

PART

1

INTRODUCTION

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CHAPTER

1

FRAMEWORKS FOR INTERDISCIPLINARY URBAN HEALTH RESEARCH AND PRACTICE

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LEARNING OBJECTIVES

- Offer three reasons why interdisciplinary research approaches are especially suitable for investigation of urban health problems.
- Explain the characteristics of cities that affect the public health challenges they face and that make urban health problems particularly appropriate for interdisciplinary study.
- Compare and contrast unidisciplinary and interdisciplinary research from the point of view of both substance and the processes involved, as well as the challenges inherent in interdisciplinary research.

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- Describe approaches to overcoming interdisciplinary challenges related to assumptions, methods, institutional settings, and the focus of interventions.

INTRODUCTION

For the past two centuries, cities and urbanization have been a dominant influence on health and disease, and today, more of the world's population lives in cities than ever before. In 2007, half of the world's population lived in urban areas, and by 2030, three-quarters will live in cities.^{1,2} For health researchers and practitioners, understanding how the urban environment influences health and well-being will determine how successful we are in caring for individuals and families, in promoting population health, and in achieving local, national, and global health goals.

More broadly, as the United Nations *State of the World's Cities* report noted in 2001, "For better or worse, the development of contemporary societies will depend largely on understanding and managing the growth of cities. The city will increasingly become the test bed for the adequacy of political institutions, for the performance of government agencies, and for the effectiveness of programmes to combat social exclusion, to protect and repair the environment and to promote human development."³

As the urban population grows and as cities become more diverse and complex, it becomes increasingly difficult for any single individual, academic discipline, profession, institution, or agency to develop the insights and skills needed to improve the health of urban populations or to create healthier cities. Despite the growing recognition that only interdisciplinary research and practice can solve the health challenges facing cities today, most universities still train health researchers and professionals in a single discipline, teach them only a few research methods, and do not acquaint their students with the growing literature on interdisciplinary approaches to health. In this volume, we seek to remedy this problem by introducing students, researchers, and practitioners in public health, medicine, social work, nursing, sociology, anthropology, psychology, urban planning, geography, and other disciplines to the concepts of interdisciplinary approaches to urban health research and practice. Our goals are to familiarize readers with the emerging concepts and principles that characterize interdisciplinary urban health research, to provide case studies of interdisciplinary health research within cities, and to prepare readers to work more effectively within interdisciplinary research and intervention teams.

This volume grows out of our own experiences as researchers and teachers, from our reading of several bodies of literature, and from recent calls for more emphasis on interdisciplinary education and research. Since the early 1980s, we have separately and together studied, developed, directed, and evaluated interventions to address several quintessential urban social, health, and environmental problems: childhood lead poisoning, asthma, deteriorated housing, HIV infection, reentry from jail, violence and crime, mothers' and children's mental health problems, and obesity and diabetes. In each of these cases, our efforts to understand and reduce the health problems facing

urban neighborhoods forced us to transcend the disciplinary boundaries of our professional training and to learn new languages, concepts, and methods.

As teachers at City University of New York (CUNY), the largest urban public university in the nation, and Vanderbilt University, we also bumped against disciplinary boundaries. Our graduate students in psychology, public health, environmental health, health education, nursing, public policy, and sociology—many of them working in the health field during the day—wanted to take courses, learn skills, and integrate methods from different disciplines to succeed in solving the problems they faced in their own research and in jobs at the municipal health department, in voluntary health agencies, or with community organizations. Too often, however, the requirements of accrediting agencies, the curriculum or departmental structure of our universities, or our own limitations as disciplinary researchers made it difficult for our students to achieve their interdisciplinary objectives. Recently, we have worked to develop at CUNY a variety of interdisciplinary approaches to graduate education for social science and public health students interested in urban health. These experiences have reinforced our view of both the potential and the obstacles facing interdisciplinary study.

