



HIDDEN CITIES

UNMASKING AND OVERCOMING HEALTH INEQUITIES IN URBAN SETTINGS



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NOTE: Examples from specific cities are used to illustrate different points within this report. These examples should not be interpreted as assessments of cities' overall level of health equity, nor should they be taken to mean that any city is more or less advanced than other cities in terms of its action to tackle the root causes of urban health inequities.

CONTENTS

FOREWORDS	IV
EXECUTIVE SUMMARY	VII
PART ONE. THE DAWN OF AN URBAN WORLD	1
INTRODUCTION TO PART ONE	2
CHAPTER 1. THE RISE OF MODERN CITIES	3
DEMOGRAPHICS OF URBANIZATION AND TRENDS	4
THE BENEFITS OF URBANIZATION	6
THE CHALLENGES OF RAPID, UNPLANNED GROWTH	7
CITIES OF THE FUTURE	10
CHAPTER SUMMARY	10
CHAPTER 2. HEALTH IN AN URBAN CONTEXT	11
DETERMINANTS OF HEALTH	12
HEALTH DETERMINANTS IN URBAN SETTINGS	12
HEALTH CONSEQUENCES OF LIVING IN CITIES	28
CHAPTER SUMMARY	29
PART TWO. UNMASKING HIDDEN CITIES	31
INTRODUCTION TO PART TWO	32
CHAPTER 3. URBAN HEALTH INEQUITY AND WHY IT MATTERS	33
HEALTH INEQUALITY AND HEALTH INEQUITY EXPLAINED	34
WHY URBAN HEALTH INEQUITY MUST BE UNMASKED AND OVERCOME	35
URBAN HEALTH EQUITY IS RELATED TO HUMAN RIGHTS AND INTERNATIONAL FRAMEWORKS	37
CHAPTER SUMMARY	38
CHAPTER 4. URBAN HEALTH INEQUITIES REVEALED	39
HEALTH INEQUITIES BETWEEN RICH AND POOR URBAN POPULATIONS	40
HEALTH INEQUITIES BETWEEN NEIGHBOURHOODS	49
HEALTH INEQUITIES BETWEEN SUBGROUPS OF CITY DWELLERS	54
CHAPTER SUMMARY	56
CHAPTER 5. ACHIEVING THE MILLENNIUM DEVELOPMENT GOALS	57
INTRODUCTION TO THE MILLENNIUM DEVELOPMENT GOALS	58
MDG 1: ERADICATE EXTREME POVERTY AND HUNGER	59
MDG 4: REDUCE CHILD MORTALITY	62
MDG 5: IMPROVE MATERNAL HEALTH	64
MDG 7: ENSURE ENVIRONMENTAL SUSTAINABILITY	66
CHAPTER SUMMARY	67

PART THREE. OVERCOMING URBAN HEALTH INEQUITIES **69**

INTRODUCTION TO PART THREE **70**

CHAPTER 6. URBAN GOVERNANCE FOR REDUCING HEALTH INEQUITIES **71**

THE ROLE OF LOCAL GOVERNMENTS 72

PARTNERSHIPS: THE KEY TO GOOD URBAN GOVERNANCE 72

PREREQUISITES FOR LOCAL ACTION 75

CHAPTER SUMMARY 79

CHAPTER 7. BUILDING AN EVIDENCE BASE FOR ACTION **81**

THE IMPORTANCE OF EVIDENCE FOR SUSTAINABLE AND EFFECTIVE ACTION 82

THE IMPORTANCE OF DISAGGREGATED DATA 83

DATA CONSIDERATIONS 83

WHO'S URBAN HEART 84

UN-HABITAT'S URBANINFO 87

CHAPTER SUMMARY 88

CHAPTER 8. TAKING ACTION **89**

THREE MAIN APPROACHES TO REDUCING URBAN HEALTH INEQUITIES 90

CHOOSING PRIORITY INTERVENTIONS 93

MONITORING AND EVALUATION 96

CHAPTER SUMMARY 96

CONCLUSION: THE PRICE AND THE PROMISE OF OUR URBAN WORLD **97**

A ROLE FOR ALL: WHO CAN DO WHAT? 100

ANNEXES **103**

ANNEX A. ADDITIONAL RESOURCES AND TOOLS 104

ANNEX B. METHODOLOGICAL APPROACH FOR ASSESSING URBAN HEALTH INEQUITIES 106

ANNEX C. EXAMPLES OF INTERVENTIONS 109

REFERENCES **118**

BOXES

Box 1.1 Healthy Cities around the world (by WHO region) 7

Box 1.2 Spotlight on Nairobi's slums 8

Box 1.3 Spotlight on cities vulnerable to sea level rise 9

Box 2.1 Climate change: a multiplier of health risks 17

Box 2.2 Spotlight on Haiti's earthquake 27

Box 2.3 Spread of SARS via urban centres 28

Box 5.1 The eight Millennium Development Goals 58

Box 6.1 Spotlight on Nakuru, Kenya 72

Box 6.2 Spotlight on community participation in urban areas of Catalonia, Spain 73

Box 6.3 Spotlight on community participation in the urban slums of Nairobi, Kenya 76

Box 6.4 Spotlight on the London Health Inequalities Strategy 77

Box 6.5 Spotlight on supportive governance structures in Vancouver, Canada 77

Box 6.6 Recommendations for national policy-makers on intersectoral action on health 78

Box 7.1 Disaggregating national-level data: an example from India 84

Box 7.2 Spotlight on Parañaque City, Philippines 86

Box 8.1 Spotlight on lady health workers in urban slums of Pakistan 92

Box 8.2 Improving water and sanitation in towns of the Lake Victoria region, East Africa 92

Box 8.3 Spotlight on helmet use 92

Box 8.4 Community mobilization against violence in Brazil 94

FIGURES

Figure ES.1	Factors influencing the health of cities	XI
Figure ES.2	Under-five mortality rate in urban areas, by region, in 42 low- and middle-income countries	XIV
Figure 1.1	Where do city dwellers live in slums?	9
Figure 2.1	Determinants of health	12
Figure 2.2	Factors influencing the health of cities	13
Figure 3.1	Inequity in chronic malnutrition among children less than five years of age for 47 developing countries, comparing urban to rural inequalities (1994–2004)	35
Figure 4.1	Under-five mortality rate in urban areas, by region, in 42 low- and middle-income countries	40
Figure 4.2	Under-five mortality rate in urban areas of seven selected countries	41
Figure 4.3	Chronic malnutrition among children less than five years of age, by region, in 41 low- and middle-income countries	42
Figure 4.4	Chronic malnutrition among children less than five years of age in urban areas of seven selected countries	42
Figure 4.5	Factors that contribute to inequities in childhood malnutrition among children less than five years of age in urban areas of seven selected countries	43
Figure 4.6	Skilled birth attendance coverage, by region, in urban areas of 44 low- and middle-income countries	44
Figure 4.7	Skilled birth attendance coverage in urban areas of seven selected countries	44
Figure 4.8	Factors that contribute to inequities in skilled birth attendance, in urban areas of seven countries	45
Figure 4.9	Prevalence of self-reported diabetes diagnosed by a physician, adults age 45 and older, urban Bangladesh (low-income country)	47
Figure 4.10	Prevalence of self-reported diabetes diagnosed by a physician, adults age 45 and older, urban Tunisia (middle-income country)	47
Figure 4.11	Prevalence of self-reported diabetes diagnosed by a physician, adults age 45 and older, urban Spain (high-income country)	47
Figure 4.12	Percentage of households with access to piped water, in urban areas of 44 low- and middle-income countries	48
Figure 4.13	Inequities in access to piped water in urban areas from seven selected countries	49
Figure 4.14	Infant death rates, Nairobi, Kenya	50
Figure 4.15	Death rates in children less than five years of age, Kenya, disaggregated by Nairobi neighbourhood	50
Figure 4.16	Newly notified TB case rate per 100 000 population, largest cities in Japan, 2006	51
Figure 4.17	Homicide rates vary by a factor of four between subdistricts of Cape Town, South Africa, 2001–2004	52
Figure 4.18	Geographical relationship between percentage of residents living in poverty and likelihood of dying from AIDS, New York city, United States	53
Figure 4.19	Income inequalities and crime and disorder inequalities, Preston, United Kingdom, 2007	54
Figure 4.20	HIV prevalence by gender and area of residence	56
Figure 5.1	All MDGs are related to health	59
Figure 5.2	Progress in reducing childhood malnutrition (stunting) in urban areas	60
Figure 5.3	Trends and projections towards halving stunting by 2015 (in relation to 1990 levels) in urban areas of the Plurinational State of Bolivia	61
Figure 5.4	Trends and projections towards halving stunting by 2015 (in relation to 1990 levels) in urban areas of India	61
Figure 5.5	Progress in reducing under-five mortality in urban areas	62
Figure 5.6	Trends and projections towards reducing by two thirds under-five mortality by 2015 (in relation to 1990 levels) in urban areas of the Plurinational State of Bolivia	63
Figure 5.7	Trends and projections towards reducing by two thirds under-five mortality by 2015 (in relation to 1990 levels) in urban areas of India	63
Figure 5.8	Progress in improving skilled birth attendance coverage in urban areas	64
Figure 5.9	Trends and projections towards achieving universal coverage for skilled birth attendance by 2015 in urban areas of the Plurinational State of Bolivia	65
Figure 5.10	Trends and projections towards achieving universal coverage for skilled birth attendance by 2015 in urban areas of India	65
Figure 5.11	Proportion of urban population living in slum areas, 1990 and 2010	66
Figure 7.1	Female HIV prevalence across socioeconomic groups, nationally and in urban areas in Swaziland, 2006–2007	83
Figure 7.2	Utilization of the new birthing facility in 2009, San Martin de Porres, Parañaque City, Philippines	87
Figure 8.1	Three main approaches to reducing urban health inequities: (a) targeting, (b) narrowing the gap, (c) acting on the whole population	91

TABLES

Table 7.1	Core indicators for Urban HEART	85
Table B.1	Countries for which data were available from the Demographic and Health Surveys for four key indicators	107

FOREWORDS



It is well known by now that half of humanity lives in urban areas – and the proportion is growing. Cities, with their concentration of culture, infrastructure, and institutions have long driven the progress of civilization and have been the focus of opportunity and prosperity. For both rich and poor, in developed and developing countries, cities offer unique opportunities for residents to increase income, to mobilize for political action, and to benefit from education as well as health and social services. These positive aspects of city life remain magnets for people to come to and stay in urban areas.

While urban living continues to offer many opportunities, these advantages can be extremely uneven in their distribution. Looking beyond the bustling marketplaces, skyscrapers and big city lights, today's cities across the world contain hidden cities, masking the true lives and living conditions of many city dwellers. Certain city dwellers suffer disproportionately from poor health and these inequities can be traced back to differences in their social and living conditions. No city is immune to this problem.

The list of potential urban hazards and associated health risks is long: substandard housing and crowded living conditions, problems with food and water safety, inadequate sanitation and solid waste disposal services, air pollution, and congested traffic, to name a few. Many cities face a triple threat: infectious diseases thrive when people are crowded together under paltry living conditions. Chronic, noncommunicable diseases are on the rise with the globalization of unhealthy lifestyles, which are facilitated by urban life – tobacco use, unhealthy diets, physical inactivity and harmful use of alcohol. And urban health is further burdened by accidents, injuries, road accidents, violence, and crime.

Local and national governments alike are grappling with the challenges of urbanization. In many cases, the rapid population growth has outpaced the municipal capacity to build essential infrastructures that make life in cities safe and healthy. Urbanization, both in the developing and developed world, has been accompanied by a concentration of poverty which is becoming a severe, pervasive, and largely unacknowledged feature of urban life. Nearly one billion people – one third of the urban population – are living in urban slums and shantytowns. For the urban poor, the advantages of city life are lacking or nonexistent. For example, availability of and access to health care does not ensure affordability and utilization of health services. Unfortunately, some city dwellers experience inequalities, various forms of exclusion and marginalization.

The health sector cannot act alone to tackle those inequities and the various urban health challenges. Cities directly influence the living conditions, socioeconomic opportunities and health outcomes of all city dwellers. As such, real and lasting changes on health of urban residents involve a large number of stakeholders. Urban health goes beyond the roles and responsibilities of government to include the contributions that civil society, community groups, and businesses can make. Communities – and especially the urban poor – need to be brought into the decisions that affect their lives. Opportunities to put health at the heart of the urban policy agenda exist, and it is time for all sectors to work together toward innovative and effective solutions that mitigate health risks and increase health benefits.

Cities are the future of our world. We must act now to ensure that they become healthy places for all people.

MARGARET CHAN

Director-General of the World Health Organization (WHO)

By far the greatest share of health problems in rapidly urbanizing contexts is attributable to living and working conditions. These conditions include social determinants such as poor and overcrowded housing; unhealthy and unsafe working conditions; lack of access to clean water and decent sanitation; and social exclusion. Currently, an estimated one billion people live in informal settlements and slums. Yet health policies in most rapidly urbanizing countries remain dominated by disease-focused solutions that ignore the social and physical environment. As a result, health problems persist, health inequities have increased, and health interventions have produced less than optimal results.



Yet urbanization presents many advantages for more effective health policies and practices. There is little evidence, however, that public policies are being informed and shaped by these opportunities, as evidenced by the prevailing modes of chaotic and poorly planned urbanization. This urbanization of poverty and social exclusion increases health inequities and vulnerabilities.

Of the many risks to health that are linked to rapid urbanization, none is more compelling than urban poverty, manifested most clearly by the growth of informal settlements. While rising urban poverty is also evident in the developed world, this trend is more pronounced in developing countries and results almost invariably in housing deprivations.

Throughout the world, slum dwellers have less access to health resources, have more illness and die earlier than people in any other segment of the population. These unfair health gaps are growing in spite of unprecedented global wealth, knowledge and health awareness. Despite the relatively good health services in urban areas, the urban poor seem to have lower health status than their rural counterparts. This calls for a better understanding of intra-urban inequities and their implications for health.

Beyond epidemiology and improvements in health systems, the ultimate “cause of causes” of human well-being, at this particular stage of human development, can mainly be addressed through interventions directed at the urban setting.

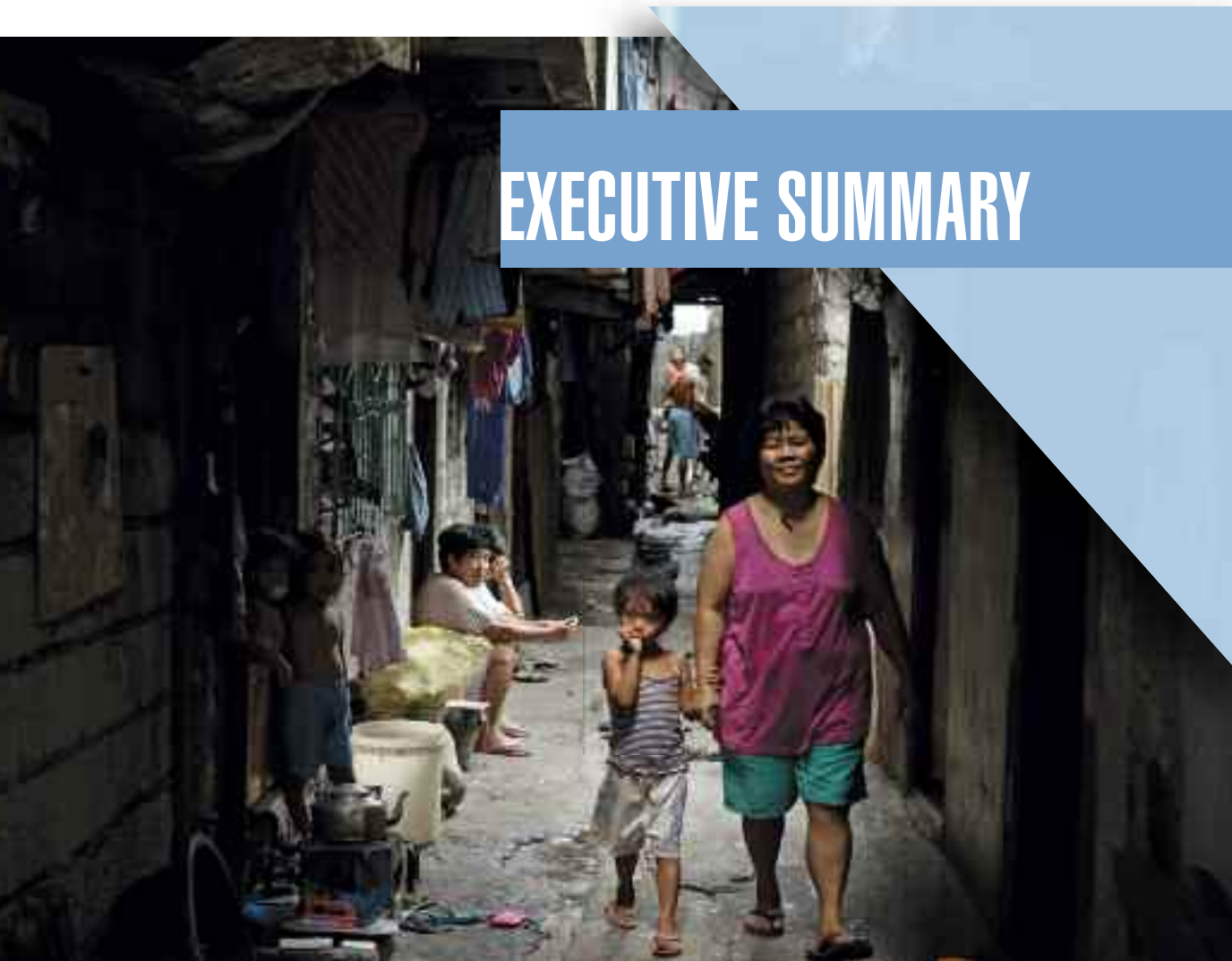
This calls for paying more attention to the manner in which measures are taken to transform urban living and working conditions as well as the social processes and knowledge that can lead to a sustainable improvement of urban health. This joint report by UN-HABITAT and WHO makes a clarion call for taking concrete action in addressing health inequity in our urban settings. It is my sincere hope that the recommendations made in this report will advance this urgent cause.

A handwritten signature in black ink, appearing to read 'Inga Björk-Klevby'.

INGA BJÖRK-KLEVBY

Officer in Charge, United Nations Human Settlement Programme (UN-HABITAT), Assistant Secretary-General United Nations, and Deputy Executive Director, UN-HABITAT

EXECUTIVE SUMMARY



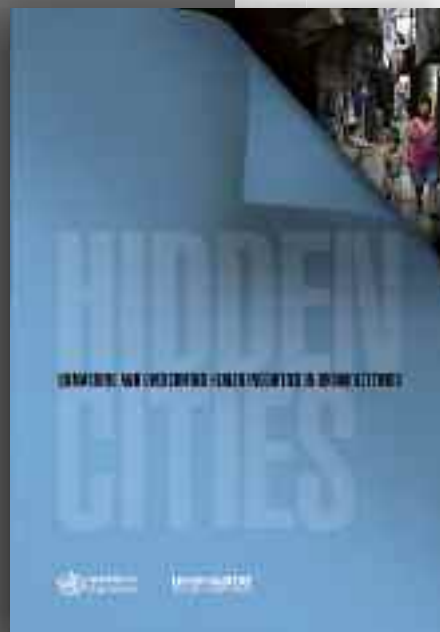
WHO/Anna Kari

The World Health Organization (WHO) and United Nations Human Settlements Programme (UN-HABITAT) joint global report, *Hidden cities: unmasking and overcoming health inequities in urban settings*, exposes the extent to which certain city dwellers suffer disproportionately from a wide range of diseases and health problems.

This report provides information and tools to help governments and local leaders reduce health inequities in their cities. The objective of the report is not to compare rural and urban health inequities. Urban health inequities need to be addressed specifically for they are different in their magnitude and in their distribution.

KEY MESSAGES OF THIS REPORT

- For the first time in human history, the majority of the world's population is living in urban areas, and this proportion continues to grow.
- Cities concentrate opportunities, jobs and services, but they also concentrate risks and hazards for health.
- The rapid increase of people living in cities will be among the most important global health issues of the 21st century.
- Urban growth has outpaced the ability of governments to build essential infrastructures, and one in three urban dwellers lives in slums or informal settlements.
- In all countries, certain city dwellers suffer disproportionately from poor health, and these inequities can be traced back to differences in their social and living conditions.
- To unmask the full extent of urban health inequities, it is important to disaggregate health and health determinants data *within* cities.
- Unless urgent action is taken to address urban health inequities, countries will not achieve the health-related Millennium Development Goal targets.
- Acting on urban health inequities requires the involvement of organized communities and all levels of government – local, provincial and national.
- Solutions often lie beyond the health sector, and require the engagement of many different sectors of government and society.
- Local leaders and governments can and should play a key role in promoting urban health equity.



VIRTUALLY ALL URBAN POPULATION GROWTH IN THE NEXT 30 YEARS WILL OCCUR IN CITIES OF DEVELOPING COUNTRIES



The dawn of an urban world

The joint WHO and UN-HABITAT report, *Hidden cities: unmasking and overcoming health inequities in urban settings*, is being released at a turning point in human history. For the first time ever, the majority of the world's population is living in cities, and this proportion continues to grow. Putting this into numbers, in 1990 fewer than 4 in 10 people lived in urban areas. In 2010, more than half live in cities, and by 2050 this proportion will grow to 7 out of every 10 people. The number of urban residents is growing by nearly 60 million every year.

This demographic transition from rural to urban, or **urbanization**, has far-reaching consequences. Urbanization has been associated with overall shifts in the economy, away from agriculture-based activities and towards mass industry, technology and service. High urban densities have reduced transaction costs, made public spending on infrastructure and services more economically viable, and facilitated generation and diffusion of knowledge, all of which have fuelled economic growth.

Urbanization became more rapid as globalization spread industry and technology to all corners of the world. For example, whereas London took

roughly 130 years to grow from 1 to 8 million people, Bangkok took 45 years, and Seoul took only 25 years. Globally, urban growth was at its peak during the 1950s, with a population expansion of more than 3% per year.

As the world becomes more urban, people will continue to live in cities of all sizes, with a pattern of city size distribution similar to that which is evident now. Currently, around half of all urban dwellers live in cities with between 100 000 and 500 000 people, whereas fewer than 10% of urban dwellers live in mega-cities (defined by UN-HABITAT as a city with a population of more than 10 million).

Almost all urban population growth in the next 30 years will occur in cities of developing countries. Cities such as Phnom Penh, Cambodia; Tijuana, Mexico; Marrakesh, Morocco; and Lagos, Nigeria, are expected to grow at annual rates of around 4%, effectively doubling their populations within the next 17 years. Some cities in China, such as Shenzhen and Xiamen, will experience annual growth rates of more than 10%, doubling their populations roughly every seven years. In high-income countries, immigration – both legal and illegal – will account for more than two thirds of urban growth. Without immigration, the urban population in these countries would probably decline or remain the same in the coming decades.



A NEW URBAN LANDSCAPE

In many places, cities will merge together to create urban settlements on a scale never seen before. These new configurations will take the form of mega-regions, urban corridors and city-regions, creating a new urban hierarchy and landscape. For example, it is estimated that Japan's Tokyo Nagoya-Osaka-Kyoto-Kobe mega-region will have a population of 60 million by 2015. The city-region of Bangkok in Thailand will expand another 200 kilometres from its current centre by 2020, growing far beyond its current population of more than 17 million. Similar trends are occurring in other parts of the world.

Typical urbanites have more choice and opportunity than their ancestors ever had before. Compared with their rural counterparts, urban residents have unique opportunities to increase income, to benefit from good quality housing and living conditions, and to access services such as education and health care. It is perhaps then not surprising that urban residents, on average, are better off than rural residents. They tend to have greater access to social and health services, literacy rates are higher and life expectancy is longer.

At the same time, cities concentrate certain risks and health hazards. The impact of adverse events such as contamination of the water supply, air or noise pollution, or natural disasters is amplified in densely populated urban settings. Climate change-related health impacts create additional

hazards for cities. The projected rise in sea level of between 18 and 59 centimetres by the end of this century will strain some of the largest and fastest-growing cities, located on coastlines of developing countries. Around the world, cities will feel the effects of climate change through increasing frequency of heat waves, air pollution, severe storms and infectious diseases.

In many cases, rapid urban population growth has stretched governments' capacity to provide essential infrastructure and services. Absent or poorly designed water, sanitation and transport systems are common problems in many cities. Unsuitable housing conditions, ranging from high-rise tenements to shacks to plastic sheet tents on sidewalks, are other hazards for many urban residents, and tend to be unregulated and overcrowded. Dwellings of this type are often located in undesirable parts of the city, such as steep hillsides, riverbanks subject to flooding or industrial areas.

As population-dense centres of both opportunity and risk, cities – and the global phenomenon of urbanization more generally – are of central importance to 21st-century global health. The sheer number and increasing proportion of people living in cities means that urban health issues directly affect more than half of the world's population. Indirectly, cities affect the health of broader populations through spreading disease pandemics via densely populated bus and train stations, large international airports and seaports. The SARS outbreak in 2003 is a case in point.



MEGA-REGIONS, CITY-REGIONS AND URBAN CORRIDORS CREATE NEW CHALLENGES AND OPPORTUNITIES FOR HEALTH

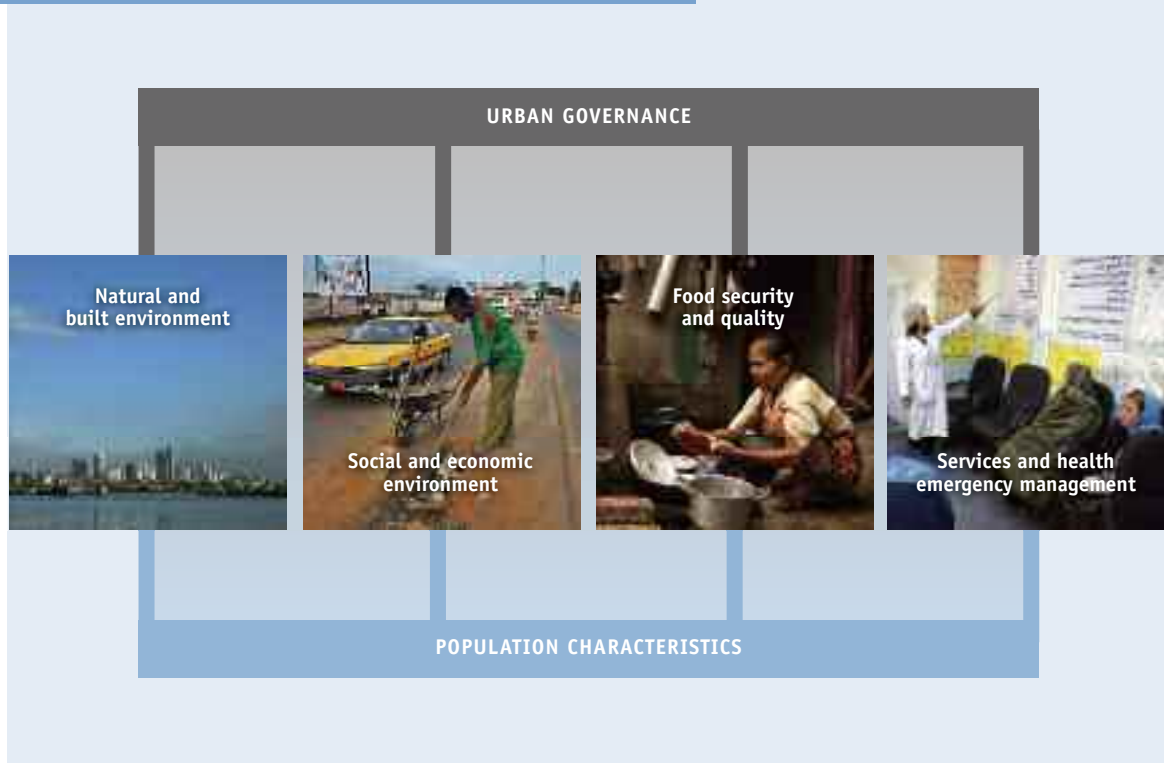
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WHERE WE LIVE AFFECTS OUR HEALTH

Broad physical, social and economic determinants influence the health of city dwellers (Figure ES.1). The **natural and built environment** influences the health of urban residents through geography and climate, housing quality, water and sanitation systems, air quality, and transportation systems and infrastructure. The **social and economic environment**,

including access to economic and educational opportunities, safety and security, social support and cohesion, and gender equality, has a major impact on the health of city dwellers. **Food security and quality** affect urban health through food scarcity, such as that caused by drought, and through a shift towards calorie-dense diets, characterized by high levels of fat, sugar and salt. A range of **services and health emergency management**

FIGURE ES.1
FACTORS INFLUENCING THE HEALTH OF CITIES



1-3 from Left: WHO/Anna Kari; 4: UN Photo/Jawad Jalali

factors influence urban health; key aspects include access to good-quality primary care services, universal coverage and health emergency management. Finally, **urban governance** is inextricably linked to the health and well-being of city dwellers through its ability to provide city dwellers with the platform that will allow them to use their talents to improve their social and economic conditions. Each of these factors can greatly support or undermine the health of city dwellers.

FACING A TRIPLE THREAT TO HEALTH IN CITIES

In many cities around the world, health determinants have combined to create a triple threat of urban diseases and health conditions. This triple threat consists of (a) infectious diseases such as HIV, tuberculosis, pneumonia and diarrhoeal infections; (b) noncommunicable diseases and conditions such as heart disease, cancers and diabetes; and (c) injuries (including road traffic accidents) and violence. Infectious diseases are a major threat in many cities due to population density, overcrowding, lack of safe water and sanitation systems, international travel and commerce, lack of

provision of health care services, and poor health-care access, particularly in slums. Noncommunicable diseases and conditions are exacerbated in urban areas by changes in diet and physical activity, exposure to air pollutants (including tobacco smoke) and harmful use of alcohol. In many developing countries, urbanization and the increased number of motorized vehicles have not been accompanied by adequate transport infrastructure, enforcement of traffic regulations or implementation of measures to ensure improved road safety. Major contributors to urban violence include social exclusion, poverty, unemployment and poor housing conditions.

So while cities offer unique opportunities for residents to benefit from education, health and social services and to optimize their health and quality of life, at the same time health hazards such as poor housing conditions and lack of access to safe water and sanitation are fuelling a range of health problems. Overwhelmed by the speed of growth, many governments are not keeping pace with ever-expanding needs for infrastructure and services. The result is that many urban areas contain – at the same time and within the same cities – the best and the worst for health and well-being.



DISAGGREGATED
DATA REVEAL
WHERE OVERLOOKED
POPULATIONS
REQUIRE THE
MOST ATTENTION

WHO/Anna Kari

Unmasking hidden cities

While it is generally understood that city dwellers, on average, enjoy better health than their rural counterparts, very little is known about health differences that exist within cities. Often, growth occurs so quickly municipal planners do not know even basic information such as how many people are residing in their cities or where they are living. Available health information is usually aggregated to provide an average of all urban residents – rich and poor, young and old, men and women, migrants and long-term residents – rather than disaggregated by income, neighbourhood or other population characteristics. As a result, the different worlds of city dwellers remain in the shadows, and the substantial health challenges of the disadvantaged go overlooked.

In particular, poor city dwellers are often neglected altogether because public health authorities do not collect information in informal or illegal settlements, and miss homeless people altogether. This is of particular importance because an estimated 828 million people live in slum conditions, representing around one third of the world's urban population. The vast majority of slums – more than 90% – are located in cities of developing countries. It is often the fastest-growing cities that have the highest concentrations of these informal settlements.

TURNING THE SPOTLIGHT ON INEQUITIES IN ALL CITIES

Understanding urban health begins with knowing which city dwellers are affected by which health issues, and why. To achieve this understanding, available information must be disaggregated according to defining characteristics of city dwellers, such as their socioeconomic status or place of residence. Turning the spotlight on the information in this way will provide a better understanding of what the problems are, where they lie and how best to address them.



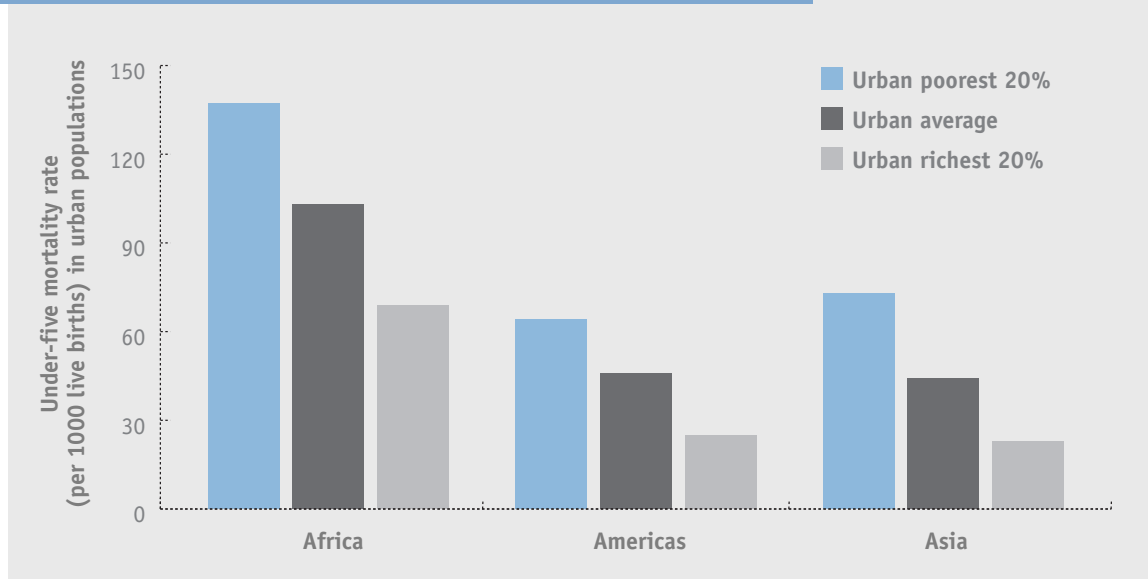
WHO/Anna Kari

URBAN AVERAGES DO NOT REVEAL THE WHOLE STORY. WE CAN NO LONGER AFFORD TO LOOK AT CITIES IN THE SAME WAY IF THE HEALTH OF ALL CITY RESIDENTS IS TO BE IMPROVED

Disaggregated data invariably reveal urban **health inequities**, which are defined as health inequalities that are systematic, socially produced (and therefore modifiable) and unfair. Health inequities are the result of the circumstances in which people grow, live, work and age, and the health systems they can access, which in turn are shaped by broader political, social and economic forces. They are not distributed randomly, but rather show a consistent pattern across the population, often by socioeconomic status or geographical location. No city – large or small, rich or poor, east or west, north or south – has been shown to be immune to the problem of health inequity.

Examples featured in *Hidden cities* illustrate that the urban poor suffer disproportionately from a wide range of diseases and health problems. Families with the lowest incomes in urban areas are most at risk for adverse health outcomes such as early childhood death (Figure ES.2), have less access to health services such as skilled birth attendance, and are also disadvantaged in terms of their living conditions, such as access to piped water. Importantly, these inequities exist along a social gradient, also affecting middle-class city dwellers to at least some extent. The underlying causes of these inequities in health are primarily

FIGURE ES.2
UNDER-FIVE MORTALITY RATE IN URBAN AREAS, BY REGION,
IN 42 LOW- AND MIDDLE-INCOME COUNTRIES



Note: These results represent averages of those countries for which urban DHS data were available for under-five mortality (Africa = 25 countries, Americas = 7 countries, Asia = 10 countries). As such, they are not representative of the regions as a whole.
 Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 2000–2007.

social in nature, including household wealth, education and location of residence, which outweigh the effects of predetermined attributes such as age and gender.

Disadvantage and disease also cluster within certain neighbourhoods, and city dwellers' odds of being healthy depend very much on their "place" within the city. For example, poor health is concentrated in certain neighbourhoods of New York City, United States of America, and the neighbourhoods with the worst health outcomes are also those that are the poorest in economic terms. In 2001, the life expectancy in New York City's poorest neighbourhoods was eight years shorter than in its wealthiest neighbourhoods.

Beyond socioeconomic status and neighbourhood, some city dwellers have poor health outcomes because of the way societies marginalize and discriminate against them for aspects of their identity they cannot change, such as their age, sex or disability. For example, women are particularly vulnerable to HIV within cities. Results presented in *Hidden cities* show that prevalence of HIV among urban women is 1.5 times higher than that

among urban men, and 1.8 times higher than that among rural women.

HEALTH INEQUITIES AFFECT EVERYONE

Ultimately, urban health inequities are detrimental to all city dwellers. Disease outbreaks, social unrest, crime and violence are but a few of the ways that urban health inequities affect everyone. These threats can spread easily beyond a single neighbourhood or district to endanger all citizens and taint a city's reputation.

Urban health inequities also threaten the achievement of many health-related Millennium Development Goal (MDG) targets by 2015. For example, more than 80% of low- and middle-income countries examined for *Hidden cities* will fail to meet MDG-related benchmarks for childhood stunting and childhood deaths among their urban poor if they continue at current rates of progress. This will undermine countries' ability to meet national targets, and will prevent the realization of the international community's vision of health and development for all.

Overcoming health inequities

Because urban health inequities exist everywhere, all local and national leaders should consider how to overcome them. Local governments are uniquely positioned to coordinate efforts, but must do so in a way that includes other levels of government and communities. Operating within this framework, they must understand the nature and scope of health inequities within their cities, choose priority interventions, and then monitor and evaluate their effects over time.

BREAKING DOWN THE DATA TO REVEAL THE REALITY IN WHICH ALL PEOPLE LIVE

The starting point is a clear picture of the health issues and their determinants within the city. Disaggregated data should be used; depending on the specific context, data can be disaggregated into male versus female, age groups, geographic areas or locale with the city, and socioeconomic groups. Once information is assembled, it can be organized to identify the population subgroups and health issues that reveal the greatest urban health inequities. It also can be used to see how these issues are developing over time, or

compare between cities. Data can be sourced from local or national levels, but in all cases it should meet high standards of reliability, transparency and completeness.

Armed with information, multiple sectors can take action in a coordinated fashion on the complex web of relevant health determinants. The specific sectors for involvement will depend on the nature of the health inequity and the organizational arrangement of the government, but typically will include representatives from municipal government departments, national-level ministries, civil society and the private sector. Vertical partnerships among national, regional and local governments must be complemented by horizontal partnerships of stakeholders within cities. Local authorities are often well positioned to lead the process, but coherence between national policies and local implementation is crucial.

In addition to intersectoral partnerships, prerequisites for effective action against health inequities include political commitment across a wide range of local leaders; a shared vision that is supported by everyone involved in the process; institutional arrangements that will support ongoing intersectoral communication and collaboration; and connections with others – within and beyond the country – who can provide expertise and practical experience in support of the effort. Each of these is essential for ensuring the long-term reduction of health inequities.

POLITICAL COMMITMENT, A SHARED VISION, PARTNERSHIPS ACROSS SECTORS AND COMMUNITY INVOLVEMENT ARE PREREQUISITES FOR EFFECTIVE ACTION AGAINST HEALTH INEQUITIES

WHO/Anna Kari



BUILDING AN EVIDENCE BASE FOR ACTION

A range of factors must be considered in prioritizing and implementing specific interventions. Beyond using the health inequity profile of the city as a basis for decision-making, selected interventions should be feasible, sustainable and evidence based. The “best available evidence” approach is an alternative to not using any evidence in decision-making. It implies using the evidence that is available, even if it has not been produced according to a rigorous study design. Other considerations in choosing interventions include local capacity for implementation, likely impact, acceptability and political support.

Another important consideration is the population target of the intervention. Three main approaches are (a) targeting disadvantaged population groups or social classes; (b) narrowing the health gap, meaning focusing only on the best-off and worst-off urban residents, or the extremes of the social scale; and (c) reducing health inequities across the entire urban population, meaning focusing on all urban residents, including the middle class.

Most agree that health equity can be achieved best through using the third approach: reducing inequities throughout entire urban populations.

Nonetheless, caution must be exercised because interventions that have a positive influence on general population health might not reach vulnerable groups, thereby potentially increasing health inequities. Careful analysis is needed to determine whether priority interventions should be designed to reach only disadvantaged population groups or urban residents as a whole. In any event, the decision should be made based upon the overall objective of reducing health inequities within the city.

INTERVENTIONS AND TOOLS

Specific areas for intervention span the natural and built environment, the social and economic environment, food security and quality, and services and health emergency management. Examples from each area are provided in *Hidden cities*. Although initial action might be restricted to specific action areas, it is crucial that policy makers and decision-takers not lose sight of their overall shared vision.

Following implementation, close monitoring and evaluation are required to understand whether the activities related to the intervention have been completed within the required time frame, whether inputs and outputs for activities have been delivered, whether targets have been reached,



CAREFUL ANALYSIS IS NEEDED TO DETERMINE WHETHER PRIORITY INTERVENTIONS SHOULD BE DESIGNED TO REACH ONLY DISADVANTAGED POPULATION GROUPS OR URBAN RESIDENTS AS A WHOLE

UN Photo/Jawad Jalali

and whether outcomes have been achieved. A results-sharing mechanism that includes multi-sectoral partners and the community helps reinforce collaboration and maintain focus on desired equity outcomes. Available and emerging results must be communicated in ways that are understandable and useful to end users.

