

PREFACE TO THE FIRST EDITION

Principles of Emergency Planning and Preparedness	520
Bioterrorism Preparedness	523
Smallpox	528
Conclusion	530

Chapter 30—Public Health in the Twenty-First Century: Achievements and Challenges	535
Challenges for the Twenty-First Century	537
Strategic Planning for Public Health	539
Hope for the Integration of Public Health and Medical Practice	543
Information Technology	545
The Challenge of Biotechnology	547
The Ultimate Challenge to Public Health in the Twenty-First Century	548
Conclusion	548
Index	553

As a laboratory scientist, a science writer, and a citizen, I always had a vague sense of uncertainty when I heard or read the term *public health*. When in 1986 I accepted a position as an administrator to help build the new School of Public Health in Albany, New York, a collaboration between the University at Albany and the New York State Department of Health, that sense of uncertainty became more acute. What is public health? If we don't understand what it is, how can we create a school to teach it? I found that I was not alone in my confusion. When I asked the question of those around me, some struggled to explain, while others admitted that their understanding was as vague as mine.

Fortunately, two events rescued me from my confusion. One was the publication in 1988 of the Institute of Medicine's report, *The Future of Public Health*.¹ The report set out, first of all, to clearly define public health, went on to state that the general public and policymakers do not understand public health and its importance, and urged that we who work in public health reach out to educate the public about what it is. Reading the report reassured me that at least I had not been alone in my ignorance.

What helped most to clarify my understanding of the concept was the assignment to work with the public health professionals of the New York State Department of Health to create the School's Master of Public Health (MPH) program. The MPH is the quintessential degree for public health professionals, and it is designed to provide students with a broad understanding of the whole interdisciplinary field of public health, together with a set of skills that will equip them to work at protecting and promoting the health of the public. In designing the University at Albany's public health program, I worked with committees of Health Department epidemiologists, biomedical scientists, environmental health specialists,

I hope that the existence of this textbook will inspire faculty at other colleges and universities to teach public health to undergraduate students. Americans are still largely uninformed about what public health is and what it does for us. A poll conducted by Louis Harris and Associates in 1996 found that "few Americans have any real idea what the words 'public health' mean," although when it was explained to them, "almost everyone" believed it to be very important.² I believe that every citizen of the United States should know something about public health, just as they should know something about democracy, law, and other functions of government. One step toward achieving this goal would be to include public health as a general education course in college. Ideally the concept of public health should also be introduced in high school courses, an objective that could be achieved if future teachers were introduced to the subject in college.

I have tried to make this book easily comprehensible to the general reader. Public health issues are featured almost every day on the front pages of our newspapers and in the headlines of our television news programs. Often, they are not labeled as public health, and this is why so many of us are confused as to what those two words mean. This book is my effort to spread the word about the crucial role that public health plays in maintaining and improving the health of us all.

REFERENCES

1. Institute of Medicine (U.S.), Committee for the Study of the Future of Public Health, *The Future of Public Health* (Washington, DC: National Academy Press, 1988).
2. H. Taylor, "Public health: Two Words Few People Understand Even Though Almost Everyone Thinks Public Health Functions Are Very Important," Louis Harris and Associates, Inc., January 6, 1997.

... and behavioral scientists, biostatisticians, and health policy makers – people who were actually doing public health – searching, questioning, debating over what should be part of a public health education. For me was an inspiration to observe the idealism and commitment of these professionals, clearly dedicated to the health of the people of New York State, who were willing to volunteer their time and effort toward the goal of preparing the public health professionals of the future. The process gave me a better sense not only of what public health is, but also of the meaning and ideal of public health as a basic principle of social justice.