As social scientists and health researchers, we are influenced by several emerging bodies of literature on urban health, on social determinants of health, on social support and health, on health inequities and disparities, on various participatory research methods, and on human rights, social justice, and health. Each of these fields has been developed by investigators from several disciplines, and each has begun to establish an interdisciplinary foundation that can guide future research and intervention. Although these new developments have informed our research and teaching, we have also been frustrated with the difficulty of developing for ourselves and our students a user-friendly synthesis of these emerging principles, theories, and methods that can guide research and practice. Once again, our own and our colleagues' disciplinary roots make it difficult to integrate new scholarship across levels and disciplines.

Finally, this book is a response to several recent calls for more attention to interdisciplinary research and education. In its report *The Future of the Public's Health in the 21st Century*,⁴ the National Academies Press emphasized the importance of interdisciplinary education in health. It called on universities to “increase integrated interdisciplinary learning opportunities for students in public health and other related health science professions . . . and interdisciplinary education and appropriate incentives for faculty to undertake such activities.” The 2003 National Academies Press report *Who Will Keep the Public Healthy?*⁵ also stressed the need for more interdisciplinary education for biomedical and social science researchers. In its 2005 report *Facilitating Interdisciplinary Research*,⁶ the National Academies Press suggested that graduate students should explore ways to broaden their experience by gaining “requisite” knowledge in one or more fields in addition to their primary field. They also suggested that researchers and faculty members desiring to work on interdisciplinary research, education, and training projects should immerse themselves in the languages, cultures, and knowledge of their collaborators.

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In its effort to chart a “road map” for medical research in the twenty-first century, the National Institutes of Health observed that “the scale and complexity of today’s biomedical research problems increasingly demand that scientists move beyond the confines of their own discipline and explore new organizational models for team science.”⁷ As urban health researchers and teachers, we support these calls for new paradigms but note the lack of practical tools for achieving these ambitious aims. We hope this volume will help to fill this gap.

Finally, the Institute of Medicine, the Council on Education for Public Health, and other bodies have called on schools of public health to strengthen preparation of students in interdisciplinary collaboration and communication. Most faculty and researchers agree in principle with this call, but few have developed practical strategies for meeting this new mandate or found ways to equip students with the competencies to defuse the land mines one encounters when crossing disciplinary boundaries. This book hopes to meet that need.

In sum, we hope this collection of essays will help to educate health professionals and researchers who can transcend the limitations we have faced. By introducing students early in their careers to the concepts and methods of other disciplines, by describing the benefits but also the real-world challenges that interdisciplinary researchers face, and by presenting case studies from the interdisciplinary front lines of public health and social science research and practice, we hope today’s students will be better prepared to accept interdisciplinary approaches as the norm rather than the exception. In this chapter, we introduce several themes that are developed in subsequent chapters.

THE IMPLICATIONS OF URBAN LIFE FOR HEALTH

One recurring theme is that interdisciplinary research and the field of urban health are good partners for a lasting relationship. What makes the health of urban populations especially suitable for these interdisciplinary approaches?

First, like coral reefs or tropical rain forests, cities are complex biological, social, and physical systems in which organisms (in this case, humans are our main interest) interact with each other and their environment at the molecular, local, and global levels. No single discipline can capture the complexity of these interactions, and only interdisciplinary methods can consider these dynamics at several levels simultaneously.^{8,9}

Second, cities have diverse populations. Population heterogeneity sets the stage for a variety of biological, cultural, political, and social encounters among and within the various subpopulations. For example, understanding the health implications of the food practices of urban ethnic groups and their varying interactions with the urban food system requires nutritional, anthropological, sociological, and psychological expertise,¹⁰ as Zenk and her colleagues describe in Chapter Three.

Third, cities have dense populations. Sociologists, economists, and biologists have studied the consequences of population density for more than 200 years, and more recently, epidemiologists and psychologists have also taken on this issue. Some research suggests that density contributes to negative effects on physical and mental health, but

other studies document increased access to health services, close knit subcultures, and greater freedom of choice and personal development. By integrating the findings on density from these various disciplines, it may be possible to develop a more nuanced view of the various ways that density influences health. More pragmatically, understanding the complex ways that density affects health can assist urban planners to design cities and neighborhoods that better promote well-being. In Chapter Nine, Hadley and colleagues examine how urban density shapes the health consequences of disasters such as earthquakes, tsunamis, or terrorist attacks.

