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Changing Living Conditions; Changing Health

U.S. Cities since World War II

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Introduction

In the previous chapter, we proposed a framework for the study of the determinants of the health of urban populations. Here, we use this framework to examine changing patterns of health and disease in U.S. cities in the six decades since World War II, calling attention to the key elements of the framework and discussing how these processes and factors have affected the health of urban populations in one specific place and time.

In the United States, underlying social and economic structures have been shaped by the nation's origins as a European colony, its conquest of indigenous peoples and importation of slaves from Africa, its rise as a world power in the 19th century, and its global economic and military reach in the 20th. The U.S. political traditions of representative democracy, division of political authority among three levels of government, free speech, and two-party system create numerous opportunities for political participation, but substantial stratification of economic and social opportunity allows the persistence of inequitable distribution of basic goods such as education, employment, and health care. Since World War II, the public health community in the United States has rarely challenged these enduring structures, in part because they are so difficult to change. The course of human history has shown, however, that such changes to underlying structures have the potential to improve population health dramatically.¹⁻³ Our focus here on more proximate determinants of health reflects not a lack of appreciation of the importance of enduring structures but rather our emphasis on achieving more immediate change in the health of urban populations.

Global and National Trends and the Health of Cities

As cities change, so too does the health of its citizens. To begin, we look at the four broad social trends that we believe explain much of the historical and geographic variation in health in U.S. cities since 1945: migration, suburbanization, changes in the role of government; and changes in the global economy. These trends influence urbanization and the movement of people and resources into cities, as well as urban and metropolitan development and the movements of people and resources within cities and their larger metropolitan areas.

Migration and Immigration

Today, more than 140 million people in the world live outside their country of birth and migrants constitute more than 15% of the population of at least 50 nations.⁴ Increasingly, people move from the countryside to the city or from a developing to a developed world city, making immigration primarily an urban phenomenon. Economic inequality, poverty, wars, and political discrimination are among the factors that have pushed people to move to cities or to change the country in which city they reside. Immigration has profound economic implications, as much for countries or regions that lose citizens as for those in which immigrants make their new homes.

The number of legal immigrants entering the United States between 1980 and 1990 doubled compared with the decade of the 1950s. According to the 2000 Census,⁵ 31.1 million U.S. residents, 11.1% of the population, were foreign born and 13.2 million of these, or 4.7% of the overall population, came to the United States between 1990 and 2000. The U.S. Immigration and Naturalization Service estimates that the number of “illegal” immigrants in the United States increased from 5 million in 1996 to 8 million in 2000.

This dramatic increase in immigration to the United States had a disproportionate affect on cities. In 1990, 93% of foreign-born Americans lived in metropolitan areas, compared with 73% of native-born Americans. Many observers⁶ credit immigrants, both documented and undocumented, with contributing to economic growth in U.S. cities in the 1990s. In previous decades, most new immigrants first settled in cities, primarily New York, Los Angeles, Chicago, Miami, San Francisco, and Boston, but in the past 10 years growing numbers of new immigrants have moved to smaller cities and suburban areas, contributing to the diversity of these areas and linking them in new ways to immigrant communities in larger cities.⁷

Before 1965, most immigrants came to the United States from Europe, but new immigration laws in 1965 and 1986 brought more from Central and Latin America and Asia. As a result, by the start of the 21st century, several big U.S. cities no longer had white majorities, but instead three or more ethnic/racial groups, none with majority status.

Cities change immigrants but immigrants also change cities,^{6, 8-10} and both

these dynamics influence health. For example, while powerful global forces have pushed millions of Latino immigrants into U.S. cities in the past two decades, these new residents have transformed many urban areas, contributing to new cultures, diets, and forms of community mobilization.¹¹ Growing Latino and Asian populations have also changed political dynamics in Los Angeles, New York, Houston, and other big cities, creating new opportunities for coalitions and the reallocation of resources affecting health.¹²

In the area of health, studies show, on one hand, that immigrants bring lifestyles and support systems that protect them against some of the adverse outcomes that other low-income urban residents experience, such as poor birth outcomes and diabetes.¹³ Some of these protections fade after a generation or two of exposure to U.S. urban conditions.^{14, 15} On the other hand, immigrants from some regions are often burdened with a higher prevalence of some diseases than long-term residents of the host country. Providing health care to the growing number of immigrants in the United States, especially in big cities, is also a problem. Children of immigrants face the task of balancing old and new worlds, a tension that can affect health.¹⁶ Many immigrants lack insurance coverage, face language and cultural barriers to medical care, and fear that encounters with public authorities, including health care providers, may lead to legal problems, including deportation.^{13, 17}

In the United States (and other industrialized countries with a low birth rate), immigration has been an important source of population growth. Sometimes this influx of impoverished people to a city in search of jobs and services has taxed available infrastructure, including transportation, housing, food, water, sewage, jobs, and health care. Overtaxed sanitary systems may directly lead to rapid spread of disease, as it has many times in North America during the past century and continues to do so in the developing world today. Also, the population strain on available jobs may result in falling wages, higher unemployment, and other declines in socioeconomic status for persons previously living in a given city. This lowering of socioeconomic status that is frequently associated with the immigrant condition can result in more limited access to health care and to poorer health. In some cities, immigration has become a contentious political issue, leading to conflict over public resources including health care.¹⁸

A true picture of the impact of immigration comes from considering the full range of benefits and costs of new residents.¹⁹ Despite recent efforts to control immigration in the United States, Europe, and other industrial nations, increasing global movement of people appears as inevitable as increasing global trade of goods, services, and information.

