the cases served by the hospital, analyzed the proportion by distance, and calculated the probable impact on the community if the hospital were relocated to the proposed site. In her view, hospitals were a part of the wider community that served the needs of humanity. Kopf (1978) noted that this method of health planning and matching resources to the needs of the population was visionary and was not reapplied until the twentieth century.

Nightingale's uniform classification of hospital statistics focused on the importance of tabulating the classification of diseases in hospital patients and the need to identify the diseases that patients contracted in the hospital. These diseases, such as gangrene and septicemia, were later called *iatrogenic* diseases (Kopf, 1978). Considering the lack of surgical sanitation in hospitals at the time, it is not surprising that iatrogenic infection was rampant. For example, Goodnow (1933) illustrates the following unsanitary operating procedures:

> *Before an operation the surgeon turned up the sleeves of his coat to save the coat, and would often not trouble to wash his hands, knowing how soiled they soon would be! The area of the operation would sometimes be washed with soap and water, but not always, for the inevitability of corruption made it seem useless. The silk or thread used for stitches or ligatures was hung over a button of the surgeon's coat, and during the operation a convenient place for the knife to rest was between his lips. Instruments ... used for ... lancing abscesses were kept in the vest pocket and often only wiped with a piece of rag as the surgeon went from one patient to another. (pp. 471–472)*

During the nineteenth century, the following important scientists were born: **Louis Pasteur** in 1822, **Joseph Lister** in 1827, and **Robert Koch** in 1843. Their research had a profound impact on health care, medicine, and nursing. Pasteur was a chemist, not a physician. While experimenting with wine production in 1854, he proposed the theory of the existence of "germs." Although his colleagues ridiculed him at first, Koch applied his theories and developed his methods for handling and studying bacteria. Subsequently, Pasteur's colleagues gave him acknowledgment for his work (Kalisch and Kalisch, 2004).

Lister, whose father perfected the microscope, observed the healing processes of fractures. He noted that when the bone was broken but the skin was not, recovery was uneventful. However, when both the bone and the skin were broken, fever, infection, and even death were frequent. He postulated the answer to his observation from Pasteur's work and suggested that something outside the body entered the wound through the broken skin, causing the infection (Goodnow, 1933). Lister's surgical successes eventually improved when he soaked the dressings and instruments in mixtures of carbolic acid (i.e., phenol) and oil.

In 1882, Koch discovered the causative agent for cholera and the tubercle bacillus. Pasteur discovered immunization in 1881 and the rabies vaccine in 1885. These discoveries were significant to the development of public health and medicine. However, physicians accepted these discoveries slowly (Rosen, 2015). For example, TB was a major cause of death in late nineteenth-century America and often afflicted its victims with chronic illness and disability. It was a highly stigmatized disease, and most physicians thought it was a hereditary, constitutional disease associated with poor environmental conditions. Hospitalization for TB was rare because the stigma caused families to hide their infected relatives. Without treatment, the communicability of the disease increased. The most common treatment was a change of climate (Rosen, 2015). Although Koch had announced the discovery of the tubercle bacillus in 1882, it was 10 years before the emergence of the first organized community campaign to stop the spread of the disease.

The case of puerperal (i.e., childbirth) fever illustrates another example of slow innovation stemming from scientific discoveries. Although Pasteur showed that *Streptococcus* caused puerperal fever, it was years before physicians accepted his discovery. However, medical practice eventually changed, and physicians no longer delivered infants after performing autopsies of puerperal fever cases without washing their hands (Goodnow, 1933).

Debates over the causes of disease occurred throughout the nineteenth century. Scientists discovered organisms during the latter part of the century, supporting the theory that specific contagious entities caused disease. This discovery challenged the earlier miasmic theory that environment and atmospheric conditions caused disease (Greifinger and Sidel, 1981). The new scientific discoveries had a major impact on the development of public health and medical practice. The emergence of the germ theory of disease focused diagnosis and treatment on the individual organism and the individual disease.

State and local governments felt increasingly responsible for controlling the spread of microorganisms. A community outcry for social reform forced state and local governments to take notice of the deplorable living conditions in the cities. In the New York City riots of 1863, the populace expressed their disgust for overcrowding; filthy streets; lack of provisions for the poor; and lack of adequate food, water, and housing. Local boards of health formed, taking responsibility for safeguarding food and water stores and managing the sewage and quarantine operation for victims of contagious diseases (Greifinger and Sidel, 1981).

The New York Metropolitan Board of Health formed in 1866, and state health departments formed shortly thereafter. States built large public hospitals that treated TB and mental disease with rest, diet, and quarantine. In 1889, the New York City Health Department recommended the surveillance of TB and TB health education, but physicians did not welcome either recommendation (Rosen, 2015). Despite their objections, in 1894 the New York City Health Department required institutions to report cases of TB and required physicians to do the same by 1897.

BOX 2.5 Scientific Theory/Single-Agent Theory

The emphasis on the use of scientific theory, or single-agent theory, in medical care developed into a focus on disease and symptoms rather than a focus on the prevention of disability and care for the "whole person." The old-fashioned family doctor viewed patients in relation to their families and communities and apparently helped people cope with problems in personal life, family, and society. American medicine adopted science with such vigor that these qualities faded away. Science allowed the physician to deal with tissues and organs, which were much easier to comprehend than the dynamics of human relationships or the complexities of disease prevention. Many physicians made efforts to integrate the various roles, but society was pushing toward academic science.

In 1883, The Johns Hopkins University Medical School in Baltimore, Maryland, formed under the German model that promoted medical education on the principles of scientific discovery. In the United States, the Carnegie Commission appointed Abraham Flexner to evaluate medical schools throughout the country on the basis of the German model. In 1910, the **Flexner Report** outlined the shortcomings of U.S. medical schools that did not use this model. Within a few years, the report caused philanthropic organizations such as the Rockefeller and Carnegie foundations to withdraw funding of poor-performing and scientifically "inadequate" medical schools, ensuring their closure. A "new breed" of physicians emerged who had been taught about "germ theory" and the "single agent theory" of disease causation (Greifinger and Sidel, 1981, p. 132) (Box 2.5).

Philanthropic foundations continued to influence health care efforts. For example, the Rockefeller Sanitary Commission for the Eradication of Hookworm formed in 1909. Hookworm was an occupational hazard among Southern workers. Implementation of preventive efforts to eradicate hookworm kept the workers healthy and thus proved to be a great industrial benefit. The model was so successful that the Rockefeller Foundation established the first school of public health, The Johns Hopkins School of Hygiene and Public Health, in 1916. The focus of this institution was the preservation and improvement of individual and community health and the prevention of disease through multidisciplinary activities.