Tools are available to help governments and local leaders with these processes. WHO's Urban HEART (Urban Health Equity Assessment and Response Tool) is simple and user friendly, and can be used by a wide range of people to assess and respond to urban health inequities. It promotes the use of already-available data, which are then disaggregated into socioeconomic groups, and geographical areas or neighbourhoods. Urban HEART considers health determinants and their interactions in multiple domains of urban life, and encourages policy responses and interventions that will be sustainable in the long term. UN-HABITAT's UrbanInfo is a software tool that helps users store, analyse and communicate results for an array of urban indicators, both global and user defined. It also helps users develop tables, graphs and maps, in multiple languages and with customized names, logos and graphics. Additional resources and tools are referenced in *Hidden cities*.

Conclusion

The number of people living in urban areas continues to grow. By the middle of the 21st century, the urban population will almost double, increasing from roughly 3.4 billion in 2009 to 6.4 billion in 2050. In contrast, rural populations will decline around the world during this same time frame. Almost all urban population growth will occur in low- and middle-income countries. Some of the fastest-growing cities will double their populations in the next seven years.

Overall, urbanization has brought countries opportunity, prosperity and health, but at the same time it has created large and unfair differences in the health status of city dwellers. These urban inequities have been largely hidden from view, yet in every corner of the world certain city dwellers

suffer disproportionately from poor health, enduring inequities that can be traced back to differences in their social and living conditions. The triple threat of infectious diseases, noncommunicable diseases and conditions, and injuries (including road traffic accidents) and violence are the result of a complex interaction of various urban health determinants, including unhealthy living conditions and insufficient infrastructure and services. At current rates of progress in addressing the urban poor, the ability of countries to meet many health-related MDG targets will be undermined.

Governments and local leaders who want to reduce urban health inequities must first understand which city dwellers are affected by which health issues, and why. Disaggregated data are essential for this purpose. Tools such as Urban HEART and UrbanInfo can assist with building the evidence base for action.

Once the nature and extent of urban health inequities are understood, action can be taken in several areas. Options include interventions to improve the natural and built environment, the social and economic environment, food security and quality, and services and health emergency management. Priority issues will vary from city to city; in all cases, chosen interventions should be feasible, sustainable and evidence based.

What lies ahead for our urban world, and for the cities that comprise it? Past trends can give some useful clues, though it remains difficult to predict the impact of certain major factors that will shape the future of our cities – migration, climate change, and access to information, technology and the global marketplace. Cities without adequate planning or proper governance will find it increasingly difficult to provide affordable land, decent housing, adequate transportation and public services. In this scenario, slum dwellers and the urban poor will continue to be overlooked, and disparities within cities will continue to grow.

At the same time, cities present substantial opportunities for the future. The most prosperous cities will be those that design sustained, comprehensive visions, and create new institutions, or strengthen existing ones, to implement this vision. This will bring them to look for new methods of close



THE FUTURE
HAS YET TO BE
REALIZED, BUT
BRINGS BOTH
A PRICE AND
A PROMISE

Raija Ylonen/SXC.hu

cooperation with regional and central governments and other actors such as the private sector, all the while ensuring an equitable distribution of opportunities and sustainable development.

The future has yet to be realized, but brings both a price and a promise.

The price, if we fail to take action, will be the further proliferation of inequity among city dwellers, leading to more avoidable suffering from a range of diseases and health problems, preventing countries from attaining their Millennium Development Goals and realizing their full economic and human potential. The promise, on the other hand, is cities that are healthy for all people. Health equity is, above all, an issue of social justice, and an indicator of the ability of cities to provide their residents

with the prerequisites for health and well-being, and to help them achieve fulfilment of their aspirations and capabilities.

This promise can be realized by reorienting our conventional approaches. This implies reconnecting the fields of public health and urban planning within a framework of multilevel urban governance. *Hidden cities* describes the leadership role that municipal leaders and local governments can play in combining the talents and powers of all sectors in a coordinated effort to reduce urban health inequities.

The price and the promise are both possible, and the choice is ours. It is our collective responsibility to ensure that cities are healthy places for all people, both now and in the future. We all have roles to play in making this a reality.

**PART
ONE**

**THE DAWN OF AN
URBAN WORLD**

INTRODUCTION TO PART ONE

In 1990, fewer than 4 in 10 of the world's population lived in cities. In 2010, more than half live in cities, and by 2050, 7 out of every 10 people will live in urban areas. Most of this explosive growth is occurring in developing countries, where municipalities and other government authorities are often overwhelmed by the rapid population boom, and struggling to keep pace.

Around the world, modern cities are centres of economic activity. Their skyscrapers and bustling marketplaces are testament to the development they have driven. Overall, urbanization has brought countries opportunity, prosperity and health.

At the same time, modern cities are filled with shadows. Beneath the skyscrapers, behind the marketplaces, the lives of city dwellers are hidden from view. This is especially true for the urban poor living in slums or other informal settlements, which are often excluded from estimates of cities' economic and health development. Relying on city averages, rather than examining differences between neighbourhoods and urban subgroups, has further obscured inequalities within cities.

Latter parts of this report will illuminate these hidden cities; Part One provides an overview of what is already known. The world is urbanized and will become even more so in the future. The rapid increase of people living in cities will be among the most important global health issues of the 21st century. Cities offer unique opportunities for residents to benefit from education, health and social services and to optimize their health and quality of life. At the same time, health hazards such as poor housing conditions, lack of access to safe water and sanitation, and economic downturns are fuelling a range of health problems. If left unchecked, climate change will multiply these and other urban health risks through heat waves, storms and changing weather patterns. Meanwhile, overwhelmed by the speed of growth, health services in many urban settings are poorly equipped to manage current and emerging public health threats.

CONTENTS

Chapter 1. The rise of modern cities

Chapter 2. Health in an urban context

KEY MESSAGES

- For the first time in human history, the majority of the world's population is living in urban areas, and this proportion continues to grow.
- Cities concentrate opportunities, jobs and services, but they also concentrate risks and hazards for health.
- The rapid increase of people living in cities will be among the most important global health issues of the 21st century.
- Urban growth has outpaced the ability of governments to build essential infrastructures, and one in three urban dwellers lives in slums or informal settlements.



CHAPTER 1

THE RISE OF MODERN CITIES

William Picard/SXC.hu

This chapter reviews trends and projections related to the rapid increase of people living in cities around the world, as well as some of the consequences of this phenomenon.

Demographics of urbanization and trends

For the first time in history, the majority of the world's population is living in urban areas, and this proportion continues to grow. It was only a few years ago that the world's urban population started to outnumber its rural population. One hundred years ago, only 2 in 10 people in the world were living in urban areas. By 2030, 6 out of every 10 people will be city dwellers, rising to 7 out of every 10 people by 2050. According to population growth projections, virtually all global growth over the next 30 years will be in urban areas. The number of urban residents is growing by nearly 60 million every year.¹

As humans change, so do their living and working environments. In contrast to agrarian rural settings, cities are characterized by their mass production, service industries and marketplaces. Their scale, density and diversity of social, cultural and ethnic groups also set them apart from rural contexts. It is not only the visible aspects of living and working environments that change, but also their intangible qualities, such as their intellectual assets, creativity, vibrancy and shared identity. Typical urbanites have more choice and opportunity than their ancestors ever had before.

URBANIZATION EXPLAINED

Urbanization refers to the overall increase in the proportion of the population living in urban areas, as well as the process by which large numbers of people have become permanently concentrated in relatively small areas, forming cities.² While specific definitions of "urban" differ from one country to another, in all regions urbanization has been characterized by demographic shifts from rural areas to cities; growth of urban populations; and overall shifts in the economy from farming towards industry, technology and service.

GLOBAL TRENDS AND PROJECTIONS

Urbanization became more rapid as globalization spread industry and technology to all corners of the world. For example, whereas London took roughly 130 years to grow from 1 to 8 million people, Bangkok took 45 years, and Seoul took only 25 years.³ Globally, urban growth was at its peak during the 1950s, with a population expansion of more than 3% per year.⁴

By the middle of the 21st century, the urban population will almost double, increasing from roughly 3.4 billion in 2009 to 6.4 billion in 2050. In contrast, rural populations will decline around the world during this same time frame.⁵

Despite these dramatic increases in the total number of city dwellers, the overall pace of urbanization is not accelerating. On a global scale, the urban population is expected to grow roughly 1.5% per year between 2025 and 2030.⁵

As the world becomes more urban, people will continue to live in cities of all sizes, with a pattern of city size distribution similar to that which is evident now.⁶ Currently, around half of all urban dwellers live in cities with between 100 000 and 500 000 people, whereas fewer than 10% of urban dwellers live in mega-cities (defined by UN-HABITAT as a city with a population of more than 10 million).¹ In many places, however, cities will merge together to create urban settlements on a scale never seen before. These new configurations will take the form of mega-regions, urban corridors and city-regions, creating a new urban hierarchy and landscape.

Today, mega-regions are amassing larger populations than mega-cities. Mega-regions are natural economic units that result from the growth, convergence and spatial spread of geographically linked metropolitan areas and other agglomerations.⁷ They are growing considerably faster than the overall population of the countries in which they are located.⁸ The population of China's Hong Kong-Shenzhen-Guangzhou mega-region, for example, comprises approximately

120 million people, and it is estimated that Japan's Tokyo-Nagoya-Osaka-Kyoto-Kobe mega-region will have a population of 60 million by 2015.^{1,9}

In urban corridors, city centres of different sizes are connecting along transport routes. In Africa, the Greater Ibadan-Lagos-Accra urban corridor, spanning roughly 600 kilometres across four countries, is the engine of the regional economy in West Africa.¹⁰ The corridor developing between Mumbai and Delhi in India will stretch about 1500 kilometres from Jawaharlal Nehru Port in Navi Mumbai to Dadri and Tughlakabad in Delhi.^{1,11} Urban corridors are changing the functionality of large and small cities, and even towns, increasing the growth of trade, real estate development and land value along their ribbon-like development areas.

At still another level, city-regions are developing as the result of large cities extending beyond their administrative boundaries to engulf smaller cities and towns, absorbing semi-urban and rural surrounding areas, and in some cases merging with other intermediate cities. Many city-regions have grown enormously over the last 20 to 30 years. The extended Bangkok Region in Thailand, for example, is expected to expand another 200 kilometres from its current centre by 2020, growing far beyond its current population of more than 17 million. In Brazil, Metropolitan São Paulo already covers 8000 square kilometres, with a population of 16.4 million.⁶ The extent of South Africa's Cape Town city-region, when including the distances from which commuters travel to and from the city every day, reaches up to 100 kilometres.¹²

Suburbanization, or urban sprawl, is also becoming prevalent around the world. Its hallmark characteristics include a population that is widely dispersed in low-density development; separated residential and commercial areas; a network of roads marked by long blocks and poor access; and a lack of well-defined, thriving activity centres, such as downtown areas. Other features usually associated with sprawl include overdependence on motorized transport coupled with a lack of transport alternatives, and pedestrian-unfriendly spaces. In most cases, sprawl leads to increased public infrastructure costs. Sprawling metropolitan areas consume

much more energy than compact cities and require a greater output of materials such as metal, concrete and asphalt because homes, offices and utilities are farther apart.¹³

URBAN GROWTH IS NOT UNIFORM

Urbanization trends vary across different parts of the world. Some cities and regions are experiencing rapid growth, whereas other cities and regions are in population decline. Currently, Africa and Asia are the least urbanized regions, with 40% and 42% of their populations, respectively, living in urban areas. Yet by 2050, their urban populations will increase to 62% in Africa and 65% in Asia.⁵ Meanwhile, in Europe more than half of all cities are expected to experience population declines over the next 20 years.

Almost all urban population growth in the next 30 years will occur in cities of developing countries. Between 1995 and 2005, the urban population of developing countries grew by an average of 1.2 million people per week, or around 165 000 people every day.¹⁴ By the middle of the 21st century, it is estimated that the urban population of these countries will more than double, increasing from 2.5 billion in 2009 to almost 5.2 billion in 2050.⁵ Nonetheless, on average the rate of urban population growth is slowing in developing countries, from an annual rate of roughly 4% from 1950 to 1975, to a projected 1.55% per year from 2025 to 2050.⁵

In contrast, the total urban population in the developed world is expected to remain largely unchanged over the next two decades, increasing from 920 million people in 2009 to slightly more than 1 billion by 2025.⁵ Immigration – both legal and illegal – will account for more than two thirds of urban growth in high-income countries. Without immigration, the urban population in these countries would probably decline or remain the same in the coming decades.

Urban growth in developing countries is far from uniform, and this dissimilarity will only increase in the future. While high growth rates are expected in

around half of urban areas in the next 20 years, another 16% will experience slow growth rates, and 11% will see their populations regress – and, very likely, their economies as well.¹⁵

Cities such as Phnom Penh, Cambodia; Tijuana, Mexico; Marrakesh, Morocco; and Lagos, Nigeria, are expected to continue to grow at annual rates of around 4%, effectively doubling their populations within the next 17 years. Some cities in China, such as Shenzhen and Xiamen, will experience annual growth rates of more than 10%, doubling their populations roughly every seven years.¹⁵

Meanwhile, other cities in developing countries are expected to experience population declines. These include La Paz, Plurinational State of Bolivia; Belo Horizonte, Brazil; Dengzhou, China; Madurai, India; Bandung; Indonesia; San Luis Potosi, Mexico; Rabat, Morocco; and Manila, Philippines. In these cities, departing residents will leave behind unoccupied houses, vacant commercial sites, idle infrastructure and neighbourhoods in physical decay.^{16,17}

City and regional planning will require new methods and techniques that respond to urban development, expansion and growth management, but also to population decline or outmigration. Smart planning for growth needs to be combined with smart planning for contraction for more sustainable and balanced urban and regional development.

The benefits of urbanization

For both rich and poor, in developed and developing countries, cities offer unique opportunities for residents to increase income, to mobilize for political action, and to benefit from education as well as health and social services. The density of urban settings lends itself to more efficient and environmentally sensitive housing, transport systems and other physical infrastructure.

Urbanization is also linked to economic development. Most urbanized countries have higher

incomes, more stable economies and stronger institutions, and are better equipped to withstand the shocks and volatility of the global economy. Conversely, most countries with a high per capita income are among the most urbanized, whereas most countries with a low per capita income are among the least urbanized. In both developed and developing countries, cities generate significant portions of gross domestic product and national wealth, and create development opportunities, jobs and investment. In the coming years, cities are likely to have even stronger roles as engines of growth and key factors of national development – particularly those cities that become parts of urban agglomerations such as mega-regions and urban corridors. In the future, regional and urban development will be linked more strongly, in such a way that successful cities will be located in successful regions.

Urbanization is not only a positive force for economic development, but also one that can confer desirable social and health outcomes. Urban populations are generally better off than their rural counterparts: they tend to have greater access to social and health services, literacy rates are higher and life expectancy is longer.¹⁸

Numerous cities around the world have capitalized on the opportunities presented by urbanization to create healthier environments. Healthy Cities networks are being established in all World Health Organization (WHO) regions. Initiated by the WHO Regional Office for Europe in 1986, the networks now include thousands of cities, towns and regions in dozens of countries around the world.¹⁹ Some networks are country specific, whereas others are regional. Typically, each network develops its own approach based on local needs and concerns (Box 1.1), but all have a common root in the concept of the city as a key setting for health promotion; a place where environments support health; where municipal, regional, provincial and national governments develop and implement policies that are good for health; and where citizens are engaged in the process of creating healthier neighbourhoods and cities by increasing control over their health and its determinants.

BOX 1.1

HEALTHY CITIES AROUND THE WORLD (BY WHO REGION)

HEALTHY CITIES IN AFRICA. Introduced in 1999, Healthy Cities is still relatively young in the African Region. Although its activities have been limited to isolated projects, results are encouraging for the future development of the programme. Many Healthy Cities projects in Africa aim to improve the living conditions and health of the urban poor. Projects typically address pressing community issues such as access to water and sanitation.

HEALTHY CITIES IN THE AMERICAS. For more than 20 years, the Healthy Municipality Initiative has been promoted by WHO in Latin America. The movement arose from the need to effectively address the economic, social and political determinants of health. Regional networking activities and sharing of knowledge and experiences between municipalities and countries has been a key aspect in the success of the movement.

HEALTHY CITIES IN THE EASTERN MEDITERRANEAN. In the Eastern Mediterranean Region, Healthy Cities projects are being implemented in Bahrain, Islamic Republic of Iran, Iraq, Oman, Pakistan, Saudi Arabia, Somalia, Sudan and Tunisia, covering a population of nearly 13 million people. Many Healthy Cities projects in the region have been focused on improving city dwellers' diets, which would then help reduce diabetes, hypertension and other diet-related conditions such as heart disease and cancer.



HEALTHY CITIES IN EUROPE. The European Healthy Cities Network includes more than 1300 cities across the region, all of which are committed to health and sustainable development. They are designated to the WHO European Healthy Cities Network on the basis of criteria that are renewed every five years. Each five-year phase focuses on a number of core priority themes and is launched with a political declaration and a set of strategic goals. The overarching goal of Phase V (2009–2013) is health and health equity in all local policies.

HEALTHY CITIES IN SOUTH-EAST ASIA. The WHO Healthy Cities Programme was launched in the South-East Asia Region in 1994. By 2003, 40 cities from the region were participating in the initiative. Healthy Cities has now been expanded to Healthy

Settings; action in all contexts is guided by an appreciation for the complex connections between human settings and health.

HEALTHY CITIES IN THE WESTERN PACIFIC. Healthy Cities was adopted in the Western Pacific Region in 1992. Currently, some 170 cities in the region are implementing Healthy City projects. Of these, WHO has supported the development of 18 projects in Cambodia, China, the Lao People's Democratic Republic, Malaysia, Mongolia, the Republic of Korea, the Philippines and Viet Nam. The Alliance for Healthy Cities was founded in 2003, and is a group of cities and other organizations committed to the Healthy Cities approach. The network started with 25 cities, and had grown to 120 cities and organizations from 10 countries by December 2008.

Kursad Keteci/SxC.hu

The challenges of rapid, unplanned growth

Despite their opportunities and benefits, many cities have generated inequalities, various forms of exclusion and marginalization, and serious environmental problems.

Rapid population growth can strain municipal capacity to regulate air and water quality, provide

sanitation, ensure food availability, protect food safety and safeguard the quality of health care provided by both the public and private sectors. Unhealthy housing, problems with food and water safety, congested traffic, air pollution and crime are common consequences.

Often, growth occurs so quickly that municipal planners do not know how many people are residing in their cities, where they are living or what kind of support they require. This lack of



BOX 1.2 SPOTLIGHT ON NAIROBI'S SLUMS

According to Jhpiego, a nongovernmental organization working in the area, health is jeopardized in Nairobi's urban slums due to the following factors:

INADEQUATE HEALTH SERVICES AND POOR ACCESS TO HEALTH SERVICES. Health-care services are generally unavailable to urban slum dwellers. Qualified private facilities are too expensive, unlicensed providers can be dangerous, and government facilities are in general disrepair and are feared by community members due to rumours about their services. Additionally, Nairobi's urban poor often have a limited understanding of health issues and do not know where to access health-care services.

UNHEALTHY LIFESTYLES AND UNSTABLE SOCIAL STRUCTURES. Reduced access to safe food and water, poor sanitation, a breakdown of traditional family structures, and high unemployment rates affect slum dwellers' health. The urban cash economy forces slum dwellers to choose to spend scarce money either on health care or on other basic needs.

INSECURITY AND NEGLECT. Slum dwellers live in overcrowded, poorly constructed housing, often with insecure land possession. High crime coupled with disrespect by local authorities result in disenfranchised populations that distrust formalized services of any kind, including health services.

Manoocher Deghati/IRIN

basic information creates situations in which public resources fail to reach those who are most in need.

Rapid, unplanned urbanization also contributes to urban poverty, which is becoming a severe, pervasive and largely unacknowledged feature of urban life. Poverty can be found in all parts of the world, including cities in Sweden, the United

Kingdom and the United States.²⁰ In many low- and middle-income countries, the urban poor are most visible in large-scale slums.

Today, an estimated 828 million people live in slum conditions, representing around one third of the world's urban population. The vast majority of slums – more than 90% – are located in cities of developing countries. It is often the fastest-growing cities that have the highest concentrations of these informal settlements.¹⁴

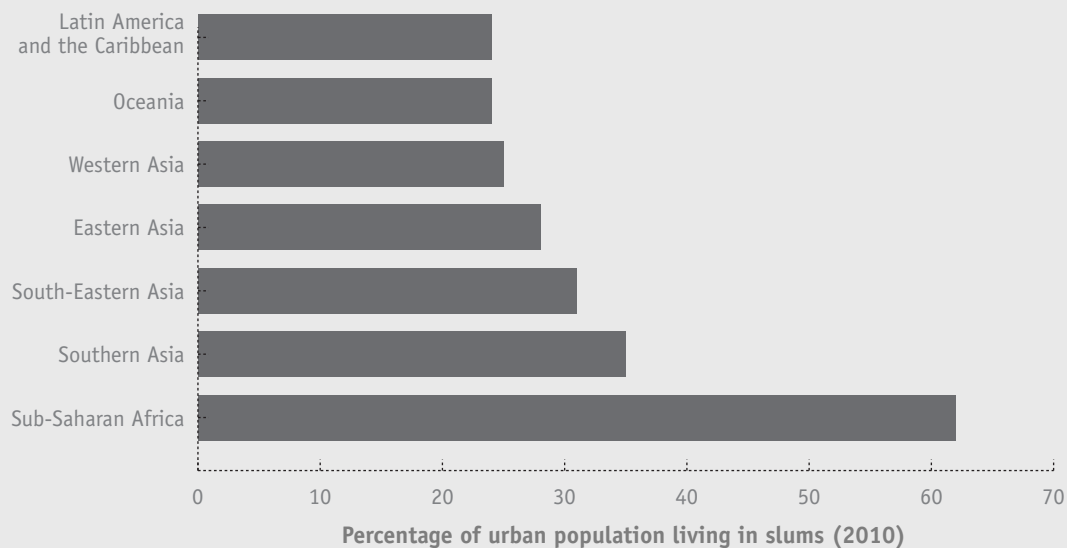
Slum dwellers often experience difficult social and economic conditions that manifest different forms of deprivation – material, physical, social and political (see Box 1.2 for a description of slums in Nairobi, Kenya).²¹ They live in overcrowded, poorly constructed housing, often with insecure land possession. Reduced access to safe food and water, poor sanitation, a breakdown of traditional family structures, high crime and high unemployment rates affect slum dwellers' health. Slums are home to a wide array of infectious diseases (including tuberculosis, hepatitis, dengue fever, pneumonia, cholera and malaria), which spread easily in highly concentrated populations. Despite the tremendous need, health-care services are generally difficult to access in these areas.

Slums are no longer just marginalized neighbourhoods housing a relatively small proportion of the urban population. In many cities, they are the dominant type of human settlement (Figure 1.1), carving their way into the fabric of modern-day cities, and making their mark as a distinct category of human settlement that now characterizes so many cities in the developing world.

Cities, especially those in wealthier areas, have been significant contributors to climate change. Collectively, cities account for 75% of global energy consumption and a similar proportion of all waste. According to latest estimates, urban areas contribute directly to more than 60% of greenhouse gas emissions.²² It is no coincidence, therefore, that climate change has emerged at the forefront of international debate at precisely the same time that the planet has become predominantly urban.

Ironically, cities will also be among the areas most affected by climate change. If sea levels rise by just 1 metre, many major coastal cities will be under threat, including Buenos Aires, Argentina;

FIGURE 1.1 WHERE DO CITY DWELLERS LIVE IN SLUMS?



Source: *State of the world's cities 2010/2011 – cities for all: bridging the urban divide*. United Nations Human Settlements Programme (UN-HABITAT)/ Earthscan, 2010 (<http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=2917>).

BOX 1.3 SPOTLIGHT ON CITIES VULNERABLE TO SEA LEVEL RISE

Cities at risk from sea level rise include:

COTONOU, BENIN. Benin's largest urban centre, with around 700 000 residents, is in danger from sea level rise and storm surges. Most of Cotonou's population live in slums, making them especially vulnerable to these changes. Beaches, roads and buildings have already been destroyed.²⁴

ALEXANDRIA, EGYPT. Along Egypt's Mediterranean coast, a sea level rise of 50 centimetres would force more than 2 million people to abandon their homes. World-famous historical, cultural and archaeological sites would also be lost.²⁵

DHAKA, BANGLADESH. Dhaka, the capital of Bangladesh, is home to more than 13 million people. Like other parts of the country, Dhaka is highly vulnerable to flooding because of its situation among river basins. Its most urbanized areas are only 6

to 8 metres above sea level. With a long history of catastrophic floods, it is projected that the city will experience flooding more frequently due to the melting of glaciers and snow in the Himalayas, and increasing and more concentrated rainfall associated with climate change. Waterlogging and drainage congestion will add to the gravity of the situation, affecting infrastructure, the economy and public health. National and local authorities have undertaken measures to manage floods and address drainage congestion, while improving environmental quality and reducing greenhouse gas emissions.²⁶

VENICE, ITALY. Now less than 1 metre above the level of the Adriatic Sea, Venice is threatened by land subsidence and sea level rise due to climate change. Both factors have contributed to a total relative sea level rise of about 25 centimetres in the 20th century (13 centimetres due to subsidence and 12 centimetres due to sea level rise). Severe damage to its urban heritage has occurred as a result. Mobile barriers installed to curtail flooding are considered by experts to be inadequate to safeguard the city in the wake of further, forthcoming climate-induced sea level rise.²⁷



WHO/Anna Kari

Rio de Janeiro, Brazil; Shanghai, China; Cairo, Egypt; Osaka-Kobe and Tokyo, Japan; Lagos, Nigeria; and Los Angeles and New York City, United States.²³ Box 1.3 contains information about other cities vulnerable to sea level rise.

The urban poor – and chief among them, the nearly 900 million slum dwellers – will probably be the most affected by climate change. They live in vulnerable locations – along beaches prone to flooding or on slopes prone to landslides. The buildings in which they live are often of poor quality and would not withstand major weather events such as hurricanes.

At the same time, cities have the potential to play significant roles in reducing greenhouse gas emissions and mitigating climate change. Urban centres can be more energy efficient than rural areas if their population density is capitalized upon to create energy-efficient housing, transport systems and other physical infrastructure. Additional information on climate change and its relationship to urban health is contained in Annex C to this report.

Cities of the future

What lies ahead for our urban world, and for the cities that comprise it?

Looking to past trends is a useful way of imaging the future, but unforeseen events are inevitable and will certainly shape the future of cities in

ways that cannot be predicted fully. Cities will differ from one another based on several factors. Their access to information, technology and the global marketplace will shape them, as will the ways in which they are governed. Migration will continue to influence the size and nature of their populations. Climate change impacts and new disease pandemics could trigger mass migration at an unprecedented scale, altering demographics within countries and cities, changing borders or generating conflicts.

Cities without adequate planning or proper governance will find it increasingly difficult to provide affordable land, decent housing, adequate transportation and public services. As a consequence, their political legitimacy will, sooner or later, begin to erode. Nongovernmental organizations or the private sector may attempt to fulfil roles previously held by local authorities, and fragmentation will ensue. In this scenario, slum dwellers and the urban poor will continue to be overlooked, and disparities within cities will continue to grow.

At the same time, cities present substantial opportunities for the future. The most prosperous cities will be those that design sustained, comprehensive visions, and create new institutions, or strengthen existing ones, to implement this vision. This will bring them to look for new methods of close cooperation with regional and central governments and other actors such as the private sector, all the while ensuring an equitable distribution of opportunities and sustainable development.²⁸

CHAPTER SUMMARY

This chapter has outlined trends and projections related to urbanization. It has revealed that virtually all global population growth over the next 30 years will be in urban areas; by 2050, 7 out of 10 people will be living in cities. ■ Urbanization is not inherently positive or negative. Historically, it has produced both desirable and adverse outcomes: while urbanization has been a positive force for countries' economic development, large inequalities have emerged between city dwellers, and urban slums have become a feature of many cities. Urbanization has also contributed significantly to global greenhouse gas emissions, although this need not be the case if cities commit themselves to sustainable development. ■ As the next chapter shows, the underlying drivers of urban health can be traced back to common determinants.



CHAPTER 2

HEALTH IN AN URBAN CONTEXT

WHO/Anna Kari

Since its inception in 1948, the World Health Organization has embraced a comprehensive understanding of health as “not merely the absence of disease or infirmity”, but rather “a state of complete physical, mental and social well-being.” Today, compelling scientific evidence shows that physical, mental and social health and well-being are closely interwoven and deeply interdependent, and that health is influenced by a broad range of determinants that lie beyond the health sector. This chapter introduces underlying drivers of health in urban areas, and describes some of the common health issues faced by people living in cities.

Determinants of health

Determinants of health refer to the socioeconomic, cultural and environmental conditions that influence the health of individuals and populations. They include the conditions of daily life and the broader influences upon them.

As depicted in Figure 2.1, individual characteristics such as age and sex are nested within wider determinants of health, which arise from social, environmental and economic conditions. These include household living conditions, conditions within communities and workplaces, and health care, along with policies and programmes affecting any of these factors.

This field of inquiry was taken forward by WHO's Commission on Social Determinants of Health, which reviewed the evidence on a broad range of social determinants.³¹ The Commission organized these health determinants into a more detailed

framework consisting of both underlying structural drivers, such as income, level of education and gender; and circumstances of daily life, such as access to water and sanitation, living and working conditions, and access to health services.

Looking at health issues from a determinants' perspective facilitates the identification of the root causes of health problems. From this point of view, waterborne diseases are not only caused by microorganisms, but also by the political, social and economic forces that fail to make clean water available to all. Heart disease is caused not only by clogged arteries, but also by diet, physical inactivity and tobacco use, which in turn are influenced by the environments in which people live.

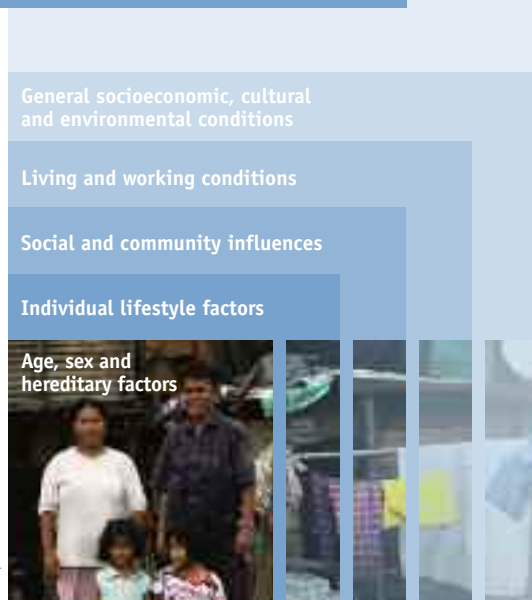
Health determinants in urban settings

Cities offer both the best and the worst environments for health and well-being. Multiple determinants converge to influence the health status of city dwellers, and positive and negative influences tend to cluster according to the specific neighbourhood or "place" within the city.

The physical and social environments in urban contexts are shaped by multiple factors and multiple players at multiple levels. Global trends, national and local governments, civil society, financial markets and the private sector all shape the context in which local factors operate. Each of these factors can greatly support or undermine residents' health.

Specific determinants of health in urban settings span population characteristics, urban governance, the natural and built environment, the social and economic environment, food security and quality, and services and health emergency management (Figure 2.2). Each of these areas is examined in detail in the following sections.

**FIGURE 2.1
DETERMINANTS OF HEALTH**



Source: Adapted from Whitehead M, Dahlgren G. What can we do about inequalities in health? *Lancet*, 1991, 338:1059–1063.

WHO/Anna Kari

FIGURE 2.2
FACTORS INFLUENCING THE HEALTH OF CITIES



1-3 from left: WHO/Anna Kari; 4: UN Photo/Jawad Jalali

POPULATION CHARACTERISTICS

The demographic characteristics of those living in a particular city or urban neighbourhood at a particular time reflect historical trends, patterns of fertility and migration trends. The age, gender and disability status of city dwellers affect health, both at individual and populationwide levels.

Certain population groups require special consideration because they have particular health issues or needs within urban environments. Without targeted attention, they are likely to be excluded from overall health development.

CHILDREN. Children comprise a major portion of the urban population: it is estimated that 60% of all city dwellers will be under the age of 18 by 2030.³² Although children living in urban areas are often regarded as better off than their rural peers, this is not always the case, considering that many children live in slums or other adverse environments.³³

Deaths of children in cities are often the direct result of contamination of water, inadequate sanitation and lack of solid waste disposal, which exacerbate the occurrence and severity of diarrhoeal and related diseases. Gastrointestinal illness can lead to malnutrition and death, especially among younger and undernourished children who still have poorly developed immune defences.

Pneumonia and diarrhoeal diseases are the leading causes of childhood death globally,³⁴ and can be a particular problem in urban settings due to crowding, indoor air pollution and poor access to health care in urban slums. For similar reasons, children in urban areas are susceptible to death from malaria and vaccine-preventable illnesses such as measles.

Road traffic injuries among children are of significant concern in urban areas. Lack of consideration to children in urban and transport planning contributes to the problem.³⁵ Globally in 2004, road traffic injuries were the leading cause of

death among youths aged 15–24 years, and the second leading cause of death for those aged 10–14 years.³⁶

Children are also particularly vulnerable to exploitation and crime at the hands of older children and adults. In deprived urban settings, children have higher rates of psychological and behaviour problems^{37,38} and lower educational and occupational expectations³⁹ than those from rural areas.

OLDER ADULTS. Urbanization in low- and middle-income countries will concentrate an increasing proportion of the older population in cities. New York, London, Paris and Tokyo already have the largest concentrations of older people in their respective countries. The “oldest old” – those 85 and older – comprise the fastest-growing segment of this population.⁴⁰ In Africa and Asia, older people still live predominantly in rural areas, but it is expected that this situation will be reversed before 2020.³²

In cities, older people are often invisible or forgotten among other priorities. They may become housebound due to physical impairments combined with inadequate transportation systems. Pride may discourage them from seeking help. Special attention is needed to ensure that older people can preserve their autonomy and independent living for as long as possible, and can access health and other social services, including home-based care.

WOMEN. While cities open many possibilities for women to meet, work and form social support networks, women living in cities also face unique challenges. These include heightened risk of physical, sexual and psychological violence; barriers in accessing health and social services due to lack of control over family financial resources, child-care responsibilities, restricted mobility and limited decision-making power; and lack of education and economic security relative to men.⁴¹

Urban poverty has become highly feminized. Compared to their male counterparts, poor urban women tend to have lower-paying jobs and higher illiteracy rates. They also are excluded from certain types of jobs because of lack of education or discriminatory practices. On top of this, women are often excluded from land and home ownership and inheritance.⁴² All these factors place poor urban women and their dependents at increased risk for a range of health problems.

MIGRANTS. Immigration is commonly characterized as population movement from poor to richer localities, as well as from rural to urban areas. A complex set of context-dependent factors – economic, political and social – explain why some cities have large migrant populations. Migrants are attracted by the possibilities that cities can offer. Frequently, they are searching for better employment and economic opportunities, or fleeing from persecution and violence.

Those who migrate to escape difficult circumstances often experience a double jeopardy in cities: pre-existing vulnerabilities combined with greater exposure to migration-associated stressors. A social and economic gap often emerges between long-time urban residents and migrants.⁴³

PEOPLE WITH DISABILITIES. People with disabilities are strongly affected by the physical and social environments of cities. Depending on their particular characteristics, urban environments can greatly facilitate or undermine the independence and quality of life of people with disabilities.⁴⁴

Cities’ physical environments and infrastructure are particularly important for people with locomotor or sensory disabilities. Disability-friendly transport systems, sidewalks, pedestrian crossings and building



WHO/Anna Kari



Dina, 16
Jakarta, Indonesia

FIGHTING DISEASE AT THE SOURCE – LIVING CONDITIONS AND DENGUE

Dina lives with her father, mother, and little brother. She likes living in her neighbourhood because she knows everyone and says that people are kind. Her uncles and aunts and grandfather live next door.

“I got sick in 2009,” says Dina. “I had a headache, nausea, shivers and my temperature was very high.” She went to the doctor but after a week was still very sick and so she went to

I felt terrible and had a high fever. They did blood tests and the doctor told me it was dengue fever.”

“I was worried when the doctor told me,” continues Dina, “because I knew a girl my age who died a few years ago from dengue. I really wanted to get well quickly.”

After Dina came out of the hospital, she noticed that people were

the hospital with her mother. “I was admitted to the hospital for four days.

spraying in her neighbourhood. “Now they have been spraying the area to kill the mosquitoes every few months.” The community has also stepped up its prevention efforts. “There are people in the community who monitor the larvae. They put powder on the larvae they see which kills them. Without larvae, there will be no more mosquitoes.”

Still, Dina cautions, “People are not careful enough. They leave open containers with water and there is a lot of garbage dumped here.”

WHO/Anna Kari

entrances are but a few of the many factors that have a major impact on the daily lives of those who use assistive devices such as canes, walkers or wheelchairs. People with hearing or visual impairments often benefit from additional accommodations, such as the provision of key information in multiple auditory and visual formats.

The social environment of cities influences the degree of stigma and discrimination experienced by people with disabilities. In particular, people with chronic mental disorders or intellectual disabilities can be adversely affected by hostile environments if they are not specifically addressed through public awareness campaigns and antidiscriminatory regulations.

The ability to access regular health services and community support are particularly important for people with all types of disabilities.

URBAN GOVERNANCE

Urban governance refers to the mechanisms, processes and institutions through which residents and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences.⁴⁵ It is important to note that governance is broader than government. In many formulations, governance includes government, and also the private sector, civil society and community groups. Second, governance emphasizes process. It recognizes that decisions are made based on complex relationships between many actors with different priorities.⁴⁶

Urban governance is inextricably linked to the health and well-being of city dwellers. Good urban governance affirms that no one should be denied access to the necessities of urban life, and provides all city dwellers with the platform that will allow them to use their talents to improve their social and economic conditions.⁴⁶ Within developing countries, the best urban governance can help produce 75 years or more of life expectancy; with poor urban governance, life expectancy can be as low as 35 years.⁴⁷

Healthy urban governance is discussed in detail in Part Three of this report.

NATURAL AND BUILT ENVIRONMENT

The natural and built environment refers to natural and human-made aspects of cities and their interaction therein. Facets of the natural and built environment that influence health include cities' geography and climate; housing conditions; access to safe water and sanitation; transport systems; and air quality.

GEOGRAPHY AND CLIMATE. The geographical location and climate of cities are linked fundamentally to health. They influence residents' vulnerability to natural disasters, including tornadoes, hurricanes or cyclones, floods, earthquakes, landslides and fires. They also influence residents' health via heat waves, droughts and susceptibility to illnesses carried by mosquitoes or other pests.

Climate change-related health impacts are already happening. A WHO assessment concluded that the effects of climate change since the mid-1970s may have caused 150 000 additional deaths in 2000.⁴⁸ This is probably an underestimate, considering that the study took into account only a subset of possible health impacts. It also concluded that these impacts are likely to increase in the future. The largest health risks are to children in the poorest communities, the group that contribute least to greenhouse gas emissions.⁴⁹

The most adverse impacts of climate change are likely to be in urban areas where people, resources and infrastructure are concentrated. In the future, climate change will increasingly multiply existing urban health risks through its impact on access to water and sanitation, food security and living conditions, among other factors. Heat waves, air pollution, severe storms and infectious diseases will become more common (Box 2.1). Climate change-related health risks will be greatest for the urban poor, who often lack adequate shelter or access to health services.²³

Tropical mega-cities and coastal cities will be particularly affected. Residents of these cities will be exposed to a combination of health risks such as heat waves, floods, infectious diseases and air pollution. The projected rise in sea level of between 18 and 59 centimetres by the end of this

BOX 2.1

CLIMATE CHANGE: A MULTIPLIER OF HEALTH RISKS

Climate change will exacerbate the impact of climate on urban health, through heat waves, air pollution, severe storms and infectious diseases.⁵¹

The frequency and intensity of heat waves will increase in the near future, causing particular problems in cities due to heat island effects. The urban heat island effect is a phenomenon whereby cities experience higher temperatures than surrounding rural areas due to dense urban buildings and lack of vegetation.

Increasingly severe and intense flooding and storms will cause the destruction of homes, health-care facilities and other essential services, particularly in slums. Gradual sea level rise, coupled with stronger storm surges, will lead to more frequent and severe coastal flooding and contamination of city water supplies. The consequent destruction of homes and communities will eventually force unprotected populations to seek safer ground, often increasing environmental and social pressures in their new locations.

Increasing temperatures and more variable precipitation are also expected to reduce crop yields in many tropical developing regions. This is likely to worsen the burden of malnutrition in many cities of these areas.