It is also important to note that migrants move to cities from other countries but also to other regions within a country. The mass migration of African Americans and Puerto Ricans in the middle of the 20th century changed the composition of urban populations in many U.S. cities. In the middle of the last century, these new urban residents joined the manufacturing work force, contributing to the post World War II economic boom. At the same time, however, the social networks that had sustained health in rural areas, such as kinship and community, financial and

emotional support,²⁰ often broke down in the city, leading to increasing health and social problems. As the tax base of cities declined, they were less able to offer the health and social services needed to address these emerging needs.

In summary, in the past 60 years, migrants from within the United States and from other countries have dramatically changed the population composition of urban America, increasing diversity and often maintaining population density in the face of countervailing trends such as suburbanization. They have sustained urban economies by filling low wage entry-level positions in the changing urban economy. In some cases, immigrants have put new pressures on the urban physical environment and its service delivery systems, but they have also added to the mix of urban social networks, contributed social capital, and thus modified the social environment in cities and their surrounding metropolitan areas.

Suburbanization

Beginning in the second quarter of the 20th century and especially after World War II, federal housing, tax, and transportation policies encouraged millions of middle-class people to move from U.S. cities to the suburbs.^{21–23} Housing loans and low-cost mortgages for veterans, federal subsidies for highway construction that facilitated commuting from suburban homes to urban jobs, and tax breaks for home mortgages all contributed to a major shift in population.^{7, 24}

Between the 1940s and the 1990s, millions of mostly white middle-class and working-class Americans left cities for the surrounding suburbs.²⁴ This migration led to dramatic reductions in population size, density, diversity, and resources in many cities. Cleveland, Ohio, for example dropped from 915,000 people in 1950 to fewer than 500,000 in 2000. Even though Cleveland now has 400,000 fewer people, mostly poorer than before, it still has to maintain the same streets, sewers, and water lines,²⁴ despite a smaller tax base. The exodus also deprived cities of many of the people who had been civic leaders, depleting urban social capital. As conditions in inner cities further deteriorated in the 1970s and 1980s, many middle-class people of color also left, making it even harder for these communities to cope with changing economic and social circumstances.^{25, 26}

Residential suburbanization supported a parallel movement of jobs. Lower land costs and an educated work force encouraged some employers to move, reducing job opportunities in the city. Suburbanization also put new demands on the physical environment—factories once confined to urban industrial zones now polluted a wider area, new highways increased automobile traffic and pollution, and the new housing reduced the amount of open space and tree cover that had surrounded cities.²⁷

More recently, social scientists have noted that cities and their surrounding suburbs may be becoming more similar.⁷ Between 1990 and 2000, the proportion of people of color, recent immigrants, and poor people living in suburbs increased significantly.⁵ In addition, the growth of “edge cities,” poverty suburbs, and ex-urban sprawl has further blurred the distinction between urban and nonurban areas.^{28, 29}

In the past decade, attention has focused on urban sprawl and its health impli-

cations. In part as a result of suburbanization, cities—or newer urban forms—have spread beyond their political borders. These exurban areas are characterized by lower population density, heavy reliance on automobiles, and perhaps increasing social isolation. Some investigators have linked sprawl to the rise of obesity and type 2 diabetes, primarily through reduced opportunities for physical activity.²⁷

As people move between cities and suburbs so to do health and social problems. The changing demographics, politics, and social conditions of the urban/suburban divide has led some observers to propose that cities and their suburbs be viewed as a single system rather than a dichotomy.^{30, 31} This metropolitan analysis, which has earlier roots,²³ has proven useful in studying a variety of social issues, from transportation and crime to health.

In the past two decades, for example, problems such as HIV infection, tuberculosis, drug use, and violence^{32–34} have moved both within and between metropolitan regions. During the period of TB resurgence in New York, the TB incidence rates in suburban counties were associated with the proportion of residents commuting to the city, as well as with the county's population density and poverty rate³⁴ While the specific manifestation of a problem may change as it moves to the suburbs, underlying dynamics link the two phenomena. For example, gun violence in the suburbs may involve male loners going on a shooting spree in a school or workplace, while urban gun violence may result from turf battles between drug gangs. Both events are shaped by easy access to weapons, a culture that glorifies guns, and the lack of early intervention programs for people with uncontrolled anger.

Urban dominance, the term we use to describe the ideological hegemony of urban forms in a given region or period, may help to explain the diffusion of various urban life-styles from city to suburb and then to the nation as a whole. Heroin, crack, and HIV infection first spread in urban subpopulations in the 1970s and 1980s but were then disseminated throughout the country. On a more positive note, consumption of tropical fruits and vegetables, originating in U.S. urban ethnic enclaves, and long-distance marathons, starting in big cities, have also now proliferated throughout the nation. Both health-damaging and health-promoting habits are spread by people who move between areas but also by the mass media, which often glamorize urban life-styles.

While suburban populations usually fare better than urban ones on most health outcomes, both types of area have difficulty achieving national health goals. In a study of health conditions in the 100 largest U.S. cities and their surrounding suburbs, Andrulis³⁵ found that only 30 cities and 56 of their suburban areas had met the goals for infant mortality set by the U.S. Department of Health and Human Services' *Healthy People 2000* process. On tuberculosis, only six of the 76 cities and 34 of the 75 suburbs for which data were available met the goals. Only two suburbs and no cities met the goals for reduction in low birth weight. Few cities or suburbs are expected to meet the *Healthy People 2010* goal of eliminating ethnic and racial disparities in health, in part because of the failure to reduce residential segregation.³⁶

Finally, suburbanization may have different impacts on the health of subpopu-

lations. The isolation of some suburban women and people of color from urban social networks, for example, may contribute to psychological distress, while men and children have readier access to alternate networks such as work or school.

In summary, the combined trends of migration and suburbanization changed the socioeconomic and racial/ethnic composition of U.S. cities in the postwar period. Suburbanization also put new pressures on municipal governments by reducing their tax base, on the physical environment by decreasing open space and increasing pollution, and on urban civil society by removing experienced community leaders. For suburban residents, the move from the city improved housing and often education but by the early 21st century, the health costs of the sprawl associated with suburbanization attracted more attention.