Community Caregiver

The traditional role of the community caregiver or the traditional healer has nearly vanished in the West. However, medical and nurse anthropologists who have studied primitive and Western cultures are familiar with the community healer and caregiver role (McFarland and Wehbe-Alamah, 2015). The traditional healer (e.g., shaman, midwife, herbalist, or priest) is common in non-Western, ancient, and underdeveloped societies. Although traditional healers have always existed, professionals and many people throughout industrialized societies may overlook or minimize their role. The role of the healer is often integrated into other institutions of society, including religion, medicine, and morality. The notion that one person acts alone in healing may be foreign to many cultures; healers can be individuals, kin, or entire societies (Hughes, 1978).

Societies retain folk practices because they provide some repeated successes. Most cultures have a pharmacopeia and maintain therapeutic and preventive practices, and it is estimated that one-fourth to one-half of folk medicines are empirically effective. Indeed, many modern drugs are based on the medicines of primitive cultures (e.g., eucalyptus, coca, and opium) (Hughes, 1978).

Since ancient times, folk healers and cultural practices have both positively and negatively affected health. The late nineteenth- and early twentieth-century practice of midwifery illustrates modern medicine's arguably sometimes negative impact on traditional healing in many Western cultures (Smith, 1979). For example, traditional midwifery practices made women rise out of bed within 24 hours of delivery to help "clear" the lochia. Throughout the mid-1900s, in contrast, "modern medicine" recommended keeping women in bed after delivery, often for fairly extended periods (Smith, 1979).

RESEARCH HIGHLIGHTS

Historical Methodology for Nursing Research

Historiography is the methodology of historical research. It involves specialized techniques, principles, and theories that pertain to historical matters. *Historical research* involves interpreting history and contributing to understanding through data synthesis. It relies on existing sources or data and requires the researcher to gain access to sources such as libraries, librarians, and databases.

Historical research should be descriptive. It should answer the questions of who, what, when, where, how, and the interpretive why. Historians reconstruct an era using primary sources and interpret the story from that perspective. Historical research in nursing will enhance the understanding of current nursing practice and will help prepare for the future.

Adapted from Lusk B: Historical methodology for nursing research, *Image J Nurs Sch* 29:3555–3560, 1997.

Establishment of Public Health Nursing

Public health nursing as a holistic approach to health care developed in the late nineteenth and early twentieth centuries. Public and community health nursing in its current form evolved from home nursing practice, community organizations, and political interventions on behalf of families, groups, and populations as explained in this section.

England

Public health nursing developed from providing nursing care to the sick poor and furnishing information and through channels of community organization that enabled the poor to improve their own health status.

District Nursing. **District nursing** was first established in England. Between 1854 and 1856, the Epidemiological Society of London developed a plan that trained selected poor women to provide nursing care to the disadvantaged families within a community. The society theorized that nurses belonging to their patients' social class would be more effective caregivers and that more nurses would be available to improve the health of community residents (Rosen, 2015).

A similar plan was implemented by William Rathbone in Liverpool in 1859. After experiencing the excellent care a nurse gave his sick wife in his home, Rathbone strongly believed that nurses could offer the same care throughout the community. He developed a plan that divided the community into 18 districts and assigned a nurse and a social worker to each district. This team met the needs of their communities with respect to nursing, social work, and health education. The community widely accepted the plan. To further strengthen it, Rathbone consulted Nightingale about educating the district nurses. She assisted him by providing training for the district nurses, referring to them as "health nurses." The model was successful, and eventually voluntary agencies adopted the plan on the national level (Rosen, 2015).

Health Visiting. **Health visiting** to provide information to improve health is a parallel service based on the district nursing tradition. The Ladies Section of the Manchester and Salford Sanitary Association originated health visiting in Manchester in 1862. Prior to that time, it had been observed that providing health pamphlets alone had little effect on improving health; therefore this service enlisted home visitors to distribute health information to the poor.

In 1893, Nightingale pointed out that the district nurse should be a health teacher and a nurse for the sick in the home. She believed that teachers should educate "health missioners" for this purpose. The model charged the district nurse with providing care for the sick in the home and the health visitor with providing health information in the home. Eventually, government agencies sponsored health visitors, medical health officers supervised them, and the municipality paid them. Thus a collaborative model developed between government and voluntary agencies.

United States

In the United States, public health nursing developed from the British traditions of district nursing, health visiting, and home nursing. In 1877, the Women's Board of the New York City Mission sent a graduate nurse named Frances Root into homes to provide care for the sick. The innovation spread, and nursing associations, later called *visiting nurse associations,* were implemented in Buffalo in 1885 and in Boston and Philadelphia in 1886.

In 1893, nurses **Lillian Wald** and Mary Brewster established a district nursing service on the Lower East Side of New York City called the **House on Henry Street**. This was a crowded area teeming with unemployed and homeless immigrants who needed health care. The organization, later called the Visiting Nurse Association of New York City, played an important role in establishing public health nursing in the United States. Box 2.6 contains Wald's compelling account of her early exposure to the community where she identified public health nursing needs.

Wald (1971) described a range of services that evolved from the House on Henry Street. Nurses provided home visits, and patients paid carfare or a cursory fee. Physicians were consultants to Henry Street, and families could arrange a visit by calling the nurse directly, or a physician could call the nurse on the family's behalf. The nursing service adopted the philosophy of

BOX 2.6 Lillian Wald: The House On Henry Street

The following highlights from *The House on Henry Street,* published in 1915, bring Lillian Wald's experience to life:

A sick woman in a squalid rear tenement, so wretched and so pitiful that, in all the years since, I have not seen anything more appalling, determined me, within half an hour, to live on the East Side.

I had spent two years in a New York training-school for nurses . . . After graduation, I supplemented the theoretical instruction, which was casual and inconsequential in the hospital classes twenty-five years ago, by a period of study at a medical college. It was while at the college that a great opportunity came to me.

While there, the long hours "on duty" and the exhausting demands of the ward work scarcely admitted freedom for keeping informed as to what was happening in the world outside. The nurses had no time for general reading; visits to and from friends were brief; we were out of the current and saw little of life saved as it flowed into the hospital wards. It is not strange, therefore, that I should have been ignorant of the various movements which reflected the awakening of the social conscience at the time.

Remembering the families who came to visit patients in the wards, I outlined a course of instruction in home nursing adapted to their needs, and gave it in an old building in Henry Street, then used as a technical school and now part of the settlement. Henry Street then as now was the center of a dense industrial population.

From the schoolroom where I had been giving a lesson in bedmaking, a little girl led me one drizzling March morning. She had told me of her sick mother, and gathering from her incoherent account that a child had been born, I caught up the paraphernalia of the bedmaking lesson and carried it with me.