Around the world, higher temperatures will endanger cities' water availability and quality. Lack of water will compromise hygiene and increase diarrhoea. Conversely, floods will cause contamination of freshwater supplies. In extreme cases, water scarcity might result in famine.

The spread of illnesses carried by mosquitoes or other insects

and small animals is also expected to change as weather alters their geographical range, seasonal activity and breeding cycle. As such, climate change may slow, halt or reverse progress against infections such as diarrhoeal diseases, malaria and dengue.

Finally, rising temperatures will increase levels of air pollutants such as ground-level ozone. Urban outdoor air pollution caused more than 1.1 million deaths in 2004, mainly from heart and lung diseases.⁵² A 1° Celsius rise in temperature would increase global deaths from air pollution by more than 20 000 people each year.⁵³



UN Photo/Fardin Waezi

century⁵⁰ will strain some of the largest and fastest-growing cities, located on coastlines of developing countries. Degraded natural protection (through deforestation and building on floodplains), vast stretches of poor-quality housing, and extensive concrete ground cover without adequate drainage will contribute to the vulnerability of these cities. Heavy rains will result in intense and sometimes lethal flash floods, such as those that occurred in and around Caracas, Bolivarian Republic of Venezuela, in 1999, and Mumbai, India, in 2005.⁵¹

HOUSING CONDITIONS. A roof over one's head and an address in a habitable neighbourhood is a vital starting point for urban residents, from which they can tap into what the city can offer them by way

of jobs, income, infrastructure and services. Decent shelter provides people with a home; security for their belongings; safety for their families; a place to strengthen their social relations and networks; a place for local trading and service provision; and a means to access basic services.

Yet as described in Chapter 1, almost 900 million urban residents live in slums and squatter settlements. Housing in these settings ranges from high-rise tenements to shacks to plastic sheet tents on sidewalks. These settings tend to be unregulated and overcrowded. They are often located in undesirable parts of the city, such as steep hillsides, riverbanks subject to flooding or industrial areas.



**Elisa, 35, Kimberly, 5
Manila, Philippines
FLOOD DISPLACES THE
URBAN POOR IN MANILA**

Elisa recalls the day the waters rose. "That day the creek had been overflowing since the morning. I was cooking rice in my house. I sell food to make a living." By the early afternoon, Elisa put the food on her roof in an attempt to save it, but the flood waters rose too fast and swept her food away. She escaped her submerged house with her daughter

Kimberly, by creating a bridge from her roof to her neighbour's using some wood she fished out of the water. She spent the night with 20 others on the roof until they were rescued the next day.

"I lost everything that day," says Elisa. "I saved only one chair and my cellphone." Her home was demolished because of the state it was in, a house she had bought for 40 000 pesos (US\$ 857) in 1989. Its base was cement, but the second floor was made of wood. The government

will relocate her and others affected by the floods to Bulacan.

In the meantime, she is staying in an open gymnasium. "They told us they will relocate us this week, because they need the gymnasium. The medical mission told me we are healthy."

Elisa says she is a bit worried about what will happen to her, but believes that maybe there is a reason she is still alive. "Now I have no money, I can't afford anything, but at least I am still alive. I just want to continue my life."

WHO/Anna Kari

Apart from those living in slums, countless other urban residents suffer from unsuitable living conditions, including building defects, poor ventilation of cooking and heating fuels, inadequate or non-existent refrigeration or other food storage facilities, and hazardous locations such as proximity to highways or hazardous waste sites.⁴⁷ Inadequate housing, especially where tenure is insecure, is associated with injuries, respiratory problems, infectious diseases and mental health problems.⁵⁴

Overcrowding is an additional health hazard. While relatively rare in high-income countries, overcrowding is widespread in cities of low- and middle-income countries. The highest proportions of urban residents without sufficient living space are in Africa and Asia; these are the same regions that have the most slums.¹ The concentration of people living in small, poorly ventilated living areas increases the risk of disease transmission and other health problems. Infectious diseases thrive in overcrowded areas due to lack of ventilation, lack of hygiene and unhealthy environmental exposures. Overcrowding also contributes to stress and family violence, including child maltreatment, intimate partner violence and sexual violence, and elder abuse.^{55,56}

People with disabilities require accessible housing to live independently in their communities. Accessibility is dependent on the nature and extent of people's disabilities. For some, access may involve small modifications such as grab bars, whereas for wheelchair users, access may require ramps, wide doorways and low countertops.

ACCESS TO SAFE WATER AND SANITATION. In developed countries, access to safe water and sanitation created the conditions for a dramatic reduction in deaths from infectious diseases in the late 19th and early 20th centuries; now cities in developing countries are facing these same challenges and opportunities.⁵⁴

Almost half of city dwellers in Africa, Asia and Latin America suffer from at least one disease caused by lack of safe water and sanitation.⁵⁷ In sub-Saharan Africa, poor people spend at least one third of their incomes for treatment of waterborne and water-related diseases such as malaria, diarrhoea and worm infections.⁵⁸

Although most official statistics reflect better coverage in urban areas than in rural areas, various surveys show that in many cities, the quantity and quality of water available to poor residents falls short of acceptable standards. Hundreds of millions of people who supposedly have access to water only have access to communal pipes shared by dozens of people. For many urban families who are poor, hours each day are lost just carrying water from distant sources. Others use water from tanker trucks or bottles provided by private vendors, at prices often far higher than those paid by wealthier residents, who obtain their water from public water supply systems.

Proper sanitation is also important for preventing infectious diseases. While a greater proportion of the urban population, compared with rural residents, has access to basic sanitation, overall risk exposure is greater in cities due to densely populated living conditions. Most cities in low- and middle-income countries do not have sewers; as a result, one quarter to one half of these urban residents lack access to sanitation that significantly reduces their risk of illness.⁵⁹ In many urban settings, especially densely populated areas, latrines do not significantly reduce the risk of disease because of their unhealthy conditions.

TRANSPORT SYSTEMS. The modes of transport city dwellers use on a day-to-day basis have major implications for their health, and for the health of the broader population.^{60,61} Transport systems influence health directly and indirectly, through their impact on physical activity, road traffic safety, air quality and psychosocial stress. Yet despite the many ways in which transport systems affect health, the links are often unacknowledged or overlooked.

Transport systems have an impact on levels of regular physical activity among urban dwellers. Pedestrian- and bicycle-friendly cities, as well as those with robust public transportation options, encourage physical activity. Conversely, overreliance on private, motorized transport acts as a barrier to regular physical activity. Globally, insufficient physical activity caused 3.2 million deaths in 2004.⁶²

Lack of proper urban planning can produce heavy traffic through residential areas, speeding and competition with pedestrians for limited road space.⁶³ Poor planning also provides limited crossing points, poor pedestrian access to amenities and a lack of separation of people from vehicle traffic, and inadequately regulated mass transit systems.^{64,65} All these factors contribute to road traffic injuries.

Transport systems also influence health through air quality. Both the total number of motorized vehicles and the level of traffic congestion contribute substantially to air pollution in urban areas. Air pollution is considered further in the following section.

Social health and well-being also are affected. Transport systems can compromise mental and physical health through noise pollution, chronic stress and social isolation. Lack of reliable transportation can be a barrier to accessing health services and generate opportunities for violence.

When transport systems are poorly designed, the urban poor suffer disproportionately. They are usually the most dependent on non-motorized transport and public transport, which can be neglected in transport development. Poor families often work and live directly alongside congested urban streets, and thus may be exposed most

directly to the health hazards of road traffic. In particular, underprivileged urban children, whose primary playground is often the street, are vulnerable to road traffic injury as well as to the health and developmental effects of air and noise pollution.

The urban poor are also at risk for other types of road traffic injury. At an early stage of urbanization, pedestrians and bicyclists are at much higher risk of injury than those that can afford to use motor vehicles.⁶³ As economies develop, the urban poor tend to buy private motorcycles, while cars are purchased by wealthier city dwellers. The injury risk for motorcycles is much higher than for cars, so again a disparity develops between rich and poor urban residents.

The poor, however, are not the only population group to suffer the effects of poorly designed transport systems. People with disabilities are particularly affected by transport systems that do not accommodate the use of assistive devices or sensory impairments. Ultimately, traffic congestion, traffic-generated air pollution and traffic injuries touch the lives of all city residents.

AIR QUALITY. All city dwellers are affected by indoor and outdoor air quality. Air pollution compromises lung function and increases heart attacks.⁶⁶ In addition, high levels of air pollution



UNDP

directly affect people with asthma and other types of lung or heart disease.

WHO estimates that urban outdoor air pollution caused approximately 1.1 million deaths worldwide in 2004.⁶² The air that city dwellers breathe is often polluted from outdoor sources such as motorized vehicles, industry and burning trash. People living in deprived neighbourhoods tend to have higher levels of air pollution exposure than those living in higher-income areas.⁶⁷ A survey conducted in Rome, for example, showed that people of low socioeconomic status were more likely to live near busy roads and suffer the negative effects of air pollution.⁶⁸

Indoor sources of air pollution include smoke from indoor stoves, machinery in small, poorly ventilated workshops producing noxious fumes and second-hand tobacco smoke. WHO estimates that in 2004, indoor smoke from solid fuels caused almost 2 million deaths, while occupational exposure to airborne particulates caused an additional 457 000 deaths.⁶² The living conditions typical of cities create the potential for substantial exposure to second-hand tobacco smoke,⁶⁹ particularly for people in low-paid and insecure work.

SOCIAL AND ECONOMIC ENVIRONMENT

The social and economic environment has a major impact on the health of city dwellers. Influences range from local to global. For example, the 2007 global financial crisis precipitated by the downturn in the United States housing market and the subsequent collapse of major financial institutions affected the lives of countless urban residents, including many who previously thought that they had no connection to the workings of global financial markets. In many cities around the world, unemployment has risen, social services and public entitlements have been cut, wages have been slashed and loans have become difficult to obtain.

Specific social and economic factors discussed in the next sections are access to economic and educational opportunities, safety and security, social support and cohesion, and gender equality.



WHO/Anna Kart

ECONOMIC AND EDUCATIONAL OPPORTUNITIES. City dwellers' access to economic opportunities – whether employment or other income-generating activities – has a major impact on their health status. At a material level, access to economic opportunities translates into access to good-quality housing, water and sanitation, and other daily necessities. Beyond helping to meet material needs, access to economic opportunities provides a means by which people can participate fully within their communities and broader society.

Globalization – and in particular, trade liberalization, cross-border financial flows and the emergence of a global labour pool – has brought both opportunities and risks for city dwellers. For some, globalization has created job insecurity and poverty; for others, it has opened new economic opportunities.⁷⁰

Informal economy workers constitute the majority of workers in most countries and the number of informally employed, unprotected and low-income workers is increasing rapidly in both developing and developed countries. The occupational health and safety hazards they face are often added to those of poor living environments, poor nutrition and unsatisfactory housing. They are not covered by social protection or comprehensive health care and besides work-related injury and disease, they are commonly affected by poverty-related diseases.⁷¹

At a local level, the economic environment also influences health through the degree of wealth disparity within a city. Relative poverty – often defined as living on less than 60% of the national median income – has been shown to relate to poor health and risk of premature death, arguably through the psychosocial stress of low socioeconomic status and the poorer quality of social relations.

Access to educational opportunities provides the foundation for future access to economic opportunities. Education equips people with knowledge and skills for daily living, increases opportunities for income and job security, provides people with a sense of control over life circumstances and enables them to participate in society. Children and adolescents who receive good-quality education are set onto life pathways that affect their health and well-being over time. Conversely, children with low levels of education are more likely to have poor health as adults.⁷²

SAFETY AND SECURITY. Three major threats to the safety and security of cities are urban crime and violence, insecurity of tenure and forced evictions, and natural and human-made disasters.⁷³ The latter two topics are discussed elsewhere in this report; urban crime and violence are described below.

Crime and violence are typically most severe in urban areas and are compounded by their rapid growth. Sixty percent of urban dwellers in developing and transitional countries have been victims of crime, over a five-year period, with victimization rates reaching 70% in parts of Latin America and Africa. In Latin America, the rapidly expanding metropolitan areas of Rio de Janeiro, São Paulo, Mexico City and Caracas account for more than half of the violent crimes in their respective countries. The homicide rate in Rio de Janeiro has tripled since the 1970s, while the rate in São Paulo has quadrupled. In Africa, cities such as Lagos, Johannesburg, Cape Town, Durban and Nairobi account for a sizeable proportion of their country's crime.⁷³

Both perceived and real levels of crime and violence in urban areas influence health. Crime directly affects the quality of life not only of

victims, but also of their friends, family and the general community in which they live.⁷² Public opinion surveys in the United Kingdom and the United States repeatedly show that people rank crime among their top everyday concerns. In Nairobi, Kenya, more than half of residents worry about crime all the time or very often. Likewise, in Lagos, Nigeria, 70% percent of surveyed residents report being fearful of becoming victims of crime, with 90% being fearful of the prospects of being killed in a criminal attack.⁷³

Fear of crime isolates communities and has financial repercussions for individuals, governments and the private sector.⁷² Concerns about violence isolate the poor in their homes and the rich in their segregated spaces.⁷⁴ For all, fear and insecurity pervade people's lives, with serious implications for trust and well-being among communities.⁴⁷

Violence in urban areas takes a variety of forms, ranging from self-directed violence to interpersonal violence and collective violence.⁷⁵ Acts of violence have a devastating impact on people's health and livelihoods in many urban areas.⁷⁶ They also have many other costs, such as undermining a city's economic prospects. The situation in some high-income countries is as bad as in many developing countries, and the underlying social determinants are similar.⁴⁷ Major contributors include social exclusion, poverty, unemployment and poor housing conditions.

SOCIAL SUPPORT AND COHESION. The social environment influences health in urban areas through buffering or enhancing the impact of stressors, and regulating access to the emotional and material goods that influence health.⁵⁴

High levels of social support have been shown to contribute to a variety of positive health outcomes. Social support gives people the emotional and practical resources they need, and can have a powerful protective effect on health. Conversely, social isolation and exclusion are associated with poor health status and premature death.⁷⁷

Social cohesion – the quality of social relationships and the existence of trust, mutual obliga-



tions and respect in communities or in the wider city – helps to protect people and their health. Societies with high levels of income inequality tend to have less social cohesion and more violent crime. High levels of mutual support will protect health, while the breakdown of social relations reduces trust and increases violence.⁷⁷

GENDER EQUALITY. While “sex” refers to biological differences between males and females, “gender” describes socially constructed roles, rights and responsibilities that communities and societies consider appropriate for men and women.⁷⁸ Gender norms and values can give rise to gender inequalities – that is, differences between men and women that systematically empower one group to the detriment of the other. The fact that, around the world, women on average have lower cash incomes than men is an example of a gender inequality.⁷⁹

Women living in urban areas experience gender inequalities that are similar to those experienced by women generally. Gender inequalities intersect with other health determinants, such as access to

economic opportunities, to influence the health of women. Some of the identified determinants include:

- reduced opportunities for education and paid employment;
- lower social status in families, communities and society;
- limited access to and control over resources;
- limited decision-making power;
- increased vulnerability to sexual and gender-based violence due to unequal gender norms;
- a lower value placed on women's health and lives outside their reproductive years.

Lack of attention to these determinants has led to a systematic devaluation and neglect of women's health, including in urban areas. For example, within households, girls and boys, women and men often do not receive equal access to nutritious food and health care. Norms and values that lead to societal acceptance of violence against women or control over women's reproduction and sexuality contribute to a range of reproductive and sexual health conditions for women.⁸⁰

FOOD SECURITY AND QUALITY

The surge in food prices since the end of 2006 has led to increasing hunger in the world's poorest countries and made urban food security more precarious. Poor urban families use up to 70% of their income to purchase food, often neglecting education, child care and other costs. In countries deeply affected by famine or drought, families eat fewer meals, and children stop attending school to save education fees in order to pay for food. The doubling of global food prices over the last three years could potentially push 100 million people in low-income countries deeper into poverty.⁸¹ Malnutrition and stunted development will become more common.

Paradoxically, urbanization has also been associated with a shift towards calorie-dense diets, characterized by high levels of fat, sugar and salt. Processed foods, ready-to-eat meals and snacks purchased from street vendors, restaurants and fast food outlets have increased in most cities,

magnifying residents' opportunities to consume high-fat, calorie-dense food. As a result, obesity is on the rise in cities around the world.

In middle- and high-income countries, it is the poor who tend to be more obese than the wealthy, which has been viewed as something of a contradiction. It is likely that several factors contribute to this relationship, but one explanation is that calorie-dense foods, such as fried or processed foods, tend to cost less on a per-calorie basis when compared with fresh fruit and vegetables.^{82,83}

SERVICES AND HEALTH EMERGENCY MANAGEMENT

A range of health and social services influence urban health, including direct services such as education, health care and community-based support, as well as governments' capacity to respond to a wide range of public health threats that can strike urban centres. Key aspects of urban health systems that can influence city dwellers'



UN Photo/Eskinder Debebe

health are examined in greater detail below: access to good-quality primary care services, universal coverage and health emergency management.

ACCESS TO GOOD-QUALITY PRIMARY CARE SERVICES.

Cities offer at least some opportunities for accessing good-quality health care: health-care facilities are overwhelmingly concentrated in cities, and skilled health workers tend to flock to urban areas, especially those with teaching hospitals and higher incomes.

At the same time, many cities contain a complex combination of public, private and non-profit providers, with health facilities governed by different authorities, from national ministries of health to municipal authorities. Hospitals and specialists have gained a pivotal role, often at the expense of primary care services. Shortfalls in primary care have resulted in the emergence of an informal sector of unregulated, commercial health care in many cities. There are cities in Africa, for example, where public primary care has almost or completely disappeared, and been replaced by unregulated, commercial providers.

Unregulated, commercial health care raises serious quality concerns. It most often results in patients either not getting the care they need, or getting care that they do not need, and in any event paying too much for it. Unregulated, commercial care is often of substandard quality, and may be ineffective and unsafe. Adverse effects or complications put patients in a vicious cycle – needing more care and becoming more impoverished.

Social factors, such as the lack of culturally appropriate services, language barriers and prejudice on the part of health workers can also prevent poor and marginalized city dwellers, especially migrants, from accessing care. These same groups often lack a basic understanding of how to navigate the health system, and are therefore vulnerable to being preyed upon by unethical or incompetent health workers, providing poor-quality or even harmful care.

Good-quality primary care reduces exclusion and health disparities, and organizes health services around people's needs and expectations. When countries at the same level of economic development are compared, those where health

care is organized around the tenets of primary health care produce a higher level of health for the same investment.⁸⁴

UNIVERSAL COVERAGE. As defined by WHO Member States, universal coverage would require all people to have access to needed health services – prevention, promotion, treatment and rehabilitation – without the risk of financial hardship associated with accessing services. Universal coverage implies not only financial risk protection, but also primary care networks (see previous section). It protects city dwellers from foregoing essential health care because of financial costs, or facing severe financial hardship and even impoverishment.⁸⁵

In many cities, the urban poor face challenges in accessing health services due to their inability to pay out-of-pocket expenses for services. (This is in contrast to rural settings, where the main access issue facing residents is that health facilities are far from their homes and communities.) Even at many “free” public clinics, patients are required to pay for medications and supplies, if not for consultations.

Many urban dwellers at some point will face a dire choice: either to go without essential treatment, or to seek treatment and go into poverty. Although the first choice may seem more economically viable in the short term, over time it often leads to even more severe impoverishment through disability, loss of income and premature death.⁸⁶

Governments, typically at the national level, have a responsibility to ensure that all people can receive the services they require and that they are protected from the financial risks associated with using them. Over the past century, a number of countries have achieved this level of protection. European countries began, for example, to put social health protection schemes in place in the late 19th century, moving towards universal coverage after the Second World War through tax-financed or social health insurance systems, or more commonly, a blend of the two. More recently, Chile, Costa Rica, Cuba, the Republic of Korea, Thailand and Turkey have ensured access to core services with financial risk protection to their entire populations. China, Colombia and Mexico among others are at various stages towards the implementation of ambitious plans to achieve universal coverage in the near future.



Theophile, 62
Yaoundé, Cameroon
**THE REALITY OF
HEALTH CARE COSTS**

After retiring 10 years ago as a civil servant in administration, Theophile makes a living renting out the back room of his house for CFA 15 000 a month (US\$ 29). He did not work long enough in one job to receive a pension allowance, so money is tight. "I have to support other people, so it's not easy."

"My biggest problem is my health. I have had chronic inflammation of

the leg for about 15 years, but it is getting worse. It was diagnosed as rheumatism and I have only had elementary care for it." According to Theophile, other conditions soon followed, including hypertension.

"I get help from friends and family. I have already spent around CFA one million (US\$ 1940) over the years trying to treat what I have. The doctor thinks the leg should be operated on. He has been saying that for two years now, but I don't have the money. If I had the money, I could be walking properly now."

He buys medicine to treat his hypertension which costs CFA 22 000 (US\$ 42). When he doesn't manage to buy the medicine, his condition deteriorates rapidly. "I also buy anti-inflammatories, but only when I need them. I buy my medicine on the street because I can't afford to go to the pharmacy. It's dangerous, but I have no other option."

"I am forced to beg for a living now and that is the worst part. I was never a beggar before. This illness has made me a beggar."

WHO/Anna Kari

BOX 2.2 SPOTLIGHT ON HAITI'S EARTHQUAKE

Urban areas in Haiti suffered immense devastation by the earthquake that struck on 12 January 2010. Thirty percent of buildings were destroyed in the capital, Port-au-Prince, and other cities were severely damaged. The earthquake disrupted Haiti's services that were designed to save lives and treat the wounded. Many government buildings and hospitals were destroyed, and countless government officials and health workers were killed. Even before the earthquake, the country's health status was already the lowest in the western hemisphere, and more than 70% of Haitians survived on less than US\$ 2 a day.

The large international response was beset by numerous logistical and infrastructure challenges, including how to receive and distribute large amounts of aid to 3 million people in a setting where airports and seaports were damaged and roads were blocked by rubble. Working with their bare hands, ordinary Haitians saved tens of thousands of people from the rubble in the first hours of the earthquake, before any international team arrived in the country.



Despite great damage caused to key government buildings, national authorities were keen to reclaim control of the overall coordination of the humanitarian response, which United Nations and other international partners supported. Local organizations, such as the Haitian Red Cross, were instrumental in delivering services to affected people, and the survivors themselves were greatly responsible for providing shelter, support and care to their fellow Haitians.

Among other pressing issues, Haitians must now consider ways in which the many thousands of people who underwent amputations can access rehabilitative care and ongoing support in their communities. Urban planners will need to determine how they can enable people with amputations to live and travel easily within cities. More broadly, the challenge for Haiti and its partners will be to move from the humanitarian response phase to a real development strategy that may ensure a better future for generations to come.

UN Photo/Sophia Paris

HEALTH EMERGENCY PREPAREDNESS AND RESPONSE.

A city's degree of health emergency preparedness and community resilience has a major influence on the health of its residents when disaster strikes. The impact of natural disasters (such as extreme weather events and earthquakes), chemical and radiological hazards, fires, transport crashes and epidemics is amplified by both the population density and built environment of urban areas. Health facilities might be damaged, destroyed or overwhelmed, and the health workforce might be lost, leaving people with limited access to health and emergency services when they are most needed (see Box 2.2 for example of response to Haiti earthquake, January 2010).⁸⁷

In today's interconnected world, cities are prone to the import of infectious diseases. Business and

leisure travellers, migrants, and imported animals and animal products are all potential carriers of infectious agents. Cities also are the places to which people with new and unusual illnesses are brought, because they are beyond the scope of rural clinics. Once an infectious pathogen arrives, cities become an efficient engine for its rapid national and international spread, due to their population density and multiple transport links through bus and train stations, large international airports and seaports (Box 2.3 on the next page).

Biosafety and biosecurity also are important because large cities not only host major research laboratories and biotechnology companies, but also constitute targets of choice for deliberate epidemics and malicious poisoning.

Health consequences of living in cities

As outlined in the previous section, good-quality housing and living conditions, social and economic opportunities, and access to services such as education and health care contribute to the health and well-being of city dwellers. The higher levels of social support and greater social cohesion typically found in urban areas are also linked to a number of positive health outcomes. Good urban governance underpins the realization of these and other determinants of health.

At the same time, cities present a number of health risks, especially when they are poorly governed or fail to sufficiently prioritize health in all policies. Many are confronted by a triple threat: infectious diseases exacerbated by poor living conditions; noncommunicable diseases and conditions (such as heart disease, cancer and diabetes) and conditions fuelled by tobacco use, unhealthy diets, physical inactivity and harmful use of alcohol; and injuries (including road traffic accidents) and violence.⁸⁹

INFECTIOUS DISEASES

Infectious diseases are a major threat in many cities due to population density, overcrowding, lack of safe water and sanitation systems, international travel and commerce, and poor health-care access, particularly in urban slums. The 2003 outbreak of SARS (see Box 2.3) is a case in point. Other infectious conditions, such as the human immunodeficiency virus (HIV), tuberculosis, pneumonia and diarrhoeal infections, have an ongoing presence in cities.

Frequently, it is the urban poor who suffer the greatest burden. Slums are productive breeding grounds for tuberculosis, hepatitis, dengue, pneumonia, cholera and diarrhoeal diseases, which spread easily in highly concentrated populations.

Women face particular vulnerability to HIV infection, stemming from a combination of biological factors and gender inequality. Female drug users and sex workers are particularly at risk; stigma, discrimination and punitive policies only increase their vulnerability.⁹⁰



BOX 2.3 SPREAD OF SARS VIA URBAN CENTRES

In 2003, severe acute respiratory syndrome (SARS) – the first severe new disease of the 21st century – highlighted the fact that no city is automatically protected by virtue of its wealth or its standards of living and health care from either the arrival of a new disease or the subsequent disruption it can cause. SARS was, to a large extent, a disease of prosperous urban centres. Contrary to expectations, it spread most efficiently in sophisticated city hospitals. Fortunately, the spread of SARS was halted less than four months after it was first recognized as an international threat. Had SARS been allowed to establish a foothold in a resource-poor setting, it is doubtful whether the demanding measures, facilities and technologies needed to stop it could have been fully deployed.⁸⁸

Jelle Boontje/SXC.com

Conflict and insecurity in urban environments and the movement of people from crises in rural areas to cities pose other significant humanitarian challenges. Slums – and their associated health hazards – can proliferate as large numbers of displaced people seek refuge at the margin of urban areas.

The degree to which governments are prepared to manage these kinds of circumstances affects not only city dwellers, but also the country as a whole. When urban areas, which are countries' most concentrated sources of health, logistic and other resources, are affected by emergencies, assistance to the rest of the country becomes restricted.

NONCOMMUNICABLE DISEASES

Noncommunicable diseases and conditions, such as asthma, heart disease and diabetes, are a significant problem in urban centres. Most of this heightened risk can be traced back to changes in diet and physical activity as a consequence of urbanization, as well as exposure to air pollutants, including tobacco smoke. As mentioned in the subsection on “food security and quality”, urbanization is associated with a shift towards calorie-dense diets, characterized by high levels of fat, sugar and salt. As a result, obesity is on the rise in cities around the world. On top of this, people in cities tend to have physically inactive types of employment, and urban sprawl further discourages physical activity. Other factors that inhibit regular physical activity include overcrowding, high-volume traffic, overreliance on motorized transportation, crime and poor air quality. Air pollution, including tobacco smoke, is a risk factor for asthma and other respiratory diseases.

Rapid urbanization also threatens mental health. Poor housing conditions, overcrowding, noise pollution, unemployment, poverty and cultural dislocation can cause or exacerbate a range of mental health problems, including anxiety, depression, insomnia and substance abuse.^{91,92,93}

INJURIES AND VIOLENCE

About 16 000 people die every day as a result of injuries – about 10% of all deaths. The principal causes of death from injury are road traffic accidents (22%), suicide (15%) and homicide (10%), with war accounting for another 3%.⁹⁴

Road traffic injuries alone are responsible for 1.3 million deaths per year globally. In many developing countries, urbanization and the increased number of motorized vehicles have not been accompanied by adequate transport infrastructure, enforcement of traffic regulations or implementation of measures to ensure improved road safety. Low- and middle-income countries have higher road traffic fatality rates (20.1 and 22.1 per 100 000 population, respectively) than high-income countries (11.9 per 100 000).⁹⁷ And, more than 90% of the world’s road fatalities occur in low- and middle-income countries, which have only 48% of the world’s registered vehicles.⁹⁵

Worldwide, over 1.6 million people lose their lives to violence each year.⁷⁶ Suicide accounts for 844 000 deaths, homicide for 600 000 deaths and collective violence for 184 000 deaths.^{96,97} For every person who dies from violence, many more are injured and suffer a range of physical, mental and other consequences.⁷⁶ Child maltreatment, youth violence, intimate partner violence, sexual violence and elder abuse, although unlikely to result in death, are other highly prevalent forms of violence with significant behavioural and health consequences. Major contributors to urban violence include social exclusion, poverty, unemployment and poor housing conditions. The fear of such violence further contributes to the fragmentation of cities, socially, economically and politically.⁷⁴ Young people are particularly affected by urban violence. In urban areas, people aged 15 to 24 commit the largest number of violent acts, and are also the principal victims of violence.³²

CHAPTER SUMMARY

This chapter has explained how broad physical, social and economic determinants influence the health of people, and looked at some key determinants in urban areas. Health determinants in cities span the domains of the natural and built environment, the social and economic environment, food security and quality, services and health emergency management, and urban governance. ■ In practice, many cities offer both the best and worst environments for health and well-being. This dichotomy will be explored in detail in Part Two of this report.

**PART
TWO**

**UNMASKING
HIDDEN CITIES**

INTRODUCTION TO PART TWO

As described in Part One, virtually all population growth over the next 30 years will be in urban areas, and the rapid increase of people living in cities will be among the most important global health issues of the 21st century. While urbanization has improved health and development overall, it has also contributed to some adverse consequences, such as urban slums and increased greenhouse gas emissions. Municipalities and health authorities, overwhelmed by the sheer speed of urbanization, are struggling to keep pace.

Part Two reveals the substantial health gaps that exist *within* cities – the hidden side of cities that are normally obscured from view. It presents new information that reveals the extent to which certain urban residents suffer disproportionately from a wide range of diseases and health problems. It also shows how these health problems can be traced back to inequalities in social and living conditions. Finally, the report reveals that unless urgent action is taken on addressing urban health inequities, countries will not achieve key health-related Millennium Development Goal (MDG) targets by 2015.

CONTENTS

Chapter 3. Urban health inequity and why it matters

Chapter 4. Urban health inequities revealed

Chapter 5. Achieving the Millennium Development Goals

KEY MESSAGES

- In all countries, certain city dwellers suffer disproportionately from poor health, and these inequities can be traced back to differences in their social and living conditions.
- To unmask the full extent of urban health inequities, it is important to disaggregate health and health determinants data *within* cities.
- Unless urgent action is taken to address urban health inequities, countries will not achieve health-related Millennium Development Goal targets.

CHAPTER 3

URBAN HEALTH INEQUITY AND WHY IT MATTERS



WHO/Anna Kari

While it is generally understood that city dwellers, on average, enjoy better health than their rural counterparts, very little is known about health differences that exist *within* cities. Health information is usually aggregated to provide an average of all urban residents – rich and poor, young and old, men and women, migrants and long-term residents – rather than disaggregated by income, neighbourhood or other subgroup characteristics. As a result, the different worlds of city dwellers remain in the shadows, and the substantial health challenges of the disadvantaged go overlooked.

In particular, poor city dwellers are often totally neglected because public health authorities do not collect information in informal or illegal settlements, and miss homeless people altogether.

Understanding urban health begins with knowing which city dwellers are affected by which health issues, and why. By turning the spotlight on the information in this way, municipalities will better understand what the problems are, where they lie and how best to address them.



WHO/Anna Kari

Health inequality and health inequity explained

Health inequalities are simply differences in health between groups of people. These differences might be due to non-modifiable factors such as age or sex, or modifiable factors such as socioeconomic status.

Health inequities refer to the subset of health inequalities that are systematic, socially produced (and therefore modifiable) and unfair.⁹⁸ They are not distributed randomly, but rather show a consistent pattern across the population, often by socioeconomic status or geographical location. For example, a child who lives in a slum in Nairobi, Kenya, is far more likely to die before the age of five than a child living in another part of the city.⁴⁷ In Glasgow, Scotland, male life expectancy varies from 54 to 82 years, depending on the part of the city in which the person lives.⁹⁹ No law of nature decrees that these health differences must exist.⁹⁸ Rather, they are the result of the circumstances in which people grow, live, work and age, and the health systems they can access, which in turn are shaped by broader political, social and economic forces.³¹ Because they originate from

socioeconomic status, living conditions, and other social and environmental determinants, health inequities are inherently unfair.

Some health inequalities are not health inequities. For example, death rates among people in their eighties are higher than those among people in their twenties, but this is not a socially produced, unfair health inequity. Rather, it is the result of the natural biological process of ageing.

Opposite to health inequity, **health equity** implies that everyone has a fair opportunity to attain their full health potential, and no one is disadvantaged from achieving this potential because of their social position or other socially determined circumstances.⁹⁸ Health equity refers to situations where there are no systematic or unfair disadvantages to individuals and communities in health outcomes, access to health care and quality of health care because of race, gender, nationality, age, ethnicity, religion, sexual orientation, immigration status, language skills, socioeconomic status, or geographical location or neighbourhood.

Urban health equity implies that all city dwellers are provided with opportunities to reach the highest attainable standard of health. More pragmatically, it means that no one is hindered from achieving his or her full health potential, and that equal opportunities for health are available and accessible across all urban subgroups.

Importantly, equality does not in itself confer equity. If, for example, health problems in a poor community are greater than in a wealthier one (as they tend to be), then the poor community would require a relatively greater level of service provision to achieve a fair or equitable distribution among the population as a whole.

Despite their importance, urban health inequities are often missed altogether because health information is typically collected and analysed to look at urban averages. Although some forward-thinking urban leaders have systematically examined intra-urban differences in health status, the majority of municipalities have no clear information about the type and extent of health inequities that lie within their cities.

Why urban health inequity must be unmasked and overcome

Conventional wisdom takes for granted that for several health conditions rural outcomes are worse than urban outcomes. For example, globally chronic malnutrition among under-five children is lower in urban areas in comparison to rural areas. However, in Figure 3.1 we can see that with respect to health inequity, urban inequity is higher in Africa and Asia and similar to rural inequity in the Americas.

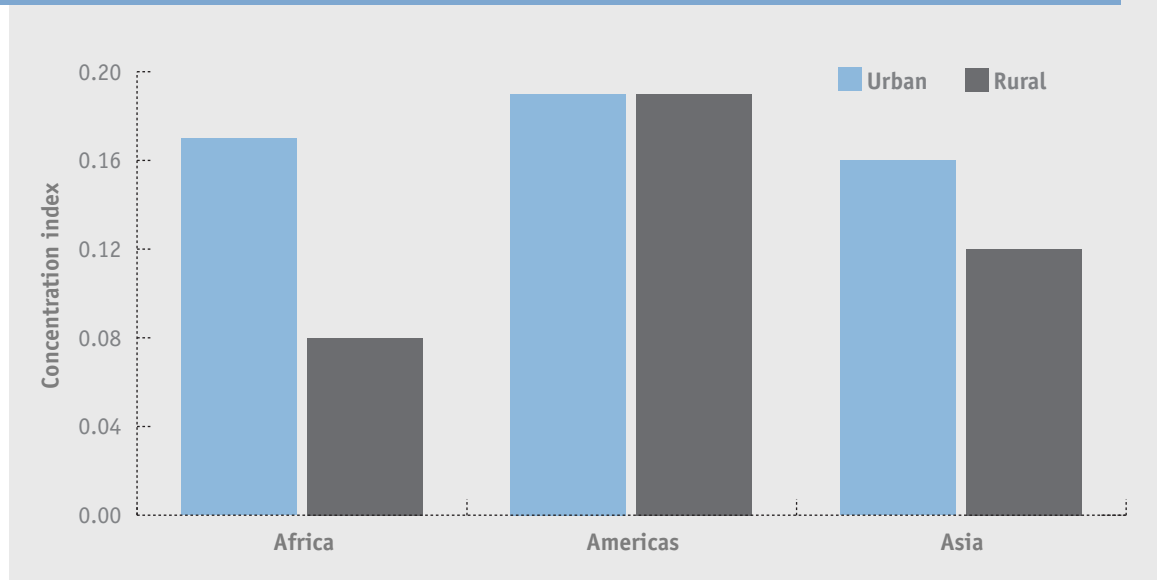
This figure presents the results of a study of Demographic and Health Surveys (DHS) data for 47 developing countries in 1994–2004 which estimated the median urban proportion of stuntedⁱ under-five children to be 28% compared to 43%

in rural areas.¹⁰⁰ Interestingly, the study pointed to two main conclusions that challenge the myth of better conditions in urban areas. First, it is mainly higher levels of household wealth in urban areas that account for lower average rates of stunting. According to the study, in a number of countries, the rural environment is healthier than the urban.¹⁰¹ Second, the degree of socioeconomic inequity in stunting was higher in urban areas in comparison to rural areas, for 32 of the 47 countries.

Reducing urban health inequity should be a central objective of cities' health and development plans. Available evidence indicates that health inequities exist in all cities. No city – large or small, rich or poor, east or west, north or south – has been shown to be immune to the problem.

Urban health inequities are detrimental to all city dwellers. Disease outbreaks, social unrest, crime and violence are but a few of the ways that urban health inequities affect everyone. These threats

FIGURE 3.1
INEQUITY IN CHRONIC MALNUTRITION AMONG CHILDREN LESS THAN FIVE YEARS OF AGE FOR 47 DEVELOPING COUNTRIES, COMPARING URBAN TO RURAL INEQUALITIES, 1994 – 2004



Note: These results represent averages of those countries for which urban DHS data were available in 1994-2004 (Africa = 28 countries, Americas = 9 countries, Asia = 10 countries). As such they are not representative of the region as a whole. The figure uses a concentration index which is an appropriate measure of inequity.

i. "Stunting" refers to children less than five years who have a height-for-age below minus two standard deviations of the National Center for Health Statistics (NCHS)/WHO reference median. Stunting is an expression of long-term exposure to nutritional inadequacy and indicates chronic malnutrition. It is an indication of poor environmental conditions and long-term restriction of a child's growth potential.



André, 25
Gualhueros, Brazil
OVERCOMING DRUG ADDICTION

André grew up surrounded by violence and crime. He lived with his mother and three brothers. “There were not many opportunities for me,” explains André. “My brothers were involved with drugs and there were always fights in the house. I left when I was 13 because I wanted some freedom and quiet.”

He soon found himself living in a house with many other kids and shared the rent. At first he sold soft drinks to make some money. “The house was full of drugs and guns, and eventually I got involved. I stole things, got drunk, and started to use cocaine when I was 14. But at that

time the drugs were occasional and just for fun.”

In his sixth year of taking drugs, André knew it had become a problem. He went to a local Social Centre for Alcohol and Drug Addicts for help. “The Centre really helped me. They had no preconceived notions or prejudice and they understood me. One of the best things was meeting other patients and sharing our experiences.”

Yet most of the activities at the Centre were for older people – knitting, sewing, woodwork and painting. “Teenagers don’t really connect when they come here. Most are here because they are forced to be.” With the approval of the Centre, he started a breakdance and rap

music programme to reach youth, enabling them to tell their stories at shows and health presentations.

“I take it as a responsibility and it makes me feel good when the younger ones listen to me and change their lives. There was a boy of just 12 who was already taking drugs and working in organized crime. I talked to him. He quit drugs and the criminal lifestyle and went back to school. His mother came to me crying and hugged me, thanking me for helping her son.”

“Before all this, I thought I would only get rid of my addiction through death, but now I believe I can beat it and that belief feels like a huge victory to me.”

WHO/Anna Kari

can spread easily beyond a single neighbourhood or district to endanger all citizens and taint a city's reputation.

On the other hand, taking action to reduce health inequities creates numerous benefits. It strengthens the branding strategies of cities and makes them more attractive to the private sector, investors, residents and institutions in a globally competitive environment. In addition, social cohesion is often improved, while violence and crime are reduced. Tackling health inequities can also generate action for integrating health into urban planning and for improving transport systems, housing and green spaces, while focusing on addressing the needs of vulnerable and disadvantaged groups. This brings immediate health benefits, and better prepares cities for natural disasters and future health-related impacts of climate change.

Ultimately, health inequities are an excellent social accountant: they are a reliable way to measure and monitor how well a city is meeting the needs of its residents. They can also be a rallying point for public demands for change; political resistance and inertia are often diminished when actions are undertaken in the name of health and health equity for all.¹⁰²

Local leaders have direct influence over a wide range of health determinants, including housing and transport policies, social services and smoking regulations. As such, they have numerous entry points for taking meaningful action against urban health inequities.¹⁰³

Urban health equity is related to human rights and international frameworks

Health equity is an ethical principle and is related closely to human rights principles. Health itself has been enshrined as a human right at the international level since the adoption of the Constitution of the World Health Organization in 1946.¹⁰⁴ The enjoyment of the highest attainable



WHO/Anna Kari

standard of health is one of the fundamental rights of every human being. This “right to health” has since been recognized in numerous internationally binding treaties¹⁰⁵ and national constitutions around the world.¹⁰⁶

Numerous international frameworks provide additional justifications for taking action on urban health inequity. These include the World Health Assembly's resolution on environmental health in rural and urban development and housing, Agenda 21, the United Nations Millennium Declaration, and the Alma-Ata Declaration, and subsequent calls for renewed action on primary health care.