Changing Role of Government

The third national trend we highlight is the changing role of government. From the Great Depression through the 1970s, the federal government played an expanding role in improving urban conditions.^{37,38} It supported urban economic development, created safety-net programs to protect vulnerable populations, contributed to the construction of urban infrastructures for water, sanitation, and sewage, and subsidized an increasing portion of municipal budgets.³⁸⁻⁴⁰ Many of the signature federal programs of the New Deal and its successors (e.g., Aid to Families and Dependent Children, Medicaid and Medicare, Head Start, Model Cities, Jobs Corps) particularly benefited cities, in part because of the urban concentration of poverty.

A comparison of government response to declining economic conditions in New York City in the early 1930s and the mid 1970s illustrates the magnitude of these changes. In an effort to improve living conditions after the onset of the Depression, New York City Mayor Fiorello H. La Guardia and President Franklin D. Roosevelt initiated a broad set of new programs in 1935.^{41,42} With federal support, New York City hired 246,000 people to repair streets and highways and build new public housing projects, community swimming pools, water mains, sewer lines, and a sewage treatment plant. Works Progress Administration employees also built and repaired public hospitals, staffed the city's first outpatient venereal disease clinic, and established two dozen baby health stations.⁴²

In contrast, when New York City faced another fiscal and social crisis in 1975, the city cut funds for the Department of Health by 25% and staffing by 30%, laid off all narcotics detectives, and closed firehouses and tuberculosis control programs. Some health researchers argue that these government decisions contributed to the resurgence of tuberculosis in the late 1970s and to the rapid spread of HIV infection and crack addiction among the city's most vulnerable populations.^{33,43,44}

Thus, over the decades, as the need in cities increased, the public resources available to meet those needs declined. In 1978, the federal government was the source of 15% of municipal revenues in the United States, but by 1999, its contribution had fallen to 3%.^{24, p. 145} In the past 25 years, more government functions have devolved to state and local governments; taxes have been cut at the federal, state, and local levels; some environmental and consumer regulations have been loosened; and many previously public services (e.g. sanitation, water, health care)

have been privatized. These political and economic changes have been accompanied by ideological shifts that challenge the ability of government to solve social problems and advocate instead free market solutions.⁴⁵⁻⁴⁸

These changing dynamics between cities and suburbs also reduced the political voice of urban residents. For much of the 20th century, urban political machines and labor unions had strong voices in many city and state governments and in Washington. By the last quarter of that century, however, in part as a result of the decline of urban political machines and lower urban voter turnout, the influence of suburban voters often surpassed that of urban ones.⁴⁹ The devolution of responsibility for many health and social services from the federal to the state level, the changing role of government (illustrated by the 1990s Republican Contract with America proposals) further reduced urban influence. In recent times, some cities have experimented with more metropolitan forms of governance and some urban researchers have advocated a “metropolitics” that links the fate of cities with their surrounding suburbs.^{24, 31} These national trends in the role of government have affected the financial and political support that municipal governments can mobilize to confront new threats to health.

Globalization

The fourth factor shaping U.S. cities has been changes in the global economy. Globalization describes the increased mobility of goods, services, labor, technology, and capital throughout the world. Although cities have always been connected to the global economy, beginning in the post World War II period, and accelerating in the 1990s, the U.S. economy became ever more dependent on international trade and more capable of moving capital from one part of the world to another.

As manufacturing in cities declined, information and service industries became more important.⁵⁰ Multinational corporations grew in size and power and a handful of “world cities” emerged as the command and control centers of international capital.^{51, 52} Globalization has affected the well-being of urban residents in several ways. First, the new mobility of U.S. capital allowed corporations that were once physically and politically tied to a place to move as the opportunity to reduce costs or increase profits emerged.⁵³ Since many U.S. manufacturing corporations were located in or near cities, their departure led to reduced municipal revenues, unemployment, and population loss. Combined with the losses of people and jobs to the suburbs, these changes had catastrophic effects on some cities. Between 1975 and 1995, for example, Detroit, the center of the U.S. automobile industry, lost a third of its population but doubled its poverty rate.⁵⁴

In the first half of the 20th century, manufacturing jobs had attracted immigrants and provided a pathway out of poverty for many urban residents and sustained municipal tax bases and economies.^{25, 26, 55} However, the subsequent job loss contributed to urban unemployment and underemployment, poverty, and the increasing racial and class segregation of the very poor.^{26, 56} Concentration of urban poverty among blacks and Hispanics further exacerbated the racial divide in the United States.^{57, 58} It also increased the pool of people available to the informal economy, including the drug trade, which had also become ever more globalized.⁵⁹

In some cities, globalization has thus contributed to community destabilization and its attendant health problems.

At the same time, a new urban economy of information and services emerged.⁵⁰ On one hand, cities continued to be the economic engine of the U.S. economy and the focal point for global interchanges of people, services, products, and money.^{60, 61} On the other hand, the new economy created relatively few high-paying jobs and many low-wage ones, contributing to economic inequality and poverty.²⁶ In both developed and developing countries, cities became the generators of economic inequality.