The child led me over broken roadways—there was no asphalt, although its use was well established in other parts of the city—over dirty mattresses and heaps of refuse—it was before Colonel Waring had shown the possibility of clean streets even in that quarter—between tall, reeking houses whose laden fire-escapes, useless for their appointed purpose, bulged with household goods of every description. The rain added to the dismal appearance of the streets and to the discomfort of the crowds which thronged them, intensifying the odors which assailed me from every side. Through Hester and Division Street[s] we went to the end of Ludlow; past odorous fishstands, for the streets were a market-place, unregulated, unsupervised, unclean; past evil-smelling, uncovered garbage-cans; and—perhaps worst of all, where so many little children played—past the trucks brought down from more fastidious quarters and stalled on these already overcrowded streets, lending themselves inevitably to many forms of indecency.

The child led me on through a tenement hallway, across a court where open and unscreened closets were promiscuously used by men and women, up into a rear tenement, by slimy steps whose accumulated dirt was augmented that day by the mud of the streets, and finally into the sickroom.

All the maladjustments of our social and economic relations seemed epitomized in this brief journey and what was found at the end of it. The family to which the child led me was neither criminal nor vicious. Although the husband was a cripple, one of those who stand on street corners exhibiting deformities to enlist compassion, and masking the begging of alms by a pretense at selling; although the family of seven shared their two rooms with boarders—who were literally boarders, since a piece of timber was placed over the floor for them to sleep on—and although the sick woman lay on a wretched, unclean bed, soiled with a hemorrhage two days old, they were not degraded human beings, judged by any measure of moral values.

In fact, it was very plain that they were sensitive to their condition, and when, at the end of my ministrations, they kissed my hands (those who have undergone similar experiences will, I am sure, understand), it would have been some solace if by any conviction of the moral unworthiness of the family I could have defended myself as a part of a society which permitted such conditions to exist. Indeed, my subsequent acquaintance with them revealed the fact that, miserable as their state was, they were not without ideals for the family life, and for society, of which they were so unloved and unlovely a part.

That morning's experience was a baptism of fire. Deserted were the laboratory and the academic work of the college. I never returned to them. On my way from the sickroom to my comfortable student quarters my mind was intent on my own responsibility. To my inexperience it seemed certain that conditions such as these were allowed because people did not know, and for me there was a challenge to know and to tell. When early morning found me still awake, my naive conviction remained that, if people knew things—and "things" meant everything implied in the condition of this family—such horrors would cease to exist, and I rejoiced that I had had a training in the care of the sick that in itself would give me an organic relationship to the neighborhood in which this awakening had come.

To the first sympathetic friend to whom I poured forth my story, I found myself presenting a plan which had been developing almost without conscious mental direction on my part.

Within a day or two a comrade from the training-school, Mary Brewster, agreed to share in the venture. We were to live in the neighborhood as nurses, identify ourselves with it socially, and, in brief, contribute to it our citizenship.

I should like to make it clear that from the beginning we were most profoundly moved by the wretched industrial conditions which were constantly forced upon us . . . I hope to tell of the constructive programmes that the people themselves have evolved out of their own hard lives, of the ameliorative measures, ripened out of sympathetic comprehension, and finally, of the social legislation that expresses the new compunction of the community.

From Wald L: *The house on Henry Street,* New York, 1971, Dover Publications (original work published 1915, Henry Holt), pp 1–9.

meeting the health needs of the population, which included the many evident social, economic, and environmental determinants of health. By necessity, this effort involved an aggregate approach that empowered people of the community.

Helen Hall, who later directed the House on Henry Street, wrote that the settlement's role was "one of helping people to help themselves" (Wald, 1971) through the development of centers of social action aimed at meeting the needs of the community and the individual. Community organization led to the formation of a great variety of programs, including youth clubs, a juvenile program, sex education for local schoolteachers, and support programs for immigrants.

Additional programs such as school nursing were based on individual observations and interventions. Wald reported the following incident that preceded her successful trial of school nursing (1971):

I had been downtown only a short time when I met Louis. An open door in a rear tenement revealed a woman standing over a washtub, a fretting baby on her left arm, while with her right she rubbed at the butcher's aprons which she washed for a living.

"Louis," she explained, "was bad." He did not "cure his head of lice and what would become of him, for they would not take him into the school because of it?" Louis said he had been to the dispensary many times. He knew it was awful for a twelve-year-old boy not to know how to read the names of the streets on the lamp-posts, but "every time I go to school Teacher tells me to go home."

It needed only intelligent application of the dispensary ointments to cure the affected area, and in September, I had the joy of securing the boy's admittance to school for the first time in his life. The next day, at the noon recess, he fairly rushed up our five flights of stairs in the Jefferson Street tenement to spell the elementary words he had acquired that morning. (pp. 46–47)

Overcrowded schools, an uninformed and uninterested public, and an unaware Department of Health all contributed to social health neglect. Wald and the nursing staff at the settlement kept anecdotal notes on the sick children teachers excluded from school. One nurse found a boy in school whose skin was desquamating from scarlet fever and took him to the president of the Department of Health in an attempt to place physicians in schools. A later program had physicians screen children in school for 1 hour each day.

Twentieth Century. In 1902, Wald persuaded Dr. Ernest J. Lederle, Commissioner of Health in New York City, to try a school nursing experiment. Henry Street lent a public health nurse named Linda Rogers to the New York City Health Department to work in a school (Dock and Stewart, 1925). The experiment was successful, and schools adopted nursing on a widespread basis. School nurses performed physical assessments, treated minor infections, and taught health to pupils and parents.

In 1909, Wald mentioned the efficacy of home nursing to one of the officials of the Metropolitan Life Insurance Company. The company decided to provide home nursing to its industrial policyholders, and soon the United States and Canada used the program successfully (Wald, 1971).

The growing demand for public health nursing was hard to satisfy. In 1910, the Department of Nursing and Health formed at the Teachers College of Columbia University in New York City. A course in visiting nursing placed nurses at the Henry Street settlement for fieldwork. In 1912, the newly formed National Organization for Public Health Nursing elected Lillian Wald its first president. This organization was open to public health nurses and to those interested in public health nursing. In 1913, the Los Angeles Department of Health formed the first Bureau of Public Health Nursing (Rosen, 2015). That same year, the Public Health Service appointed its first public health nurse.

RESEARCH HIGHLIGHTS

Example of Historical Nursing Research

Thompson and Keeling (2012) presented an historical examination describing how public health nurses contributed to a significant decline in infant mortality in New England between 1884 and 1925. Analyzing archived data and documents from Providence, Rhode Island, they estimated that in the late nineteenth century, the mortality rate of children younger than 2 was between 15% and 20%. Furthermore, they reported that the health officials believed that of those infants and small children who died during those years, 40% to 50% died from digestive-related diseases (e.g., diarrhea).

The germ theory was not widely accepted until the early 1900s. Thus, in the late nineteenth century, nurses were trained to understand "elements of modern hygiene" (e.g., good nutrition, light, cleanliness). But following acceptance of the germ theory and epidemiological techniques for data analysis in the early 1900s, public health efforts shifted to consideration of factors, including biological, environmental, and economic, that contributed to the high infant mortality rate.