In 1991, the World Health Assembly adopted a resolution on environmental health in rural and urban development and housing. The resolution recognized the rapid demographic transition towards urban areas and called on countries to strengthen their capacity for healthy urban development. Partnerships between government and community organizations, including nongovernmental organizations, the private sector and the local people, were identified as a key strategy for success.¹⁰⁷

Following this, Agenda 21 was adopted by the United Nations Conference on Environment and Development in Rio de Janeiro, 1992.¹⁰⁸ It embraces a comprehensive view of sustainable development, including the notion that sustainable development meets present needs without compromising the ability of future generations to

meet their own needs. Because so many issues addressed by Agenda 21 have their roots in local activities, it was recognized from the outset that the participation and cooperation of local authorities would be a determining factor in fulfilling its objectives. The Local Agenda 21 campaign promotes a participatory, long term, strategic planning process that helps municipalities identify local sustainability priorities and implement long-term action plans. It supports good local governance and mobilizes local governments and their citizens to undertake such a multistakeholder process. The process leads to the preparation and implementation of a long-term strategic plan that addresses priority local sustainable development concerns.

The United Nations Millennium Declaration is another international framework that recognizes the importance of action to reduce health inequities.¹⁰⁹ The Declaration was adopted in 2000 and translated into eight Millennium Development Goals (MDGs) to be achieved by 2015.¹¹⁰ Goals include eradicating extreme poverty and hunger, improving education, promoting gender equality, improving health and combating disease, ensuring environmental sustainability, and building a global

partnership for development. Although the MDGs do not explicitly include the need to improve health equity, it is commonly understood that addressing health inequities is an important aspect of meeting MDG targets in most countries. It is also broadly acknowledged that to achieve the MDGs, urban settings must be considered. The MDGs are explored further in Chapter 5 of this report.

The renewal of focus on primary health care lends additional legitimacy to the health equity agenda. The Alma-Ata International Conference on Primary Health Care,¹¹¹ held in 1978, was the first to put health equity on the international political agenda. The World Health Report 2008 called for a return to primary health care, arguing that its values, principles and approaches are more relevant now than ever before.⁸⁴ As the report noted, inequities in health outcomes and access to care are much greater today than they were in 1978. In 2009, the WHO World Health Assembly welcomed the publication of the report and reaffirmed its strong commitment to the values and principles of primary health care, including equity, solidarity, social justice, universal access to services, multisectoral action, decentralization and community participation.¹¹²

CHAPTER SUMMARY

This chapter has introduced the challenge of urban health inequity and made the case for why it matters. Health inequities are health inequalities that are systematic, socially produced (and therefore modifiable) and unfair. They are not distributed randomly, but rather show a consistent pattern across the population, often by socioeconomic status or geographical location. ■ Opposite to health inequity, health equity implies that everyone has a fair opportunity to attain their full health potential, and no one is disadvantaged from achieving that potential because of their social position or other socially determined circumstance. As such, health equity can be considered as a reliable way to measure and monitor how well a city is meeting the needs of its residents. Health equity is, above all, an issue of social justice, and related to several human rights principles and international frameworks. ■ Despite their importance, urban health inequities are often missed altogether because health information is typically collected and analysed to look at urban averages. It is only through looking for differences within cities through disaggregated data that urban health inequities can be brought out of the shadows. The remaining chapters in Part Two present results highlighting these inequities.



CHAPTER 4

URBAN HEALTH INEQUITIES REVEALED

WHO/Anna Kari

This chapter highlights health inequities in urban settings and demonstrates how aggregated data often mask substantial health inequities within urban populations – inequities that are revealed only through looking at subgroups of city dwellers according to their socioeconomic status, neighbourhood or other population characteristics. Results uncover both *gaps* between richest and poorest urban subgroups, and *gradients* in health across entire urban populations.

Most examples featured in this chapter were drawn from new analyses conducted by the World Health Organization on the nature and extent of urban health inequities. Data were extracted from reliable sources (established international organizations, or national or municipal government agencies) for which disaggregation was possible by urban/rural setting and ideally by other socio-economic factors, such as income and education level. Data from the 2003 World Health Survey¹¹³ and the Demographic and Health Surveys (DHS)¹¹⁴ were used for many of the topic areas. City populations were disaggregated according to their household income and education level. Health inequities were assessed by looking at how these different subgroups varied across a range of health indicators, including disease risk factors, health-care access and health outcomes. For selected health indicators, an additional step involved identifying specific factors that contributed to urban health inequities.

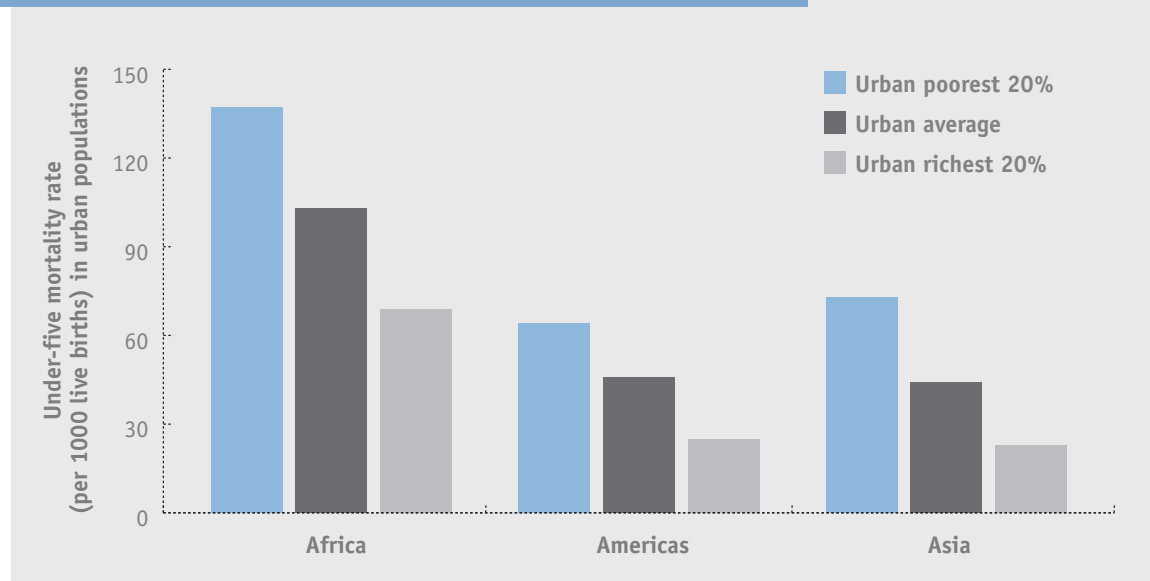
This chapter is not an exhaustive review of the World Health Organization’s new analyses on urban

health inequities or of urban health inequities in general. Examples from specific countries should not be interpreted as assessments of their overall urban health equity, nor should they be taken to mean that cities in these countries have more health inequities than cities in other countries. More detailed information about the World Health Organization’s analyses and results can be found in Annex B of this report.

Health inequities between rich and poor urban populations

Urban health averages often mask wide gaps between people of different socioeconomic status. This section demonstrates that disaggregated data reveal a starkly different reality for the urban poor. Differences exist not only between richest and poorest city dwellers, but also along the continuum of entire urban populations.

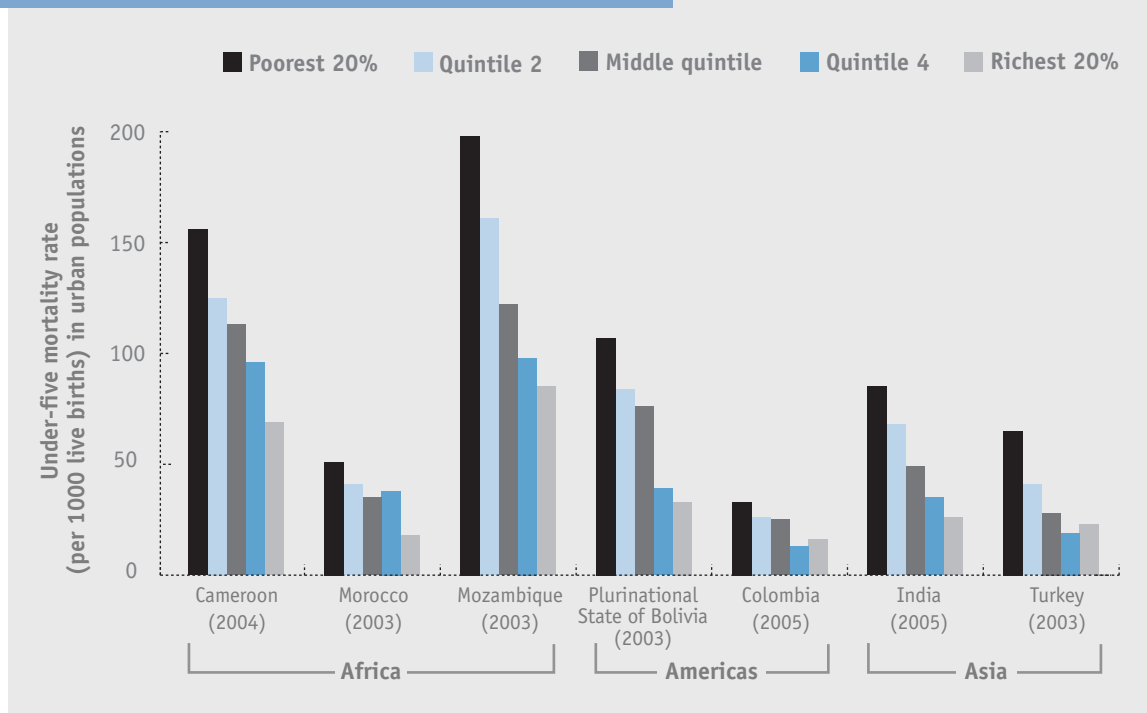
FIGURE 4.1
UNDER-FIVE MORTALITY RATE IN URBAN AREAS, BY REGION, IN 42 LOW- AND MIDDLE-INCOME COUNTRIES



Note: These results represent averages of those countries for which urban DHS data were available for under-five mortality (Africa = 25 countries, Americas = 7 countries, Asia = 10 countries). As such, they are not representative of the regions as a whole.

Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 2000–2007.

FIGURE 4.2
UNDER-FIVE MORTALITY RATE IN URBAN AREAS
OF SEVEN SELECTED COUNTRIES



Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 2003–2005.

POOR URBAN CHILDREN ARE AT INCREASED RISK FOR CHRONIC MALNUTRITION AND DEATH

Although child survival rates in urban areas are mostly higher than in rural areas, these averages obscure substantial inequities between different population groups. Figure 4.1 reveals that within urban areas, large inequities exist within and between regions in under-five mortality rates. Within each region, children from the poorest urban families are roughly twice as likely to die as children from the richest urban families. Between regions, mortality rates in urban areas of Africa are roughly double those of the Americas and Asia.

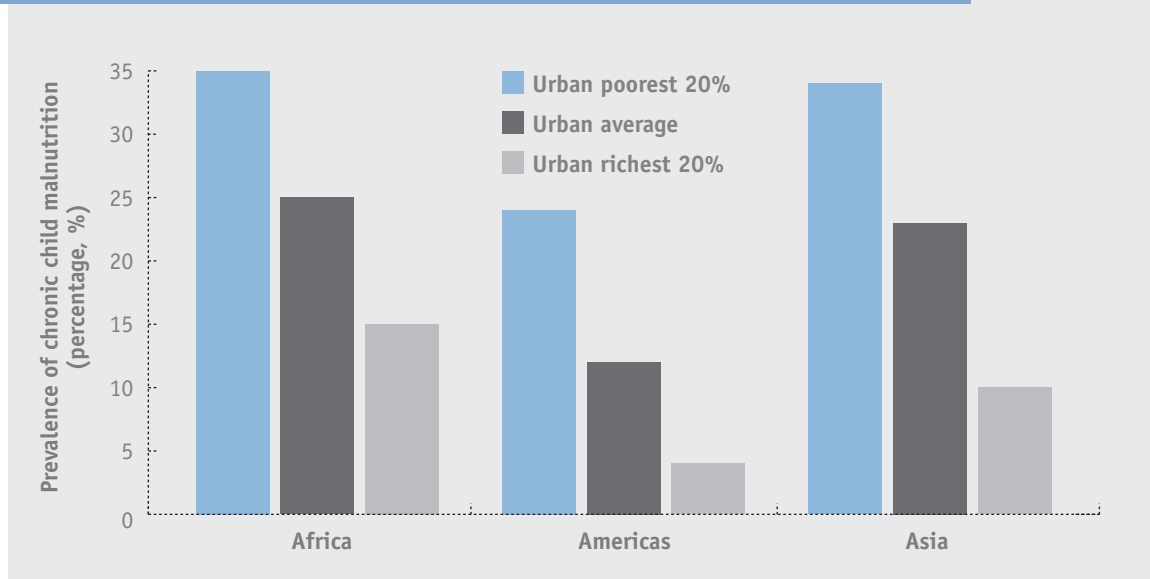
In each of the 42 low- and middle-income countries for which data (from 2000 onwards) are available, the poorest urban children are twice as likely as the richest urban children to die before the age of five years. The magnitude of difference varies

substantially across countries, ranging from 1.3 to 15.6 times relative difference between groups. Nonetheless, the overall health penalty is clear. Across all 42 countries, the poorest urban children are the most likely to die before the age of five years.

Differences exist not only between the richest and the poorest, but also across entire urban populations. In urban areas of several exemplar countries (Figure 4.2), under-five mortality rates decline progressively as family income rises. These results indicate that efforts to reduce inequities need to address the entire population, rather than focusing only on the poorest groups.

A similar picture emerges for childhood malnutrition, which causes more than a third of all deaths during childhood. Globally, malnutrition among under-five children is less common in urban areas, compared with rural areas. Yet once again, these urban averages mask substantial differences within cities. Results from 41 low- and middle-

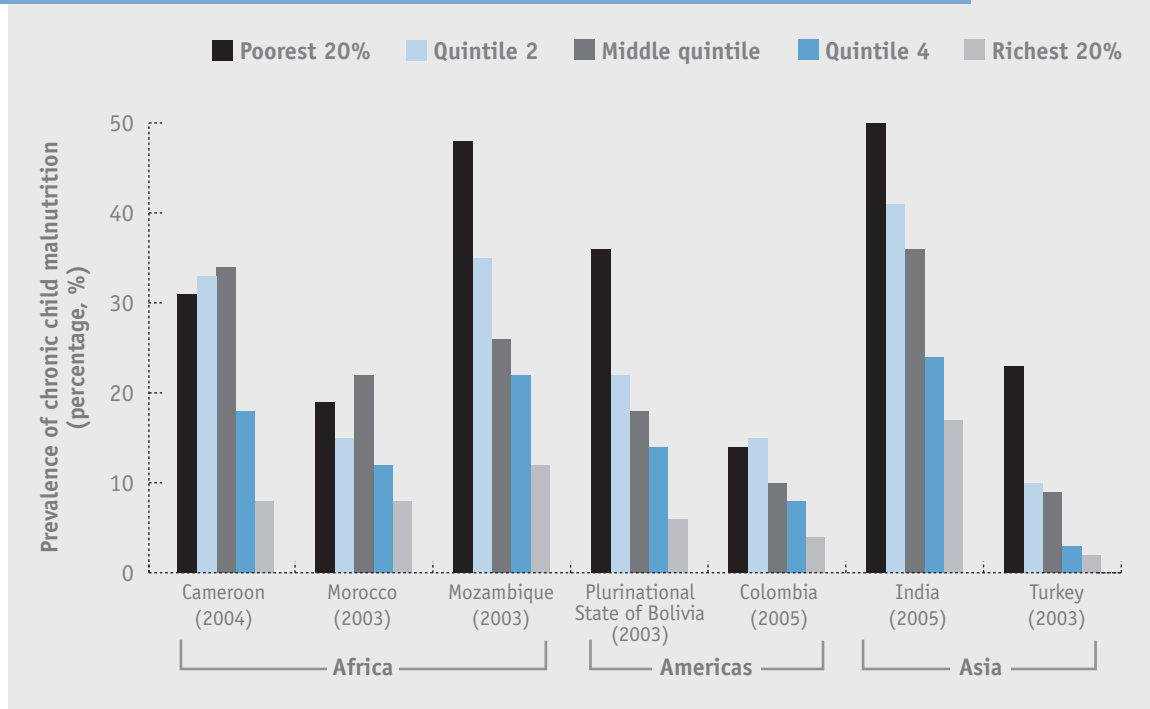
FIGURE 4.3
CHRONIC MALNUTRITION AMONG CHILDREN LESS THAN FIVE YEARS OF AGE, BY REGION, IN 41 LOW- AND MIDDLE-INCOME COUNTRIES



Note: These results represent averages of those countries for which urban DHS data were available (Africa = 27 countries, Americas = 7 countries, Asia = 7 countries). As such, they are not representative of the regions as a whole.

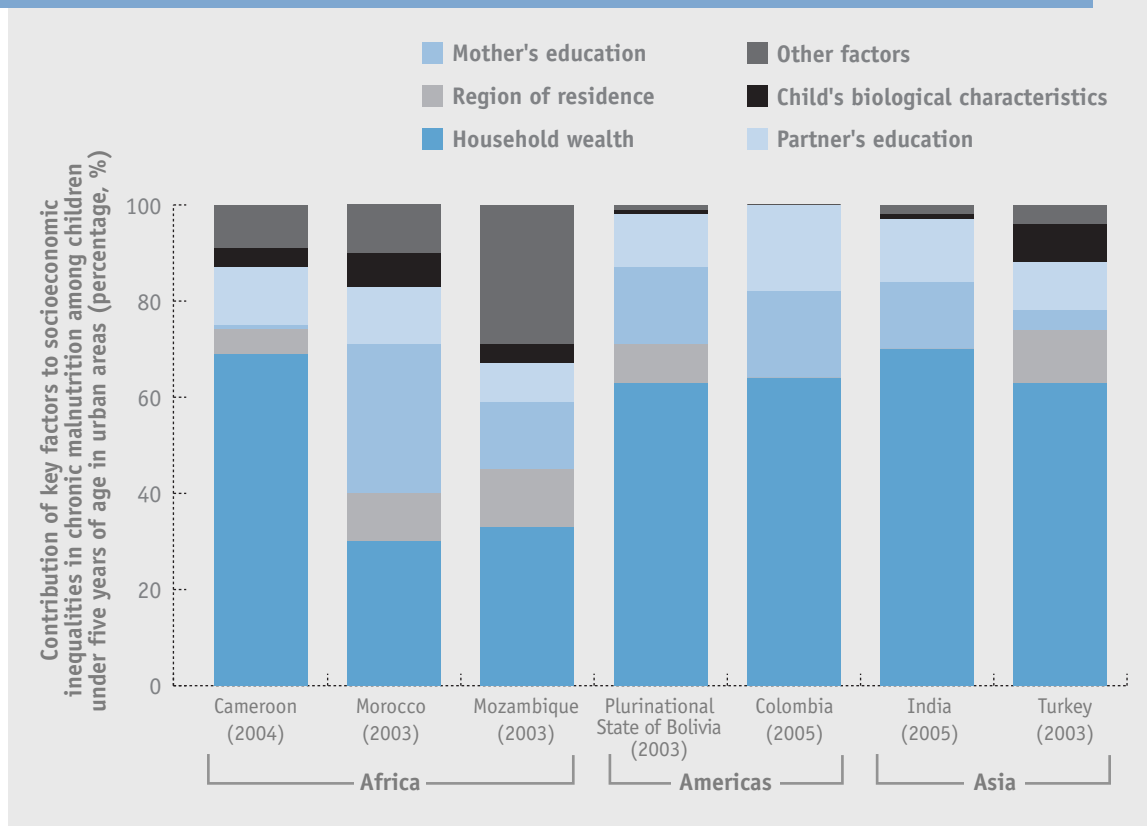
Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 2000–2007.

FIGURE 4.4
CHRONIC MALNUTRITION AMONG CHILDREN LESS THAN FIVE YEARS OF AGE IN URBAN AREAS OF SEVEN SELECTED COUNTRIES



Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 2003–2005.

FIGURE 4.5
FACTORS THAT CONTRIBUTE TO INEQUITIES IN CHRONIC MALNUTRITION AMONG CHILDREN LESS THAN FIVE YEARS OF AGE IN URBAN AREAS OF SEVEN SELECTED COUNTRIES



Notes: *Child's biological characteristics* include age, sex and birth weight; *Other factors* include mother's age, number of children under five years of age, distance to health facility, access to safe water and residual factors. See Annex B for more information on the analytic methods.

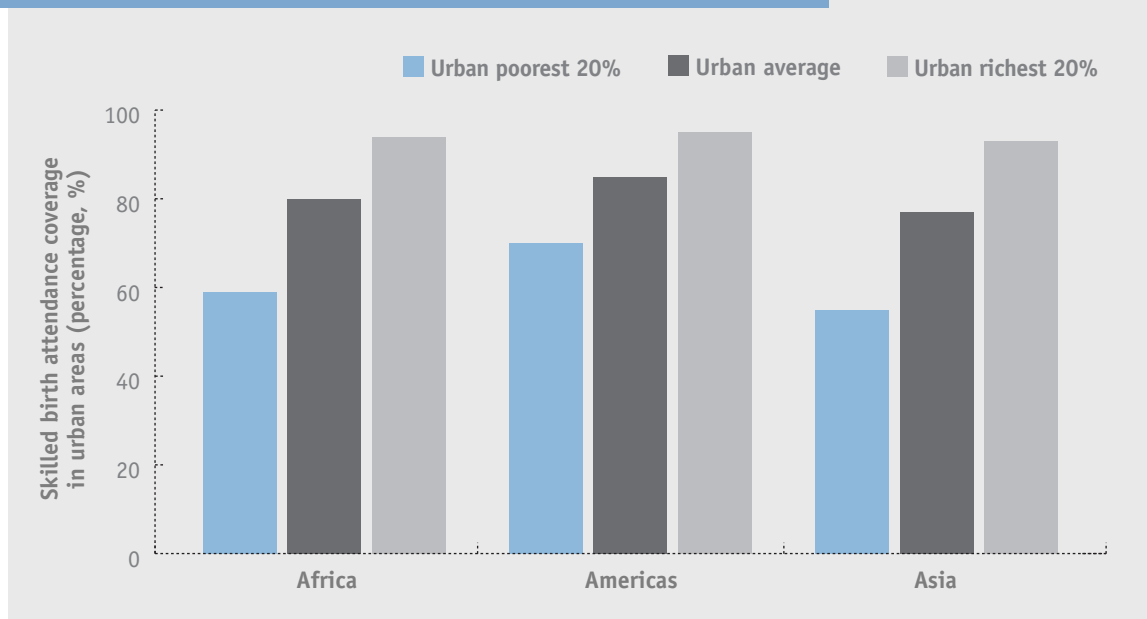
Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 2003–2005.

income countries for which data are available show that on average, the prevalence of stunting (see footnote i, Chapter 3, for a definition) among the poorest urban children is three times greater than among the richest urban children. Figure 4.3 displays inequities in childhood malnutrition among urban populations in Africa, the Americas and Asia. In each region, large gaps exist between the poorest fifth and richest fifth of urban populations.

It is not only the children in poor households who are prone to malnutrition. In general, the middle classes also suffer more childhood stunting than the richest families. Examples from urban areas in selected countries in Figure 4.4 reveal that the risk of chronic child malnutrition increases progressively as family income declines.

What accounts for these inequities? To help answer this question, WHO conducted additional analyses to identify factors that contribute to inequities in childhood malnutrition. Results are presented in Figure 4.5. Across urban areas of seven studied countries, inequities in household wealth had a strong impact on inequities in child malnutrition. The contribution of household wealth to inequity in malnutrition ranged from 30% to 76% across the seven countries. Inequities in education levels of mothers and their partners also each independently contributed to childhood malnutrition, accounting for 1% to 31%, and 8% to 18%, of malnutrition inequities, respectively. Region of residence and the child's biological characteristics were identified as additional contributors to inequity, although their relative impact was generally less than the aforementioned factors.

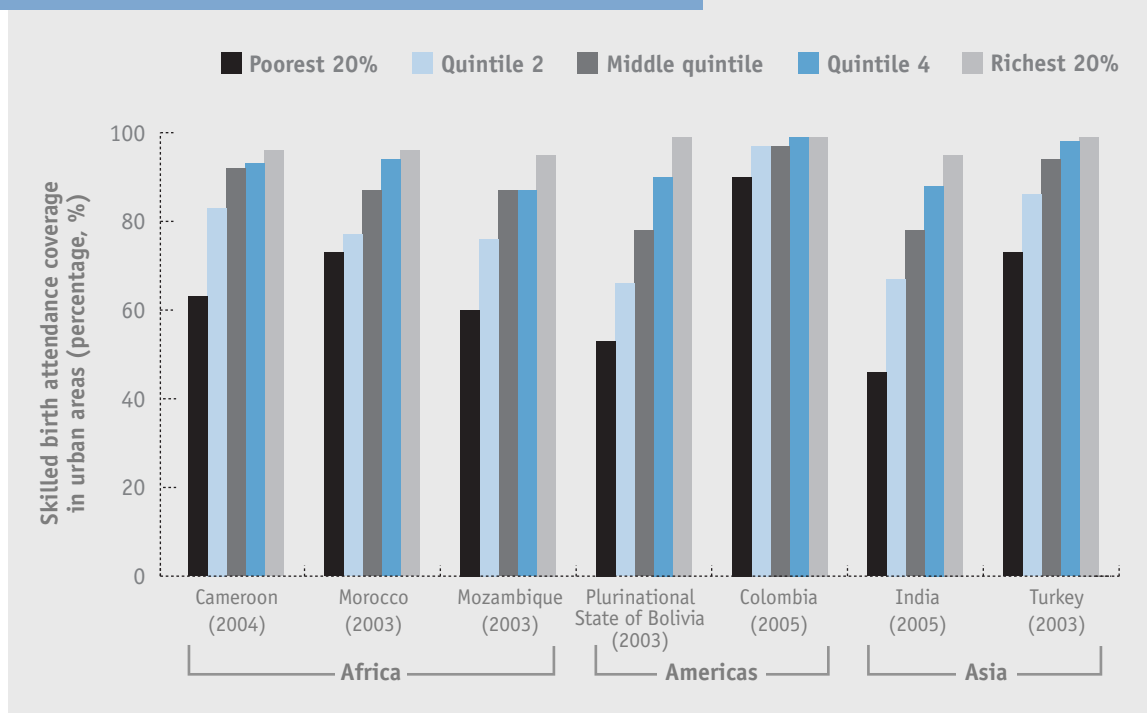
FIGURE 4.6
SKILLED BIRTH ATTENDANCE COVERAGE, BY REGION,
IN URBAN AREAS OF 44 LOW- AND MIDDLE-INCOME COUNTRIES



Note: These results represent averages of those countries for which urban DHS data were available (Africa = 26 countries, Americas = 7 countries, Asia = 11 countries). As such, they are not representative of the regions as a whole.

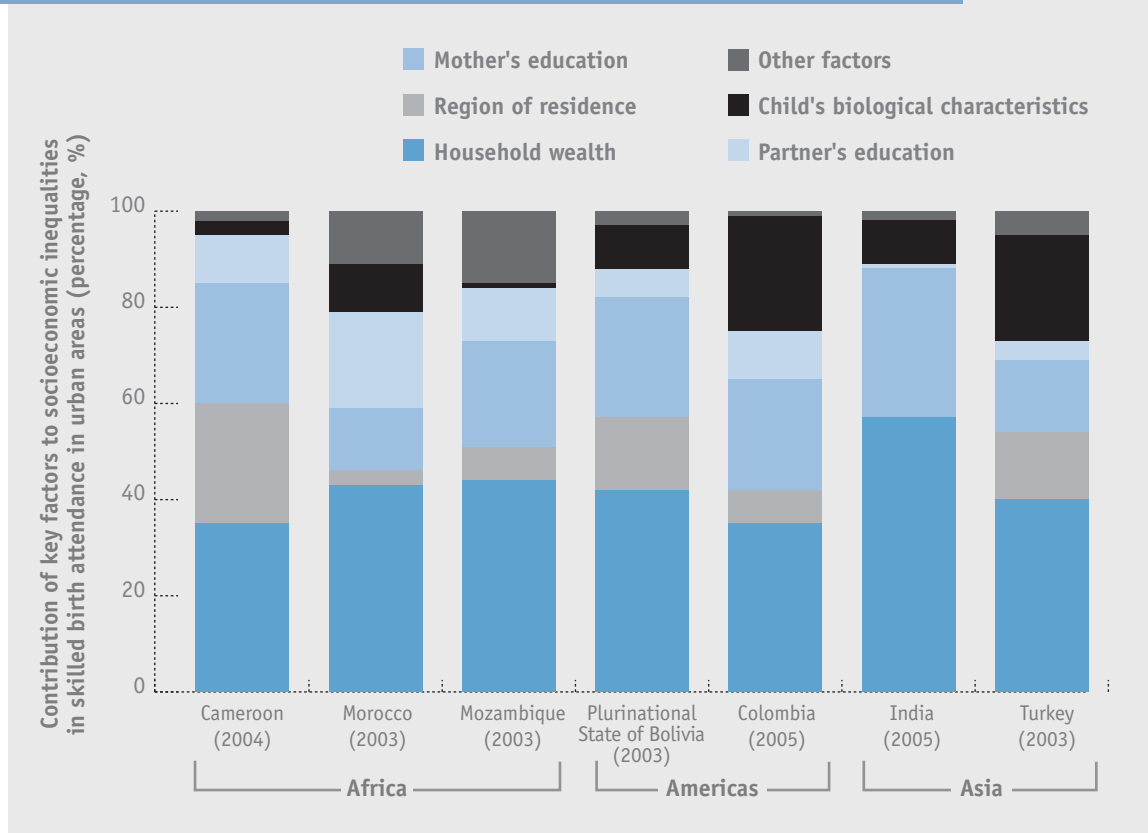
Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 2000–2007.

FIGURE 4.7
SKILLED BIRTH ATTENDANCE COVERAGE
IN URBAN AREAS OF SEVEN SELECTED COUNTRIES



Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 2003–2005.

FIGURE 4.8
FACTORS THAT CONTRIBUTE TO INEQUITIES IN SKILLED BIRTH ATTENDANCE,
IN URBAN AREAS OF SEVEN COUNTRIES



Note: *Other factors* include mother's age, cohabiting with partner, having a female household head, distance to health facility, and residual factors. See Annex B for more information on the analytic methods.

Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 2003–2005.

POOR, URBAN WOMEN HAVE LOWER SKILLED BIRTH ATTENDANCE

Professional care at birth by doctors, nurses, auxiliary nurses or other allied health professionals – skilled birth attendance – helps reduce complications during childbirth that can lead to maternal disability and death. Yet in urban areas of 44 low- and middle-income countries for which data are available, skilled birth attendance varies from a low of less than 40% to a high of 100%. The majority of the studied countries have skilled birth attendance coverage of less than 90% in the urban areas.

Figure 4.6 reveals that across the regions of Africa, the Americas and Asia, large gaps exist in skilled birth attendance between the richest and the poorest urban residents. This relationship also holds true within

individual countries. For example, in Bangladesh, skilled birth attendance coverage is 6% among the poorest fifth of the urban population while it is more than 75% among the richest fifth. While gaps tend to be smaller in countries where urban averages are higher, inequities exist even where average coverage in urban areas is relatively high. For example, Egypt's average skilled birth attendance coverage is 89% in urban areas, but ranges between 74% for the poorest fifth and 99% for the richest fifth.

With few exceptions, inequities in skilled birth attendance also affect the middle classes of urban areas. Women from middle-income families are less likely than those in the upper class to be attended during childbirth, but more likely than the poorest city dwellers to have access to this form of health care (Figure 4.7).



Neniata, 69
San Antonio, Makati,
Manila, Philippines
LIVING WITH DIABETES

Neniata has nine children, and lives in a small house with seven other adults and 12 children. "My children do painting, cleaning, gardening, whatever work they can get," she says. "They give me money when they can, but they have their own children too, so I wait my turn." On good days, she eats a lot, but, she confides, "sometimes all we have is bread. When I get some money it usually only lasts a few

days. Most of it I will spend on food. I don't drink or gamble."

Fifteen years ago she discovered she had diabetes, high cholesterol and high blood pressure. "I was weak and felt wobbly and dizzy," Neniata recalls. Now, she relies on the medicine she receives for free at her monthly check-up, but she usually can't afford to buy more when it runs out and needs to go looking for a clinic prepared to give a handout. For example, "Right now I have no medicine left. It ran out about two weeks ago."

She can't get insulin for free at the clinic and at US\$ 6.50 a day, she can't afford to buy it. Three years ago, this almost cost her a foot.

"My foot was swollen to the knee and numb. The doctor told me they might have to amputate it. I asked him not to because I like to dance! I made him laugh. I spent two months in hospital recovering and getting insulin. I am happy I kept my foot!"

Neniata is a very humorous lady with a love for life. "Really my illness is nothing! I can't worry too much about it. I like to smile and dance."

WHO/Anna Kari

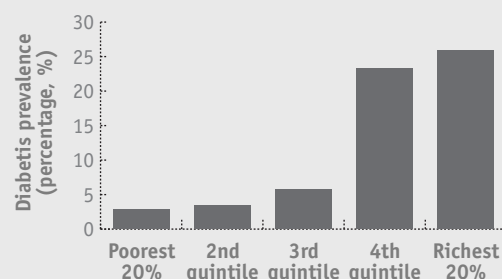
As with child malnutrition, WHO conducted additional analyses on skilled birth attendance to identify factors that contribute to inequities in skilled birth attendance coverage. Results are presented in Figure 4.8. In general, results indicate that inequalities in household wealth again have a strong impact on inequities in coverage. Across the seven countries, household wealth accounted for between 34% and 58% of the inequities. Residing in different regions contributed additionally in some countries such as Cameroon (25%) and the Plurinational State of Bolivia (14%), while its contribution was negligible in India (~0%) and Morocco (3%). The education level of the mother was another important factor: its contribution to inequities in skilled birth attendance coverage ranged from 10% in Morocco to 31% in India. The education level of the mother's partner also played a role, especially in Morocco, where the partner's education contributed more than the mother's education to inequities in skilled birth attendance. Finally, the birth order of the child, while not a major factor in most countries, contributed to inequities in skilled birth attendance up to 24% in Colombia and 23% in Turkey.

THE URBAN POOR ARE AT INCREASED RISK FOR DIABETES AS COUNTRIES DEVELOP

As a country's economy grows, the burden of noncommunicable diseases tends to shift from wealthier to poorer segments of urban populations. The specific reasons for this phenomenon are a topic of debate, but presumably are related to differential exposure to noncommunicable disease risks (for example unhealthy diet, physical inactivity, obesity and tobacco use) among different urban subgroups at different stages of a country's economic development.

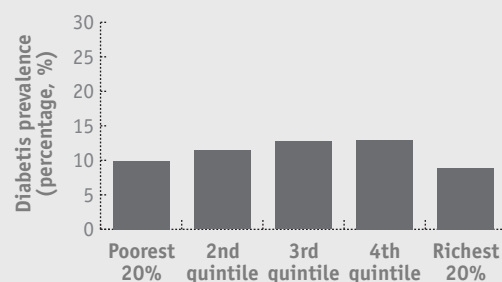
Diabetes is a case in point. Figure 4.9 shows the prevalence of self-reported diabetes among adults age 45 and older in urban areas of Bangladesh, a low-income country, by level of wealth. In this case, diabetes primarily affects the wealthier segments of the urban population. Tunisia, a middle-income

FIGURE 4.9
PREVALENCE OF SELF-REPORTED DIABETES DIAGNOSED BY A PHYSICIAN, ADULTS AGE 45 AND OLDER, URBAN BANGLADESH (LOW-INCOME COUNTRY)



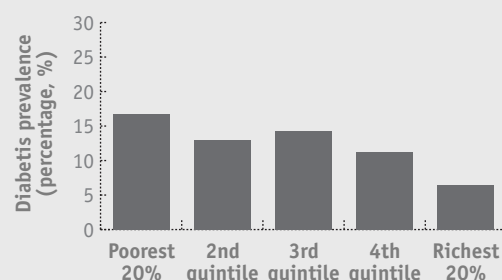
Source: WHO calculations based on data from World Health Survey, 2003.

FIGURE 4.10
PREVALENCE OF SELF-REPORTED DIABETES DIAGNOSED BY A PHYSICIAN, ADULTS AGE 45 AND OLDER, URBAN TUNISIA (MIDDLE-INCOME COUNTRY)



Source: WHO calculations based on data from World Health Survey, 2003.

FIGURE 4.11
PREVALENCE OF SELF-REPORTED DIABETES DIAGNOSED BY A PHYSICIAN, ADULTS AGE 45 AND OLDER, URBAN SPAIN (HIGH-INCOME COUNTRY)



Source: WHO calculations based on data from World Health Survey, 2003.

country, shows a relatively flat distribution of diabetes across urban wealth groups (Figure 4.10). In urban areas of Spain, a high-income country, it is poorer urban residents who are most likely to have diabetes (Figure 4.11). As several factors may contribute to these differences, more detailed epidemiological analysis is required to understand trends over time and causal relationships.

DISPARITIES IN PIPED WATER ACCESS WITHIN URBAN AREAS

Inequities between the rich and the poor exist not only for health outcomes, but also for health determinants, such as piped water access. Piped household water connections provide running water into dwellings, plots or yards. They are considered to be the most improved drinking-water source (provided pipes are maintained properly and water quality is assured). Improvements in access to piped household water connections have been the main driver of progress in access to safe water in most

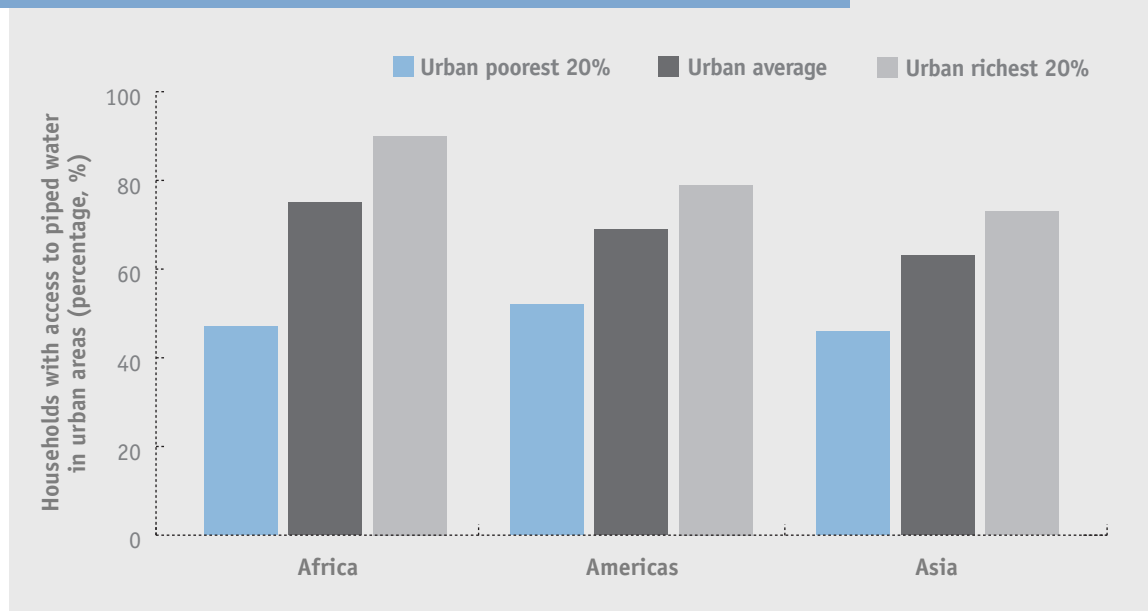
regions, with growth in piped household water access twice as high as growth in other improved drinking-water sources between 1990 and 2008.¹¹⁵

Globally, piped water coverage among urban households is much higher than that in rural areas.¹¹⁵ However, substantial inequities exist between the richest and poorest urban residents in Africa, the Americas and Asia (Figure 4.12). While magnitudes vary, the same relationship holds true within each of the studied countries in these regions.

When inequities in urban access to piped water are analysed in further detail, social gradients emerge; that is, systematic increases in urban piped water access correspond to increases in urban wealth quintile. Figure 4.13 displays these gradients in seven selected countries. Among these countries, the degree of inequity is largest in Mozambique and smallest in Morocco, although gradients exist in all countries.