Fourth, because most cities are characterized by high levels of inequality, interventions—even beneficial ones—run the risk of reinforcing or even widening disparities in health.¹¹ Thus, opening new municipal fitness centers may exacerbate the gap in physical activity levels between the poor and the better off unless the poor have what Paul Farmer has called a “preferential option” for the new services.¹² What is beneficial at the individual level may be harmful to population health and to social justice. To avoid this unintended effect, urban public health planners need to define disparity reduction as an explicit goal. This requires thinking across levels and considering technical and ethical concerns; both tasks are suited to interdisciplinary research. In Chapter Six, Geronimus and Thompson examine the multiple pathways by which public policies have often undermined the health of African American communities.

Fifth, most cities organize the municipal services that affect health in sectoral programs: education, health care, sanitation, water, or housing. Each sector has its own experts, and rarely do policymakers or researchers consider the impact of developments in one sector (e.g., increasing rates of high school dropout) on outcomes in another (e.g., longevity or premature death). For urban residents, however, it is the totality of their environment and the services available to them that shape their living conditions. Interdisciplinary research can begin to examine these intersections across levels and sectors and analyze their impact on health. Saegert and her colleagues provide such an example in Chapter Seven in their analysis of the health consequences of housing foreclosures.

Sixth, compared to other areas, cities have a rich array of social and human resources—dense social networks, many community-based organizations, and diverse formal and informal service providers. These human resources and the social capital inherent within them constitute key assets for urban health promotion, and effective public health programs use these resources both to root interventions in a specific urban context and to reduce the need for external resources.^{13–15} Recent work on social capital in psychology, sociology, and public health demonstrates the potential for both theory and research in this area and the value of investigating the dynamic interactions among different social levels.^{16–18} For example, in Chapter Ten, Fahs and her colleagues assess the contributions that immigrant urban communities can bring to healthy aging, and in Chapter Eleven, Jones and Liburd describe some of the assets that African American communities can bring to the task of reversing the diabetes epidemic. Finding the right assets, mobilizing them, and ensuring their sustainability are important tasks for urban health interventionists.

Seventh, the development of modern cities and their impact on the health and well-being of their inhabitants are dynamic across time and place. For example, although many cities in North America and Europe began experiencing unprecedented population expansion during the latter half of the nineteenth century, it was not until a century later that many of their southern counterparts in Asia, Africa, and Latin America did so. Temporal and geographic differences are also manifest in disease patterns: Many northern cities have experienced significant overall declines in infectious diseases and subsequent increases in longevity, although these diseases continue to burden disproportionately disadvantaged subgroups in the population. Now, developed world cities are battling noninfectious diseases like cancer, diabetes, heart disease, and Alzheimer's disease that are associated with cumulative exposures, aging, and long latency periods. Meanwhile, in many developing world cities, infectious diseases like HIV/AIDS, tuberculosis, malaria, and dengue fever are still raging, shortening life spans, and imposing misery. To understand the growth and character of cities and their impact on health requires that we consider a myriad of historical, geographic, economic, political, and social forces. No single discipline possesses the framework and tools for such an analysis.

In sum, we seek to show that the *methods* of interdisciplinary research can help to understand better the outcome of the health of urban populations. The complex health conditions facing cities have determinants and consequences at multiple levels of biological and social organization, and they vary significantly across time and place. In addition, they often need to effectively address simultaneous changes in behavioral, community, organizational, and policy domains. No single discipline can provide the tools needed to operate in these many dimensions.

LEVELS AND TYPES OF INTERDISCIPLINARITY

Our second theme is that interdisciplinarity is best considered a continuum rather than a polarity with disciplinary approaches. In our view, any specific research project, intervention, or program in urban health can be located along a continuum that begins with disciplinary approaches, proceeds to multidisciplinary, then to interdisciplinary, and finally to transdisciplinary. Examples of disciplinary approaches to the study of urban health abound in the peer-reviewed and popular literature—sociological studies of urban crime, psychological studies of population density and crowding, environmental health studies of urban noise, air pollution, or childhood lead poisoning, and clinical studies of anti-hypertension, cholesterol, or malarial drugs.