To address the problem of infant/child mortality, public health nurses focused on teaching low-income mothers how to care for and feed their children. The nurses worked in homes, "milk stations," and other creative settings to meet the identified needs. They set up and participated in "milk dispensaries," which provided pasteurized milk (rather than the widely available unrefrigerated milk—which was frequently days old). They also promoted breast-feeding and provided information on "infant hygiene" along with the milk. These and other efforts, including developing the role of a "children's special nurse," were effective, and the infant mortality rate dropped from 142/1000 to 102/1000 between 1907 and 1917.

From Thompson ME, Keeling AA: Nurses' role in the prevention of infant mortality in 1884–1925: health disparities then and now, *J Pediatr Nurs* 27:471–478, 2012.

At first, many public health nursing programs used nurses in specialized areas such as school nursing, TB nursing, maternal-child health nursing, and communicable disease nursing. In later years, more generalized programs have become acceptable. Efforts to contain health care costs include reducing the number of hospital days. With the advent of shortened hospital stays, private home health agencies provide home-based illness care across the United States.

The second half of the century saw a shift in emphasis to cost containment and the provision of health care services through managed care. Traditional models of public health nursing and visiting nursing from home health agencies became increasingly common over the next several decades, but waned toward the end of the century due to changes in health care financing.

ACTIVE LEARNING EXERCISE

1. Research the history of the health department or visiting nurse association in a particular city or county.
2. Discuss with peers how Lillian Wald's approach to individual and community health care provides an understanding of how to facilitate the empowerment of aggregates in the community.

CONSEQUENCES FOR THE HEALTH OF POPULATIONS

An understanding of the consequences of the health care delivery system for population health is necessary to form conclusions about public health nursing from a historical perspective. Implications for the health of aggregates relate to new causes of mortality (i.e., *Hygeia,* or health promotion/care, vs. *Panacea,* or cure) and additional theories of disease causation.

Twenty-First Century

New Causes of Mortality

Since the middle of the twentieth century, the focus of disease in Western societies has changed from mostly infectious diseases to chronic diseases. Increased food production and better nutrition during the nineteenth and early twentieth centuries contributed to the decline in infectious disease–related deaths. Other factors were better sanitation through water purification, sewage disposal, improved food handling, and milk pasteurization. According to McKeown (2001) and Schneider (2017), the components of "modern" medicine, such as antibiotics and immunizations, had little effect on health until well into the twentieth century. Indeed, widespread vaccination programs began in the late 1950s, and antibiotics came into use after 1945.

The advent of chronic disease in Western populations puts selected groups at risk, and those groups need health education, screening, and programs to ensure occupational and environmental safety. Too often modern medicine still focuses on the single cause of disease (i.e., germ theory) and treating the acutely ill. As a result, many health providers treat the chronically ill with an acute care approach even though preventive care, health promotion, and restorative care are necessary and would likely be more effective in combating chronic disease. This expanded approach may develop under new systems of cost containment.

Hygeia versus Panacea

The Grecian Hygeia (i.e., healthful living) versus Panacea (i.e., cure) dichotomy still exists today. Although the change in the nature of health "problems" is certain, the roles of individual and collective activities in the prevention of illness and premature death are slow to evolve.

In 2010, about two thirds of the active physicians in the United States were specialists (U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality [USDHHS/AHRQ], 2011). In recent years, medical education has increasingly focused on enhancing the education of primary care physicians (e.g., those specializing in internal medicine, obstetrics-gynecology, family medicine, and pediatrics) to meet the growing need for primary care. In addition to primary care, Hygeia (health promotion) requires a coordinated system that addresses health problems holistically with the use of multiple approaches and planning of outcomes for aggregates and populations. A redistribution of interest and resources to address the major determinants of health, such as food, housing, education, and a healthy social and physical environment, is critical (Shi and Singh, 2016).

Additional Theories of Disease Causation

As mentioned, the germ theory of disease causation is a unicausal model that evolved in the late nineteenth century. Najman (1990) reviewed the following theories of disease causation: the multicausal view, which considers the environment multidimensionally, and the general susceptibility view, which considers stress and lifestyle factors. Najman contended that each theory accounts for some disease under some conditions, but no single theory accounts for all disease. Other factors, such as literacy and nutrition, may reduce disease morbidity and mortality to a greater extent than medical interventions alone.

SOCIAL CHALLENGES AND PUBLIC HEALTH NURSING

Several social and political changes have occurred in the United States that have affected the development of public health nursing practice. During the twentieth century, the health of the client, nursing, health, and the environment were influenced by the development of health insurance and an emphasis on population-based focus.

The advent of and changes in health insurance dramatically altered health care delivery. The greatest health concerns at the beginning of the twentieth century were lost wages associated with sickness. The cost of health care was so low that there was little understanding of the need for health insurance. Between 1900 and 1920 there were minimal technological advances. Treatments available at the time, including surgery, were often performed in private homes.

During the 1920s and 1930s, the costs of health care rose. As the population moved from rural to urban settings, the delivery points for much of health care changed, moving from private homes to hospitals. Improved therapeutic options, more medications, the acceptance of medicine as a science, and the closure of underperforming medical schools during the 1920s increased the demand for health care and raised the associated cost (Rosenberg, 1987).

As hospitals began to expand and organize, they formed the American Hospital Association, whose leaders encouraged the development of health insurance plans. In 1929, the Committee of the Costs of Medical Care, a national group, produced a report that promoted voluntary insurance in the United States. That same year, Baylor Hospital in Dallas, Texas, joined with a local teachers' association to provide health care for those agreeing to pay a small monthly premium. In a short time, this relationship grew to include more employers and evolved into Blue Cross (Getzen, 2013; Sparer and Thompson, 2015). Improvements in medical technology and the growing practice of employers' offering health insurance in place of employee compensation during and after World War II further supported the expansion of private health insurance.

During the 1960s, politicians supported the development of federal and state health insurance for the poor and the elderly populations, subsequently enacting Medicare and Medicaid. As a result, since the 1970s most health care has been paid for with either public or private insurance plans. As a result of "third-party" reimbursement, costs grew steadily as much of the public paid little attention to charges because they were not directly responsible for payment. Consequently, the growth in available treatments because of improving technological advances, chronic disease associated with an aging

BOX 2.7 Ten Great Public Health Achievements—United States, 1900–2010

During the twentieth century, the health and life expectancy of persons living in the United States improved dramatically. It is important for nurses to realize that of the 30 years of life expectancy gained during the century, 25 years were attributable to public health efforts. During 1999, the Centers for Disease Control and Prevention published a series of articles outlining 10 of the great public health achievements of the twentieth century. In 2011, the agency published an update of highlights from the ensuing decade. Summarized here are the "Public Health Achievements" presented:

Vaccination/vaccine-preventable diseases—Widespread vaccination programs resulted in eradication of smallpox; elimination of polio in the Americas; and control of measles, rubella, tetanus, diphtheria, and a number of other infectious diseases in the United States. In the first decade of the twenty-first century, new vaccines (e.g., rotavirus, herpes zoster, hepatitis A, and human papilloma virus) were introduced and are having a significant, positive impact on population health.