Globalization has created new winners and losers within cities. Populations that lack the skills, networks, and education to succeed in the global economy become marginalized and increasingly have trouble meeting the needs for housing, education, and health care that contribute to well-being. The growth of what some have called the “urban underclass”^{26, 45} with its concentration of health and social problems is in part the result of these economic changes. Public health studies show that some sectors of the urban underclass have rates of mortality many times higher than the general urban population.^{62, 63} This burden contributes to the “urban health penalty,” the excess morbidity and mortality associated with urban living.⁶⁴

In contrast, the winners of globalization, higher socioeconomic status urban and suburban residents, have new opportunities to maintain their health using their higher levels of wealth and education. With access to food from around the world, the best health care, and fitness centers and personal trainers, the upper sectors of the U.S. population have achieved an unprecedented standard of living. In some cases, wealthy urban residents may be a magnet for resources that can also improve the health of their less wealthy neighbors. This “urban health advantage”⁶⁵ may explain lower rates of some health conditions and risky behaviors among urban compared with nonurban populations.

At the same time, however, even the privileged classes also face new global threats of infectious disease, terrorism, and other forms of political conflict.^{66, 67} Since most world travelers and commercial goods first enter the country through a city, urban residents are on the frontlines of global disease interchanges. Cities have long taken measures to protect their residents from “foreign” diseases,^{68, 69} measures now applied to avian flu, severe acute respiratory syndrome (SARS), the Marburg virus, and other emerging infections.

By the early 21st century, globalization brought a new threat to U.S. cities: terrorism, although some terrorist attacks had local origins. Terrorist attacks had the potential to impose substantial mortality and also to precipitate a range of other social responses, from increasing psychiatric symptoms to diversion of public health resources from dealing with persistent problems to combating potential attackers.

On another level, globalization has also profoundly affected American diets. By 1996, more than half of many types of produce consumed in the United States was grown outside the country.⁷⁰ As more food enters the United States from other countries, residents have access to a more diverse diet but also face the risk of

biological or chemical contamination of food originating in countries with lower environmental standards. Because of multinational food markets, ethnic enclaves, and proximity to ports, urban residents appear to consume more foreign-grown food than do nonurban residents.

Globalization has shaped the world's environments in ways that have both a direct and an indirect impact on cities. As the United States increases its dependence on and use of fossil fuels, often imported from other nations, it contributes to acid rain and ozone depletion,⁷¹ two global environmental problems. Recent studies suggest that thousands of urban deaths in the United States are caused by air pollution from transportation.⁷²

In summary, globalization moves people and resources around the world, usually for the economic benefit of the most powerful sectors of society. Since cities are the nodes of global trade, these movements usually pass through cities, changing their physical and social environments and the resources available for health. For some people in some cities, globalization has brought important benefits—new jobs, a more varied food supply, and a cleaner environment as polluting manufacturing plants left. For many other urban residents, however, both in the United States and elsewhere, the free market globalization of the late 20th and early 21st centuries has reduced economic opportunity, marginalized vulnerable populations, and contributed to environmental degradation.

Municipal-Level Determinants

While recent national and international trends have influenced living conditions in U.S. cities directly, they are also mediated by a set of variables that in our framework we label municipal-level determinants of health. Here we examine how government, markets, and civil society have influenced the health of U.S. urban populations in the past 60 years.

Government

Government influences the health of urban populations by providing municipal services, regulating activities that affect health, and setting the parameters for urban development. Government policies can exacerbate or reduce social inequality and support living conditions that promote or damage health. Government activities in many sectors affect health, including those in public education, public transportation, public safety, criminal justice, welfare, housing, and employment. While the governmental structure in the United States—three levels of government each with three separate branches—creates a complex array of sometimes overlapping responsibilities, our interest here is in the operation of government at the local level. Table 2.1 lists the services that most local governments provide and describes their functions related to health and some health outcomes these functions influence. In this section, we consider local agencies that do not have a direct mission related to health; later, we consider the role of health care and public health services.

Table 2.1. Municipal Systems and Their Impact on Health

Agency	Functions related to health	Health-related outcomes affected by agency
Schools, education	Health and physical education, school health services, school safety, food programs, environmental protection	Injuries, chronic disease management, nutritional status, fitness
Social services, human resources	Safety-net programs, such as public assistance, food and Medicaid, child protection, family support	Health care utilization, nutritional status, family violence, mental health
Police	Prevention of interpersonal violence, reduction of substance abuse, control of community disorder, prevention and control of disasters	Injury, homicide, community conflict
Courts, jails; probation	Correctional health services, discharge planning, jail-based drug treatment and violence-prevention services	Tuberculosis, violence, drug use, use of mental health services
Fire services	Control and prevention of fires, building inspections	Fire-related injuries and deaths, community abandonment
Housing	Regulation of housing conditions, maintenance of public housing	Lead poisoning, asthma control, hypo- and hyperthermia
Homeless services	Shelter and health and social services for homeless	Substance use, infectious diseases, various pediatric conditions
Parks and recreation	Access to safe opportunities for exercise and recreation	Physical fitness, obesity, exposure to pollutants, perceptions of community well-being

(continued)

Agency	Functions related to health	Health-related outcomes affected by agency
Sanitation	Removal and safe disposal of trash, promotion of recycling, pest control	Exposure to pollutants associated with solid waste, perceptions of community well-being
Environmental protection, water supply	Control and reduction of air, water, soil, and noise pollution	Exposure to variety of pollutants
Streets and highways, traffic control	Traffic and roadway maintenance	Injuries and deaths related to motor vehicles, exposure to air and noise pollution
Mass transit	Development and management of buses, subways, and other modes of transit	Physical activity, motor vehicle injuries and deaths
Consumer protection	Regulation of food and other markets, consumer education	Food-related illnesses, access to tobacco and alcohol, consumer-product injuries or illnesses
Economic development	Increased employment opportunities, management of adverse health effects of development projects	Household income, exposure to project-related pollution
Human rights	Monitoring and control of discrimination and stigma	Injuries and mental health impact of bias-related attacks, level of social support for marginalized populations
Zoning and urban planning	Siting of undesirable or unhealthy facilities, management of population density	Exposure to toxins, perceptions of community well-being