Multidisciplinary research joins investigators from different fields to bring their own methods and concepts to a common problem. As Stokols and others have noted,¹⁹ fields such as public health and urban planning are inherently multidisciplinary in that they encompass several different disciplines whose perspectives are combined in analyses of complex topics, such as population health and urban development. For example, epidemiologists, environmental health researchers, pediatricians, housing specialists, and psychologists have studied the epidemic of childhood asthma in U.S. cities. Each researcher uses his or her analytic methods and concepts to examine the role of, say,

air pollution, quality of medical care, housing characteristics, diet, or parental management in the prevalence of asthma or the severity of symptoms. And as Fuqua and her colleagues show in Chapter Eight, reducing the toll from tobacco has forced researchers from many disciplines to form innovative research collaboratives. Occasionally, these investigators work together, and such efforts have led to a better understanding of asthma. Too often, however, multidisciplinary research resembles more the parallel play of toddlers than the collaborative work of a single team. Differences in language, methods, scale, and outcome make it difficult to integrate findings across disciplines and to develop science-based multilevel interventions to improve urban health.

The National Academies Press has defined *interdisciplinary research* as “a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or field of research practice.”⁶ The operative distinction with multidisciplinary approaches is the *integration* of perspectives from two or more disciplines. Several chapters illustrate this process, including Angotti and Sze in Chapter Two, who integrate urban planning with historical and environmental health approaches to the study of urban environmental hazards and Maantay and her colleagues, who in Chapter Five synthesize geographic and medical perspectives to better understand childhood asthma.

More recently, Stokols and others have proposed the term “transdisciplinary research,” which is characterized by a deliberate integration of concepts and methods from several fields to address a common problem. It results in “collaborative products” that “reflect an integration of conceptual and/or methodological perspectives drawn from two or more fields.”¹⁹ Their work on tobacco control,¹⁹ recent studies of the obesity epidemic,^{20–22} and studies of child development in urban settings, described by Ferguson and colleagues in Chapter Four, illustrate transdisciplinary approaches. In some cases, transdisciplinary approaches lead to the creation of new discipline that integrates previously separate ones. For example, the new field of “cognitive science” brings together researchers and methods and concepts from anthropology, artificial intelligence, neuroscience, education, linguistics, psychology, and philosophy.⁶ In Chapter Twelve, we consider the advantages and disadvantages of viewing urban health as a new transdisciplinary field.

To help readers locate their own efforts and the cases described in this volume on the disciplinarity continuum, it may be helpful to describe some of the characteristics that distinguished more unidisciplinary research from interdisciplinary research (IR). First, the starting point for IR is often a problem rather than a single hypothesis about the relationship between two variables. Second, IR often struggles to define a common language and concepts, a task not usually needed in disciplinary research. Third, IR often works at two or more levels of organization, requiring more sophisticated methods to account for the influences of one level on another. Fourth, IR is less often guided by theory, in part because theories often describe only one analytic level or are bounded by a single discipline. Finally, compared to the frequently incremental approach

of disciplinary research, in which each research finding contributes a small addition to a fuller picture of the question of interest, IR may take a more dynamic approach. Integrating findings across levels may lead to a reformulation of basic concepts and a reframing of research questions.

In our view, the important task is not so much how to create precise definitions that distinguish among the points on the disciplinarity continuum but rather to help researchers decide where to locate their own efforts. Our own experience and the chapters in this volume suggest that this decision is based on the nature of the problem under study and the specific research questions that drive this decision and not on inherent characteristics of the different degrees of disciplinarity. Although we appreciate the distinction between interdisciplinary and transdisciplinary research, in this volume, we generally use the more common term *interdisciplinary* for clarity and simplicity.