Motor vehicle safety—Improvements in motor vehicle safety contributed to large reductions in traffic deaths. Improvements included efforts to make both vehicles and highways safer and to change personal behaviors (e.g., increase use of seat belts and child safety seats, reduce driving under the influence [DUI] offenses). Between 2000 and 2009, the death rate from motor vehicle accidents continued to decline, largely as a result of safer vehicles, safer roads, safer road use, and related policies (e.g., graduated driver's licenses).

Safer workplaces—Work-related health problems (e.g., coal worker's pneumoconiosis [black lung] and silicosis) were very significantly reduced during the twentieth century, as were severe injuries and deaths related to mining, manufacturing, construction, and transportation. Following legislation in 1980, safer workplaces resulted in further reduction of 40% in the rate of fatal occupational injuries by the end of the century.

Control of infectious diseases—Since the early 1900s, control of infectious diseases has resulted from clean water and better sanitation. Cholera and typhoid were major causes of illness and death in the early twentieth century and have been virtually eliminated today. Additionally, the discovery of antimicrobial therapy has been very successful in helping efforts to control infections such as tuberculosis, sexually transmitted infections, and influenza. Much of the efforts in the last decade of the twentieth century and the first of the twenty-first century focused on prevention and treatment of human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS). Prevention/education efforts, along with enhanced screening for HIV, early diagnosis, and effective treatment, have resulted in reduction in transmission of the virus, along with enabling access to lifesaving treatment and care for those who are HIV positive and their partners.

Decline in deaths from coronary heart disease (CHD) and stroke—Since 1972, the death rate for CHD has decreased 51%. This improvement is largely the result of risk factor modification (e.g., smoking cessation, blood pressure control) coupled with early detection and better treatment. In the last decade, CHD deaths continued to decline, going from 195/100,000 to 126/100,000. Contributing to the ongoing reduction are better control of hypertension, reduction in elevated cholesterol and smoking, and improvement in treatment and available medications.

Safer and healthier foods—Since 1900, reduction in microbial contamination and increases in nutritional content have led to safer and healthier foods. Food fortification programs and enhanced availability of nutritional options have almost eliminated major nutritional deficiency diseases in the United States.

Healthier mothers and babies—Since 1900, infant mortality in the United States has decreased 90% and maternal mortality has decreased 99%. These improvements are the result of better hygiene and nutrition, availability of antibiotics, access to better health care, and advances in maternal and neonatal medicine. During the early twenty-first century, there has been a significant reduction in the number of infants born with neural tube defects, a change attributable to mandatory folic acid fortification of cereal grain products.

Family planning—Access to family planning and contraceptives has provided women with better social and economic opportunities and health benefits, including smaller families and longer intervals between children.

Fluoridation of drinking water—Fluoridation of drinking water began in 1945, and by 1999 about half of all Americans had fluoridated water. This achievement positively and inexpensively benefited both children and adults by preventing tooth decay. Indeed, fluoridation has been credited for reducing tooth decay by 40% to 70% in children and tooth loss by 40% to 60% in adults.

Tobacco control—Recognition in 1964 that tobacco use is a health hazard resulted in behavior and policy changes that eventually led to a dramatic decline in the prevalence of smoking among adults. The rate of smoking peaked in the 1960s, and by 2009 only about 20% of adults and youths were current smokers. Health policy efforts (e.g., prohibition of smoking in worksites, restaurants, and bars), dramatic increases in cigarette taxes, and prohibition of selling to youths have contributed to much of the recent decline.

Data from Centers for Disease Control and Prevention: Ten great public health achievements—United States, 1900-1999, *MMWR Morb Mortal Wkly Rep* 48(12):241–243, 1999; and Centers for Disease Control and Prevention: Ten great public health achievements—United States, 2001–2010, *MMWR Morb Mortal Wkly Rep* 60(19):619–623, 2001.

population, and negative lifestyle choices and other factors led to a dramatic number of individuals and families who were not able to afford health care because they could not afford health insurance.

The Patient Protection and Affordable Care Act (ACA) was passed in 2010 to help reduce some of the problems associated with access to health care. After implementation, the number of uninsured dropped dramatically, but costs continued to increase and access was still problematic for some.

Changes to the ACA are anticipated, but problems with costs and access will likely persist. Indeed, considerable attention on current public health initiatives, such as the *Healthy People 2020* campaign and further health care reform, focus on ensuring elimination of disparities in health care. Box 2.7 provides a summary of some of the dramatic effects of public health activities on the health of Americans during the last 100 years. The photo novella in this chapter illustrates community health nursing in the early and mid-twentieth century.

IMAGES OF COMMUNITY HEALTH NURSING IN THE EARLY AND MID-TWENTIETH CENTURY

Group Immunization. Multiracial group of women and children in a housing project mobile clinic waiting for and receiving vaccinations. Scene contains a doctor and a nurse. (1972). (Courtesy of the Centers for Disease Control and Prevention Public Health Image Library [PHIL] Image #1661. Source: CDC/ Reuel Waldrop.)

A public health nurse performs health teaching. (Courtesy of the Library of Congress, Washington, DC.)

A visiting nurse outside a shack with a mother and two children. (Courtesy of the U.S. National Library of Medicine, History of Medicine Division. Order No. A017986.)

A public health nurse talks to a young woman and her mother about childbirth. (Courtesy of the U.S. National Library of Medicine, History of Medicine Division. Order No. A029980.)

A public health nurse immunizes farm and migrant workers in the 1940s. (Courtesy of the Library of Congress, Washington, DC.)

The Shanghai Mother's Club of the Child Welfare and Maternal Health Clinic. United Nations Relief and Rehabilitation Administration (UNRRA) Public Health Nurse Irene Muir instructs Nurse S. U. Zee on child bathing techniques. (Courtesy of the U.S. National Library of Medicine, History of Medicine Division. Order No. A016681.)

A public health nurse transports children to a clinic. (Courtesy of MedStar Visiting Nurse Association.)

RESEARCH HIGHLIGHTS

Example of Historical Nursing Research

Fairman's (1996) review of 150 fictional novels from 1850 to 1995 revealed how the image of nursing has changed over the past 140 years. The results showed that the image of nursing improved dramatically from the negative perception of the 1850s. Trained nurses became more common in the early 1900s, and novels began to depict strong, independent, female nurses. The positive image continued until the 1960s and 1970s, when novels presented the negative image of "bed hopping honeys." Popular literature showed the most negative image of nurses, and classics and children's literature showed a more positive image.