Public transportation and local regulation of private transportation offer one example of how municipal services in non-health arenas can affect health. Public transportation facilitates population mobility in densely populated urban areas, increasing access to employment, health care, or stores that sell fresh fruits and vegetables. Lack of transportation has been identified as one determinant of low employment levels in inner cities.²⁶ Effective traffic management and good public transportation reduce automobile injuries and deaths and speed the delivery of emergency medical services. It has been shown that more densely populated cities have worse cardiovascular survival, which may be due to the longer response times of emergency medical and fire services trying to reach persons after unexpected cardiac events.⁷³

Changes in mental health policy in the middle of the last century illustrate how policy shifts can have profound and unintended consequences on urban living conditions. In the 1960s and 1970s, many state governments closed mental hospitals in response to the development of new psychiatric medications, public outrage at the inhuman conditions in many hospitals, and a desire to save money. Over the next two decades, increasing numbers of mentally-ill people found their way onto city streets and into homeless shelters and jails. The terrible conditions in these settings endangered the health of the mentally ill themselves and raised public fears about crime, violence, and disorder. A policy change intended to improve the lives of the mentally ill instead contributed to worse outcomes for the mentally ill and more widespread perceptions of urban decline.⁷⁴

In the past few decades, the previously described national trends in government—the decline of urban political machines, a continuing squeeze on local tax revenues, and the political belief that government should do less rather than more—have reduced the ability of cities to respond forcefully to threats to health. For example, Klinenberg⁴⁸ in his “social autopsy” of the more than 700 heat-related deaths during the Chicago heat wave in 1995 describes how these long-term changes in government affected that city’s capacity to respond to this disaster. By the mid 1990s, municipal officials, journalists, and other opinion makers believed that community organizations and families rather than the city agencies should take the lead in protecting vulnerable individuals, that people in need should be active consumers of often-privatized social services, able to find what they need in times of crisis, and that most problems that city governments faced should be solved by the paramilitary services (e.g., police and fire) that remained in the stripped-down municipal governments of the 1990s.^{48, p. 142} As a result, Chicago failed to coordinate the many services that could have protected frail and isolated citizens, leading to hundreds of preventable deaths.

Other examples that illustrate the role of municipal government in health include the resurgence of tuberculosis in New York and other cities in the 1980s,^{34, 43} related in part to the establishment of crowded, poorly ventilated homeless shelters and jails, as well as cuts in public health services, and the outbreak of cryptosporidium-related diarrhea in Milwaukee in 1993 that sickened 200,000 residents after a breakdown in the water filtration system.⁶⁷

Municipal governments have the capacity to modify the urban physical and

social environments and to deliver or oversee the delivery of public health, health care, and social services. To the extent that municipal governments have the political will, the financial resources, and the technical expertise to take on this role, they can play a powerful role in health promotion and disease prevention.

In the past several decades, cities have faced a host of new problems, including growing concentrations of poor people, increasing income inequality, epidemics of infectious diseases and substance abuse, increased public demands to control violence, loss of manufacturing jobs, and the inability of urban school systems to prepare most graduates to meet the demands of the new economy. At the same time, cities have fewer resources, a diminished local tax base, reduced federal support, and no national leadership advancing an urban agenda. City leaders debate whether to view municipal services as a strategy for community building or a consumer product that should be organized to respond to market forces.⁴⁷ The outcome of this debate will determine how local governments use their resources to meet social needs.

The collapse of most municipal services in New Orleans in 2005 in the aftermath of Hurricane Katrina provides a stark illustration of the health and social consequences of municipal breakdowns. The government reaction to Katrina also shows the challenge of coordinating federal, state, and local public responses to threats and the high costs of inadequate coordination.

Markets

In early human history, the density of urban populations and the resulting specialization of labor created the conditions for markets.⁷⁵ As a method of allocating scarce resources, markets are a quintessentially urban form. Today, local, national, and global markets play a central role in shaping the conditions that determine the health of urban populations. Markets allocate housing, jobs, food, medical care, and transportation and, because of privatization, increasingly play a role in education, public safety, and others sectors previously confined to the public realm.

The historical improvement in the standard of living in U.S. cities (and other areas) and the ensuing improvements in health are in large part a function of the free market's ability to provide most people in this country with a growing supply of the necessities of life. Yet, persistent and growing socioeconomic disparities in urban health, the staggering toll from tobacco, concentrations of pollution in some urban areas, and a growing epidemic of obesity are among the indicators of markets' limitation in protecting health.

Since employment has such a strong influence on health, the job market plays a particularly important role. Wilson²⁶ describes how national and local factors interacted to reduce employment opportunities for disadvantaged urban residents after the 1970s. This failure of job markets contributed to the economic and social isolation of inner-city neighborhoods and their related health problems. For recent immigrants, the job market created urban niche employment in construction, garment production, household services, and other sectors, each with characteristic occupational health risks; immigrant construction workers, for example,

often face especially perilous working conditions.⁷⁶ On a positive note, national prosperity in the 1990s made it easier for low-income urban residents to find work and, as a result, income inequality briefly narrowed.

An examination of housing and food provides other examples of the importance of markets to the health of urban populations. Despite unprecedented economic prosperity in the 1990s, the number of people who were homeless actually increased during that period.⁷⁷ Homelessness has been associated with a variety of adverse health outcomes.^{78, 79} While homelessness has many determinants, most observers agree that the fundamental cause of the increase was a decreasing supply of affordable low-income housing. New York City, for example, where Wall Street led the 1990s national prosperity, had a shortage of 250,000 to 500,000 housing units at the end of the decade. Housing investors made higher profits in high- and middle-income housing, government reduced support for subsidized housing, and the housing market was unable to meet this pressing demand, placing hundreds of thousands of mostly urban people at risk.