One important caveat to these results is that routine administrative data generally refer to

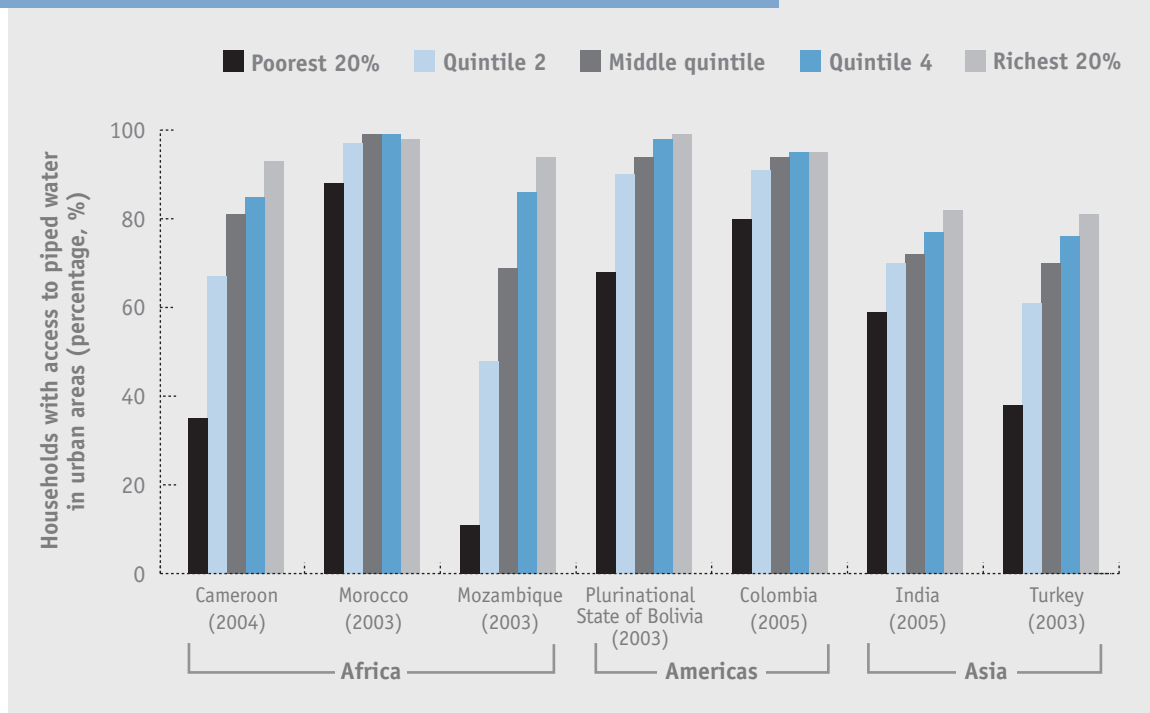
FIGURE 4.12
PERCENTAGE OF HOUSEHOLDS WITH ACCESS TO PIPED WATER, IN URBAN AREAS OF 44 LOW- AND MIDDLE-INCOME COUNTRIES



Notes: Data refer to the most recent data available during the period 2000–2007. Poorest and richest 20% refer to the lowest and highest urban wealth quintiles. These results represent averages of those countries for which urban DHS data were available (Africa = 27 countries, Americas = 7 countries, Asia = 10 countries). As such, they are not representative of the regions as a whole.

Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 2000–2007.

FIGURE 4.13
INEQUITIES IN ACCESS TO PIPED WATER IN URBAN AREAS
FROM SEVEN SELECTED COUNTRIES



Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 2003–2007.

existing water sources, whether or not they are actually used by households. More importantly, they might not take into account those living in slums. Thus, these data might provide gross over-estimates of access to piped water, especially in cities with poorly maintained water distribution systems or with large slum areas.

SUMMARY

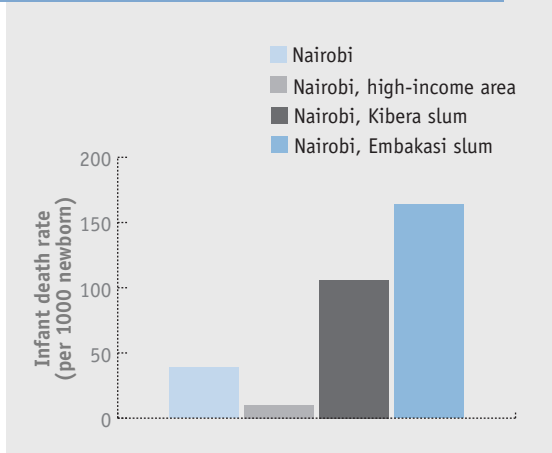
This section has demonstrated that aggregated data often mask substantial health inequities within urban populations – inequities that are revealed when looking at city dwellers according to their family income or wealth level. Specifically, these analyses show that families with the lowest incomes in urban areas are most at risk for adverse health outcomes such as child malnutrition and early childhood death, have less access to health services such as skilled birth attendance, and are

also disadvantaged in terms of their living conditions, such as access to piped water. Importantly, these inequities exist along a social gradient, also affecting middle class city dwellers to at least some extent. The underlying causes of these inequities in health are primarily social in nature, including household wealth, education and location of residence, which outweigh the effects of predetermined attributes such as age and gender.

Health inequities between neighbourhoods

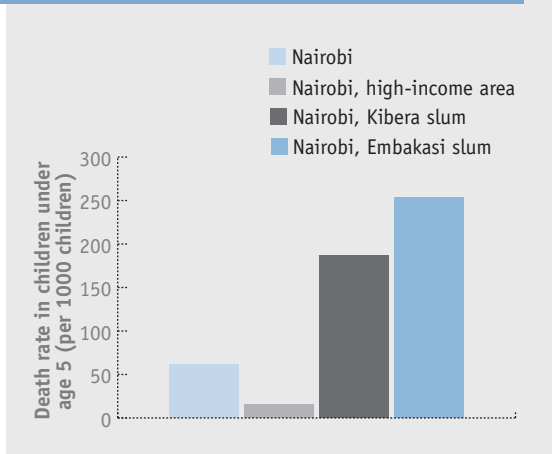
Evidence in this section looks at health inequities from a geographical perspective, by comparing neighbourhoods or districts within cities. Results show that city dwellers’ odds of being healthy depend very much on their “place” within the city.

FIGURE 4.14
INFANT DEATH RATES, NAIROBI, KENYA



Source: *Population and health dynamics in Nairobi's informal settlements*. Nairobi, African Population and Health Research Center, 2002. Data were collected in 2000.

FIGURE 4.15
DEATH RATES IN CHILDREN LESS THAN FIVE YEARS OF AGE, KENYA, DISAGGREGATED BY NAIROBI NEIGHBOURHOOD



Source: *Population and health dynamics in Nairobi's informal settlements*. Nairobi, African Population and Health Research Center, 2002. Data were collected in 2000.



WHO/Anna Karf

Neighbourhoods vary dramatically within most cities, and disadvantage tends to cluster within certain districts. Some have ready access to fresh food via meat and produce markets; others have only fast food or street vendors. Some have good-quality housing, green spaces and clean air; others are run down, crowded and polluted. Some have an array of health and social services within their limits; others have none. These and other factors combine to influence health on a neighbourhood-by-neighbourhood level.

Although neighbourhoods differ according to residents' economic status, not all urban poor live in slums or areas of concentrated disadvantage, and not all people who live in slums or areas of concentrated disadvantage are poor. It is therefore useful to consider health inequities by neighbourhood, in addition to socioeconomic status, although these two factors tend to correlate with one another.

SLUM DWELLERS IN NAIROBI, KENYA, ARE THE MOST LIKELY IN THE COUNTRY TO DIE DURING EARLY CHILDHOOD

The city of Nairobi, Kenya, exemplifies rapid urbanization amidst deteriorating economic and health conditions. With an annual growth rate of 7% over the last two decades, Nairobi remains one of the fastest growing cities in Africa. Since the 1960s, Nairobi's population has increased more than tenfold, from 293 000 in 1960 to more than 3 million in 2009.^{116,117} Most of the growth of the city of Nairobi is a result of rural-urban migration rather than immigration from other countries or natural increase.

On average, infant deaths in Nairobi are less common than infant deaths in rural parts of Kenya.¹¹⁸ Nonetheless, this urban average masks stark differences between different areas of Nairobi. Figure 4.14 reveals that slum areas of Nairobi have infant death rates that far exceed corresponding rates for the city as a whole and its high-income areas. The same picture emerges for deaths in children less than five years of age (Figure 4.15).

TUBERCULOSIS RATES DIVERGE DRAMATICALLY BY WARD IN JAPAN'S LARGEST CITIES

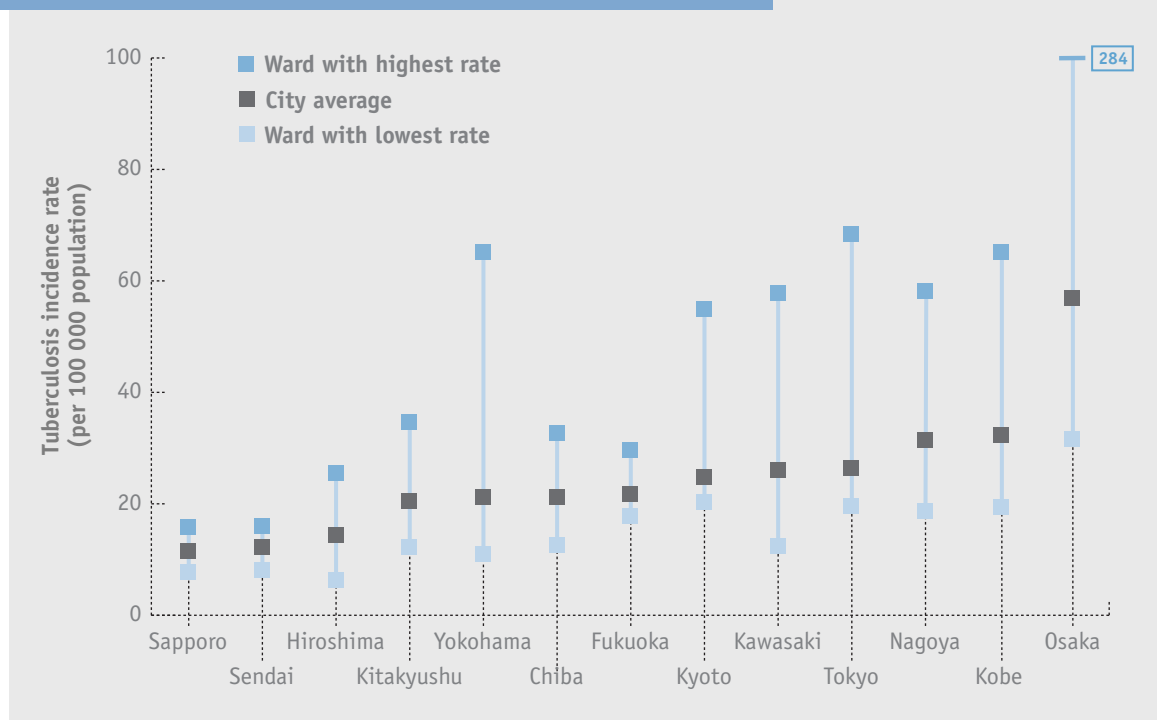
Urban health inequities also exist in Japan, a country known for high standards of health and social development (as indicated by its residents' life expectancies). Data obtained from the Research Institute of Tuberculosis in Japan reveal wide disparities in tuberculosis incidence within the country's largest cities.

Tuberculosis (TB) was highly prevalent in Japan before and immediately after the Second World War, with hundreds of thousands of people dying from the disease each year. Poverty, poor housing and overcrowded cities were the major causes at the time. Japan's economic development in the 1960s helped to change the situation: living standards improved enormously and the government reinforced its TB control efforts. Nevertheless, TB is more common in Japan than in other developed countries.

Figure 4.16 reveals wide disparities in the number of newly notified TB cases between the largest cities in Japan. In 2006, the average number of newly notified TB cases per 100 000 urban population ranged from a low of 11.5 in Sapporo to a high of 57.0 in Osaka. The national rate for that year of 20.6 new cases per 100 000 population (including both urban and rural areas) was exceeded in 9 of the 13 cities.

This figure also shows that substantial gaps exist within cities, from ward to ward. Such large variations over small distances are a characteristic of TB in many cities around the world. In Japan, inequities were found within all of the studied cities, including Tokyo, Kawasaki and Yokohama (part of the Greater Tokyo area), and Kyoto, Nagoya and Kobe (part of, or contiguous with, the Kyoto-Osaka-Kobe metropolitan area). The cities with higher average rates tended to have wider gaps, but even cities with relatively low rates, such as Yokohama, had large disparities between the worst and best performing wards in the city.

FIGURE 4.16
NEWLY NOTIFIED TB CASE RATE PER 100 000 POPULATION, LARGEST CITIES IN JAPAN, 2006



Source: Research Institute of Tuberculosis, Kiyose, Japan.

Osaka had the highest rate of newly notified TB cases, as well as the largest disparities among its wards. Among its 24 wards, new TB cases ranged from 31.6 per 100 000 residents in the Tsurumi ward to 284.3 per 100 000 residents in the Nishinari ward. Nishinari is home to one of Japan's largest concentrations of day labourers, many of whom are homeless. Its extremely high TB rate probably reflects the situation among this economically and socially disadvantaged minority group.

RISK OF HOMICIDE VARIES FOURFOLD BETWEEN SUBDISTRICTS IN CAPE TOWN, SOUTH AFRICA

The following data from Cape Town, South Africa, show that disadvantaged clusters often exhibit a number of negative indicators – the subdistricts with the greatest number of homicides are also those that are the poorest, and have the largest proportion of residents who are unemployed and living in slums.

South Africa has one of the highest rates of homicide in Africa and in the world. Among South Africa's major cities, Cape Town has the largest problem, with 63.5 homicides per 100 000 residents in 2007.¹¹⁹

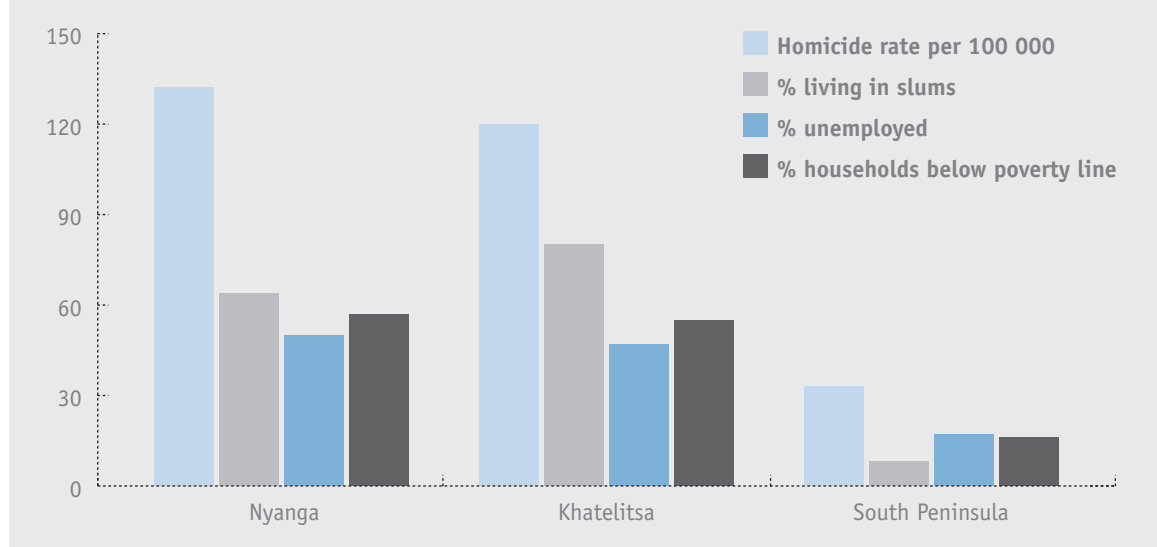
When homicide data from Cape Town were disaggregated into 11 city subdistricts, striking disparities within the city were revealed. Homicide rates ranged considerably, from a low of 33 in South Peninsula to a high of 132 in Nyanga, equivalent to four times the risk of violent death.¹²⁰

The two districts with the highest homicide rates, Nyanga and Khayelitsha, are also the most disadvantaged. Considerable proportions of people living in these areas live in slums, are unemployed and subsist below the poverty line. This stands in contrast to South Peninsula, which is among the most advantaged districts of the city (Figure 4.17).

HEALTH INEQUITIES BETWEEN NEIGHBOURHOODS OF NEW YORK CITY, UNITED STATES

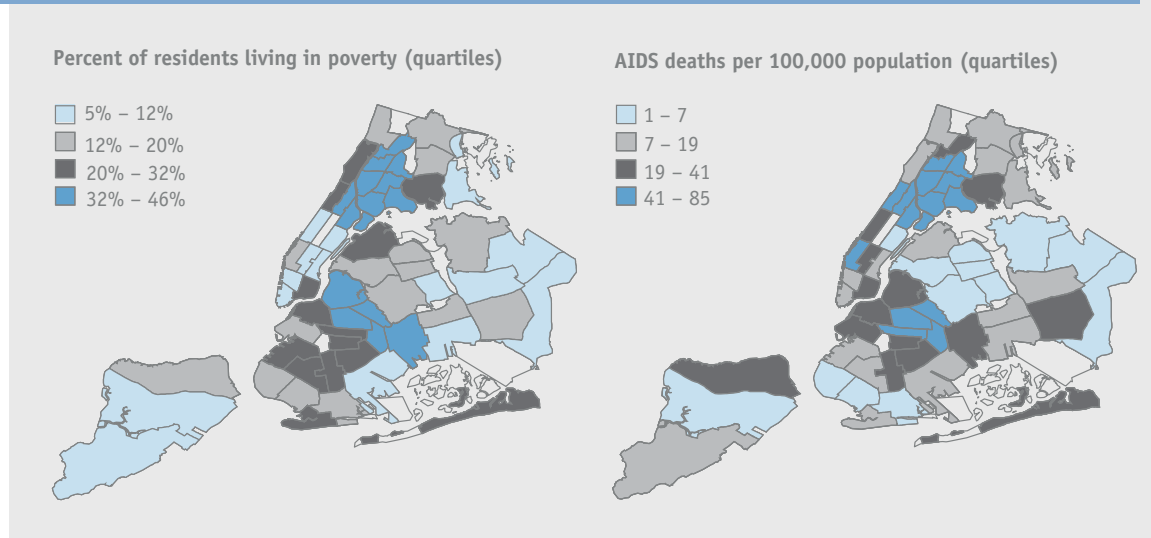
Data from New York City, United States, reveal that poor health is concentrated in certain New York City neighbourhoods, and that the neighbourhoods with the worst health outcomes are also those that are the poorest in economic terms, and in which people are least likely to have access to essential health care. In 2001, the

FIGURE 4.17
HOMICIDE RATES VARY BY A FACTOR OF FOUR BETWEEN SUBDISTRICTS OF CAPE TOWN, SOUTH AFRICA, 2001–2004



Source: Bourne D et al. *Western Cape burden of disease reduction project, Vol. 2 of 7: Institutionalising a mortality surveillance system in the Western Cape Province to measure the burden of disease and the impact of preventive interventions*. Final report 2007. City of Cape Town, 2007.

FIGURE 4.18
GEOGRAPHICAL RELATIONSHIP BETWEEN PERCENTAGE OF RESIDENTS LIVING IN POVERTY
AND LIKELIHOOD OF DYING FROM AIDS, NEW YORK CITY, UNITED STATES



Source: Karpati A et al. *Health disparities in New York City*. New York, New York City Department of Health and Mental Hygiene, 2004.

life expectancy in New York City's poorest neighbourhoods was eight years shorter than in its wealthiest neighbourhoods.¹²¹

Figure 4.18 illustrates this phenomenon by displaying the geographical relationship between the percentage of residents living in poverty and the likelihood of dying from acquired immune deficiency syndrome (AIDS). Neighbourhoods with high concentrations of poverty (indicated by darker colours on the left map) coincide with neighbourhoods that have higher rates of AIDS deaths (indicated by darker colours on the right map). Similar relationships have been found for numerous other indicators of poor health and adverse living conditions, including rates of hospitalization, infant deaths and deaths due to diabetes.¹²¹

POOR HEALTH CONCENTRATED IN CERTAIN DISTRICTS OF PRESTON, UNITED KINGDOM

Data from Preston, United Kingdom, show a similar picture to that of New York City. Certain parts of the city (called wards) are localities of concentrated deprivation and premature death. As a growing

city of around 132 000 people, and home to a university and the British aerospace industry, local leaders are now using the deprivation and health inequity data to better tailor interventions and services to communities with the greatest need.

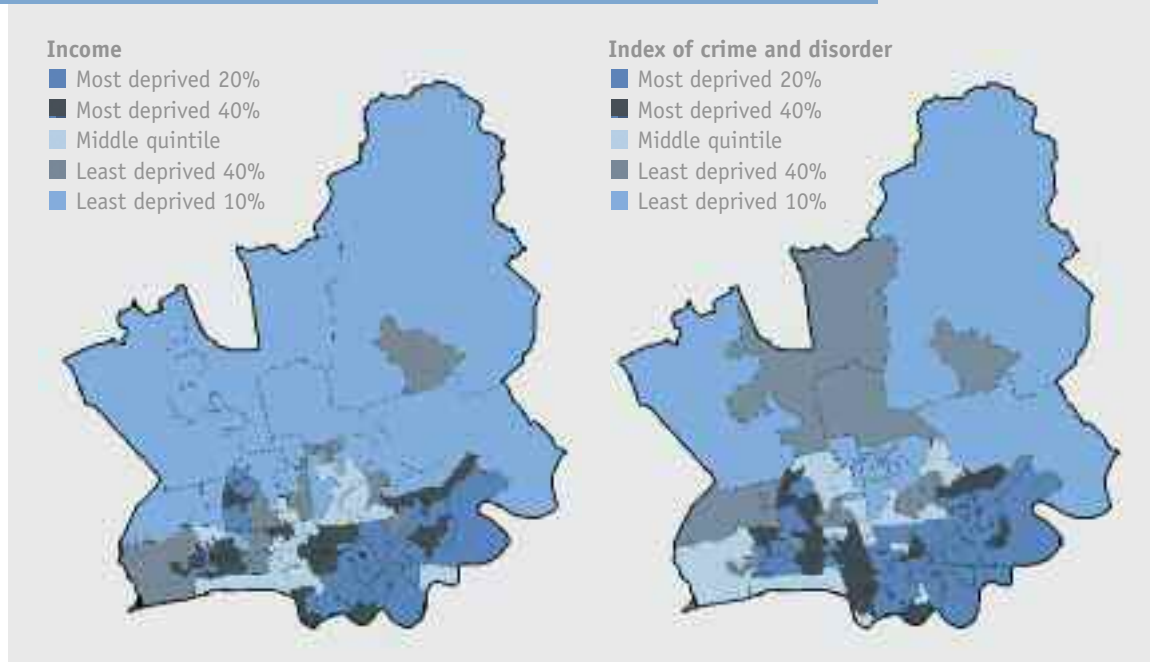
Within Preston, life expectancy varies dramatically between the largely deprived communities and the more affluent. Men in affluent areas live 14.7 years longer than those in deprived wards. For women, life expectancy varies 10 years between wards.¹²²

The maps of Preston (Figure 4.19 on the next page) illustrate in greater detail how level of income and crime and disorder cluster into the same areas of the city. These and other indicators are combined to form an index of multiple deprivation (IMD), which is used in a standardized manner throughout the whole of England.¹²³

SUMMARY

This section has provided examples from a wide range of cities from around the world, showing that health inequities exist by neighbourhood or district. Once again, these data illustrate that while

FIGURE 4.19
INCOME INEQUALITIES AND CRIME AND DISORDER INEQUALITIES,
PRESTON, UNITED KINGDOM, 2007



Source: National Health Service Central Lancashire, Public Health Intelligence Team.

urban averages give one picture, information disaggregated into neighbourhoods or districts provides a completely different view. Disaggregated data at subcity level can help identify areas and populations most in need of intervention and support.

taged neighbourhood, for example, will probably experience a very different reality than a wealthy, male citizen living in an upscale part of the city. This section provides examples of different segments of the urban population having unfair differences in health status.

Health inequities between subgroups of city dwellers

Beyond socioeconomic status and neighbourhood, some city dwellers have poorer health outcomes than others due to unfair marginalization and discrimination as a result of their age, gender, ethnicity, disability or other aspects of their identity. Most frequently, these factors interact to create double or triple jeopardy for certain people. A poor, immigrant woman living in a disadvan-

POOR URBAN WOMEN ARE MOST LIKELY TO HAVE HIV INFECTION

Results from the Demographic and Health Surveys (DHS) conducted in 21 selected countries, primarily in sub-Saharan Africa, show that the average HIV prevalence in urban areas is higher than in rural areas, and that women are particularly vulnerable to HIV within cities (Figure 4.20). Prevalence of HIV among urban women is 1.5 times higher than that among urban men, and 1.8 times higher than that among rural women.



Huguette, 33
Yaoundé, Cameroon

STRUGGLE FOR SURVIVAL WITH HIV AND TB

"I have known for 13 years that I am HIV positive," reveals Huguette. Soon after marrying, she says, "My husband started to get sick. There was no treatment. He knew he was positive but no one would talk about it. I only discovered it when I looked in his health papers one day and it was written. I was very angry with him." She began to use condoms with him, but she tested positive. "My husband would go out with many girls and he refused to change. So I decided to leave him." Yet her family persuaded her to

return and care for him in his dying days.

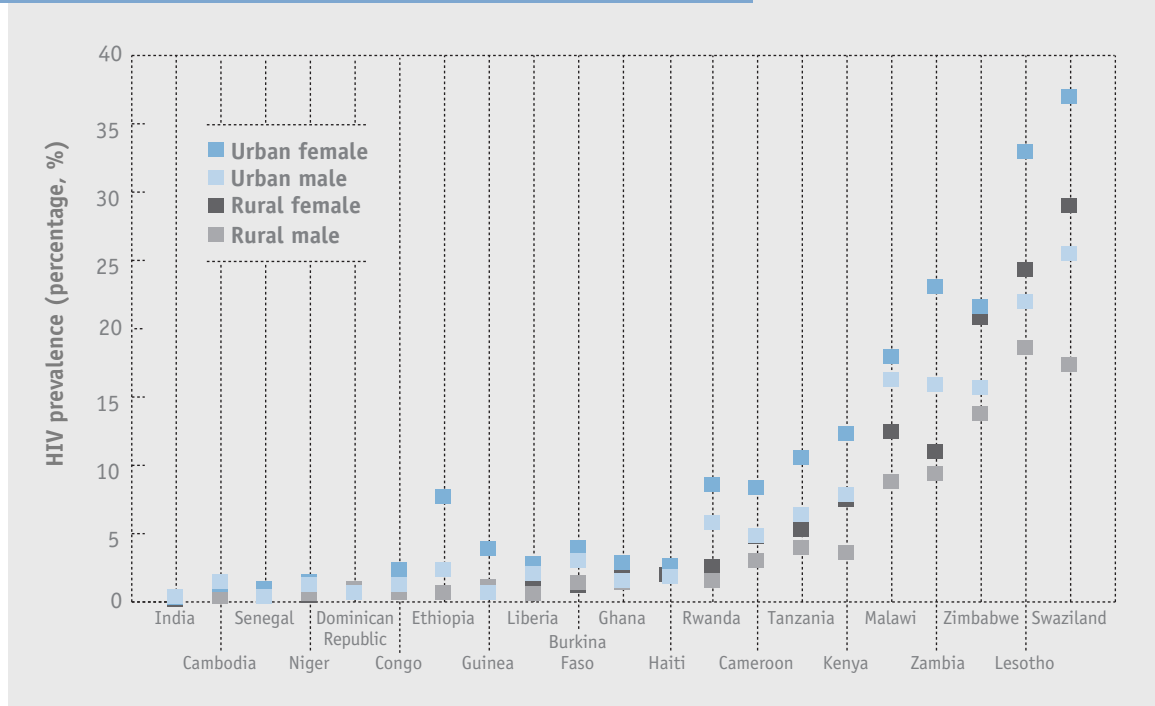
She got pregnant by him and gave birth to an HIV-positive baby. "Poro had TB and suffered for so long. At that time the treatment was available, but it was too expensive, almost US\$ 1040 a month. It was so painful to see him suffer. He would cough all night, and there was nothing I could do. He was 5 years old when he died." Huguette remarried to a man she met at church, and lost another baby, this time a baby girl, to the virus before her own health made a turn for the worse. "I also started to become sick, and reached the last stage. I had TB, I was vomiting, coughing."

Finally, she went to the central hospital and received ARVs, which saved her life. With her supportive husband and the falling cost of ARVs, eventually made free, "I got better and better and then I had a new baby. She was born healthy and is HIV negative. I now have a newborn son as well. I am so happy. I did all the treatments to prevent them from getting HIV from me."

Now, Huguette has started her own small organization. "I advise other HIV positive people, give information, people come here to my house to talk. I also go to schools and churches to educate and tell them about HIV. I feel so happy when I help others. It feels so good to live."

WHO/Anna Kari

FIGURE 4.20
HIV PREVALENCE BY GENDER AND AREA OF RESIDENCE



Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 2003–2008. Data were used from latest available survey for each country.

Low socioeconomic status appears to further compound the problem for women living in urban areas. In 71% of the countries considered in this analysis, the poorest 40% of women in urban areas had a higher HIV prevalence than other women, who are relatively wealthier; among men, this income-based inequity was found in only 48% of the studied countries.

There is an urgent need for further research to understand the urban conditions that may increase vulnerability to HIV infection among women, such as gender-related barriers in access to services, lack of access to education and economic opportunities, and violence against women and girls.

CHAPTER SUMMARY

This chapter has demonstrated how aggregated data often mask substantial health inequities within urban populations – inequities that are revealed when this same information is disaggregated according to defining characteristics of city dwellers, such as their socioeconomic status or place of residence. Examples in this chapter have illustrated that the urban poor suffer disproportionately from a wide range of diseases and health problems, and that disadvantage and disease tend to cluster within certain neighbourhoods of cities. Beyond socioeconomic status and neighbourhood, some city dwellers have poor health outcomes because of the way societies marginalize and discriminate against them for aspects of their identity they cannot change, such as their age, sex or disability. In every city, disaggregated data can help identify people and areas most in need of intervention and support. ■ Once again using disaggregated urban data, the following chapter reveals that unless urgent action is taken to reduce health inequities in urban areas, many countries will not achieve the health-related MDG targets by 2015.

A photograph showing a city skyline across a body of water. In the foreground, a traditional outrigger boat with a blue hull and wooden outriggers is on the water. The city skyline in the background features several tall buildings and a mix of urban structures. The sky is clear and blue.

CHAPTER 5

ACHIEVING THE MILLENNIUM DEVELOPMENT GOALS

WHO/Anna Kari

This chapter presents new analyses looking at health progress and projections on health-related MDGs in urban areas. It goes beyond urban averages to reveal how the richest and poorest city dwellers differ from one another in relation to MDG health targets.

BOX 5.1 THE EIGHT MILLENNIUM DEVELOPMENT GOALS



MDG 1: Eradicate extreme poverty and hunger



MDG 2: Achieve universal primary education



MDG 3: Promote gender equality and empower women



MDG 4: Reduce child mortality



MDG 5: Improve maternal health



MDG 6: Combat HIV/AIDS, malaria and other diseases



MDG 7: Ensure environmental sustainability



MDG 8: Develop a global partnership for development

From the 1990 baseline date, 2010 is 80% of the way towards the Millennium Development Goal (MDG) target date of 2015. Currently available data show that while some countries have made impressive gains in achieving health-related targets, others are falling behind.

Results reveal that at current rates of progress, many health-related MDG targets will not be achieved unless urban health inequities are

addressed urgently. Current levels of urban health inequities are undermining countries' ability to meet national targets, and preventing the realization of the international community's vision of health and development for all.

Introduction to the Millennium Development Goals

In September 2000, the largest-ever gathering of heads of state and government ushered in the new millennium by adopting the United Nations Millennium Declaration. The Declaration was endorsed by 189 countries and was translated into eight Millennium Development Goals (MDGs – see Box 5.1) to be achieved by 2015.^{110,124}

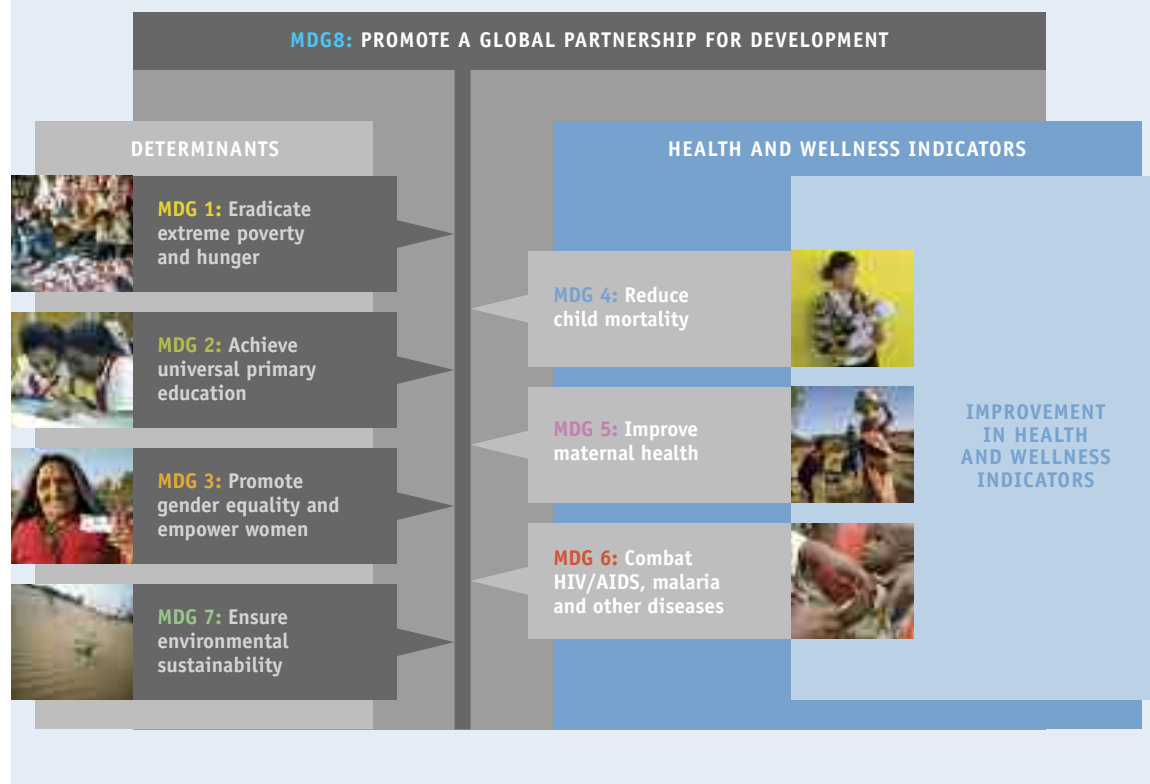
Health is at the heart of the MDGs (Figure 5.1). Achieving the health-related MDGs will not be possible without progress on poverty, food security, gender equality, wider access to education and better stewardship of the environment.

Although the MDGs are global and their related targets are set for countries as a whole, cities, as the newly dominant setting of human habitation, are essential for the realization of the MDGs. The success or failure in meeting MDG targets at global and national levels will depend to a large extent on how much is achieved within urban populations.

UN Photo/Terry Deglau (Eastman Kodak)



FIGURE 5.1
ALL MDGs ARE RELATED TO HEALTH



Source: Road map to contribute to the achievement of the Millennium Development Goals in the context of healthy municipalities, cities and communities. Washington, Pan American Health Organization, 2006 (<http://www.cepis.ops-oms.org/bvsdemu/fulltext/roadgoals/intro.pdf>). Photos: MDG1 – UN Photo/John Isaac, MDG2 – UN Photo/Milton Grant, MDG3 – UN Photo/Nayan Tara, MDG4 – UN Photo/Martine Perret, MDG5 – UNICEF/NYHQ2006-2815/Khemka, MDG6 – UN Photo/Marie Frechon, MDG7 – UN Photo/John Isaac.

And while MDG goals and targets are not equity specific, evidence shows that failure to address the distribution of wealth undermines progress in development. Policies to promote equity, on the other hand, accelerate progress towards the MDGs.¹²⁵

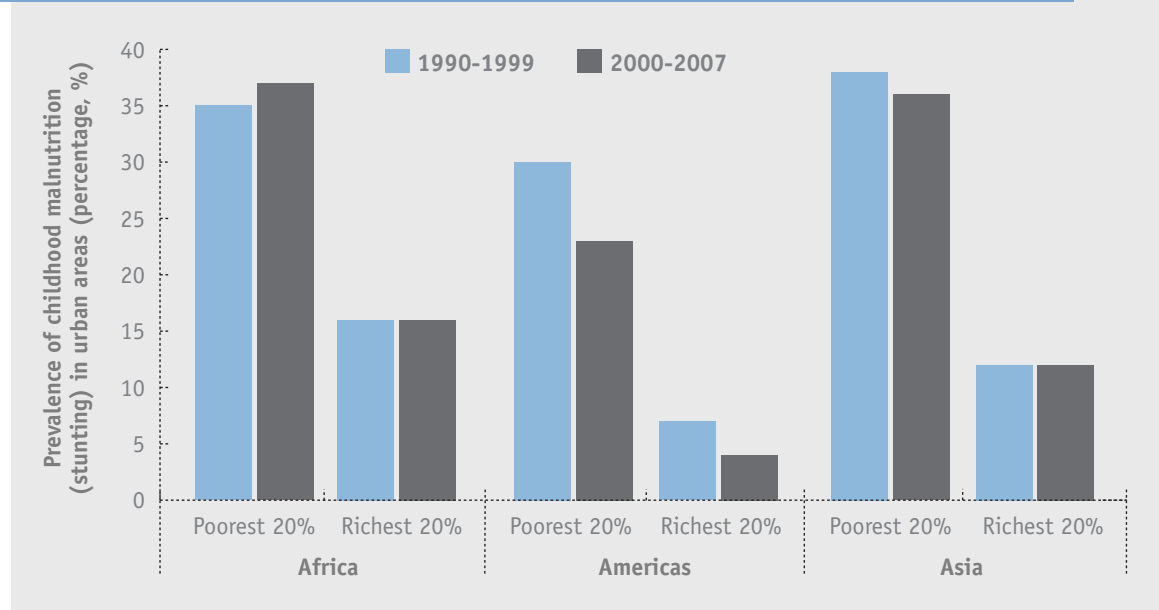
Projections presented in this chapter are based on observed rate of progress over the longest time period for which data are available. This form of linear projection might not be most accurate in every case, given that each country has a specific context and may be undergoing health reforms or economic growth (or crisis), which may create the conditions for better or worse performance leading to 2015. However, linear projection also has several advantages: it can be applied in a standard manner for all countries; it is dependent entirely on observable data, as opposed to arbitrarily assigned growth rates; and it is relatively simple to understand because it is based on past achieve-

ments. More detailed information about the World Health Organization's analyses and results can be found in Annex B of this report.

MDG 1: Eradicate extreme poverty and hunger

The first MDG is to eradicate extreme poverty and hunger, both of which are determinants of health and development. The second of its two targets is to halve, between 1990 and 2015, the proportion of people who suffer from hunger. The health indicators for this target are the prevalence of underweight children (under five years of age), and the proportion of the population below the minimum level of dietary energy consumption.

FIGURE 5.2
PROGRESS IN REDUCING CHILDHOOD MALNUTRITION (STUNTING) IN URBAN AREAS



Note: These results represent averages of those countries for which urban DHS data were available (Africa = 21 countries, Americas = 6 countries, Asia = 5 countries). As such, they are not representative of the regions as a whole.

Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 1990–2007.

Globally, the number of children younger than five years of age suffering from malnutrition, according to WHO child growth standards, declined from 1990 to 2007. But the progress is uneven, and an estimated 112 million children are underweight.¹²⁶

Our analysis examined the prevalence of stunted children (see footnote i, Chapter 3, for a definition), which is considered an indicator of chronic malnutrition. Figure 5.2 reveals that among urban areas of 21 countries in Africa, 6 in the Americas and 5 in Asia, the poorest 20% of urban populations in Africa have, on average, experienced an increase in childhood stunting during 2000 to 2007, compared with 1990 to 1999. In the

Americas, the poorest 20% in urban areas have experienced an average reduction of 7% in childhood stunting. In all examined regions, the gap between the richest and poorest has not improved significantly over the two decades.