Adapted from Fairman PL: *Analysis of the image of nursing and nurses as portrayed in fictional literature from 1850 to 1995*, San Francisco, CA, 1996, University of San Francisco Dissertation Abstracts.

ACTIVE LEARNING EXERCISE

Obtain copies of early articles from nursing journals (e.g., *American Journal of Nursing* dates from 1900). Discuss the health problems, medical care, and nursing practice these articles illustrated.

Collect copies of early nursing textbooks. Discuss the evolution of thoughts on pathology, illness management, and health promotion.

CHALLENGES FOR PUBLIC HEALTH NURSING

Public health nurses face the challenge of promoting the health of populations. They must accomplish this goal with a broadened understanding of the multiple causes of morbidity and mortality. The specialization of medicine and nursing has affected the delivery of nursing and health care. Well-prepared nurses must be aware of the increased technological advances that specialization has contributed to. These advances have resulted in an increase in the number of advanced practice nurses in the past several decades. It is anticipated that this growth will persist and likely expand (IOM, 2011).

The community need for a focus on prevention, health promotion, and home care may become more widespread with the changing patterns of health care cost reimbursement. Holistic care requires multiple dimensions and must have more attention in the future.

The need for education in public health nursing calls for a curriculum that prepares students to meet the needs of aggregates through population-based strategies that include an understanding of statistical data and epidemiology. Such a curriculum would move the focus from the individual to a broader population approach. Strategies would promote literacy, nutrition programs, prevention of overweight school-aged children, decent housing and income, education, and safe social and physical environments.

Health care services to individuals alone cannot solve today's health problems. All health care workers must learn to work with and on behalf of aggregates and help them build a constituency for the consumer issues they face.

A population focus for nursing addresses the health of all in the population through the careful gathering of information and statistics. A population focus will better enable community health nurses to contribute to the ethic of social justice by emphasizing society's responsibility for health (Beauchamp, 1986). Helping aggregates help themselves will empower people and create avenues for addressing their concerns.

RESEARCH HIGHLIGHTS

Example of Historical Nursing Research

An in-depth examination of all of the issues from 115 years of the *American Journal of Nursing* was undertaken to "explore the nurse's historical and contemporary role in promoting patient safety" (Kowalski and Anthony, 2017, p. 34). A detailed content analysis of almost 1100 articles outlined the evolution of nursing's emphasis and interventions related to safety.

The authors described how the "safety" focus moved from asepsis and the "newly understood germ theory" in the early decades of the twentieth century to preventing medication errors in the 1930s. During and after World War II, improving patient survival rates was emphasized, and in the 1950s, attention moved to progressive patient care and various levels of care (intensive, intermediate, long-term, or home care). During the 1960s and 1970s, focus turned to the increasing complexity of care related to technology and enhanced medication regimens and the associated safety problems. Hospital-acquired infections and medication and nursing procedure safety were emphasized in the 1980s and 1990s. Since 2000, safety attention has moved to systematic factors such as communication, patient–nurse ratios, provider skill mix, and shift work.

The authors identified three major themes related to patient safety throughout the 115 years: infection prevention, medication safety, and technology response. They described the concurrent processes and procedures that were implemented to improve patient safety, but concluded that much more work is needed.

Kowalski SL, Anthony M: Nursing's evolving role in patient safety, *Am J Nurs* 117(2):34–50, 2017.

SUMMARY

Western civilization evolved from the Paleolithic period to the present, and people began to live in increasingly closer proximity to one another; therefore they experienced a change in the nature of their health problems.

In the mid-nineteenth and early twentieth centuries, public health efforts and the precursors of modern and public health nursing began to improve societal health. Nursing pioneers such as Nightingale in England and Wald in the United States focused on the collection and analysis of statistical data, health care reforms, home health nursing, community empowerment, and nursing education. They established the groundwork for today's public health nurses.

Modern public health nurses must recognize and try to understand the philosophical controversies that influence society and ultimately their practice. These controversies include different opinions about what "intervention" means—specifically in regard to "cure" vs. "care."

Controversy also surrounds the significance of maintaining a focus on individuals, families, groups, or populations. Finally, public health nurses need to understand social determinants of health and to be part of the solution with regard to coming up with ways to address persistent health problems while addressing the critical problem of escalating health care costs.

EVOLVE WEBSITE

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3

Thinking Upstream: Nursing Theories and Population-Focused Nursing Practice

Diane Cocozza Martins

OUTLINE

OBJECTIVES

Upon completion of this chapter, the reader will be able to do the following:

1. Differentiate between upstream interventions, which are designed to alter the precursors of poor health, and downstream interventions, which are characterized by efforts to modify individuals' perceptions of health.
2. Describe different theories and their application to community/public health nursing.
3. Critique a theory with regard to its relevance to population health issues.
4. Explain how theory-based practice achieves the goals of community/public health nursing by protecting and promoting the public's health.

KEY TERMS

conservative scope of practice
critical interactionism
critical theoretical perspective
health belief model (HBM)
macroscopic focus
microscopic focus
Milio's framework for prevention
self-care deficit theory
theory
upstream thinking

It may seem as if many community health problems are so complex, so multifaceted, and so deep that it is impossible for a nurse to make substantial improvements in health. Although nurses see persons in whom cancer, cardiovascular disease, or pulmonary disease has just been diagnosed, we know that their diseases began years or even decades ago. In many cases, genetic risks for diseases are interwoven with social, economic, and environmental risks in ways that are difficult to understand and more difficult to change. In the face of all these challenges, how can nurses hope to affect the health of the public in a significant way? How can the actions nurses take today reduce the current burden of illness and prevent illness in the next generation of citizens?

When nurses work on a complex community health problem, they need to think strategically. They need to know where to focus their time, energy, and programmatic resources. Most likely they will be up against health problems that have existed for years, with other layers of foundational problems that may have existed for generations. If nurses use organizational resources in an unfocused manner, they will not solve the problem at hand and may create new problems along the way. If nurses do not build strong relationships with community partners (e.g., parent groups, ministers, local activists), it will be difficult to succeed. If nurses are unable to advocate for their constituencies in a scientifically responsible, logical, and persuasive manner, they may fail. In the face of these challenges and many more, how can nurses succeed in their goal to improve public health?

Fortunately, there are road maps for success. Some of those road maps can be found by reading a nursing history book or an archival work that tells the story of a nurse who succeeded in improving health by leveraging diplomacy skills or

neighborhood power, such as Lillian Wald. Other road maps may be found in "success stories" that provide an overview of how a nurse approached a problem, mobilized resources, and moved strategically to promote change. This chapter addresses another road map for success: the ability to think conceptually, almost like a chess player, to formulate a plan to solve complex problems. Thinking conceptually is a subtle skill that requires you to understand the world at an abstract level, seeing the manifestations of power, oppression, justice, and access as they exist within our communities. Most of all, thinking conceptually means that you develop a "critical eye" for the community and understand how change happens at micro and macro levels.