Markets also influence the availability of food. A recent study found that black Americans living in neighborhoods with supermarkets were more likely to consume fresh fruits and vegetables than those in neighborhoods without supermarkets.⁸⁰ Previous studies suggest that poor urban neighborhoods often lack such stores.⁸¹ Market forces can also lead to improvements in diet, as the recent growth of urban farmer's markets, which sell fresh produce directly to consumers, demonstrate.⁸²

Markets shape urban living conditions by distributing the necessities of life among various sectors of the population, according to the rules of the free market system. These market-determined housing, food, and employment niches offer differing opportunities for health.^{83, 84} Where current markets fail to provide some people with sufficient food, shelter, or health care to maintain health, government or civil society needs to step in or population health will suffer. In the past decades, several vulnerable populations have emerged in U.S. cities: children living in poverty,⁸⁵ the homeless, the frail elderly, certain sectors of people losing welfare benefits, recent immigrants,⁸⁴ and inmates released from correctional facilities.⁸⁶ Often, the current food, employment, housing, and health care markets have met their needs poorly, risking not only their own health but also the well-being of urban populations more broadly. What level of suffering or disease is socially acceptable is of course a political decision.

At the same time, markets can also affect the health of middle- and upper-income residents (as well as low-income groups) by making unhealthy products too easily available. The epidemic of obesity,⁸⁷ easy access to tobacco, guns, and alcohol, and the rapid spread of polluting, rollover-prone sport utility vehicles⁸⁸ in upscale urban neighborhoods demonstrate that market "successes" can be public health failures. Understanding the pathways by which specific markets influence health may lead to the development of more effective interventions, whether market-driven or government-sponsored.⁸⁹

Civil Society

Civil (or civic) society defines the space not controlled by government or the market where residents interact to achieve common goals. While these three sectors are conceptually distinct, in practice they work closely together. In the past decade, politicians from the left and the right, as well as academics from several disciplines have debated the role of civil society, whether it is contracting or expanding and what influence it has on health.⁹⁰⁻⁹³ Related concepts include social capital, social cohesion, social support, community capacity, and community competence.⁹⁴⁻⁹⁶

Several participants in civil society influence the health of urban populations. Community-based organizations, such as neighborhood associations and tenants groups, provide services, mobilize populations, and advocate for resources. Churches and faith-based organizations offer social support, safe space, and political leadership.^{97,98} Social movements struggle for institutional and policy change.⁹⁹ The state of civil society in a community at a given time can influence its ability to protect the health of residents, promote social cohesion, and counter isolation, stigma, or marginalization.

A few examples illustrate the roles these stakeholders have played in U.S. cities. Community-based organizations (CBOs) have a long history of working to improve urban living conditions.⁴⁰ In the 1960s and 1970s, sometimes with government support, urban CBOs promoted economic development, established health centers, advocated for improved public education, and built new housing. In the 1980s and 1990s, CBOs were at the forefront of the struggle against the AIDS epidemic, playing a key role in health education, linking people to services, and encouraging policy change.¹⁰⁰

In the last half of the 20th century, new social movements emerged, many with roots in urban communities.¹⁰¹ The civil rights, women's, environmental, and gay rights movements each took on health issues, and their accomplishments contributed to higher levels of political participation, improved health care, reduced discrimination, and stronger environmental protection. While some of these movements eventually developed a national perspective, their origins and their most successful actions were usually in cities, whose dense social networks, defined political spaces, and histories of struggle provided fruitful recruiting grounds. More recently, movements for environmental justice, food security, and living wages demonstrate their potential for improving the health of urban populations.

Unlike municipal governments, which are obligated to employ traditional political strategies to achieve their objectives, social movements can use nontraditional and "contentious" strategies,¹⁰² thus promoting public debate and citizen involvement in deciding such health-related questions as the right to abortion services, the appropriateness of needle exchanges for injecting drug users, or the appropriate response to polluting hazardous-waste facilities.

Civil society is a powerful influence on a city's social environment. Its strength and assets can determine to what extent a particular urban social environment supports health by buffering people against stressful conditions and events. For urban

health researchers, finding valid ways to assess the state of civil society and analyze its impact on specified health outcomes is an important task

Urban Living Conditions

Urban living conditions are the most proximate influence on the health of city residents. These conditions are shaped by global and national trends, as well as the municipal characteristics described in the preceding section. Four such characteristics of urban life that are especially important to health include the people who live in a city, the physical and the social environment in which they live, and the array of health and social services that are available. Urban settings differ from nonurban ones in such dimensions as population size, density, and diversity, the level of development of the human-built environment, and the number and diversity of social networks and formal and informal service agencies. These characteristics are independent variables (i.e., determinants of health) and intermediate outcomes, the object of change necessary to achieve desired improvements in health. We consider here some of the ways that these characteristics have changed in the past several decades and the implications for the health of urban populations in the United States.

Population

Compared with nonurban areas, U.S. cities have higher concentrations of poor people, people of color, and recent immigrants. Some cities also have higher proportions of children and multi-millionaires. But although urban and nonurban residents differ in important ways, it is important to acknowledge that these differences are not inherent within individuals—there is no urban genotype with unique genetic characteristics. Rather, social processes such as immigration and suburbanization have sorted people into various urban and nonurban settings. Similarly, other social processes, for example, racial and gender discrimination, housing markets, and access to higher education, sort urban residents into different communities and social strata. Within these niches, the inherent characteristics of individuals interact with the particular social and physical environment to produce an “urban phenotype.”