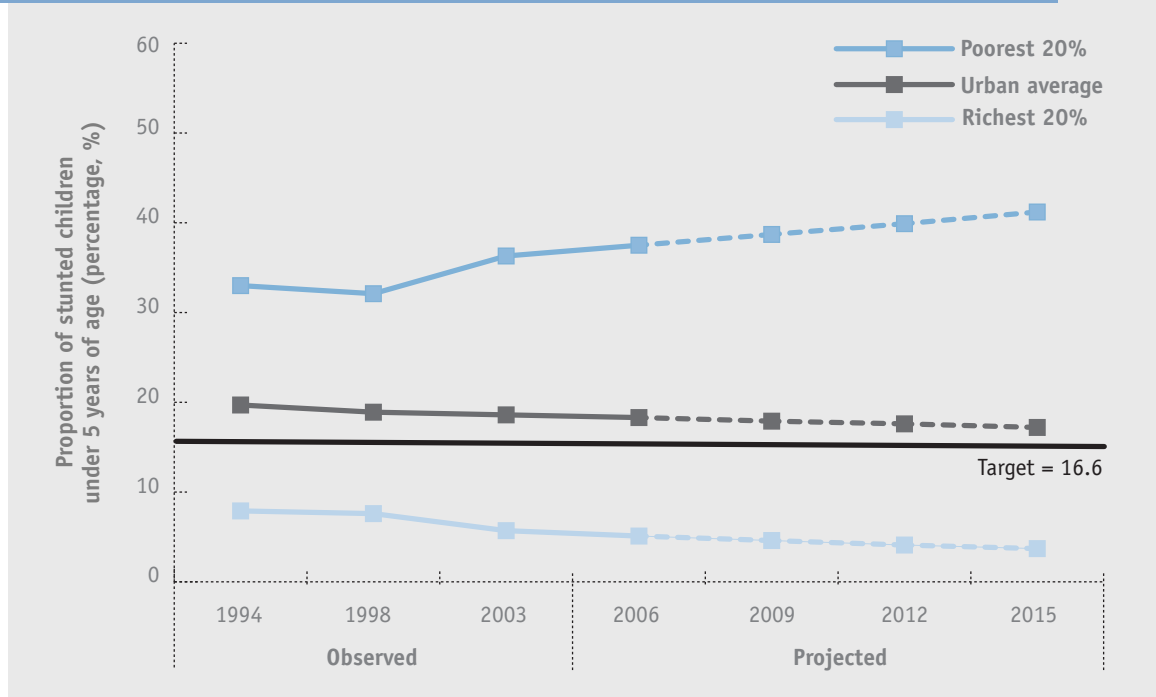
Linear projections indicate that in 88% of considered countries, stunting among the urban poor is unlikely to be reduced by 2015 to half of what it was nationally in the 1990s. On the other hand, the urban rich are likely to achieve this in 75% of these countries, based on current rates of progress.

Figures 5.3 and 5.4 display the prevalence of childhood stunting over time in urban areas of the Plurinational State of Bolivia and India. In both countries, large inequities exist between rich and poor urban children. However, in the Plurinational State of Bolivia, the gap between poor and rich children is widening, while in India, childhood stunting is declining in all segments of the population, resulting in a gap that is essentially unchanged over time. In urban areas of both countries, average levels of childhood stunting will not meet MDG-related targets by 2015. This is due in large part to the situation of the poorest urban children.



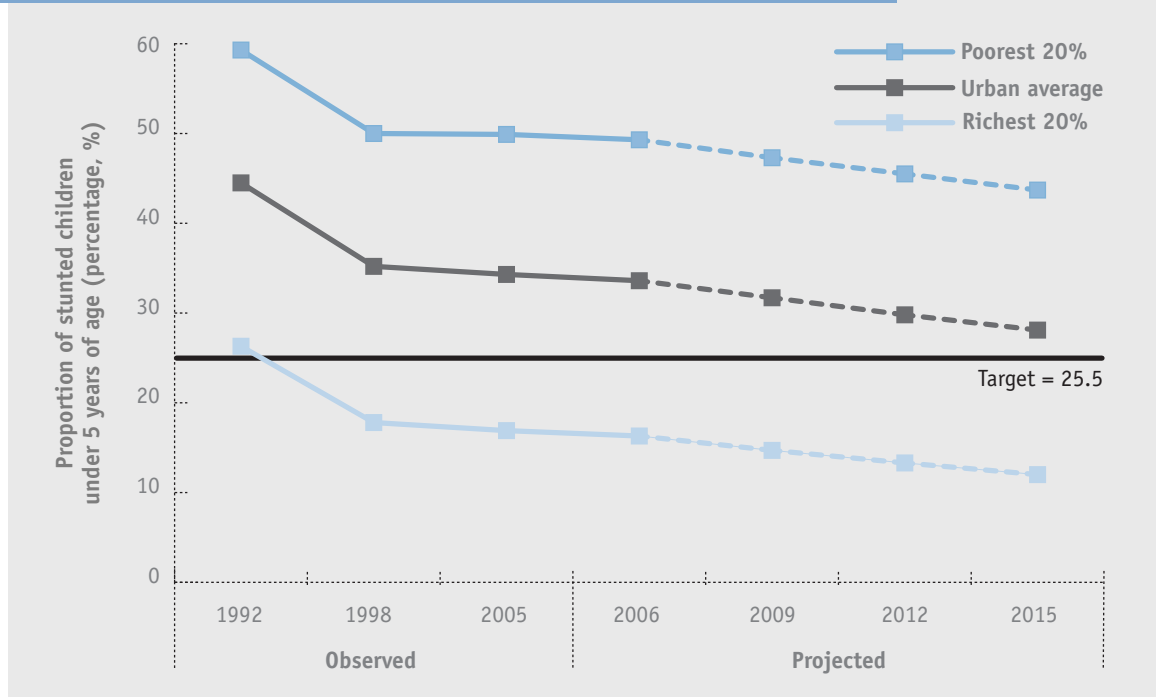
WHO/Anna Kari

FIGURE 5.3
TRENDS AND PROJECTIONS TOWARDS HALVING STUNTING BY 2015 (IN RELATION TO 1990 LEVELS) IN URBAN AREAS OF THE PLURINATIONAL STATE OF BOLIVIA



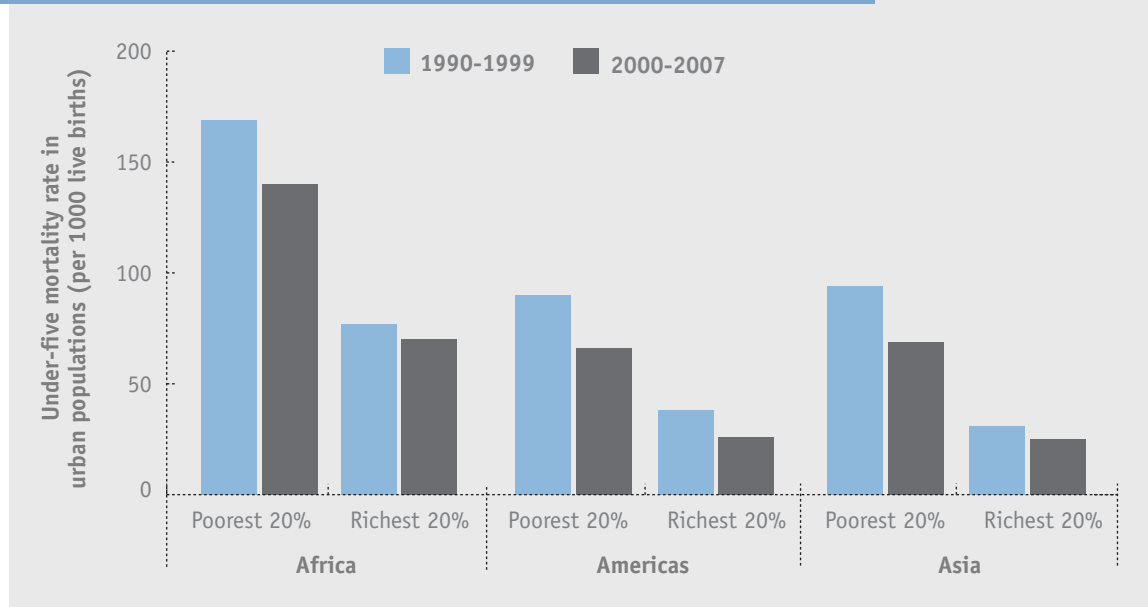
Note: Projected estimates are based on the long-term annual rate of growth from the 1990s to the latest year with available data.
 Source: WHO calculations based on data from Demographic and Health Surveys (DHS).

FIGURE 5.4
TRENDS AND PROJECTIONS TOWARDS HALVING STUNTING BY 2015 (IN RELATION TO 1990 LEVELS) IN URBAN AREAS OF INDIA



Note: Projected estimates are based on the long-term annual rate of growth from the 1990s to the latest year with available data.
 Source: WHO calculations based on data from Demographic and Health Surveys (DHS).

FIGURE 5.5
PROGRESS IN REDUCING UNDER-FIVE MORTALITY IN URBAN AREAS



Note: These results represent averages of those countries for which urban DHS data were available (Africa = 21 countries, Americas = 6 countries, Asia = 8 countries). As such, they are not representative of the regions as a whole.

Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 1990–2007.

MDG 4: Reduce child mortality

MDG 4 is to reduce child mortality, and its target is to reduce the under-five mortality rate by two thirds between 1990 and 2015. Under-five mortality rate is defined as the probability of dying before the age of five, expressed as the number of deaths per 1000 live births.

Globally, the number of children who die before their fifth birthday has been reduced by 27%, from 12.5 million estimated in 1990 to 8.8 million in 2008. Under-five mortality rates (number of deaths per 1000 live births) have declined in all regions of the world.¹²⁷

Figure 5.5 displays under-five mortality rates in urban areas of Africa, the Americas and Asia. Progress has been made in each of the three regions, in both poor and rich urban populations. Between the periods of 1990 to 1999 and 2000 to 2007, 86% of the countries studied improved their

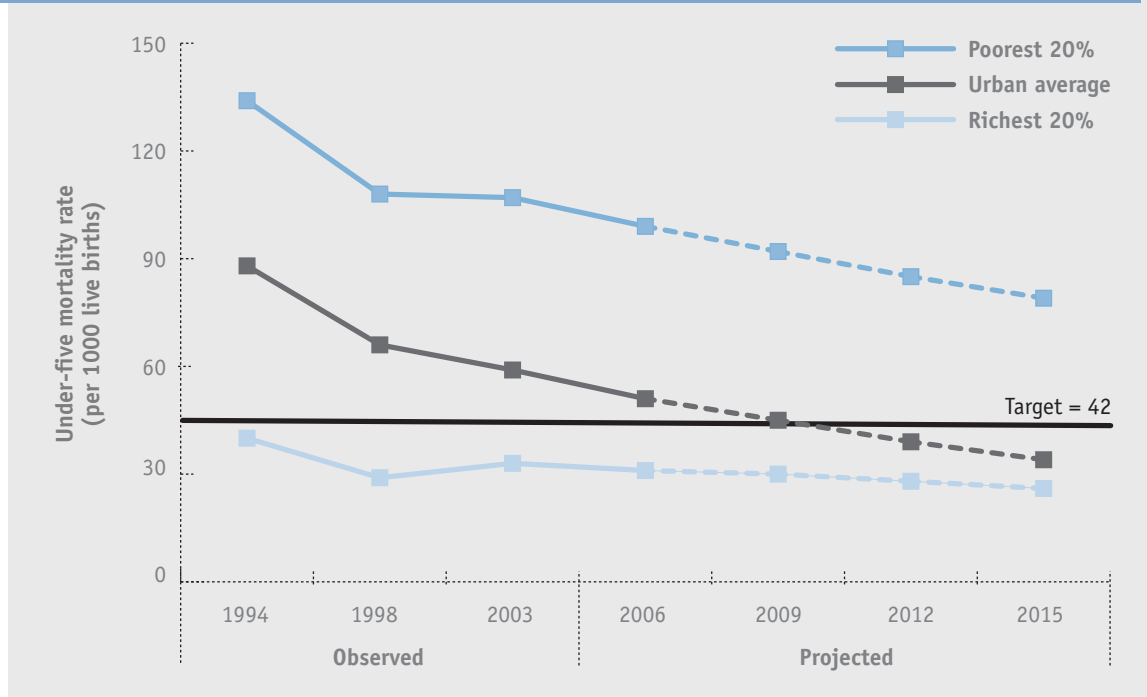
overall under-five mortality rates in urban areas. The few countries with worsened urban under-five mortality rates were all located in sub-Saharan Africa.

However, based on annual rates of progress since the 1990s, the poorest urban children in 80% of the countries studied will not achieve the target level of under-five mortality rate at the national level. This stands in contrast to the richest 20% of urban children, among whom the target is likely to be achieved in 57% of countries.

Figures 5.6 and 5.7 show trends and projections for urban areas of the Plurinational State of Bolivia and India. In both countries, progress is being made. On average, the Plurinational State of Bolivia is expected to achieve its national MDG target in its urban areas, whereas India's urban areas will fall slightly short of its national target. Nonetheless, the poorest 20% of urban children will continue to suffer from unacceptably high mortality rates, and as a group will fall substantially short of their countries' MDG targets. Similar results are found in many other countries.

FIGURE 5.6

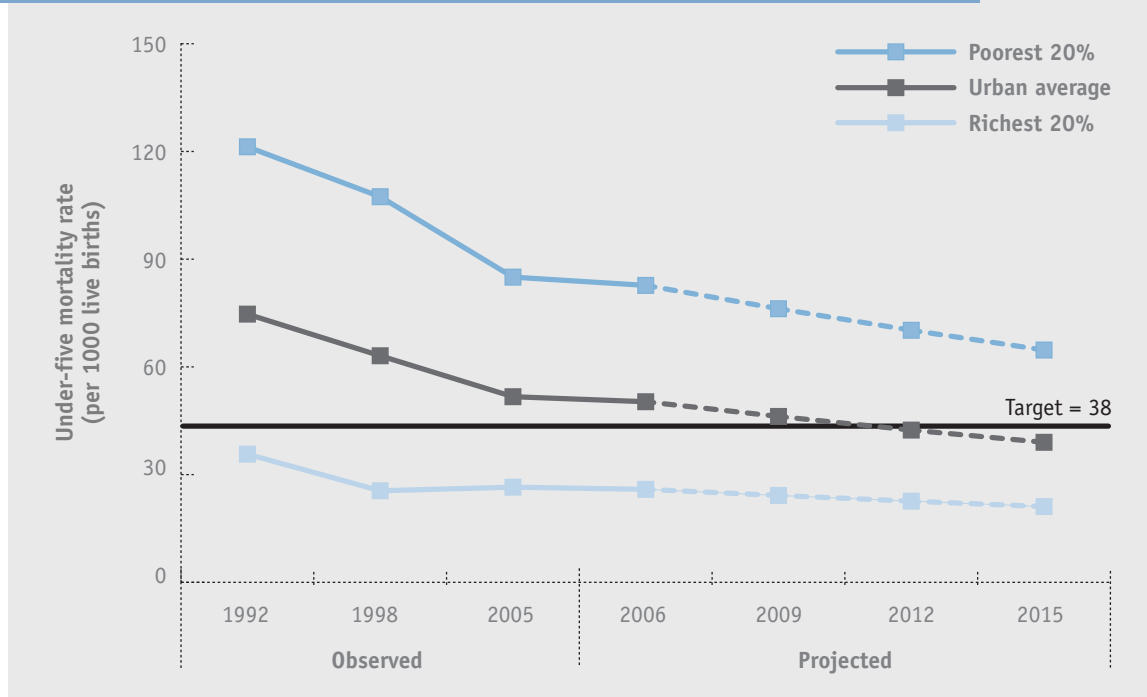
TRENDS AND PROJECTIONS TOWARDS REDUCING BY TWO THIRDS UNDER-FIVE MORTALITY BY 2015 (IN RELATION TO 1990 LEVELS) IN URBAN AREAS OF THE PLURINATIONAL STATE OF BOLIVIA



Note: Projected estimates are based on the long-term annual rate of growth from the 1990s to the latest year with available data. Source: WHO calculations based on data from Demographic and Health Surveys (DHS).

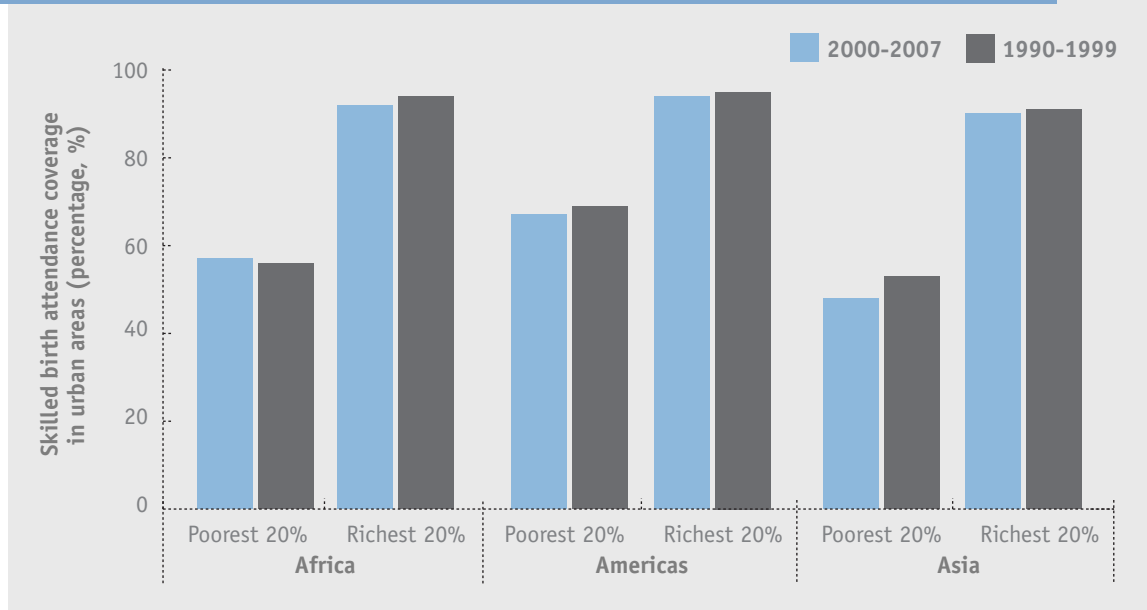
FIGURE 5.7

TRENDS AND PROJECTIONS TOWARDS REDUCING BY TWO THIRDS UNDER-FIVE MORTALITY BY 2015 (IN RELATION TO 1990 LEVELS) IN URBAN AREAS OF INDIA



Note: Projected estimates are based on the long-term annual rate of growth from the 1990s to the latest year with available data. Source: WHO calculations based on data from Demographic and Health Surveys (DHS).

FIGURE 5.8
PROGRESS IN IMPROVING SKILLED BIRTH ATTENDANCE COVERAGE IN URBAN AREAS



Note: These results represent averages of those countries for which urban DHS data were available (Africa = 22 countries, Americas = 6 countries, Asia = 9 countries). As such, they are not representative of the regions as a whole.

Source: WHO calculations based on data from Demographic and Health Surveys (DHS), 1990–2007.

MDG 5: Improve maternal health

MDG 5 is to improve maternal health, and its target is to reduce by three quarters, between 1990 and 2015, the maternal mortality ratio (the number of women dying as a result of pregnancy or childbirth). One of the indicators for this target is the proportion of births attended by skilled health personnel (physicians, nurses, trained midwives), which, ideally, should be 100%. The proportion of women who deliver with the assistance of a skilled health-care worker is highly associated with maternal mortality ratios.¹²⁸

Around the world, the proportion of births attended by a skilled health worker improved between 1990 and 2006, though still falling short of the 100% target. Improvements were made in almost all regions, except in Europe, where coverage levels were already high in 1990.¹²⁹

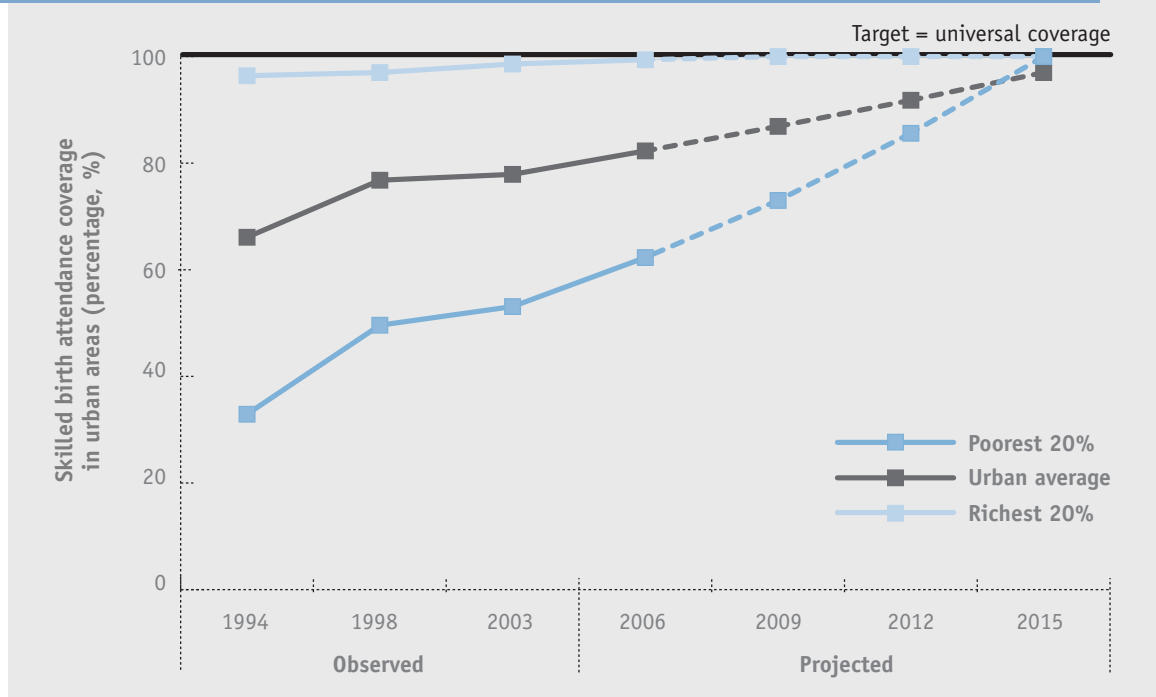
Figure 5.8 displays skilled birth attendance coverage rates in urban areas in Africa, the

Americas and Asia. Very little progress has been made in urban areas of these regions. At current rates of progress, 78% of the studied low- and middle-income countries in Africa, the Americas and Asia will not achieve even 90% coverage of skilled birth attendance for the poorest 20% of urban women. The situation is even more dire in 38% of the same countries, where fewer than half of the poorest women in urban areas will have access to skilled birth attendance in 2015, according to current rates of progress.

Trends and projections for skilled birth attendance in urban areas of the Plurinational State of Bolivia and India are shown in Figures 5.9 and 5.10. The Plurinational State of Bolivia has made remarkable progress towards skilled birth attendance for all urban women. In India, however, inequities have remained relatively constant and are projected to continue into the future. Around half of poor urban women in this country will continue to lack access to skilled birth attendance in 2015.

FIGURE 5.9

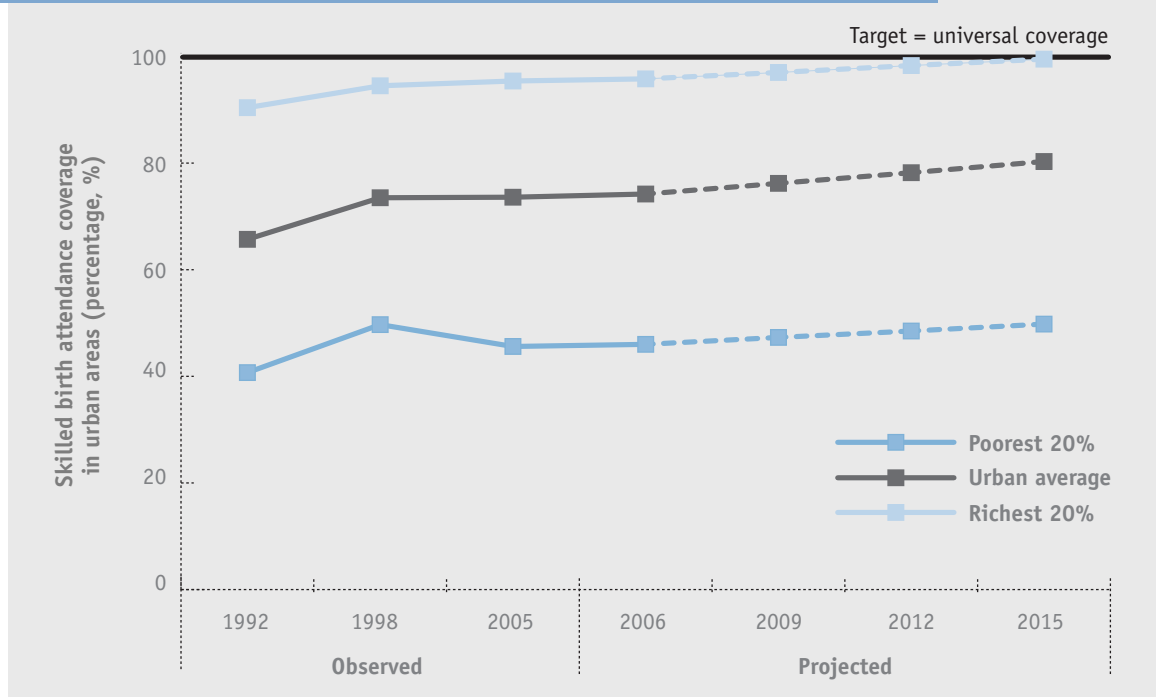
TRENDS AND PROJECTIONS TOWARDS ACHIEVING UNIVERSAL COVERAGE FOR SKILLED BIRTH ATTENDANCE BY 2015 IN URBAN AREAS OF THE PLURINATIONAL STATE OF BOLIVIA



Note: Projected estimates are based on the long-term annual rate of growth from the 1990s to the latest year with available data. Source: WHO calculations based on data from Demographic and Health Surveys (DHS).

FIGURE 5.10

TRENDS AND PROJECTIONS TOWARDS ACHIEVING UNIVERSAL COVERAGE FOR SKILLED BIRTH ATTENDANCE BY 2015 IN URBAN AREAS OF INDIA



Note: Projected estimates are based on the long-term annual rate of growth from the 1990s to the latest year with available data. Source: WHO calculations based on data from Demographic and Health Surveys (DHS).



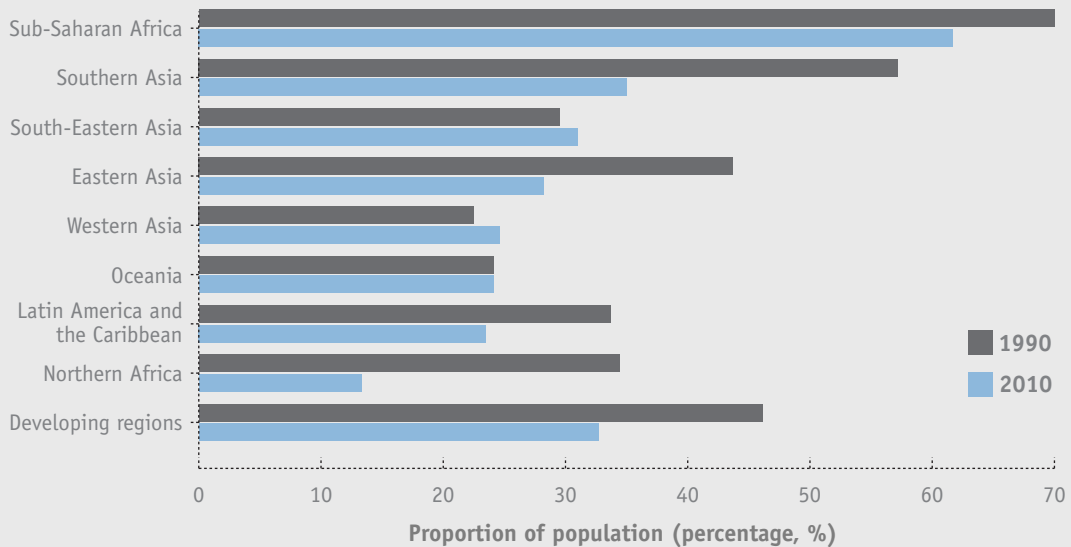
MDG 7: Ensure environmental sustainability

MDG 7 is to ensure environmental sustainability, and a key target relating to urban areas is to achieve a significant improvement in the lives of at least 100 million slum dwellers by 2020.

UN-HABITAT estimates that this target has already been exceeded by at least 2.2 times. Between 2000 and 2010, 227 million people will have moved out of slum conditions. The proportion of slum dwellers has declined in all regions of the world, from 39% in the year 2000 to an estimated 33% in 2010. Because more than 200 million urban dwellers have gained access to improved water and sanitation or to durable and less crowded housing, their prospects have improved to escape poverty, disease and illiteracy, and to lead better lives.¹

However, due to population growth the absolute number of slum dwellers has grown considerably, and will continue to rise in the near future.

FIGURE 5.11
PROPORTION OF URBAN POPULATION LIVING IN SLUM AREAS, 1990 AND 2010



Source: *State of the world's cities 2010/2011 – cities for all: bridging the urban divide*. United Nations Human Settlements Programme (UN-HABITAT)/Earthscan, 2010 (<http://www.unhabitat.org/content.asp?cid=8051&catid=7&typeid=46&subMenuId=0>).

UN-HABITAT estimates that the number of slum dwellers has risen from 657 million in 1990 to 767 million in 2000 and 828 million in 2010. This means that 171 million urban poor have been added to the global population of slum dwellers since 1990.¹ There is therefore no room for complacency during the next decade.

In least-developed and conflict-affected countries, slum prevalence is expected to remain very high, comprising 70% of the urban population. In conflict-affected countries, the proportion of the urban population living in slums increased from 64% in 1990 to 77% in 2010.¹

Figure 5.11 displays the proportion of city dwellers estimated to be living in slums in 1990 and 2010,

for various regions of the world. In 2010, the highest slum prevalence is in sub-Saharan Africa (62%), followed by Southern Asia (35%), compared to less than one third of urban residents in all other regions of the developing world. Despite the efforts of some cities and countries in sub-Saharan Africa to expand basic services and improve housing conditions in slum areas, inaction in other areas has prevented overall progress in the region. In Western Asia, the increase in the proportion of slum dwellers can be attributed largely to the conflict related deterioration of living conditions in Iraq, where the proportion of urban residents living in slum conditions has tripled from 17% in 2000 (2.9 million) to an estimated 53% in 2010 (10.7 million).¹

CHAPTER SUMMARY

Although the MDGs are global and their related targets are set for countries as a whole, cities – by virtue of their population sizes – are crucial parts of the equation.¹³⁰ Results presented in this chapter show that at current rates of progress, many health-related MDG targets will not be achieved in urban populations by 2015. This will undermine countries' ability to meet national targets, and will prevent the realization of the international community's vision of health and development for all. ■ Results in this chapter also revealed that the urban poor are most at risk of not achieving national MDG targets. For example, more than 80% of low- and middle-income countries studied will fail to meet MDG-related benchmarks for childhood stunting and childhood deaths among their urban poor. MDG goals and targets are not equity specific: there is no explicit requirement for achievements to be made equally in all population subgroups. Nonetheless it is generally understood that achievement of the MDGs will improve equity, and that improving equity will contribute to achievement of the MDGs. ■ It is not too late to alter these trends. Action must be taken at street and neighbourhood levels, with municipal, provincial and national governments working in partnership with communities.¹³¹ Part Three of this report describes a strategy for overcoming urban health inequities and providing a better future for all city dwellers.

**PART
THREE**

**OVERCOMING URBAN
HEALTH INEQUITIES**

INTRODUCTION TO PART THREE

As shown in Part Two, hidden cities exist everywhere. They can be found within urban centres of the Americas, Europe, Africa and Asia; in rich and poor countries; in small, medium and mega cities. In every corner of the world, certain city dwellers suffer disproportionately from poor health, and these inequities can be traced back to differences in their social and living conditions. At current rates of progress, health-related MDG targets will not be achieved among the urban poor by 2015.

Because urban health inequities exist everywhere, all local and national leaders should consider how to overcome them. This part of the report describes overarching prerequisites for action and gives examples of effective interventions. Local governments are uniquely positioned to tackle health inequities, but must do so in a way that includes other levels of government and communities. They must develop a vision of the future with a strong health dimension, understand the nature and scope of health inequities within their cities, choose priority interventions, and then monitor and evaluate their effects over time.

CONTENTS

Chapter 6. Urban governance for reducing health inequities

Chapter 7. Building an evidence base for action

Chapter 8. Taking action

KEY MESSAGES

- Acting on urban health inequities requires involvement of organized communities and all levels of government – local, provincial and national.
- Solutions often lie beyond the health sector, and require the engagement of many different sectors of government and society.
- Local leaders and governments can and should play a key role in promoting urban health equity.

An aerial photograph of a city, likely Cairo, Egypt, featuring the Cairo Tower on the left. The foreground shows a large green park area with several swimming pools and a winding path. The city skyline is visible in the background under a clear blue sky.

CHAPTER 6

URBAN GOVERNANCE FOR REDUCING HEALTH INEQUITIES

Samantha Villagran/SXC.hu

This chapter describes ways in which different levels of government, nongovernmental organizations, the private sector and the community can work together for good urban governance. Coordination at all levels is essential to reduce health inequities.

At a practical level, good urban governance requires political commitment, vision, institutional change and networks that are working towards similar goals. This chapter describes each of these prerequisites based on the experiences of cities that have already taken action.

The role of local governments

Local governments are diverse in their structure, power, and community representativeness. Yet, they share common roles and responsibilities in implementing pro-equity policy and planning. Motivations for local governments to tackle health inequities vary, too. If there is significant local interest and the political will to address health inequities, actions can be motivated internally. In other cases, national imperatives may influence local governments to translate health equity targets or goals into action at the local level.

Local actions present unique opportunities for partnering with private and non-profit sectors, with civil society or citizens' groups, or with other public agencies that prove more beneficial than an independent sectoral response. Supporting citizen participation in priority-setting, planning and implementation, and monitoring of health inequities have also been shown to be critical

both in terms of facilitating successful action on reducing health inequities and on strengthening social cohesion.

Partnerships: the key to good urban governance

Urban governance is not the sole domain of government, but the combined effort of a multitude of actors, including different levels of government, nongovernmental organizations, the private sector and the community. In the best-managed cities, local governments take a leadership role in combining the talents and powers of all sectors.

To reduce health inequities in urban settings, multiple sectors act in a coordinated fashion on the complex web of health determinants. The specific sectors for involvement will depend on the nature of the health inequity and the organizational arrangement of the government, but typically would include representatives from municipal government departments, national-level ministries, civil society and the private sector.¹³²

Vertical partnerships between national, regional and local governments must be complemented by horizontal partnerships of stakeholders within cities. Coherence between national policies and local implementation is crucial for effective urban governance.

Local authorities are often well-positioned to lead the process (see Box 6.1 for an example of local leadership in Kenya).¹³³ They frequently have influence over land use, building standards, water and sanitation systems, roads and transportation, environmental protection, enactment or enforcement of tobacco use bans, and oversight of occupational health and safety regulations. They may also play a significant role in the provision of a range of human services fundamental to health, such as education, social services, health services, libraries, parks and recreation services, and community development.

BOX 6.1 SPOTLIGHT ON NAKURU, KENYA

In February 2007, Nakuru, Kenya, became the first city in Kenya and in East Africa to ban smoking in public places. The Nakuru Municipal Council enacted a law that prohibits smoking in all buildings frequented by the public, including shopping centres, food courts, retail and wholesale stores, places of public worship, hospitals, colleges, schools, theatres and office buildings. Leadership, political commitment and community participation were crucial for the successful implementation of this policy.

Stefanie Angele/Fotolia

BOX 6.2

SPOTLIGHT ON COMMUNITY PARTICIPATION IN URBAN AREAS OF CATALONIA, SPAIN

Community participation has been essential for the implementation of the Neighbourhood Health Plan in urban areas of Catalonia, Spain. The plan, enacted in 2004, emphasizes the development of community health programmes tailored to the needs of the neighbourhood and aims to reduce health inequities.

Barcelona, a city with 1.6 million inhabitants, has nine projects funded by this plan. The Public Health Agency of Barcelona is responsible for leading the interventions, but relies on the ongoing support from representatives of:

- the Health Consortium of Barcelona, which is responsible

for primary health care, specialized care and tertiary care;

- the Government of Catalonia's Department of Health;
- the Barcelona City Council;
- Barcelona administrative districts (of which there are 10);
- community workers, community groups, neighbours and other associations.

In every participating neighbourhood, a community group is formed to oversee action. With the support of a range of local partners, the group is responsible for all aspects of planning and implementation.

Steps include identifying neighbourhood health inequities; identifying potential responses; prioritizing objectives and actions; implementing interventions; and monitoring progress.



Peter Szustka/SXC.hu

In particular, municipal leaders such as mayors or their equivalents are crucial to leading the effort to reduce health inequities.¹³⁴ Their role is not only to address local issues but also broader concerns, including the global challenges of climate change, financial debt and population health. In the United States, for example, more than 1000 mayors have signed the U.S. Conference of Mayors' Climate Protection Agreement, representing a population of more than 86 million people.¹³⁵ In Europe, over 2500 local authorities are committed to the Aalborg Charter, which provides a framework for the delivery of local sustainable development and calls on local authorities to engage in Local Agenda 21 processes.¹³⁶ In 2007, European Union ministers adopted the Leipzig Charter, which promotes sustainable European cities and places special emphasis upon deprived urban neighbourhoods within the scope of an integrated urban development policy.¹³⁷

The state/regional and central/national levels of government usually have a less direct impact on the local environment and the local economy. They concentrate on creating a strategic policy framework and facilitating stability, innovation or financial incentives, which are necessary for

change. Health service provision is often the responsibility of the regional or national level of government. However, the role of the health sector needs to be flexible. To what extent the health sector can (or should) take the lead role in planning and implementing multisectoral action depends in large part on the issue being addressed.

The private business sector can provide its financing capacity and business expertise to cities by working independently or in partnership with the public sector. Private capital can be attracted by the quality of life in a city and financial incentives.

Community participation in urban governance, from prioritizing issues to evaluating interventions and monitoring the outcomes, is also fundamental. Participation of city dwellers helps ensure that the right issues are being addressed, promotes local ownership and engenders the sustainability of interventions. It also supports the broader agenda of community development and empowerment. Box 6.2 describes how the community was engaged along with many other partners in Barcelona, Spain.¹³⁸



Ashley, 14
Elephant and Castle
London, United Kingdom
FACING CHILDHOOD OBESITY

Ashley lives in South London with his mother and attends school at Bacons College. Not long ago, Ashley was overweight. "I was really big before, I wasn't interested in sports and I ate lots of unhealthy food. I wasn't doing much at all – I stayed at home or went to school."

Three years ago, Ashley was encouraged to play basketball by his physical

education teacher who also works for a nongovernmental organization that helps children get involved with sports. "Basketball has helped me socialize and it has helped me improve my appearance in school," he says. "I am also much fitter now. I have more muscle, I am taller and slimmer. I feel much more confident."

Ashley believes that young people today are not healthy. He notes that there are many more obese people in his generation and that they are not involved in sport. "I'm not sure why that is happening."

He is glad to have been introduced to basketball and cites the opportunity his school and the local nongovernmental organization gave him by taking him to see games and to meet more people his age. Access to sporting facilities is also helpful. Besides the time he plays on the team at school, he enjoys shooting hoops in his neighborhood where there is a small court outside his apartment block.

"Before, I didn't use my time very well. Now I enjoy sports, and I eat more fruit and vegetables and less fast food."

WHO/Anna Kari

Prerequisites for local action

Local governments are often responsible for addressing many local needs which may exacerbate or diminish health inequities. They can also affect intermediate pathways linking root social and environmental causes to health outcomes and inequities.

Despite variations in governance structure, scale of operation, provision of public spaces enabling debates with their citizenry, and relation to national authorities, local governments share an excellent opportunity to address health inequities. They also have commonalities regarding roles and responsibilities in general, and strategies and interventions in particular.

It is also important to acknowledge the effects of politics on health, as politics may affect population health via policies and interventions, but also via processes like social movements, strikes, and protests. As such, urban health inequities are shaped by mechanisms that go beyond health policies and interventions.

In general, four prerequisites for action can be identified: political commitment, vision, institutional change and networks.^{139,140} They are aimed at changing the ways in which individuals, communities, nongovernmental organizations, the private sector and governments understand and make decisions about health and health equity.

POLITICAL COMMITMENT

The first prerequisite for sustainable action is political commitment at the highest levels to the values, principles and strategies of health for all urban residents. Lack of political will has been shown to jeopardize multisectoral engagement; actions are sustainable only if there is high-level political interest and support at the outset.¹⁴¹

Health is the business of every sector and urban leaders have a convening power to orchestrate the contributions of many actors. The Alma-Ata Declaration on Primary Health Care,¹¹¹ the Global Strategy for Health for All,¹⁴² the Ottawa Charter for Health Promotion,¹⁴³ and the Bangkok Charter for Health Promotion in a Globalized World¹⁴⁴ are important foundation documents that support this perspective.

To command support and secure needed resources, both the representative and executive arms of local government must be committed to action. One mechanism involves the mayor or equivalent city leader obtaining endorsement from the representative council of the municipality or analogous urban government. Endorsements by other levels of government – potentially including provincial, regional and central governments, depending on the system of governance – are analogously essential for success.