This chapter begins with a brief overview of nursing theory, which is followed by a discussion of the scope of community health nursing in addressing population health concerns. Several theoretical approaches are compared to demonstrate how different conceptualizations can lead to different conclusions about the range of interventions available to the nurse.

THINKING UPSTREAM: EXAMINING THE ROOT CAUSES OF POOR HEALTH

> *I am standing by the shore of a swiftly flowing river and hear the cry of a drowning man. I jump into the cold waters. I fight against the strong current and force my way to the struggling man. I hold on hard and gradually pull him to shore. I lay him out on the bank and revive him with artificial respiration. Just when he begins to breathe, I hear another cry for help. I jump into the cold waters. I fight against the strong current and swim forcefully to the struggling woman. I grab hold and gradually pull her to shore. I lift her out onto the bank beside the man and work to revive her with artificial respiration. Just when she begins to breathe, I hear another cry for help. I jump into the cold waters. Fighting again against the strong current, I force my way to the struggling man. I am getting tired, so with great effort I eventually pull him to shore. I lay him out on the bank and try to revive him with artificial respiration. Just when he begins to breathe, I hear another cry for help. Near exhaustion, it occurs to me that I'm so busy jumping in, pulling them to shore, applying artificial respiration that I have no time to see who is upstream pushing them all in . . .(Adapted from a story told by Irving Zola as cited in McKinlay, J.B. (2012). A case for refocusing upstream: The political economy of illness. In P. Conrad & V. Leiter (Eds.), The sociology of health and illness: Critical perspectives (Ch 47, 9th ed.), New York: Worth.)*

In his description of the frustrations in medical practice, McKinlay (1979) used the image of a swiftly flowing river to represent illness. In this analogy, doctors are so busy rescuing victims from the river that they fail to look upstream to see who is pushing patients into the perilous waters. Many things could cause a patient to fall (or be pushed) into the waters of illness. Refocusing upstream requires nurses to look beyond individual behavior or characteristics to what McKinlay terms the "manufacturers of illness." McKinlay discusses factors such as tobacco products companies, companies that profit from selling products high in saturated fats, the alcoholic beverage industry, the beauty industry, exposure to environmental toxins, and occupationally induced illnesses. "Manufacturers of illness" are what push clients into the river. Cigarette companies are a good example of manufacturers of illness—their product causes a change for the worse in the health status of their consumers, and they take little to no responsibility for it. McKinlay used this analogy to illustrate the ultimate futility of "downstream endeavors," which are characterized by short-term, individual-based interventions, and challenged health care providers to focus more of their energies "upstream, where the real problems lie" (McKinlay, 1979, p. 9). Downstream health care takes place in our emergency departments, critical care units, and many other health care settings focused on illness care. **Upstream thinking** actions focus on modifying economic, political, and environmental factors that are the precursors of poor health throughout the world. Although the story cites medical practice, it is equally fitting to the dilemmas of nursing practice. Nursing has a rich history of providing preventive and population-based care, but the current U.S. health system emphasizes episodic and individual-based care. Chronic diseases are responsible for 70% of American deaths each year and accounts for 86% of U.S. health care costs (Centers for Disease Control and Prevention, 2017)

HISTORICAL PERSPECTIVES ON NURSING THEORY

Many scholars agree that Florence Nightingale was the first nurse to formulate a conceptual foundation for nursing practice. Nightingale believed that clean water, clean linens, access to adequate sanitation, and quiet would improve health outcomes (Ali Parani, 2016). However, in the years after her leadership, nursing practice became less theoretical and was based primarily on reacting to the immediacy of patient situations and the demands of medical staff. Thus hospital and medical personnel defined the boundaries of nursing practice. Once nursing leaders saw that others were defining their profession, they became proactive in advancing the theoretical and scientific foundations of nursing practice. Some of the early nursing theories were extremely narrow and depicted health care situations that involved only one nurse and one patient. Family members and other health professionals were noticeably absent from the context of care. Historically, this characterization may have been an appropriate response to the constraints of nursing practice and the need to emphasize the medically dependent activities of the nursing profession.

Although somewhat valuable, theories that address health from a microscopic, or individual, rather than a macroscopic, or global/social, perspective have limited applicability to community/public health nursing. Such perspectives are inadequate because they do not address social, political, and environmental factors that are central to an understanding of communities. More recent advances in nursing theory development address the dynamic nature of health-sustaining and/or health-damaging environments and address the nature of a collective (e.g., school, worksite) versus an individual client.

HOW THEORY PROVIDES DIRECTION TO NURSING

The goal of **theory** is to improve nursing practice. Chinn and Kramer (2015) stated that using theories or parts of theoretical frameworks to guide practice best achieves this goal. Students often find theory intellectually burdensome and cannot see the benefits to their practice of something so seemingly obscure. Theory-based practice guides data collection and interpretation in a clear and organized manner; therefore it is easier for the nurse to diagnose and address health problems. Through the process of integrating theory and practice, the student can focus on factors that are critical to understanding the situation. The student also has an opportunity to analyze the realities of nursing practice in relation to a specific theoretical perspective, in a process of ruling in and ruling out the fit of particular concepts (Schwartz-Barcott et al., 2002). Barnum (1998) stated, "A theory is like a map of a territory as opposed to an aerial photograph. The map does not give the full terrain (i.e., the full picture); instead it picks out those parts that are important for its given purpose" (p. 1). Using a theoretical perspective to plan nursing care guides the student in assessing a nursing situation and allows the student "to plan and not get lost in the details or sidetracked in the alleys" (J. M. Swanson, personal communication to P. Butterfield, May 1992).

As with other abstract concepts, different nursing writers have defined and interpreted theory in different ways. Several writers' definitions of theory are listed in Box 3.1. The lack of uniformity among these definitions reflects the evolution of thought and the individual differences in the understanding of relationships among theory, practice, and research. The definitions also reflect the difficult job of describing complex and diverse theories within the constraints of a single definition. Reading several definitions can foster an appreciation for the richness of theory and help the reader identify one or two particularly meaningful definitions. Within the profession, definitions of theory typically refer to a set of concepts and relational statements and the purpose of the theory. This chapter presents theoretical perspectives that are congruent with a broad interpretation of theory and correspond with the definitions proposed by Dickoff and James (1968), Torres (1986), and Chinn and Kramer (2015).