Biological and social markers of the “urban phenotype,” the observable characteristics of city dwellers, might include lungs blackened by exposure to higher levels of air pollution, immunity to prevalent infectious diseases, psychological distress related to the quality of the living environment, and membership in several social networks (including the potential for drug using and sexual networks and gangs, as well as a variety of civic and social clubs). This belief that the characteristics of place are as important as those of people has led to “place-based” research that seeks to link health outcomes to exposure to various dimensions of the urban environment.¹⁰³ How a unique set of urban conditions becomes “embodied” in a particular population and how those states of health in turn influence the health of others defines a key question for urban health researchers. For example, the compromised immune systems of urban homeless and drug using populations

in U.S. cities in the 1980s reflected (“embodied”) their strenuous living conditions and in turn contributed to the wider spread of tuberculosis and HIV infection.¹⁰⁴

As we have previously observed, in the United States, some of the differences between urban and nonurban areas are diminishing. Moreover, there is still wide variation in population characteristics within urban neighborhoods and between different cities and metropolitan areas. This variability provides urban health researchers with rich opportunities for studying the interactions between population characteristics and the other dimensions of urban life.

Physical Environment

The urban physical environment includes the built environment, the air city dwellers breathe, the water they drink and bathe in, the indoor and outdoor noise they hear, the parkland inside and surrounding the city, and the unique geological and climate conditions. McNeill⁷¹ has argued that what distinguished the 20th century from previous ones and cities from nonurban areas is the degree to which humans have become the primary influence on the physical environment.

The human-built environment includes housing, which can influence physical and mental health, increasing incidence of asthma and other respiratory conditions, injuries, and psychological distress, and negatively affecting child development.¹⁰⁵ As the United States faces a growing shortage of affordable housing in its cities, these housing-related health problems may increase.¹⁰⁶ Urban design may also influence crime and violence rates,^{107, 108} demonstrating the close interactions among urban physical and social environments.

Highways and streets can pollute water through runoff, destroy green space, influence motor vehicle use and accident rates, and contribute to the urban heat sink, absorption of heat that can increase the temperature in cities by several degrees. The urban infrastructure is also part of the physical environment and determines how a city provides water and energy and disposes of garbage.³⁹ As this expensive infrastructure ages in a period of declining municipal resources, breakdowns may increase, causing health problems related to water, sewage, or disposal of solid waste. Depending on their construction, city structures like bridges and skyscrapers may be vulnerable to natural or human disasters, as the San Francisco earthquake and the September 11, 2001, attack on New York City demonstrated.

In the first half of the 20th century, air pollution in the United States increased steadily as industrialization progressed, industries and homes used coal for power and heat, and automobiles proliferated. Cities had the worst air pollution.⁷¹ In the second half of the century, however, and especially in the past 25 years, many forms of air pollution decreased as coal was phased out, manufacturing plants moved to the suburbs or abroad, lead was banned from gasoline, and the automobile industry was forced to build cleaner cars. The environmental movement played an important role in these improvements, prodding local and federal governments to adopt and enforce environmental regulations that protected human health.¹⁰⁹ Despite these advances, however, as late as the mid 1990s, researchers estimated that urban air pollution contributed to 30,000 to 60,000 U.S. deaths a year.^{72, 110}

Other threats to public health such as hazardous-waste landfill sites, often located in or near urban areas, may be associated with risks of low birth weight, birth defects, and cancers.¹¹¹ Noise exposure, a common urban problem, may contribute to hearing impairment, hypertension, and ischemic heart disease.¹¹² Some environmental threats are concentrated in low-income urban neighborhoods, exacerbating disparities with better-off areas.¹¹³

Social Environment

The social environment describes the structure and characteristics of relationships among people within a community. Components of the social environment include social networks, social capital, and the social support that interpersonal interactions provide. For a comprehensive definition of many of these factors, see Berkman and Kawachi.¹¹⁴ The social environment influences health through a variety of pathways, including the support of individual or group behaviors that affect health (e.g., smoking, diet, exercise, sexual behavior), buffering or enhancing the impact of stressors, and providing access to goods and services that influence health (e.g., housing, food, informal health care).¹¹⁵ A city's social environment can support or damage health.¹¹⁶⁻¹⁸

Many of the national- and municipal-level changes discussed in this chapter have exposed urban residents to new social conditions in the past century that have had profound, but complex, effects on health. For example, in the United States the number of persons living in the 100 largest cities has increased from 42 million to 56 million between 1950 and 2000.⁵ Nearly half of the 100 largest cities are now home to more "minorities" than whites, with 71 of these cities losing white residents and a 43% increase in the number of Hispanics. Immigration to cities continues; for example, there are 76 different language groups in Brooklyn, a single borough in New York City.¹¹⁹ More Americans now have the opportunity to interact with people who look different, have different values and beliefs, and may speak a different language. These opportunities have the potential both to enhance health (e.g., improve diet, broaden social support) and to damage it (e.g., break down health-protecting values related to drug or sexual behavior). Similarly, overall racial diversity may simply mask increased regional segregation. Between 1980 and 2000, segregation of blacks in the United States declined, but levels of segregation were still highest for blacks, and several measures of the segregation of Hispanics and Asians increased.¹²⁰ Segregation has been associated with poor health outcomes and probably operates through several pathways.¹²¹

The variety of social settings available within cities can affect the well-being of many urban residents. The individual who may be considered "deviant" in a homogeneous community can find others with similar characteristics in a more diverse setting. The emergence of urban gay communities illustrates this phenomenon. The young immigrant may identify with both the culture of the country of origin and urban youth culture, reducing the dissonance of transition. Another prominent example of the complex changes in the social fabric of cities during the past century has been the interplay between racial stratification and segregation.^{56, 58}

Ultimately, the growing role of mass media in particular and market forces in general has had a profound effect on the changing social environment of modern U.S. cities. Today parents, schools, and churches, traditional mainstays of the urban social environment, compete with hip hop stars, tobacco and clothing advertisers, and Hollywood for the attention of their children. As Madison Avenue and Wall Street search for new markets, they have packaged and disseminated selective elements of inner-city (and mainstream) culture—a glorification of misogyny, violence, and drug and alcohol use and worship of consumerism.¹²² This barrage of messages now constitutes an important part of the urban social environment, as yet unstudied in systematic ways by health researchers.