... since the School was firmly established and the MPH program was maturing, some of us began to think about the Institute of Medicine report's mandate to inform the public about public health and, specifically, to expose undergraduates to concepts, history, current context, and techniques of public health."^{1(p.17)} Because schools of public health are primarily graduate schools, most college students don't have the opportunity to take a course in public health or even know enough about the field to be curious about it. Public health does not fall neatly into any traditional academic category and I would be surprised if it earned more than passing mention in courses in history, government, or political science – fields that might be expected to include public health as a topic of study – or micro-biology, sociology, or anthropology, disciplines that contribute to the field of public health. To help remedy the deficiency, the faculty of the School developed a course called "Introduction to Public Health," which has been taught annually to undergraduates at the University at Albany since 1994.

This book was written as a textbook for "Introduction to Public Health," for which I am the course coordinator. The audience I have in mind for the book includes people such as I was before I came to work at the School of Public Health, people who feel vaguely uncertain about what it is being referred to when they hear or read about public health. The material on which I base most of the book arises out of the course, which is taught by faculty from all departments of the School. Because many of the faculty of the School of Public Health at Albany are first of all public health practitioners at the New York State Department of Health, many of the lectures consist of these wonderful people talking about what they do every day to promote and protect the health of the population of New York State. I have continued to learn by attending these lectures and have found them fascinating and inspiring way to learn about public health. I believe the students who have taken the course have likewise been fascinated and inspired.

Public health is a fascinating field. The fact that it depends on political decisions is frustrating to many practitioners, but it is often the politics that put public health in the headlines. I hope that this book will help give you all a better idea of the sciences and politics of public health.

ACKNOWLEDGMENTS

This book is in a sense a joint effort by all the faculty of the School of Public Health who have cooperated in teaching the undergraduate course, Introduction to Public Health, at SUNY-Albany. Much of what I have written is taken from their lectures. Any errors, however, are my own.

Dan Beauchamp was an important influence in the early days of Albany's School of Public Health. His idealism about public health as a force for social cohesion inspired us all. Dan's lessons on the philosophy, ethics, and politics of public health opened my eyes to the rich variety of the subject, which I hope this book will help to communicate to others.

David Strogatz was one of the small group of faculty who originally planned the course and he anchored the course in the early years with his discussion of the basic science of public health. I have based much of my epidemiology section on his lectures.

Jack Conway was another member of the original planning team and was a regular lecturer in the course. My section on environmental health follows his lead to a great extent.

In the area of social and behavioral aspects, Michelle van Ryn and Barry Sherman were always thought-provoking on why these factors have such a major influence on health, and why certain social groups are at special risk for poor health. I have learned most of what I know of this complex and important field from them. In recent years, Mary Gallant and Ben Shaw have taken over the task of explaining for the class the role of social and behavioral sciences in public health.

Gene Theriault has been the principal statistics lecturer for the course, explaining statistical concepts and methods with remarkable lucidity. I am grateful to him for bringing to life a difficult subject. Peter Millock explains the legal basis of public health each year with great panache.

PREFACE TO THE SECOND EDITION

In the Preface to the first edition, I wrote of the public's general ignorance of the field of public health. That situation seems to have improved somewhat since the book was published, in part because of the attention paid to public health as a result of the anthrax attacks in fall 2001 and the recognition that defense against bioterrorism requires a strong public health system. Each time I begin a new semester of teaching this course at SUNY-Albany, I ask the class what they think public health is. Clearly, recent students have displayed more understanding of the field than did the students of the 1990s.

Teaching public health to undergraduate students has become more widespread in recent years, and some universities have begun to offer undergraduate minors and majors in public health. I am happy for whatever contribution this textbook has made toward expanding general knowledge of the field and inspiring students to choose public health as a career.

The second edition of this textbook follows the plan of the first edition, bringing it up to date and including new developments in infectious diseases, women's health, environmental health controversies, the FDA, and many other issues encompassed by the always newsworthy field of public health. A new chapter has been added, prompted by the events of fall 2001 together with the timely publication by the American Public Health Association of *Public Health Management of Disasters: The Practice Guide*, written by Linda Landesman. Disaster preparedness has always been an important but under-appreciated component of public health, and Landesman's book is the result of an effort, supported by the Association of Schools of Public Health and the Centers for Disease Control and Prevention, to develop a disaster curriculum for schools of public health.