CONUNDRUMS IN INTERDISCIPLINARITY

A third theme that emerges from this book is that interdisciplinary research is difficult. We resist the effort to paint it as the ideal solution to all complex problems and argue instead that researchers need to have a clear rationale for its use in any specific situation.

What makes interdisciplinary research so challenging? First, the value of disciplines—part of the reason they emerged—is to help focus attention on a defined set of variables, usually at a single analytic level and informed by a small number of relevant theories. Once researchers give up the disciplinary lens, they can be dizzied by choices—like looking through a microscope, binoculars, and a telescope simultaneously. And interdisciplinary approaches offer not only multiple ways of framing the problem but also multiple methods of collecting and analyzing data. Choosing this path significantly expands the number of choices a researcher needs to make.

A related challenge is integrating methods and theories from different analytic levels or different levels of social organization. In some cases, methodologies such as multilevel statistical models or structural equation modeling provide a framework for explaining the relationship among different levels, but the simplified assumptions these models require may limit the insights they can offer. In childhood lead poisoning, for example, the child's nutritional status, behavioral patterns, interactions with parents, and access to health care, as well as the living conditions inside the household, the building, the block, the neighborhood, and the policies of the city, state, and national government all influence the individual and population prevalence of elevated lead levels. How do we integrate findings from these different levels to develop more effective lead poisoning prevention policies and interventions? The practical difficulty explains why researchers often choose to focus on a single level using data and theories from a single discipline—even if such studies are of limited use in the development of effective prevention policies.

Another difficulty for the researcher considering interdisciplinary approaches is the sheer volume of knowledge needed to be effective in this task. The unread journals that pile up in our own offices show how hard it is to keep up with new findings and

new methods in our own field. Imagine having to stay on top of two or three fields to stay current. Learning what you do—and do not—need to know to move beyond your own discipline is a critical skill for interdisciplinary researchers. The chapters in this volume suggest some of the strategies these authors have used, including the value of interdisciplinary colleagues as sources of guidance and information.

Institutional obstacles also hamper interdisciplinary research. As we have discussed interdisciplinary approaches with our colleagues, we heard several stories from faculty members who had been warned by their departmental chairs not to stray too far from their own discipline. Tenure and promotion, they were told, depended on publishing in their disciplinary journals and using methods and theories with which their colleagues were familiar. In our own university, while administrators were supportive of our development of interdisciplinary approaches to urban health research and teaching, the practical questions of who gets overhead, release time, and teaching credit arose with every effort. Like others, we often found that disciplinary approaches elicited fewer questions and concerns, forcing us to consider whether the extra effort our interdisciplinary initiatives required was worth the benefits. In the final chapter, we review some of the methods the authors of these chapters have used to overcome the challenges posed by their choice of interdisciplinary approaches.

INTERDISCIPLINARITY AND THEORIES OF KNOWLEDGE

A fourth theme that several authors consider is the intersection between interdisciplinary and social constructivist perspectives. Social constructivists believe that reality is produced and reproduced by people acting on their *interpretations* and their *knowledge* of the world.²³ In disciplines like anthropology, history, and some schools of thought in political science and sociology, scholars point out that the answers to the question of how, for example, city living affects health are not univocal but depend on the geographic, cultural, socioeconomic, religious, and other statuses of the analyst. Although interdisciplinary approaches also acknowledge the value of different voices, there is no inherent belief that all knowledge is “constructed” or that essential truths do not exist.

Bringing together interdisciplinary teams that include both constructivists and essentialists may be something like asking atheists and devout believers to write scriptures together. However, failing to include these two fundamental approaches to modern scholarship may limit researchers’ ability to understand phenomena of interest. For public health researchers, the most useful perspective may be a pragmatic one. Not all points of view are equally effective in reducing threats to health, so perhaps the utility of any given perspective depends on its value to fulfilling the public health mission of promoting health and preventing disease. This perspective is further discussed by Angotti and Sze in Chapter Two.