Health and Social Services

Cities are characterized by a rich array of health and social services. Even the poorest urban neighborhood often has dozens of social agencies, each with a distinct mission and service package. Their organizational life-span may be short, the funding inadequate, the quality of services uneven, and the coordination with other providers limited, but these assets provide an important resource for health that may not be available in rural or even in suburban neighborhoods. Many of the inner-city health successes of the past two decades, for example, tuberculosis control and reductions in HIV transmission, teen pregnancy rates, and new cases of childhood lead poisoning, have depended in part on the efforts of these groups.

Low-income urban residents, however, face significant obstacles in finding health care. First, low-income people, blacks and Latinos, overrepresented in urban areas, are more likely to lack health insurance coverage.³⁵ In turn, uninsured persons face barriers to care, receive poorer quality care, and are more likely to use emergency systems.¹²³ Recent immigrants, homeless people, and inmates released from jail or prison, all disproportionately represented in urban areas, also face specific obstacles in obtaining health care. These populations then put a burden on health care systems not adequately funded or prepared to care for them.

Social services for disadvantaged or marginalized populations are often susceptible to an economic cycle that leaves cities least able to support services when needs are greatest as a result of declining living conditions. In the past few years, for example, the decline in the national economy and tax revenues has forced many cities and states to reduce services at the very time unemployment, homelessness, and hunger are increasing.

U.S. cities are characterized by sharp disparities in wealth between relatively proximate neighborhoods. These disparities are often associated with disparities in quality of care.³⁵ The presence of well-equipped, lucrative, practice opportunities in the same city decrease the likelihood that service providers will work in lower paid, public service clinics, particularly when these latter services are burdened by limited resources and wavering political commitment.

In summary, the interactions among the availability, affordability, accessibility and quality of health care and social services and the relative demands for service by high-need populations determine their role in improving the health of

urban populations. While health care advocates in urban areas are rightly pressing the U.S. health care system to resolve issues of access and quality, most public health researchers agree that improvements in health care constitute only one part of a comprehensive strategy to improving health.¹²⁴

Public Health Intervention and Research

While public health interventions are at the center of our interest in this volume, it is only after considering the range of factors that influence urban living conditions that we can profitably turn our attention to this task. For public health professionals, the specific characteristics of the urban setting for which they are responsible shape the opportunities and constraints for intervention. The attributes of the population, the urban physical and social environments, and the health and social service systems constitute the raw materials for constructing public health programs. Combining these ingredients into effective interventions that address the realities of urban life at the start of the 21st century is the challenge that faces public health today.

The urban public health community includes those whose primary mission is to undertake action or research for the express purpose of promoting health and preventing disease. It consists of local and state health officials, some health care providers, and some participants in civil society. Its ability to contribute to health is shaped by enduring structures, global and national trends, and the actions of government, markets, and civil society. In the past few decades, U.S. public health practitioners have carried out a wide variety of programs designed to improve the health of urban populations.^{125, 126}

Historians have debated the relative influence on urban health of organized public health efforts compared with more general improvements in living conditions.^{127, 128} Recent research suggests it may be more useful to examine this question in the particular than in general,¹²⁹ suggesting another priority for urban health researchers. For example, experience with resurgent tuberculosis in U.S. cities indicates that adequately funded public health programs (e.g., directly observed therapy or DOT programs) can contain some epidemics without addressing the more fundamental social conditions that contribute to their spread.¹⁰⁴

How do changing social and economic conditions interact with public health interventions and medical advances to influence health outcomes? In the 1990s, homicide rates declined precipitously in many U.S. cities, teenage pregnancy rates dropped, and new cases of AIDS fell sharply. Some studies suggest that police practices, sexuality and HIV education, and the wider availability of antiretroviral medications contributed to these respective outcomes, but it is also true that all three trends unfolded in a period of national prosperity, when living conditions for at least some vulnerable populations improved. Future research should focus on understanding these relationships. It may be that developing interventions that can “ride the wave” of improving social conditions can achieve better outcomes than those forced to fight the tides of negative trends.

In the United States, public health interventions have used various strategies

to promote health and prevent disease among urban populations. These include strategies to modify individuals, usually by education to change risk behavior; to modify social environments by providing increased social support, enhancing social networks, or changing social norms; to change physical environments by improving housing, regulating pollution, or promoting new approaches to urban planning; and to modify health and social services by increasing access, offering enhanced services, training providers, and improving the quality of care. A recent review of published reports on health interventions designed to reduce selected health problems in U.S. cities found that the changing individuals and health care services were the most frequently used methods and that few interventions operated on more than one or two levels.¹²⁶

The framework proposed in Figure 1.4 in Chapter 1 suggests that interventions to improve health are more likely to be effective if they address the full range of determinants of urban living conditions.

Conclusions

Enduring structures, global and national trends, municipal determinants, and urban living conditions in communities have interacted to create the unique patterns of health and disease that characterized U.S. cities in the last half of the 20th century. In the 19th and 20th centuries, public health researchers focused on the health consequences of industrialization and urbanization. In recent decades, urban researchers have emphasized the impact of the diffusion of urban characteristics to wider metropolitan regions. To develop policies and programs that can make healthy cities a reality in the United States and in other developed and developing nations in the 21st century, we need to move beyond describing the health-related characteristics of various urban populations and analyze how living conditions in cities and metropolitan areas affect health, especially differentially between groups within cities. Such a shift in framework is necessary if we are to make comparisons that can inform interventions at the appropriate level and evaluate their effectiveness in improving the health of urban populations.

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