It is also necessary to obtain commitment from key stakeholders within the city. These include leaders of agencies, quasi-governmental organizations, nongovernmental organizations and businesses who have significant influence over the key determinants of health. If, for example, water and sanitation is supplied by a private company and regulated by local or provincial government, then all these stakeholders should be committed before action is taken. If transport infrastructure is supplied by the municipality, and local buses are run by a private company that is partly financed by a grant from the provincial government, then all three stakeholders should be engaged. Communities should also be committed to the process: Box 6.3 on the next page describes how communities were engaged in such a way in the urban slums of Nairobi, Kenya.¹⁴⁵

VISION

A second prerequisite for sustainable action is a city vision with a strong health dimension. Responding to the global trend of decentralization, many city governments now have powers and responsibilities

BOX 6.3

SPOTLIGHT ON COMMUNITY PARTICIPATION IN THE URBAN SLUMS OF NAIROBI, KENYA



Since 2005, Jhpiego, an affiliate of Johns Hopkins University, has worked in two Nairobi slums, Korogocho and Viwandani, to ensure increased community participation and improved quality of health services. To this end, Jhpiego uses a participatory approach to help communities and health workers assess their needs, identify problems and develop their own solutions. This approach builds the capacity of local leaders to solve problems, and energizes communities to assert their role in improving health.

Several activities were instrumental in the success of Jhpiego's work. Community members were engaged in identifying underlying determi-

nants of health by mapping local health dangers. Training was provided to community members on a variety of health issues, including infection prevention and hygiene, HIV, reproductive health and family planning, and maternal and child health. Mechanisms such as regular stakeholder forums were developed to facilitate regular community input into health issues.

Jhpiego's results¹⁴⁶ demonstrate that poor urban communities can be empowered successfully.

- Trust and respect have improved between health workers and community members, and use of health-care services has increased.

- Communities have been mobilized to address their self-identified health concerns. During one community mapping exercise, participants identified a small grassy area next to a clinic as a health hazard; medical waste discarded there was often scavenged by entrepreneurs or played with by children. Community members and clinic workers cleaned the area and planted a community vegetable garden to support people living with HIV.
- Community technical resources have been developed. A group of trained expert patient trainers (who are engaged to help train health workers in HIV case management) has since registered as a community-based organization called Expert Patients International, whose mission is to educate all people living with HIV on their health rights and to ensure quality HIV case management.

The impact of Jhpiego's approach has resonated far beyond its original programme objectives. In the immediate aftermath of the disputed 2007 presidential election, young slum dwellers, empowered by Jhpiego's programmes, served as mediators of peace. Believing in the power of communal resolution, these Jhpiego-trained individuals acted on their own accord to fulfil the tenets of trust and respect they had gained through Jhpiego's work.

Manoocher Deghati/IRIN

to define a future characterized by a prosperous local economy, sustainable environment and cohesive social life. Alongside economic prosperity, health should be an integral element of a city's vision and a core value guiding development. Health is integral to many qualities cities desire, such as good quality of life and a welcoming and liveable environment. It also is related reciprocally to the economy: healthy children are better educated and a healthy workforce is more productive.¹⁴⁷ Finally, health is integral to sustainable development. The city of London in the United Kingdom has recently released its strategy for addressing health inequities; details are described in Box 6.4.¹⁴⁸

Although an aspirational document is essential, in itself it is insufficient for change. Integrated planning is required to maximize synergies, and health and health equity are required in all local policies.

INSTITUTIONAL CHANGE

In the process of preparing for action, many cities discover that their organizational structures and management processes do not serve their present needs (see Box 6.5 for an example from Vancouver, Canada).¹⁴⁹ In these cases, institutional structures, mechanisms and capacities must be developed to

support both near-term change and enduring healthy public policy over the long term.

The traditional departmental silos operating in many local governments are inappropriate because health is everyone's business. Many potential partners with specific terms of reference – for example, bus operators for transport, schools for education, retailers for the provision of food – do not appreciate their wider impact on health. Intersectoral processes and structures are required to

engage all these talents, sustain their commitment and maximize their contribution.

Although there is a lack of evidence on what works and what does not work in implementing intersectoral action on health, there is little doubt about its potential for reducing health inequities in urban settings. After analysing experience from 20 countries, a group of experts prepared a set of practical recommendations for policy-makers on how to trigger intersectoral action (Box 6.6).¹⁵⁰



WHO/Anna Kari

BOX 6.4 SPOTLIGHT ON THE LONDON HEALTH INEQUALITIES STRATEGY

In 2010, the city of London in the United Kingdom released its Health Inequalities Strategy, which is aimed at reducing significant inequalities within the city in health determinants, health status and life expectancy. The strategy has five core objectives: to empower individuals and communities to improve health and well-being; to improve access to high-quality health and social care services, particularly for Londoners who have poor health outcomes; to reduce income inequality and the negative consequences of relative poverty; to increase the opportunities for people to access the potential benefits of good work and other meaningful activity; and to develop and promote London as a healthy place for all. To ensure the strategy delivers on its aims, the city is producing a series of delivery plans. The First Steps to Delivery plan lists priority actions to 2012 against the strategy's 30 high-level commitments. These actions are a mixture of long-term campaigns and initiatives to tackle the determinants of the city's health inequities, alongside specific initiatives on key health challenges, such as obesity and mental disorders.



Sasa Loggin/SXC.hu

BOX 6.5 SPOTLIGHT ON SUPPORTIVE GOVERNANCE STRUCTURES IN VANCOUVER, CANADA

To support an intersectoral initiative designed to promote sustainable development in a deprived neighbourhood of Vancouver, partners developed a new governance structure. A policy committee, a management committee, a coordination team and a coordination unit were formed. The policy committee had ultimate responsibility for the initiative, including decision-making and accountability. The management committee was responsible for inter-governmental relations, external communication, monitoring and evaluation, investment decisions and oversight of operational activities. The coordination team was the primary operational committee responsible for implementing the strategic plan. The coordination unit oversaw the day-to-day work of the initiative.

The partnership included federal, provincial and municipal levels of government, as well as the private sector, nongovernmental organizations and community activists. Their initial aim was to establish positive solutions to economic, social and public safety challenges through community development projects in Vancouver's Downtown Eastside. The area had become Canada's poorest district, with drug dealing on the main street, crime, street prostitution and homelessness.

BOX 6.6 RECOMMENDATIONS FOR NATIONAL POLICY-MAKERS ON INTERSECTORAL ACTION ON HEALTH

1. A shared policy framework between all participating sectors will facilitate the integration of strategies and actions towards a common end. The framework should consider prevailing political, cultural and socioeconomic circumstances, and be supported by strong political commitment.
2. A supportive governance structure for implementing intersectoral action should be established to sustain efforts, utilizing existing organizations where possible. Legislation, institutions, and mandatory reporting are among the tools to strengthen governance for intersectoral action.
3. A capable and accountable health sector is vital to promote and support intersectoral action. The health sector should facilitate the process as appropriate, and be flexible to adapt its role at various stages in the implementation of intersectoral action.
4. Community participation and empowerment in the process of policy-making, from the initial stage of assessment to evaluation of the intervention and monitoring of outcomes, are critical to focus attention on the needs of the people.
5. The concurrence of multiple levels of government on a prioritized and focused set of intersectoral actions is important to success and will help to obtain sufficient funding and human resources.
6. Effective intersectoral action can lead to better public policies. The policies selected for implementation through intersectoral mechanisms have to be robust, feasible, based on the evidence, oriented towards outcomes, applied systematically, sustainable, and appropriately resourced.
7. Assessment, monitoring, evaluation and reporting are required through the whole process. Proper assessment of the problem, its determinants and social, political and cultural context are crucial to frame the issue and benefits to several sectors. Evaluation of the activities should identify the strengths and weaknesses of interventions. Regular monitoring of the health impacts is required to maintain focus on outcomes.

The need for high-level political commitment and adaptation of the policies to the local political, economic, cultural and social contexts was recognized as crucial to success.

NETWORKS

Networks are entities that bring people together and enable collective learning. Through sharing experiences, networks support innovation while helping cities avoid risk and repeating the mistakes of others. As such, networks increase the efficiency of cities and provide the basis for capacity building, change and innovation.

Informal networks often complement formal partnerships, and can operate both within and beyond particular cities. Within a city, informal networks might shadow formal committee structures, sourcing

and disseminating new ideas and practical solutions to new challenges and perennial problems. They provide support and encouragement, and help sustain key professionals and community representatives through adversity.¹⁵¹

National and international networks facilitate the import and export of evidence and know-how between cities, and they build the legitimacy of cities to address health inequities when health services are the responsibility of national governments.

An example of such networks is Healthy Cities, established in several cities, towns and regions in countries around the world. Some networks are country specific, whereas others are regional. Healthy Cities networks provide an opportunity for WHO to promote the health-for-all policy, provide up-to-date information and tools, and work as a catalyst for action, all at a local level of governance.^{19,152} In this way, the networks

complement WHO's traditional interactions with national governments.

Local government associations are another example of networks enabling knowledge sharing, lobbying for policy change and working towards the development of inclusive policies to respond

to the challenges of urban development. They work in partnership with all levels of government within countries, between regions and globally to encourage multisectoral and intersectoral action. Their outreach potential is particularly strong as they are reliant on peer-to-peer learning and like-minded exchanges.

CHAPTER SUMMARY

This chapter has explained that effective urban governance is not the sole domain of government, but the combined effort of a multitude of actors, including different levels of government, nongovernmental organizations, the private sector and the community. Vertical partnerships between national, regional and local governments must be complemented by horizontal partnerships within cities. ■ Local governments are often well positioned to take the leadership role in combining the talents and powers of all sectors to reduce urban health inequities. Coordination at all levels is essential to reduce health inequities. ■ Prerequisites for action include securing political commitment across a wide range of local leaders, developing a common vision for health and health equity, creating supportive institutional arrangements and connecting with others who can support the work. Political commitment to the values, principles and strategies of health for all urban residents is required at the highest level. A vision of the future with a strong health dimension provides a common basis for multisectoral action. Institutional structures, mechanisms and capacities must support both near-term change and enduring healthy public policy over the long term. Networks at local, national and international levels promote shared learning and innovation. ■ The next step is to conduct an assessment of the urban health inequities that exist in the city in order to build an evidence base for action. This is discussed in the following chapter.



CHAPTER 7

BUILDING AN EVIDENCE BASE FOR ACTION

WHO/Anna Karti

As revealed in Part Two, urban health inequity exists around the world. Yet only few cities and countries have looked for their urban health inequities, and even fewer have done so regularly. This chapter highlights the importance of evidence to understand existing health inequities and their determinants, and how to improve action to overcome them. The importance of disaggregated data is emphasized.

The chapter provides guidance and tools to enable policy-makers and key stakeholders to better understand health inequities in their cities. Two specific tools are profiled within this chapter; Annex A provides a list of additional resources and tools for readers to consider.

The importance of evidence for sustainable and effective action

A variety of interventions and policies have been developed to address urban health, including providing public utilities, increasing neighbourhood security, and the provision of primary health care. Selecting the appropriate intervention is always a challenge. Considering the complexity of the urban environment and the variety of intervention approaches available (for example structural, facility-based and individual), it is vital that policy-makers use available evidence for making decisions regarding the health of urban populations. Evidence-based decision-making is likely to increase the positive aspects and mitigate the negative impacts of urbanization.

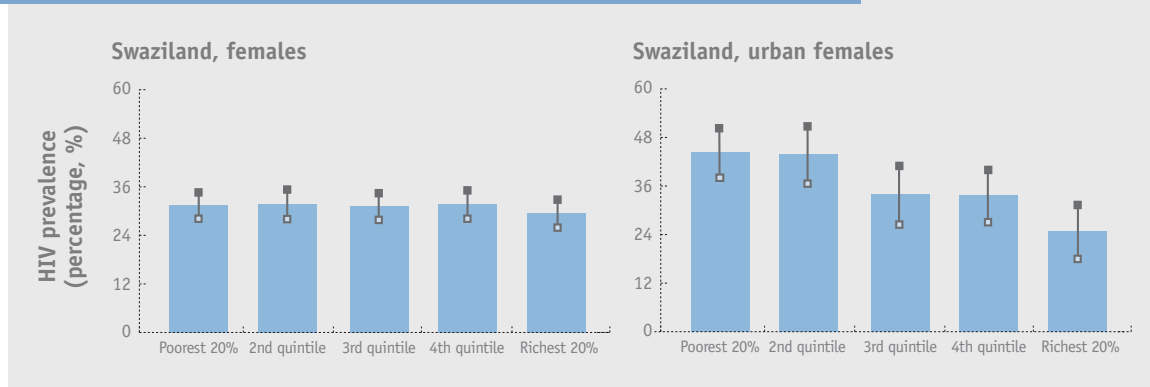
A large number of information sources are available to local and national decision-makers, yet they are often underutilized. Moreover, cities are different from one another and may change over time. The complexity and heterogeneity of cities mean that social and environmental determinants of health may vary throughout a particular city. This limits the generalizations that can be drawn about the impact of urbanization on health. For this reason, evidence used in decision-making should be specific to the conditions of the population.¹⁵³

To identify, scale up and adapt programmes and policies that are successful, policy-makers must look at the available evidence in its various forms. The “best available evidence” approach is an alternative to not using any evidence in decision-making. It implies using the evidence that is available, even if it has not been produced according to a rigorous study design. Studies using rigorous evaluation designs are important for informing programmes and policies. Systematic



WHO/Anna Kart

FIGURE 7.1
FEMALE HIV PREVALENCE ACROSS SOCIOECONOMIC GROUPS,
NATIONALLY AND IN URBAN AREAS IN SWAZILAND, 2006–2007



Source: WHO calculations based on data from Swaziland Demographic and Health Surveys (DHS), 2006–2007

reviews are also a suitable alternative, as they provide insights into the larger body of evidence. To sum up, sources of data may vary; however, all data are informative and can aid in policy-making.

Once evidence is assembled, it can be organized to identify the population subgroups and health issues that reveal the greatest urban inequities. It also can be used to see how these issues are developing over time, or to compare between cities.

The importance of disaggregated data

Building an evidence base for action serves multiple purposes. At its most basic level, it enables the identification and monitoring of inequities, high-risk groups and unmet needs. As such, it informs health planning and provides a focus for intersectoral action. Assessments of health inequities can also be used to raise awareness and motivate the public, health professionals and policy-makers to take action.

National-level data from Swaziland illustrate the importance of going beyond national averages when building an evidence base. The left side of Figure 7.1 shows that at the national level in Swaziland, no clear pattern of HIV prevalence among women exists across socioeconomic groups. However, when the data are disaggregated to examine urban areas only, as shown on the right side of the figure, a clear health inequity emerges: poorer urban women are more likely to be infected with HIV than those who are better off.

Data considerations

Disaggregated data should be used to examine urban health inequities. Depending on the specific context, data can be disaggregated into male versus female, age groups, geographical areas or locale with the city, and socioeconomic groups.

The process of generating and analysing data should entail minimal cost and should be within the institutional mechanisms of national and local governments. As much as possible, data should be obtained from existing information systems and regular records and reports. Conducting new surveys is not recommended unless there is strong local willingness, capacity and resources to do so.

Data can be sourced from local or national levels. City-specific data have their advantages, in that they can be more specific or detailed at the local level. Nonetheless, efforts should be made to ensure that local data collection and data analysis are done in a standardized fashion, thus enabling city-to-city comparisons. Conversely, national-level

BOX 7.1

DISAGGREGATING NATIONAL-LEVEL DATA: AN EXAMPLE FROM INDIA



Disaggregating existing national-level data to examine urban health inequities is a useful strategy for building the evidence base for action. This was done in India to better understand the health conditions of the country's urban poor.

Researchers at the Urban Health Resource Centre undertook a re-analysis of data from India's National Family Health Survey, which is a form of the Demographic and Health Surveys (DHS). The household survey gathers information on fertility, family planning, infant and child mortality, reproductive health, child health, nutrition of women and children, and the quality of health and family welfare services. The latest round, conducted in 2005 and 2006, represented more than 99% of India's population living in all 29 states. Researchers from the Urban Health Resource Centre disaggregated the data into urban areas, and within them, into wealth quartiles. For the purposes of this analysis, the bottom wealth quartile (25%) of the urban sample was used to represent the "urban poor", while remaining urban respondents were classified as "non-poor".

Results revealed a number of urban health inequities. Health indicators among the urban poor were much worse than urban averages, and generally similar to those of rural populations. For example:

- Infant mortality rates were 54.6 among the urban poor, compared with 35.5 among urban non-poor and 41.7 in urban areas overall.
- Only 40% of urban poor children received all recommended vaccinations, comparable to 39% for rural households and much lower than the urban average of 58%.
- Nearly 50% of urban poor children were underweight for their age. This rate was worse than rural areas (46%) and significantly worse than the urban average (33%).
- Nearly 60% of urban poor women aged 15 to 49 years were anaemic, increasing the likelihood of maternal and infant death, premature birth and underweight infants.

This example from India shows how national-level data can be used to unmask urban health inequities. The approach is available to those who are interested in building an evidence base for action when locally disaggregated data are not available.

UN Photo/J.P. Lafont

urban data should be collected and organized in a way that enables disaggregation and intra-urban comparisons (Box 7.1).¹⁵⁴

Regardless of the specific source, data should meet high standards of reliability, transparency and completeness. The highest standards of quality should be maintained, including the use of standard sources and indicators that are deemed reliable and valid indicators of the variables in question. Data should adequately represent the population and relevant subpopulations. Data-handling practices should be in accordance with guidelines and other established standards for storage, back-up, transport of information and retrieval. Data analysis should be conducted using well-established statistical tests and methods.

WHO's Urban HEART

Urban HEART (Urban Health Equity Assessment and Response Tool) is a tool that can be used to build the evidence base for action.¹⁵⁵ The World Health Organization developed Urban HEART from 2008 to 2009 based on experiences in several cities from 10 countries: Brazil, Indonesia, Islamic Republic of Iran, Kenya, Malaysia, Mexico, Mongolia, Philippines, Sri Lanka and Viet Nam. Their experiences informed and shaped the current version.

Urban HEART offers several advantages to those who want to build an evidence base for action. It is simple and user friendly, and can be used by a wide range of people: local governments; central

**TABLE 7.1
CORE INDICATORS FOR URBAN HEART**

#	DOMAIN / INDICATOR	DEFINITION
HEALTH OUTCOMES		
1.	Infant mortality	The number of infant deaths between birth and exactly one year of age, expressed as a rate per 1000 live births
2.	Diabetes prevalence and death	Diabetes prevalence and death rates per 100 000 population (age-standardized)
3.	A. Tuberculosis treatment success	A. Proportion of tuberculosis cases detected and cured under directly observed treatment, short course (DOTS)
	B. Tuberculosis prevalence and death	B. Prevalence and death rates associated with tuberculosis
4.	Road traffic injuries	Road traffic death rate per 100 000 population
PHYSICAL ENVIRONMENT AND INFRASTRUCTURE		
5.	Access to safe water	Percentage of population with sustainable access to an improved water source
6.	Access to improved sanitation	Percentage of population with access to improved sanitation
SOCIAL AND HUMAN DEVELOPMENT		
7.	Completion of primary education	Completion of primary education, expressed as a percentage
8.	Skilled birth attendance	Proportion of births attended by skilled health personnel
9.	Fully immunized children	Percentage of fully immunized children
10.	Prevalence of tobacco smoking	Percentage of population who currently smoke cigarettes and other forms of tobacco products
ECONOMICS		
11.	Unemployment	Percentage of population who are currently unemployed
GOVERNANCE		
12.	Government spending on health	Percentage of local government spending allocated to health

Source: *Urban HEART: Urban Health Equity Assessment and Response Tool*. Kobe, Japan, World Health Organization, 2010 (<http://www.who.or.jp/urbanheart/>).

government ministries, including health, education and transport; and community groups and civil society organizations. It promotes the use of already-available data, which are then disaggregated into socioeconomic groups, and geographical areas or neighbourhoods. Urban HEART considers health determinants and their interactions in multiple domains of urban life, and

encourages policy responses and interventions that will be sustainable in the long term.

Urban HEART has two main components: assessment and response. The assessment component guides users through the process of selecting appropriate indicators to examine health inequities. A common set of core indicators is recommended for all cities (Table 7.1). These indicators are

limited in number but represent a broad scope of health determinants and health outcomes. Core indicators were selected based on their relevance to urban health equity, availability in pilot sites and comparability. The core indicators are further complemented with strongly recommended and optional indicators, which are adaptable to local circumstances.

To assess equity, data pertaining to each indicator are disaggregated by population group and geographical area. Once the information is collected, it is organized to identify the population subgroups and health issues that reveal the

greatest inequities. It is also used to see how issues are developing over time, or to compare between cities. Urban HEART provides tools to help users organize their information in these ways.

The response component of Urban HEART enables users to determine the policies and interventions that will best help them reduce health inequities. Steps involve identifying equity gaps, identifying appropriate response strategies, and then selecting relevant interventions. Using Urban HEART, a team in Parañaque City, Philippines, formulated a response to a pressing health inequity in their city (Box 7.2).¹⁵⁶

BOX 7.2 SPOTLIGHT ON PARAÑAQUE CITY, PHILIPPINES



Parañaque City, Philippines, used Urban HEART to overcome urban health inequities and improve the quality of health care for pregnant women.

Its Urban HEART team, constituted in 2008, was multisectoral and included municipal representatives from the health, housing, planning, budgetary and engineering sectors. Civil society and community groups also participated, and national- and regional-level health representatives joined during the implementation

phase. The mayor of Parañaque City played a central role, both in providing leadership and in liaising with a range of sectors and stakeholders. The city, which lies in the southern part of metropolitan Manila, is home to almost 600 000 people and is growing rapidly. It is divided into 16 barangays or administrative areas.

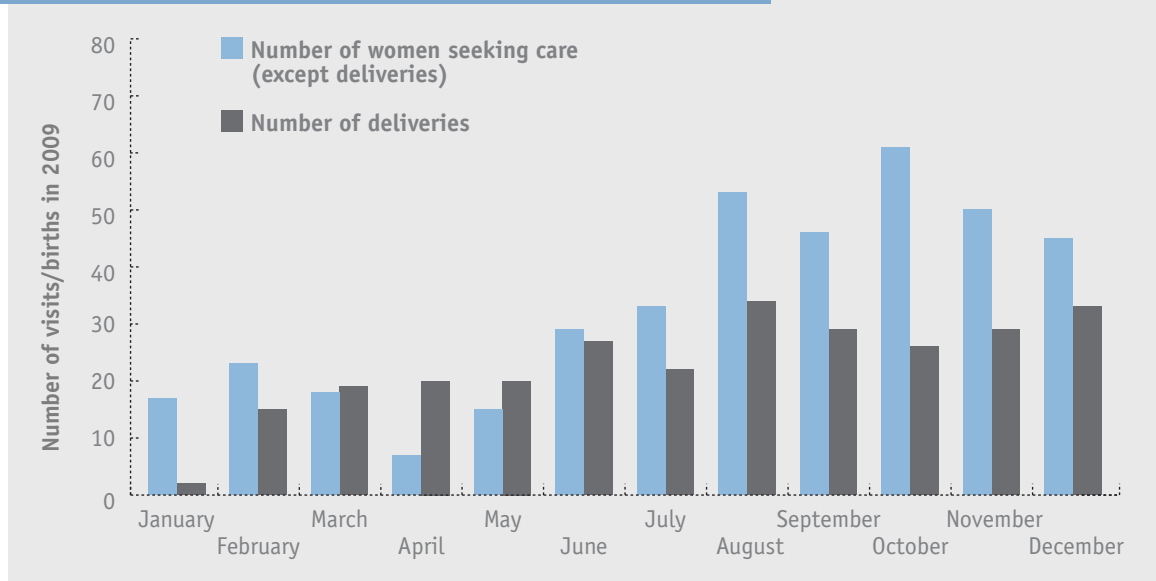
Urban HEART's assessment component was used to identify the city's most pressing health inequities. Results revealed that the city had overall shortcomings and substantial inequities between barangays on access to safe water, crime and the percentage of pregnant women giving birth in health facilities. Citywide, almost half of all births were happening at home without a skilled birth attendant. And, among the city's 16 barangays, one of the poorest had the highest proportion of home deliveries: in San Martin de Porres, 92% of all deliveries were happening at home. Armed with this new information, and with the help of the criteria suggested by the Urban HEART tool, the team decided upon the most feasible and relevant intervention: to establish a birthing facility in San Martin de Porres. Following approval of the San Martin

de Porres council, the facility was opened at the end of 2008.

An awareness-raising and advocacy campaign complemented the building's renovation. Information about the new birthing facility was posted in all deprived areas of San Martin de Porres, and media outreach resulted in wide coverage of the facility's opening in local and national news outlets. A series of community outreach efforts informed women about the complications and risks of home deliveries, and motivated them to use the new birthing facility. Following the opening of the birthing facility, the number of women using the facility increased in the subsequent months (Figure 7.2). A decrease in the proportion of home deliveries was also witnessed in 2009.

The establishment of the birthing facility stimulated other positive developments. The San Martin de Porres council passed a local resolution discouraging home deliveries in the barangay and pledging full support to the birthing facility. The Parañaque City council approved a new ordinance allowing the city government to set regulations for birthing facilities in the city. Encouraged by the success of San Martin de Porres, leaders in five other barangays are establishing birthing facilities in 2010.

FIGURE 7.2
UTILIZATION OF THE NEW BIRTHING FACILITY IN 2009,
SAN MARTIN DE PORRES, PARANAQUE CITY, PHILIPPINES



UN-HABITAT's UrbanInfo

UrbanInfo¹⁵⁷ is another useful tool for building the evidence base for action. Developed in response to demands from UN-HABITAT's data users, it is a user-friendly software that runs on the Windows platform and helps users store, present and analyse urban indicators through a variety of presentation tools, such as tables, graphs and maps. UrbanInfo supports both global and user-defined indicators, multiple languages and customized names, logos and graphics.

UrbanInfo has evolved over two versions. The first version was published in 2006 and contained information on several topics, such as housing,

demography, communication, energy, economy, education, health, nutrition and gender. The second version provides updated information on these topics and covers new areas, such as disasters, crime, migration, income inequalities and transport. It was designed by UN-HABITAT in collaboration with the United Nations Children's Fund (UNICEF) and the United Nations Development Group (UNDG), with financial support from the World Bank and other partners.

UrbanInfo is part of UN-HABITAT's long history of collecting urban indicators and strengthening local and national capacity for monitoring urban development and performance. Its Monitoring Urban Inequities Programme produces the Global Urban Indicators database,¹⁵⁸ which is updated annually.

CHAPTER SUMMARY

Taking action against urban health inequities requires looking at the health status of subgroups of city dwellers according to their socioeconomic status, neighbourhood or other population characteristics. By assembling available information in this way, we can better understand what the health problems are, where they lie and how best to address them. ■ Disaggregating existing national-level health data can uncover urban health inequities. Results can reveal a number of urban health inequities, and this information can build support for action. ■ Tools such as Urban HEART and UrbanInfo can assist with building the evidence base for action. Urban HEART is simple and user friendly, and can be used by a wide range of people to assess and respond to urban health inequities. UrbanInfo is a software that helps users store, analyse and communicate results for an array of urban indicators, both global and user defined. Additional resources and tools are referenced in Annex A. ■ In conclusion, data should meet high standards of reliability, transparency and completeness. As much as possible, data should be obtained from existing information systems and regular records and reports. Depending on the specific context, disaggregated data can be organized by demographic group (gender, age), geographical area or locale with the city, or socioeconomic status (as measured by income or wealth). ■ Following assessment of urban health inequities, next steps are prioritizing and implementing interventions, and monitoring and evaluating results. These are described in the following chapter.



CHAPTER 8 TAKING ACTION

UN Photo/Wolff

This chapter presents a range of interventions that can be employed to improve the natural and built environment, the social and economic environment, food security and quality, and services and health emergency management. It does not encompass an exhaustive list of everything that can be done, but rather illustrates what is possible.

The chapter describes a range of factors that must be considered in formulating a specific plan to take action against urban health inequities. Above all, information about the particular health inequities within the city should be used as the basis for prioritization and decision-making. Selected interventions should be feasible, sustainable and evidence based. Other considerations include local capacity for implementation, likely impact, acceptability and political support.

Three main approaches to reducing urban health inequities

Multiple strategies can be used to address urban health inequities. Three main approaches are targeting disadvantaged population groups or social classes, narrowing the health gap, and reducing inequities throughout the whole population (Figure 8.1).⁹⁸ Most agree that health equity can be achieved best by “levelling up” physical and social conditions for the urban poor and other disadvantaged groups. In reality, though, the three approaches are interdependent and should build on one another. Their relative merits are discussed briefly.

TARGETING DISADVANTAGED GROUPS (A)

This approach focuses on improving the health status of a targeted group, for example the poorest 20% of city dwellers. Within this approach, the health of the urban population as a whole is not taken into consideration. And while this approach may improve the health of the targeted group in absolute terms, it does not necessarily lead to a reduction in health inequities; for example, the

health gap between the urban rich and the urban poor may not decrease even as the urban poor are making some health gains (see Box 8.1 on page 92 for an example from Pakistan).

NARROWING THE HEALTH GAP (B)

This approach takes as its starting point the health of disadvantaged groups relative to the rest of the urban population. Action is focused on reducing the gap between the worst-off and the best-off – the extremes of the social scale (see Box 8.2 for an example from East Africa).

REDUCING INEQUITIES THROUGHOUT THE ENTIRE URBAN POPULATION (C)

This approach recognizes that, as shown in Part Two of this report, health status and socioeconomic status are interrelated on a continuum. In other words, health inequities exist not only between the richest and the poorest city dwellers, but also affect the middle classes. Within this approach, the entire urban population is taken into consideration, including middle-income groups. The goal is to reduce the inequities in health by equalizing health opportunities across the socioeconomic spectrum (see Box 8.3 for an example on helmet use).



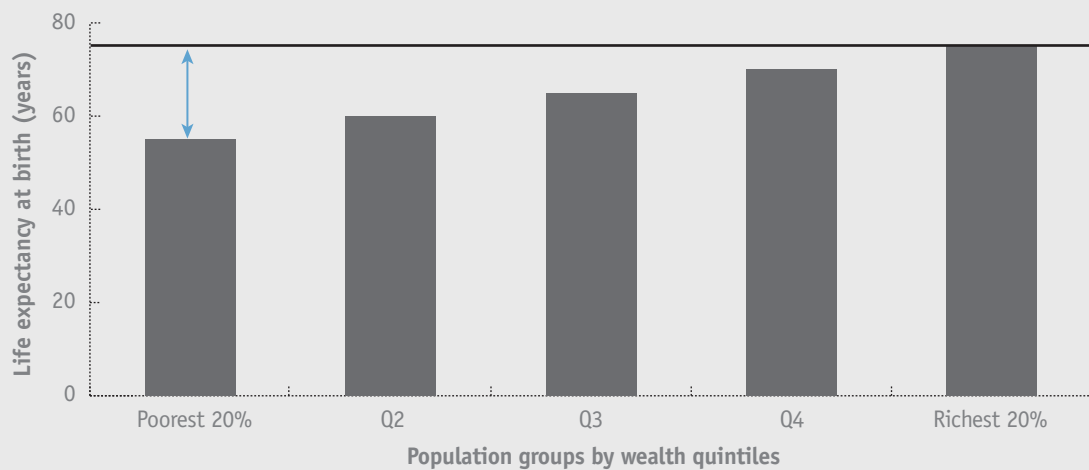
Pierre Holtz/IRIN

FIGURE 8.1
THREE MAIN APPROACHES TO REDUCING URBAN HEALTH INEQUITIES*

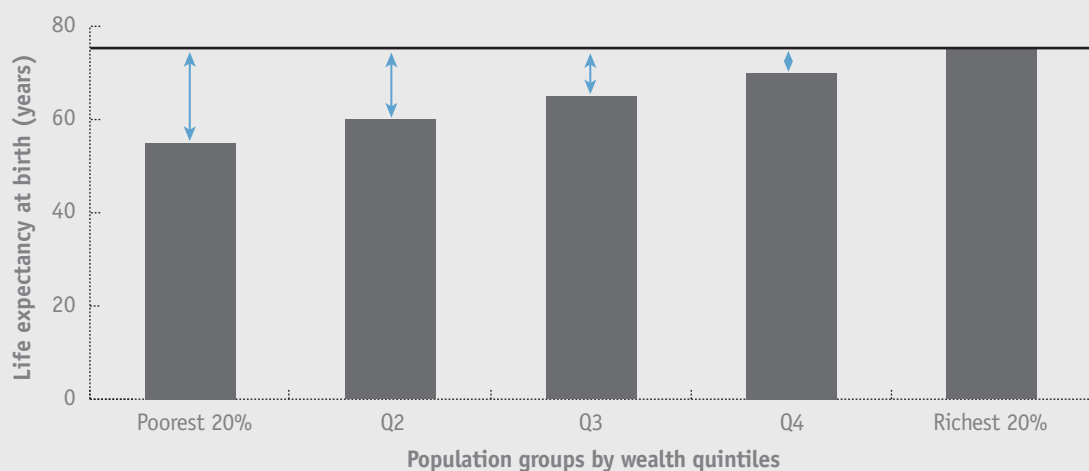
A. TARGETING DISADVANTAGED GROUPS



B. NARROWING THE HEALTH GAP



C. REDUCING INEQUITIES THROUGHOUT THE ENTIRE URBAN POPULATION



* For illustration purposes only.

BOX 8.1 SPOTLIGHT ON LADY HEALTH WORKERS IN URBAN SLUMS OF PAKISTAN

Rapid urbanization in Pakistan has created urban slums, in which illness and disability are endemic.¹⁵⁹ Urban health centres, meanwhile, are poorly equipped and overstretched to cover catchment areas beyond their operational reach.¹⁶⁰

Female community health workers, known as lady health workers, fill unmet health-care needs in urban slums through door-to-door primary health services. They treat minor ailments and injuries, and provide maternal, neonatal and child care, including reproductive health and family planning. Complex or urgent cases are referred to general practitioners. Each lady health worker serves around 1000 people or 150 households in her own community, for which a small allowance is provided by the Ministry of Health.

Candidates must be recommended by their community and meet a set of criteria, including a minimum of eight years of education. They are trained for 15 months in the prevention and treatment of common illnesses: three months in the classroom, followed by 12 months of practical on-the-job training. After training, provincial and district coordinators provide monitoring and supervision.

Lady health workers have succeeded in addressing a substantial proportion of unmet health-care needs in urban slums. They have scaled up family planning and child immunization, and effectively promoted the use of skilled birth attendants. They also effectively manage diarrhoea, respiratory tract infections and fever in children.¹⁶¹ More broadly, lady health workers act as catalysts for community involvement in health and serve to disseminate health messages on malaria, tuberculosis, hepatitis B and C, nutrition, family planning and injury prevention.



UN Photo/Evan Schneider



BOX 8.2 IMPROVING WATER AND SANITATION IN TOWNS OF THE LAKE VICTORIA REGION, EAST AFRICA

The rapidly growing urban centres in the Lake Victoria basin of East Africa are playing an increasingly important role in the economic development of the region. However, unplanned urban development and intense pressure on basic infrastructure have had a significant negative impact on living conditions, the natural environment and the fragile ecosystem of the lake. The poor populations of these urban and peri-urban areas, most of them remaining outside the reach of municipal services, are the most affected.

A comprehensive initiative is being pursued by UN-HABITAT across Lake Victoria region towns in Kenya, Uganda and the United Republic of Tanzania.¹⁶² With a clear pro-poor focus, the initiative is intended to improve access to water, sanitation, solid waste management and drainage services in the project areas; implement functional and gender-focused strategies for sustainable management and monitoring of rehabilitated systems; and build institutional capacity for long-term administration of the systems. It also aims to contribute to the reduction of pollutants entering the lake, thereby protecting the lake environment on which the region depends for survival.

UN Photo/Evan Schneider

BOX 8.3 SPOTLIGHT ON HELMET USE

Increasing helmet use through legislation is an important evidence-based intervention, especially in low income countries where motorized two-wheel vehicles are common, and helmet use is low. A recent Cochrane review found that, on average, helmets reduce motorcyclists' risk of death by 42% and risk of head injury by 69%.¹⁶³ Many successful examples of helmet legislation can be found around the world. In Thailand, for example, head injuries decreased by 41% and deaths decreased by 21% following new legislation.¹⁶⁴ In Malaysia, motorcycle deaths were reduced by 30%.¹⁶⁵ Viet Nam experienced similar results after implementing a new helmet law in December 2007 that required all drivers and passengers to wear helmets on all roads at all times, without exceptions or exemptions. By October 2008, there were more than 1400 fewer road traffic fatalities, and more than 2200 fewer serious injuries compared to the same time in 2007.¹⁶⁶



Fotolia

Choosing priority interventions

Each city must consider a range of factors in deciding priority interventions. The starting point should be a clear assessment of the urban health inequities that exist in the city (see Chapter 7). The choice of interventions must reflect the opinions of city dwellers and the priorities of policy-makers, and be realistically informed about the powers of the intersectoral group to influence health determinants and reduce health inequity. Priority interventions in various areas are presented in Annex C and a specific example of community engagement is provided in Box 8.4¹⁶⁷ on the next page.

Priorities should be selected in a consensual fashion, taking into account legitimate differences about the pace of change, the most pressing areas for action, and the level of coherence with existing national and regional policies and plans. If, for example, a national government has prioritized and provided local funding for improved sanitation, then the intersectoral group might decide to take advantage of this opportunity and focus its efforts on reducing sanitation-related inequities. In any event, policy-makers and decision-takers should not lose sight of their vision for integrated development.

FEASIBILITY

Interventions must be feasible to implement given available resources – human, financial and organizational capacity. In addition, they should be accepted by the communities who will be affected by their application. Finally, it is important that interventions comply with existing or proposed national policies and priorities, align with the local political agenda and receive support from the local government.

SUSTAINABILITY

Sustainability implies the ongoing availability of adequate resources to continue interventions in the long term. It also means that interventions are meeting the needs of city dwellers without compromising the ability of future generations to reach their full health potential.

EVIDENCE BASED

Whenever possible, local leaders should use the “best available” evidence to inform their choice of interventions. The best available evidence approach is based on the principle that using some evidence, even if it was not produced according to a rigorous study design, is better than using no evidence whatsoever. It acknowledges the gaps in available evidence, yet calls on decision-makers to seek and use the sources of information that are accessible to them.

POPULATION TARGET OF INTERVENTION

As discussed above, most agree that health equity can be achieved best by reducing inequities throughout entire urban populations. Nonetheless, interventions that have a positive influence on general population health might not reach vulnerable groups, thereby potentially increasing health inequities. Interventions to the natural and built environments, for example, will improve health equity only if they are implemented in a way that prioritizes the needs of the disadvantaged.¹⁶⁸ Careful analysis is needed to determine whether priority interventions should be designed to reach only disadvantaged population groups or urban residents as a whole. In any event, the decision should be made based upon the overall objective of reducing health inequities within the city.

BOX 8.4 COMMUNITY MOBILIZATION AGAINST VIOLENCE IN BRAZIL



Brazil has one of the highest homicide rates in the world. Between 1980 and 2002 the national homicide rate more than doubled, from 11.4 to 28.4 per 100 000 population. In São Paulo City, the homicide rate more than tripled during the same time period, from 17.5 to 53.9 per 100 000 population.

Jardim Angela is a conglomerate of slums located in the southern region of São Paulo City, with about 250 000 inhabitants. In July 1996, Brazil's *Veja* magazine reported an average homicide rate of 111 per 100 000 population, ranking this region as one of the most violent in the world. An integrated community effort of 10 institutions, called Fórum

de Defesa da Vida (Life Defence Forum), was created. Parallel to the creation of this alliance, a network of social protection involving civil society was organized, capitalizing on community capacity, social movements and formal and informal health and social services.

This network engaged in a broad range of community interventions, ranging from providing assistance to recently incarcerated children to a collective initiative for rebuilding community spaces. As a result of the investment in community space, abandoned sites such as squares, clubs and schools were rebuilt, providing space for sports, complementary school activities,

and alcohol and drug abuse programmes. The community and police also established a coalition aimed at securing community welfare through surveillance of violence, criminality and traffic in illicit drugs. A range of policies and services were also implemented with community input, including closing times for bars, a programme for victims of domestic violence, and health promotion interventions aimed at reducing teen pregnancy.

In 2005, the homicide rates for the city and state of São Paulo were 24 per 100 000 population and 18 per 100 000 population, respectively, reflecting a 51% reduction in homicide for the state. In addition, for 50 consecutive days in the same year, there were no homicides in Jardim Angela. More recently, from January to July 2006, Jardim Angela experienced a more than 50% reduction in reports of muggings, assaults, picking pockets and car thefts compared to previous years.

Jardim Angela represents an example of implementation of integrated efforts towards comprehensive development, attentive to both national and local specificities. A continuous dialogue between civil society and authorities at different levels constitutes a precondition for the success of such initiatives.