To give an example, the HIV epidemic has evoked numerous analyses from both constructivists and essentialists.^{24, 25} Most (but not all) researchers now agree that the human immunodeficiency virus has been established as the proximate cause of HIV

infection beyond any reasonable doubt, and this analysis has led to the development of antiretroviral treatments that have substantially reduced morbidity and mortality—but not HIV incidence—around the world. However, the effectiveness of HIV prevention campaigns depends almost wholly on the perceptions of their recipients, who construct meaning for the messages based on their socioeconomic status, culture, nationality, gender, sexual orientation, and so on. From this pragmatic perspective, the essentialist framework has contributed a tool to treat the infection, and the constructivist approach yields insights for prevention and disease management. The more general point is that only research teams that appreciate the differences between and respective value of each approach can make informed decisions about research and intervention priorities. In Chapter Eleven, Jones and Liburd apply this insight to their discussion of the cultural dimensions of diabetes.

METHODOLOGICAL CHALLENGES AND APPROACHES TO INTERDISCIPLINARITY

A fifth theme is that interdisciplinary researchers need to become familiar with a wide range of new and old methods for data collection and analysis. New methodological technologies that have merged in the last decade or two are DNA sequencing, geographic information systems (GIS), network analysis, community-based participatory research, multilevel and structural equation modeling, and software for textual analysis. In some cases, these new technologies have enabled new interdisciplinary research questions. For example, infectious disease researchers used polymerase chain reaction methods to sequence the genotype of *Mycobacterium tuberculosis* in a cluster of patients in New Jersey and then mapped cases using GIS. This analysis led to new insights into the transmission of various strains of tuberculosis in urban neighborhoods and suggested tuberculosis control strategies.²⁶ Similarly, in Chapter Five, Maantay and her colleagues map asthma cases identified by the health care system and levels of environmental pollutants assessed by the city environmental agency to analyze the distribution of asthma hospitalizations.

Some observers have emphasized the high concept dimensions of interdisciplinary research: integrating findings from different levels of analysis, synthesizing theories from different disciplines, or framing new paradigms. We have been equally impressed by the practical and operational questions of mastering new methods, learning new languages, integrating databases collected by different agencies, and creating appropriate organizational structures to support interdisciplinary research.

INTERDISCIPLINARITY: WHICH DISCIPLINES WHEN?

For urban health researchers, *interdisciplinary* may include more players than two or more academic disciplines, a sixth theme that recurs in this book. Among the other participants in the cases described in the following chapters are other professions like urban planning, law, architecture, and engineering; representatives of other sectors

such as education, housing, criminal justice, and transportation; social movements and activists from environmental justice, women's health, food justice, occupational safety and health, and human rights; policymakers from local, state, national, and global governance bodies; and residents of the communities most affected by health problems. Each of these stakeholders has a role to play in conceptualizing, implementing, interpreting, and disseminating research studies.

Of course, not all interdisciplinary research includes all these players, but knowing who to invite to the table, when to make the invitation, what to serve to bring and keep guests at the table, and how to prevent food fights at the banquet are critical skills for interdisciplinary urban health researchers. The growing body of literature on community-based participatory research^{27–29} can help researchers identify some of the tasks, but in our view, this literature often underestimates the difficulties of this approach and pays inadequate attention to the importance and methods of bringing in nonacademic participants from social movements to policymakers and businesses. In Chapter Two, Angotti and Sze discuss some of the issues that arise when environmental justice activists interact with researchers to apply research methods to policy questions.

ROLE DEFINITIONS IN INTERDISCIPLINARY RESEARCH AND PRACTICE

Seventh, the chapters in this book suggest that strengthening the capacity for IR in urban health will require redefining the roles of various participants in the research enterprise. Both new and experienced researchers will need the ability to communicate with researchers from other disciplines. They will need to have an appreciation of their own discipline and its contributions but also an understanding of its limitations, especially in regard to the particular problem under investigation. No single researcher will be able to master all the disciplines and methods needed to understand a particular problem, but they will need to have a methodology for learning new content and also for identifying the unique contributions of other disciplines and methods. In their analysis of the “policy-induced breakdown” of health in African American communities in Chapter Six, Geronimus and Thompson show some of the benefits of integrating biological, social science, public health, and historical perspectives but also the complexity of synthesizing findings across levels and disciplines.