BOX 3.1 Definitions of Theory Proposed by Nursing Theorists

- "A systematic vision of reality; a set of interrelated concepts that is useful for prediction and control" (Woods and Catanzaro, 1988, p. 568).
- "A conceptual system or framework invented for some purpose; and as the purpose varies so too must the structure and complexity of the system" (Dickoff and James, 1968, p. 19).
- "A creative and rigorous structuring of ideas that projects a tentative, purposeful, and systematic view of phenomena" (Chinn & Kramer, 1999, p. 51).
- "A set of ideas, hunches, or hypotheses that provides some degree of prediction and/or explanation of the world" (Pryjmachuk, 1996, p. 679).
- "Theory organizes the relationships between the complex events that occur in a nursing situation so that we can assist human beings. Simply stated, theory provides a way of thinking about and looking at the world around us" (Torres, 1986, p. 19).

MICROSCOPIC VERSUS MACROSCOPIC APPROACHES TO THE CONCEPTUALIZATION OF COMMUNITY HEALTH PROBLEMS

Each nurse must find her or his own way of interpreting the complex forces that shape societies to understand population health. The nurse can best achieve this transformation by integrating population-based practice and theoretical perspectives to conceptualize health from a macroscopic rather than microscopic perspective. Table 3.1 differentiates between these two approaches to conceptualizing health problems.

The individual patient is the **microscopic focus**, whereas society or social economic factors influencing health status are the **macroscopic focus**. When the individual is the focus, the micro focus contains the health problem of interest (e.g., pediatric exposure to lead compounds). In this context, a microscopic approach to assessment would focus exclusively on individual children with lead poisoning. Nursing interventions would focus on the identification and treatment of the child and family. However, the nurse can broaden his or her view of this problem by addressing removal of lead sources in the home and by examining interpersonal and intercommunity factors that perpetuate lead poisoning on a national scale. A macroscopic approach to lead exposure may incorporate the following activities: examining trends in the prevalence of lead poisoning over time, estimating the percentage of older homes in a neighborhood that may contain lead pipes or lead-based paint surfaces, and locating industrial sources of lead emissions. These efforts usually involve the collaborative efforts of nurses from school, occupational, government, and community settings. Burbank and Martins (2010) discussed macro-level perspectives that provide nurses with the conceptual tools that empower clients to make health decisions on the basis of the interests of the community at large.

One common dilemma in community health practice is the tension between working on behalf of individuals and working on behalf of a population. For many nurses, this tension is exemplified by the need to reconcile and prioritize multiple daily tasks. Population-directed actions are often more global than the immediate demands of ill people; therefore they may sink to the bottom of the priority list. A community health nurse or nursing administrator may plan to spend the day on a community project directed at preventive efforts, such as screening programs, updating the surveillance program, or meeting with key community members about a specific preventive program. However, the nurse may actually end up spending the time responding to the emergency of the day. This type of reactive rather than proactive nursing practice prevents progress toward "big picture" initiatives and population-based programs. When faced with multiple demands, nurses must be vigilant in devoting a sustained effort toward population-focused projects. Daily pressures can easily distract the nurse from population-based nursing practice. Several nursing organizations focus on this population, and one

TABLE 3.1 Microscopic Versus Macroscopic Approaches to the Delineation of Community Health Nursing Problems

Microscopic Approach	Macroscopic Approach
Examines individual, and sometimes family, responses to health and illness	Examines interfamily and intercommunity themes in health and illness
	Delineates factors in the population that perpetuate the development of illness or foster the development of health
Often emphasizes behavioral responses to an individual's illness or lifestyle patterns	Emphasizes social, economic, and environmental precursors of illness
Nursing interventions are often aimed at modifying an individual's behavior by changing his or her perceptions or belief system	Nursing interventions may include modifying social or environmental variables (i.e., working to remove care barriers and improving sanitation or living conditions)
	May involve social or political action

organization, the Quad Council of Public Health Nursing, is composed of representatives from the following four public health/community health nursing organizations:

- Public Health Nursing Section of the American Public Health Association (PHN-APHA)
- Association of Community Health Nurse Educators (ACHNE)
- Association of Public Health Nurses (APHN)
- American Nurses Association Council on Nursing Practice and Economics (ANA)

The organizations emphasize system-level thinking in practice and the importance of improving health through the design and implementation of population-based interventions (Swider, Krothe, Reyes, and Cravetz, 2013).

A theoretical focus on the individual can preclude understanding of a larger perspective. Dreher (1982) used the term **conservative scope of practice** in describing frameworks that focus energy exclusively on intrapatient and nurse–patient factors. She stated that such frameworks often adopt psychological explanations of patient behavior. This mode of thinking attributes low compliance, missed appointments, and reluctant participation to problems in patient motivation or attitude. Nurses are responsible for altering patient attitudes toward health rather than altering the system itself, "even though such negative attitudes may well be a realistic appraisal of health care" (Dreher, 1982, p. 505). This perspective does not entertain the possibility of altering the system or empowering patients to make changes.

ASSESSING A THEORY'S SCOPE IN RELATION TO COMMUNITY HEALTH NURSING

Theoretical scope is especially important to community health nursing because there are many levels of practice within this specialty area. For example, a home health nurse who is caring for ill people after hospitalization has a very different scope of practice from that of a nurse epidemiologist or health planner. Unless a given theory is broad enough in scope to address health and the determinants of health from a population perspective, the theory will not be very useful to community health nurses. *Healthy People 2020* incorporated social determinants of health in the nation's health objectives (U.S. Department of Health and Human Services, 2017). Robert Wood Johnson Foundation addressed the need for a Culture of Health that benefits everyone to ensure all people have equal opportunities to make healthy choices, whatever their circumstances (Robert Wood Johnson, 2017). Applying the terms *microscopic* and *macroscopic* to health situations may help nurses guide and stimulate theory development in community health nursing.

Although the concept of macroscopic is similar to the upstream analogy, the term *macroscopic* refers to a broad scope that incorporates many variables to aid in understanding a health problem. Upstream thinking would fall within this domain. Viewing a problem from this perspective emphasizes the variables that precede or play a role in the development of health problems. Macroscopic is the broad concept, and upstream is a more specific concept. These related concepts and their meanings can help nurses develop a critical eye in evaluating a theory's relevance to population health.

ACTIVE LEARNING EXERCISE

Review the ANA's definition of community health nursing practice and the APHA's definition of public health nursing practice. What do these definitions indicate about the theoretical basis of community health nursing? How does the theoretical basis of community health nursing practice differ from that of other nursing specialty areas?

REVIEW OF THEORETICAL APPROACHES

The differences among theoretical approaches demonstrate how a nurse may draw very diverse conclusions about the reasons for client behavior and the range of available interventions. The following section uses two theories to exemplify individual microscopic approaches to community health nursing problems; one originates within nursing and one is based in social psychology. Two other theories demonstrate the examination of nursing problems from a macroscopic perspective; one originates from nursing and another has roots in phenomenology.

The format for this review is as follows:

1. The individual is the focus of change (i.e., microscopic).
   a. Orem's self-care deficit theory of nursing
   b. The health belief model (HBM)