Students also will need to learn new skills. Researchers debate whether it is better to introduce students to other disciplines and the value of IR before, during, or after they have mastered their own discipline.^{30, 31} In our view, the more important question is what are the IR competencies that students need and how can we best assure those competencies are achieved by the end of training.

Universities, too, will need to take on new roles. Already, many institutions have created new units to study urban health, and often, these units reflect an interdisciplinary perspective. For example, the doctoral program in public health at the University of California, Los Angeles, requires students to choose both a major and minor area of concentration.³² And at City University of New York, we have created a variety of

pathways by which public health and social science graduate students interested in urban health can study across disciplines.³³

MULTIPLE LEVELS OF INTERVENTION

The eighth and final theme we highlight is the value of interdisciplinary approaches to integrating and reconciling research and practice that aims to improve population health and that seeks to promote social justice. Modern public health research emerged in the nineteenth century as reformers and scientists, first in Europe then in the United States and elsewhere, joined forces to document the adverse impact of urban living conditions on the health of residents. They then acted to improve urban conditions such as housing, water, nutrition, working conditions, and sanitation.³⁴ In the past century, however, public health research became increasingly divorced from its roots in social justice and focused more on documenting individual-level risk factors and studying the impact of various techniques for financing and delivering medical care.

In this century, social movements such as the women's movement, the labor movement, the environmental movement, and more recently, movements for living wages and food justice, more than health researchers, have followed the tradition of linking health improvements with social justice. Several chapters in this volume describe the contributions these social movements have made to improvements in urban health.

Interdisciplinary researchers can contribute to the reintegration of these two concerns by studying the linkages among allocation of power, political and social processes, and health outcomes. For example, researchers from several fields, including psychology, biology, immunology, and public health, have documented a range of adverse health effects associated with higher levels of social stress.³⁵⁻³⁸ At the same time, social scientists have shown that social processes and conditions such as racism, stigma, poverty, and unemployment produce high levels of stress at the individual and population levels. One interpretation of these findings is to develop interventions to help individuals better manage their response to stress;³⁹ another is to identify changes in social structures or conditions that could reduce levels of stress, as Geronimus and Thompson describe in Chapter Six. Only researchers who can consider and understand the range of evidence on these questions can compare the relative efficacy of these two approaches.

Undoubtedly, cities in both the developed and developing world will continue to grow throughout this century. What will this growth mean for the health of urban populations? Morbidity and mortality patterns suggest that the urban environment and the complexity of factors that contribute to the growth of cities can have both a positive and negative impact on health. Urban health researchers face a formidable challenge in sorting out how the urban environment influences health and well-being. We hope this volume will contribute to knowledge that can be translated into policies and practices to improve the health of urban communities.

SUMMARY

In this chapter, we have examined the unique contributions that interdisciplinary approaches to research and practice can make to improving population health in cities. We have described the growing interest of funders, researchers, and health professionals in interdisciplinary perspectives and identified common themes that will emerge in the chapters that follow. These themes include the importance of considering the impact of different levels of organization on health in order to develop multilevel interventions, the

methodological and practical challenges that confront interdisciplinary researchers, the process of deciding which disciplines to include in a specific research project, and the importance of defining appropriate roles for the various participants in interdisciplinary urban health research. Ultimately, the approaches to research and practice described in this volume will help health professionals strengthen the health-promoting features of urban environments and to mitigate those factors that damage health.

DISCUSSION QUESTIONS

1. Identify what you believe to be the most pressing urban health problems in the United States and globally. What do you think are the characteristics of urban health problems that warrant interdisciplinary approaches to research and intervention?
2. What insights might be lost if these problems were addressed from within a single discipline?
3. Pick an area of urban health that you think requires an interdisciplinary approach and explain (a) why it requires an interdisciplinary approach, (b) the criteria you would have for selecting the disciplines to engage, and (c) the processes you would use to pull together a well-functioning interdisciplinary team.
4. Using the example from question 3, what challenges would you face and what you would do to overcome them?

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