Nati Lis/SXC.hu

LEAD AGENCY FOR IMPLEMENTATION

To what extent the health sector can (or should) take the lead role in implementing the intervention depends in large part on the issue being addressed. In general, the lead role should be assigned to the agency or organization with the greatest responsibility or authority for the

topic area. An intervention to improve water quality might be best led by the city's public utilities department, for example. In other cases, the lead role is most appropriate for the national level of government, or an organization outside government, for example in the case of an intervention located in a private sector workplace, or in a community centre.



Hesti, 47
North Jakarta, Indonesia
**IMPROVING SANITATION
IN THE NEIGHBOURHOOD**

Hesti lives with her husband and children in a seaside slum area in North Jakarta. Her husband is a builder who can earn US\$ 5.40 a day, but it's tough when he can't find work. Then, "I and the children have to shuck shellfish for US\$ 1.60 a day. I have back pain from sitting in

the same position when I break shellfish. I take traditional herbs to help it."

Hesti takes care of the local public toilet which was built last year by a charity. It has had a good impact on their life, because it replaced the foul-smelling "hanging toilet" on stilts next to their house. It was so bad that "when it rained," she recalls, "the excrement would flood into the alleyways and our homes. How would you feel if that happened

to you? When we first moved here the smell from the toilet was so bad my children would refuse to eat."

Now, she gains some income as the keeper of the new public toilet. "I clean it. The charge is 500 rupiah (US\$ 0.05), but if people don't have the money they can still come. I think most people in the community come here now. I don't make much money from the toilet, but I am very happy that we have this facility."

WHO/Anna Kari

Monitoring and evaluation

Monitoring and evaluation are key aspects of taking action. They are crucial for building evidence, refining approaches and sharing achievements and obstacles with others. Close monitoring is required to understand whether the activities outlined in the plan have been completed within the required time frame, whether inputs and outputs for activities have been delivered and whether targets have been attained. Evaluations should be both external

and internal, with participation from the community and multiple sectors, and should focus on both processes and outcomes.

A results-sharing mechanism that includes multisectoral partners and the community helps reinforce collaboration and maintain focus on desired equity outcomes. Available and emerging results must be communicated in ways that are understandable and useful to end users.

A full description of monitoring and evaluation methods for urban health inequity interventions is beyond the scope of this report, but additional information sources are provided in Annex B.

CHAPTER SUMMARY

This chapter has provided an overview of three main approaches to take action against urban health inequities. The approaches are to target disadvantaged population groups or social classes; to narrow the health gap between the best-off and the worst-off; and to reduce inequities throughout the entire urban population. Most agree that health equity can be achieved best by levelling up physical and social conditions for the urban poor and other disadvantaged groups. In reality, the three approaches are interdependent and should build on one another. ■ Priority issues vary from city to city; in all cases, chosen interventions should be feasible, sustainable and evidence based. Action can be taken to improve the natural and built environment, the social and economic environment, food security and quality, and services and health emergency management. Examples of interventions from each of these broad categories have been provided within the chapter. Regardless of the chosen interventions, monitoring and evaluation are crucial for understanding their impact.

CONCLUSION

THE PRICE AND THE PROMISE OF OUR URBAN WORLD



WHO/Anna Kari

The future of our urban world has yet to be realized, but brings both a price and a promise. To what extent we will pay the price, as opposed to fulfilling the promise, is in our hands.

For the first time in human history, the majority of the world's population is living in urban areas, and this proportion continues to grow. By 2050, 7 out of 10 people will live in urban areas. Almost all urban population growth will occur in low- and middle-income countries. Some of the fastest-growing cities will double their populations in the next eight years. Urbanization is not inherently positive or negative.

Overall, urbanization has brought countries opportunity, prosperity and health. Urban populations are generally better off than their rural counterparts: they tend to have greater access to social and health services, literacy rates are higher and life expectancy is longer. At the same time, large disparities exist between city dwellers. Rapid, unplanned population growth has strained govern-

ments' capacity to regulate air and water quality, build infrastructure and provide essential services. Globally, one in three urban dwellers now lives in slums or informal settlements. Governments are facing further challenges as they prepare for more and more people living in their cities.

Many cities are facing a triple health threat: infectious diseases exacerbated by poor living conditions; chronic, noncommunicable diseases and conditions fuelled by tobacco use, unhealthy diets and physical inactivity; and injuries (including road traffic accidents) and violence. These are the result of a complex interaction of various urban health determinants, including unhealthy living conditions and insufficient infrastructure and services.



Marshall Faulk/SXC.hu

This report has shown the inequitable distribution of these health threats within cities. Families with the lowest incomes in urban areas are most at risk for adverse health outcomes such as child malnutrition and early childhood death, have less access to health services such as skilled birth attendance, and are also disadvantaged in terms of their living conditions, such as access to piped water. Importantly, these inequities exist along a social gradient, also affecting middle-class city dwellers to at least some extent. Disadvantage and disease also cluster within certain neighbourhoods of cities. Beyond socioeconomic status and neighbourhood, some city dwellers have poor health outcomes because of the way societies marginalize and discriminate against them for aspects of their identity they cannot change, such as their age, sex or disability.

These urban inequities have been largely hidden from view, yet exist everywhere – in rich and poor countries, across continents and cultures. No city – large or small, rich or poor, east or west, north or south – has been shown to be immune to the problem. Because urban health inequities exist everywhere, all local and national leaders should consider how to overcome them.

The future of our urban world has yet to be realized, but brings both a price and a promise. To what extent we will pay the price, as opposed to fulfilling the promise, is in our hands.

The price, if we fail to take action, will be the further proliferation of inequity among city dwellers, which will translate into even more avoidable suffering from a range of diseases and health problems. The price will be more efforts to tackle the consequences of heat waves, air pollution, storms, floods and infectious diseases. The price will be the failure of countries to attain the Millennium Development Goals, and indeed, to realize their full economic and human potential.

The promise, on the other hand, is cities that are healthy for all people. Rich and poor, young and old, men and women, migrants and citizens: all will be able to enjoy the highest attainable standard of health.

This promise can be realized by reorienting our conventional approaches. This implies reconnecting the fields of public health and urban planning within a framework of multilevel urban governance. The report illustrates the leadership role that municipal leaders and local governments can play in combining the talents and powers of all sectors. The key to successful action is the involvement of organized communities and all levels of government – local, provincial and national – in a combined and coordinated effort to reduce urban health inequities.

Reducing urban health inequities involves knowing which city dwellers are affected by which health issues, and why. By turning the spotlight on the information in this way, cities will better understand what the problems are, where they lie and how best to address them. Tools such as Urban HEART and UrbanInfo can assist people with building the evidence base for action.

Once the nature and extent of urban health inequities are understood, action can be taken in several areas. Options include interventions to improve the natural and built environment, the social and economic environment, food security and quality, and services and health emergency management. Priority issues will vary from city to city; in all cases, chosen interventions should be feasible, sustainable and evidence based.

We are at a clear turning point in history, in which we are moving towards an increasingly urbanized world. The price and the promise are both possible, and the choice is ours. It is our collective responsibility to ensure that cities are healthy places for all people, both now and in the future. We all have a role to play in making this a reality.

A role for all: who can do what?*

MINISTRIES OF HEALTH

- Become more informed about health determinants, and how urban policy choices influence the health of city dwellers.
- Proactively engage other sectors, including housing, transport, industry, water and sanitation, education, environment, and finance agencies.
- Lead by example: support healthier and more liveable cities.
- Support health and environmental impact assessments for urban plans and policies.

LOCAL GOVERNMENTS

- Foster collaboration within local government through forums and dialogue between public health officials and urban planners.
- Partner with nongovernmental and community organizations; establish a mechanism that will give health professionals the opportunity to provide input on planning and transport plans.
- Provide a mechanism for sharing information, across government and with civil society and the community, on the nature of urban health inequities and progress in reducing them.

CIVIL SOCIETY

- Ensure that people participate fully in shaping the policies and programmes that affect their lives.

- Include residents of informal settlements in formal processes by establishing groups, associations and federations. Large or small, organizations of the urban poor should come together to identify the social and economic conditions that they face; to find practical solutions to these problems; to struggle against marginalization; and to ensure access to the goods and services to which they are entitled.
- Work with governments on participatory planning and budgeting to allocate a greater portion of the municipal investment budget to priorities determined by neighbourhoods and community groups.

RESEARCHERS

Generate and systematize knowledge to address the many existing information gaps, including:

- potential advantages of urbanization and urban growth;
- the inequities of health disaggregated by intra-urban area;
- the effectiveness of proactive approaches to deal with health inequity in cities;
- the importance of involving all citizens in the decisions that affect their habitat and their health.

URBAN PLANNERS

- Use zoning and land use regulations as a way to prevent exposure of city dwellers to pollution emissions and hazards from industrial and commercial activities, waste and chemicals, and transport.
- Develop and adopt building practices that protect health among building users

* The attribution of roles to specific stakeholders is neither an attempt to be exhaustive, nor prescriptive. This report promotes the idea of a “whole of government approach” encompassing all players who impact on urban health equity.



regarding indoor air environment, safety, noise, water, sanitation and waste management, among several other health determinants in urban settings.

- Build compact cities, where dwellers have easy access to green areas, public transport and bicycle paths, as well as health, education and other fundamental social services.
- Incorporate health impact assessment into the consideration of alternative planning choices and policies.

INTERNATIONAL AGENCIES

- Promote and support policies to promote healthy environments.
- Disseminate lessons learnt.
- Support women's rights, poverty reduction and equity-promoting strategies.
- Encourage policy-makers to generate and use sociodemographic information to make better decisions regarding the urban future.

ANNEXES

- A. RESOURCES AND TOOLS**
- B. METHODOLOGICAL APPROACH**
- C. EXAMPLES OF INTERVENTIONS**

ANNEX A

ADDITIONAL RESOURCES AND TOOLS

RESOURCES AND TOOLS FROM THE UNITED NATIONS HUMAN SETTLEMENTS PROGRAMME (UN-HABITAT)

URBAN INDICATORS

http://ww2.unhabitat.org/programmes/guo/urban_indicators.asp

The website is a portal to UN-HABITAT's urban indicators, which are collected regularly in a sample of cities worldwide to report on progress on the 20 key areas of the Habitat Agenda at the city level.

URBANINFO

<http://www.devinfo.info/urbaninfo/>

The website provides access to a web-based version of UrbanInfo.

RESOURCES AND TOOLS FROM THE WORLD HEALTH ORGANIZATION (WHO)

KNOWLEDGE NETWORK ON URBAN SETTINGS

<http://www.who.or.jp/knus.html>

The Knowledge Network on Urban Settings was focused on synthesizing global knowledge on social determinants of health and urbanization. The website provides access to the Network's final report, as well as a range of other resources that informed its work.

COMMISSION ON SOCIAL DETERMINANTS OF HEALTH

http://www.who.int/social_determinants/thecommission/finalreport/about_csdh/en/index.html

The Commission on Social Determinants of Health was a global network of policy-makers, researchers and civil society organizations brought together by WHO to give support in tackling the social causes of poor health and health inequities. The website provides access to the Commission's final report and related information.

HEALTHY CITIES PROGRAMME

<http://www.euro.who.int/healthy-cities>

The website provides a wealth of information on all aspects of urban health, and describes WHO's Healthy Cities Programme and its activities around the world.

URBAN HEALTH EQUITY ASSESSMENT AND RESPONSE TOOL (URBAN HEART)

<http://www.who.or.jp/urbanheart.html>

The website provides access to the latest version of Urban HEART, as well as supporting materials and information.

OTHER RESOURCES AND TOOLS

WORLD BANK – URBAN HEALTH

<http://go.worldbank.org/3YB10HELNO>

The website provides links to resources that will help planners design, implement and improve urban interventions for better health outcomes.

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID) – URBAN HEALTH AND ENVIRONMENT

<http://www.makingcitieswork.org/urbanThemes/Urbanhealthandenv>

The website describes USAID's work in the area of urban health and provides links to selected full-text versions of USAID-sponsored publications on urban health.

UNITED STATES CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC) – TOOLS FOR COMMUNITY ACTION

<http://www.cdc.gov/healthycommunitiesprogram/tools/index.htm>

The website, part of CDC's Healthy Communities Program, provides a range of tools for engaging communities to improve places and organizations that touch people's lives every day – schools, workplaces, health-care sites and other community settings – for health promotion and chronic disease prevention.

INTERNATIONAL SOCIETY FOR URBAN HEALTH

<http://www.isuh.org>

The International Society for Urban Health is an association of researchers, scholars and professionals from various disciplines and areas of the world who study the health effects of urban environments and urbanization.

INTERNATIONAL INSTITUTE FOR ENVIRONMENT AND DEVELOPMENT – URBAN ENVIRONMENT

<http://www.iied.org/human-settlements/key-issues/urban-environment-0>

The Human Settlements Programme of the International Institute for Environment and Development has been working on urban environmental issues since the mid-1970s.

AFRICAN POPULATION AND HEALTH RESEARCH CENTER

<http://www.aphrc.org/>

The Center's mission is to promote the well-being of Africans through policy-relevant research on population and health. A major focus of its work has been on urban health.

URBAN HEALTH TODAY: A CURRENT-AWARENESS TOOL

<http://urbanhealthtoday.blogspot.com/>

The website collects reports from the grey literature – not indexed in medical research storage sites (such as PubMed) – surrounding the health of people in cities worldwide. Users can access reports and upload information to share with others.

METHODOLOGICAL APPROACH FOR ASSESSING URBAN HEALTH INEQUITIES

Analyses completed by the World Health Organization for this report were based on data from reliable sources (established international organizations, or national or municipal government agencies) for which disaggregation was possible by urban/rural setting, and ideally by other socioeconomic factors such as income level. Urban samples were disaggregated and health inequities were assessed by looking at how different subgroups varied across a range of health indicators.

Data from the World Health Survey¹¹³ and the Demographic and Health Surveys¹¹⁴ were used for many of the topic areas. The World Health Survey was implemented by the World Health Organization and used a standardized survey instrument to compile comprehensive baseline information on health and health-care expenditure. In 2002, 71 countries implemented various forms of the World Health Survey – including several high-income countries, mostly in Europe, which completed a truncated version of the survey. Data were collected via face-to-face surveys, computer-assisted telephone interviews or computer-assisted personal interviews. Sample sizes varied from 1000 to 10 000, and included only randomly selected adults. The Demographic and Health Surveys are ongoing nationally representative surveys that are reliable, valid and internationally comparable. They are funded by USAID and conducted collaboratively by ICF Macro and national authorities.

A methodology proposed by Wagstaff, van Doorslaer and Watanabe¹⁶⁹ was used to decompose urban health inequalities of child malnutrition and skilled birth attendance coverage (Chapter 4).

The method determines the individual contribution of each factor to health inequality, after controlling for all other factors. In addition, it is possible to identify whether the contribution is caused by the magnitude of the effect of each factor on the health variable or by the degree of income-related inequality in the factor itself, or by a combination of both.

Existing trends were used to project the future achievement of select health-related MDGs and targets in urban areas by 2015 (Chapter 5). Consistent with the overall methodological approach, this analysis went beyond urban averages to reveal how the richest and poorest city dwellers differ from one another. Projections were based on observed rate of progress over the longest time period for which data were available. This form of linear projection might not be most accurate in every case, given that each country has a specific context and may be undergoing health reforms or economic growth (or crisis), which may create the conditions for better or worse performance leading to 2015. However, linear projection also has several advantages: it can be applied in a standard manner for all countries; it is dependent entirely on observable data, as opposed to arbitrarily assigned growth rates; and it is relatively simple to understand.

Although sample sizes from cities were sufficient for these analyses, it is likely that slums or informal settlements were not surveyed comprehensively. It is therefore possible that results for poorer populations are an underestimate of the true magnitude of health inequities.

TABLE B.1
COUNTRIES FOR WHICH DATA WERE AVAILABLE FROM THE DEMOGRAPHIC AND
HEALTH SURVEYS FOR FOUR KEY INDICATORS (X INDICATES AVAILABILITY OF DATA)

	REGION	COUNTRIES	SKILLED BIRTH ATTENDANCE	STUNTING	UNDER-FIVE MORTALITY	ACCESS TO PIPED WATER
1	Africa	Benin	X	X	X	X
2	Africa	Burkina Faso	X	X	X	X
3	Africa	Cameroon	X	X	X	X
4	Africa	Chad	X	X	X	X
5	Africa	Congo	X	X	X	X
6	Africa	Egypt	X	X	X	X
7	Africa	Ethiopia			X	X
8	Africa	Gabon	X	X	X	X
9	Africa	Ghana	X	X	X	X
10	Africa	Guinea	X	X	X	X
11	Africa	Kenya	X	X	X	X
12	Africa	Lesotho	X	X		X
13	Africa	Liberia	X	X	X	X
14	Africa	Madagascar	X	X	X	X
15	Africa	Malawi	X	X	X	X
16	Africa	Mali	X	X	X	X
17	Africa	Morocco	X	X	X	X
18	Africa	Mozambique	X	X	X	X
19	Africa	Namibia	X	X	X	X
20	Africa	Niger	X	X	X	X
21	Africa	Nigeria	X	X	X	X
22	Africa	Rwanda	X	X	X	X
23	Africa	Senegal	X	X	X	X
24	Africa	United Republic of Tanzania	X	X	X	X
25	Africa	Uganda	X	X	X	X
26	Africa	Zambia	X	X	X	X
27	Africa	Zimbabwe	X	X		X
	AFRICA	TOTAL	26	26	25	27

TABLE B.1 CONTINUED

	REGION	COUNTRIES	SKILLED BIRTH ATTENDANCE	STUNTING	UNDER-FIVE MORTALITY	ACCESS TO PIPED WATER
28	Americas	Plurinational State of Bolivia	X	X	X	X
29	Americas	Colombia	X	X	X	X
30	Americas	Dominican Republic	X	X	X	X
31	Americas	Haiti	X	X	X	X
32	Americas	Honduras	X	X	X	X
33	Americas	Nicaragua	X	X	X	X
34	Americas	Peru	X	X	X	X
	AMERICAS	TOTAL	7	7	7	7
35	Asia	Armenia	X	X	X	X
36	Asia	Bangladesh	X	X	X	X
37	Asia	Cambodia	X	X	X	
38	Asia	India	X	X	X	X
39	Asia	Indonesia	X		X	X
40	Asia	Jordan	X	X	X	X
41	Asia	Nepal	X	X	X	X
42	Asia	Pakistan	X		X	X
43	Asia	Philippines	X		X	X
44	Asia	Turkey	X	X	X	X
45	Asia	Viet Nam	X			X
	ASIA	TOTAL	11	7	10	10
	GLOBAL	TOTAL	44	40	42	44

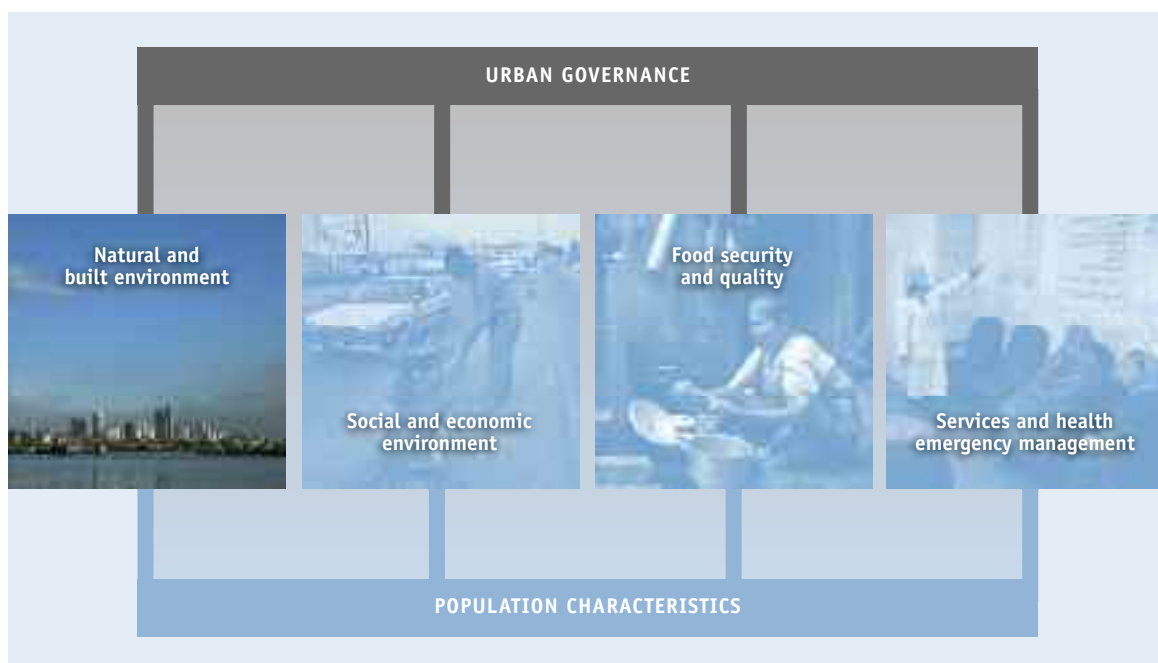
ANNEX C

EXAMPLES OF INTERVENTIONS

The following examples are not an exhaustive review of all possible interventions to reduce urban health inequities, but are illustrative of the kind of action that can be taken for selected health determinants. Annex A provides additional sources of information that can be consulted to help choose priority interventions.

Natural and built environment interventions

Within the domain of the natural and built environment, possible areas for action are mitigating and adapting to climate change; improving housing conditions; enhancing access to safe water and improved sanitation; improving transport systems and infrastructure; and improving air quality.



MITIGATE AND ADAPT TO CLIMATE CHANGE AND ITS IMPACTS

Urban settings have traditionally been significant contributors to climate change because of their use of energy, resources and land. Strategies for responding to climate change are generally classified as mitigation, which involves taking action to reduce the sources of greenhouse gases or enhance their removal; and adaptation, which refers to the adjustment in natural or human systems in response to actual or expected climate change or its effects. Mitigation and adaptation are not mutually exclusive, and neither is sufficient in itself: focusing only on mitigation would leave cities ill-prepared for anticipated health-related impacts; while focusing only on adaptation would not address cities' longer-term contributions to greenhouse gas emissions.

DEVELOP HEALTH-PROMOTING MITIGATION POLICIES. Carbon-cutting policies can reduce greenhouse gas emissions and bring additional benefits for the environment and for health, for example through reduced outdoor air pollution leading to better cardiovascular and respiratory health. Further, dealing simultaneously with air pollution and climate change issues is an opportunity to take advantage of synergies and make better use of limited resources.

ASSESS CLIMATE CHANGE VULNERABILITY, IMPACTS AND ADAPTATION. Assessments for climate adaptation can help local governments identify needs, areas for improvement and opportunities for proactive action in the light of projected climate impacts. Developing cities' resilience is essential, from investment in structural disaster mitigation to regulations, building codes, urban management and public health strengthening. Adaptation to climate change can be strengthened through public health action on the availability and quality of drinking water, sanitation systems, food security and safety, and the built environment.

STRENGTHEN HEALTH SYSTEMS. To enable appropriate responses to additional or new climate-sensitive health impacts, current public health practice can be reviewed and strengthened, and new

components specific to climate change can be fostered within the public health infrastructure. Intervention areas include public education, vector-borne disease surveillance, vector management, disaster preparedness, flood and disaster risk maps, identification of populations at risk, laboratories, diagnosis and reporting systems, and facilitation of access to health care for vulnerable population subgroups.

Additional ways in which cities can prepare themselves are considered in the section on "Services and health emergency management."

IMPROVE HOUSING CONDITIONS

Several interventions can help improve urban housing conditions for those living in unsafe or unhealthy dwellings. Interventions include improving the physical condition of housing, enhancing housing accessibility for people with disabilities, increasing affordability of housing, addressing overcrowding and promoting housing rights.

IMPROVE THE PHYSICAL CONDITION OF HOUSING. Interventions that address structural aspects of housing – for example, the quality of heating and ventilation systems – have been shown to dramatically improve health outcomes. Renovations and repairs to poor-quality housing reduce illness and death in both children and adults.¹⁷⁰ In New Zealand, for example, insulating older houses led to improved self-rated health, fewer visits to a general practitioner, fewer days absent from work and fewer days absent from school.¹⁷¹

ENHANCE HOUSING ACCESSIBILITY FOR PEOPLE WITH DISABILITIES. In some countries and municipalities, laws require certain new housing to be accessible and usable by people with disabilities. In addition, urban residents are becoming more interested in accessible or universal design. Accessible housing can simplify life for many people, not only those with disabilities.

INCREASE AFFORDABILITY OF HOUSING. Affordable housing improves health outcomes by freeing up family resources for other necessities, such as

food. By providing families with greater residential stability, affordable housing also reduces stress and related adverse health outcomes. Local governments can promote affordable housing through action such as making publicly owned land available for construction of new homes.^{172,173}

ADDRESS OVERCROWDING. Due to the multifaceted nature of approaches to addressing urban housing challenges, there is little evidence to demonstrate the impact of interventions that specifically address overcrowding. Nonetheless, almost all slum-upgrading programmes include interventions to reduce population density and rearrange the use of living space. To make a lasting impact, it is important for programmes to address the underlying causes of overcrowding, such as poverty and exclusion. Intersectoral action that integrates the technical, policy, building, housing, engineering, health and urban planning fields helps ensure a comprehensive approach.

PROMOTE HOUSING RIGHTS. While it is essential to upgrade housing conditions and address affordability and overcrowding, these activities must run parallel with actions that specifically address and focus on the human rights aspects of housing. The right to adequate housing (as a component of the right to an adequate standard of living) is enshrined in many international human rights instruments. A rights-based approach to development in the housing sector can empower the poor and the homeless; promote security of tenure, particularly for women and vulnerable groups in inadequate housing conditions; strengthen protection against forced evictions and discrimination in the housing sector; and promote equal access to housing resources and remedies in cases of violations of housing rights.

ENHANCE ACCESS TO SAFE WATER AND IMPROVED SANITATION

Enhancing access to safe water and improved sanitation involves the integrated implementation of a package of interventions, including mobilizing local governments and communities; developing potable water supplies; implementing water

quality management mechanisms; creating grey water drainage systems; developing household sanitation infrastructure; and educating communities on health and hygiene.¹⁷⁴

IMPROVE THE QUANTITY AND QUALITY OF WATER AVAILABLE FOR DOMESTIC USE. Making safe water available to households can significantly reduce illness and death from diarrhoeal diseases and waterborne illness.

IMPROVE SANITATION SYSTEMS. Improved sanitation facilities ensure hygienic separation of human excreta from human contact. They protect the water, air, soil and food from contamination and thereby reduce the risk of diseases. Facilities include toilets connected to piped sewer systems or septic tanks, pit latrines with a platform or slab, and composting toilets. When improved sanitation facilities are combined with proper hygiene (hand washing with soap or other agents), their effectiveness is maximized.

INTEGRATE WATER, SANITATION AND RELATED SYSTEMS. Interventions are ideally integrated across water, sanitation, solid waste management and drainage. This is especially important in low-income areas, in order to achieve marked improvement in the local environment and in the lives of poor communities.

IMPROVE TRANSPORT SYSTEMS

The goal of healthy and sustainable transport is to maximize access, personal mobility and healthy physical activity for all city dwellers. Technical components of a healthy and sustainable transport network will vary by locale, local needs and travel patterns. However, the following policy components are considered to be some of the most important:¹⁷⁵

START FROM A VISION OF SOCIAL EQUITY. Urban transport systems ideally provide high-quality mobility to all urban residents who need access to jobs, schools and commercial districts, regardless of whether they own a private vehicle. Health risks from pollution and injuries are minimized, and opportunities are enhanced for healthy physical activity and communal interactions across all sectors.

ENSURE PUBLIC TRANSPORT IS ACCESSIBLE TO PEOPLE WITH DISABILITIES. Specific measures may include wheelchair lifts or low floor ramps to allow easy access for people with disabilities; priority seating for those who need it; drivers trained to allow passengers time to be seated, and enter and exit the vehicle; and announcement of stops.

PRIORITIZE NON-POLLUTING TRANSPORT. Public and non-motorized modes of transport generate fewer health and environmental impacts (for example greenhouse gas emissions) per unit of travel. They can be prioritized in policies using both physical design and economic measures.

SEPARATE NON-MOTORIZED TRANSPORT NETWORKS. High-quality pedestrian and cycling networks, separated from vehicular traffic, can help reduce injury risk and enhance the mobility of poor and vulnerable populations, such as children.

IMPROVE VEHICLE STANDARDS AND TECHNOLOGY. Policies that support cleaner fuel, improved standards or retrofitting of older vehicle engines, and better vehicle maintenance and monitoring can lower pollution emissions, particularly from the most polluting vehicles.

USE ECONOMIC TOOLS. Economic tools such as fuel taxes, congestion charges and parking pricing can be used to discourage highly polluting forms of transport while generating revenues for healthy and sustainable transport.

OTHER INTERVENTIONS TO IMPROVE ROAD SAFETY. Evidence from a range of cities shows that improved road safety occurs as a result of a package of measures – including policies and institutions, road environment, the vehicle and the road user – which are implemented consistently and over the long term. Successes have been observed in a wide range of cities.^{95, 176}

IMPROVE AIR QUALITY

As described in Part One of this report, poorer city dwellers tend to be most exposed to urban air pollution and related health risks. For all urban residents, exposure is largely beyond their personal control and requires action by public authorities at

national, regional and local levels. The health sector can play a central role in leading a multi-sectoral approach to prevention of exposure to urban air pollution. It can engage and support other relevant sectors (transport, housing, energy production and industry) in the development and implementation of long-term policies to reduce the risks of air pollution to health.

DESIGN, IMPLEMENT AND ENFORCE AMBIENT AIR QUALITY MANAGEMENT INTERVENTIONS. Reducing levels of some ambient air pollutants (for example in the form of fine particulate matter) could reduce deaths in polluted cities by 15% every year.¹⁷⁷ Interventions include policies and regulations on maximum concentrations of air pollutants, emissions standards for mobile and stationary sources, fuel standards, cleaner energy sources, sustainable transportation and public education campaigns. Vehicle exhaust and industrial emissions are common sources of air pollution, and can be reduced by a combination of regulations and incentives for limiting harmful emissions.

REDUCE EXPOSURE TO ENVIRONMENTAL TOBACCO SMOKE. Because there is no safe level of exposure to second-hand tobacco smoke, a total smoking ban in workplaces, public places, public transport and, as appropriate, in other public places is the safest public health approach towards this issue. Beijing, China, undertook such action while it hosted the Olympic Games in 2008. Many cities have adopted permanent smoking bans. New York City, United States, is a celebrated example of a smoke-free city; other cities that have introduced indoor smoking bans include Chandigarh, India; Mexico City, Mexico; Davao, Philippines; Mecca and Medina, Saudi Arabia; Dubai, United Arab Emirates; and Liverpool, United Kingdom. Other cities have been successful in implementing smoke-free environments by enforcing existing provincial or national regulations, as is the case in Recife, Brazil.¹⁷⁸

Smoke-free policies have an impact beyond the cities adopting them. In several cases, neighbouring cities were encouraged and implemented similar measures, while in other cases the regulations became regional and even national; for instance, Makati in the Philippines implemented an anti-smoking ordinance in early 2003, and their experi-

ence was used to draft the national anti-smoking regulations passed later in the same year.^{179, 180}

The experiences of New York City, United States,¹⁸¹ and Hong Kong SAR, China,¹⁸² also show the potential for implementing several other tobacco control interventions, including tax increases, anti-tobacco advertising and cessation services.

ADDRESS INDOOR AIR QUALITY. The quality of indoor air depends both on the quality of outdoor air and on the strength of emissions of indoor sources. Measures to reduce indoor air pollution and associated health effects include switching to cleaner alternatives such as gas, electricity or solar energy; installing improved stoves or hoods that vent health-damaging pollutants to the outside; and encouraging behavioural change.

Social and economic environment interventions

Interventions related to improving the social and economic environment in urban settings include improving safety and security, and promoting gender equality in all policies and at all levels.

IMPROVE SAFETY AND SECURITY

As shown in Part Two of this report, urban crime and violence are disproportionately distributed in cities. Often, it is the poorest neighbourhoods that suffer most. Numerous strategies exist for improving safety and security in cities; UN-HABITAT has classified interventions for reducing urban crime and violence into six broad approaches, as follows:⁷³

ENHANCE URBAN SAFETY AND SECURITY THROUGH EFFECTIVE URBAN PLANNING, DESIGN AND GOVERNANCE.

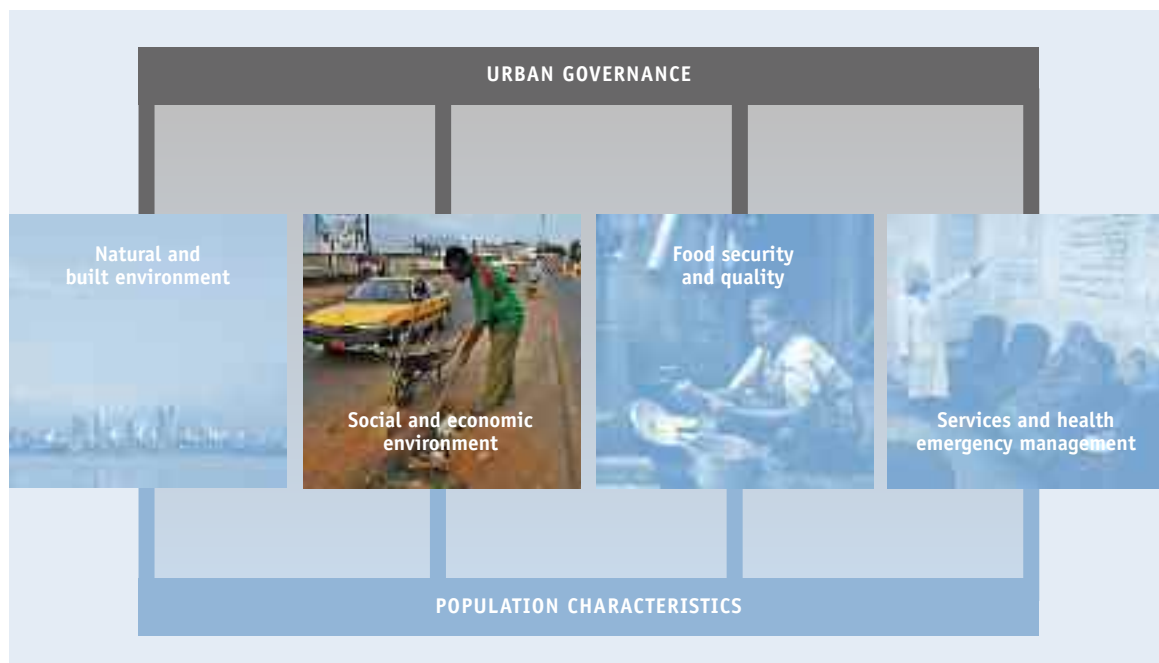
This group of interventions involves manipulating and maintaining the physical environment, which is the setting within which most crimes take place.

PROMOTE COMMUNITY-BASED APPROACHES TO ENHANCING URBAN SAFETY AND SECURITY.

Interventions of this nature enable communities to take ownership of initiatives. Community groups often become either the source of project ideas or play leading roles in implementing them.

STRENGTHEN FORMAL CRIMINAL JUSTICE SYSTEMS AND POLICING.

This is the classical approach to enhancing safety and security, in that this group of interventions is the primary territory of the police and criminal justice system.



REDUCE RISK FACTORS. These interventions tend to focus on groups that are likely to be perpetrators of crime or on groups that are at risk of being victims of crime. The aim is either to reduce the likelihood of such groups getting involved in criminal activities or to reduce the problems faced by victims.

PROMOTE NON-VIOLENT RESOLUTION OF CONFLICTS. These interventions seek to manage situations in which conflicts often arise in order to reduce the likelihood of this happening or to find solutions to the problems that do not result in violence.

STRENGTHEN SOCIAL CAPITAL. This group of interventions involves improving the ability of people, groups and communities as a whole to challenge the problems of crime and violence and the provision of community facilities that facilitate or provide more opportunities for processes of this nature.

Increasingly, it is being recognized that these interventions aimed at reducing urban crime and violence need to be part of an integrated and comprehensive programme. It is now common to find programmes containing elements of many different intervention areas listed above.

PROMOTE GENDER EQUALITY

Women face particular challenges in achieving urban health equity. Interventions to promote gender equity in cities include the following:¹⁸³

GENDER MAINSTREAMING, which aims to address gender explicitly in all urban policies through a systems approach that integrates gender analysis as part of the development of city health profiles and city health development plans.

ADDRESS GENDER BIASES in the structures of society, in laws and their enforcement, in the way organizations are run and interventions designed, and in the way in which cities' economic performance is measured.³¹

DEVELOP AND FINANCE POLICIES AND PROGRAMMES that support the economic participation of women.

PROMOTE THE EDUCATION OF GIRLS AND WOMEN, so that their ability to challenge gender inequality individually and collectively is strengthened.

INCREASE WOMEN'S PARTICIPATION in political and other decision-making processes from household to municipal level.

Food security and quality interventions

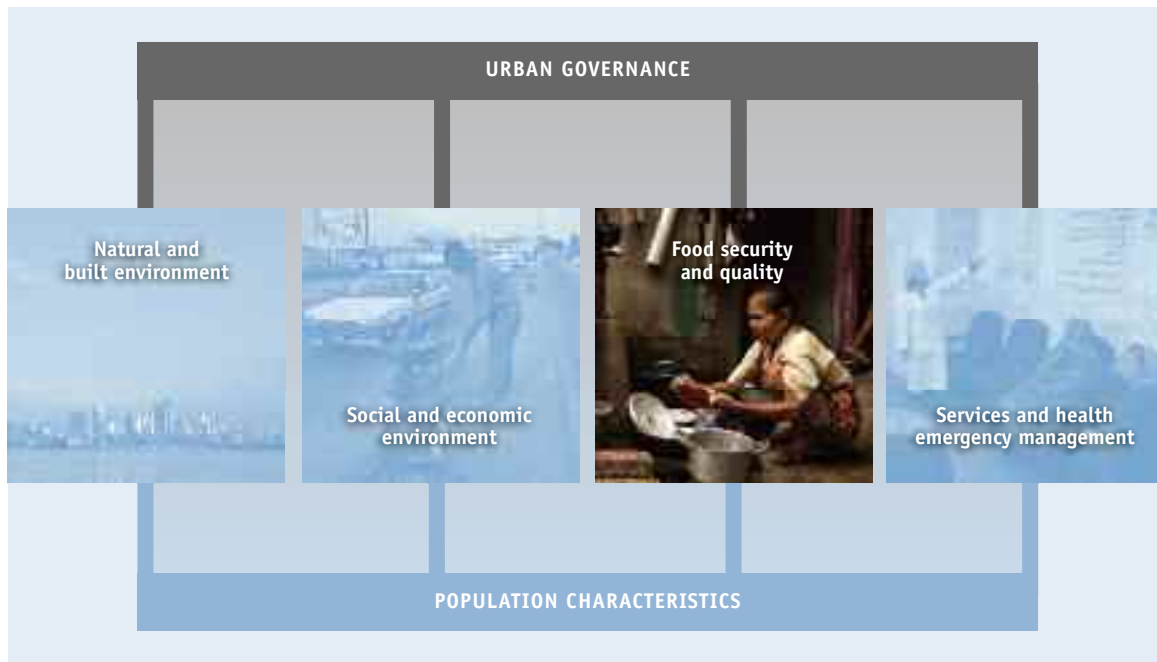
Several evidence-based interventions can promote food security and quality in cities, especially among disadvantaged populations. They include promoting in-city food production; ensuring schools support healthy food choices; providing older adults with healthy food as part of home-delivered meal services; and regulating food production and marketing. The main features of each intervention are presented below.

PROMOTE IN-CITY FOOD PRODUCTION. Many cities have promoted food production within their geographical limits using community gardens, backyards, urban farms, vacant lots, schools and other public land.^{184,185,186} The benefits extend beyond food production and include nutritional education and increased opportunities for physical activity.¹⁸⁷

ENSURE SCHOOLS SUPPORT HEALTHY FOOD CHOICES. Programmes that make healthy food options available through school food services, including cafeterias and vending machines, have been shown to be effective. Other effective school-based strategies include teaching students about dietary issues and involving parents in this education.¹⁸⁸

PROVIDE OLDER ADULTS WITH HEALTHY FOOD AS PART OF HOME-DELIVERED MEAL SERVICES. Home-based interventions, in which older adults have increased access to fruit and vegetables using existing infrastructure, are effective in improving diets.¹⁸⁸

REGULATE FOOD PRODUCTION AND MARKETING. Regulations on food production and marketing



have proven effective in protecting the public from exposure to potential hazardous products or practices. In 2008, New York City, United States, began restricting artificial trans fats in restaurant food preparation. Preliminary results suggest that replacement of artificial trans fats has resulted in food products with more healthful fatty acid profiles.¹⁸⁹

Services and health emergency management interventions

Primary health-care reforms⁸⁴ lie at the heart of improving health services in cities, and are described below.

UNIVERSAL COVERAGE REFORMS

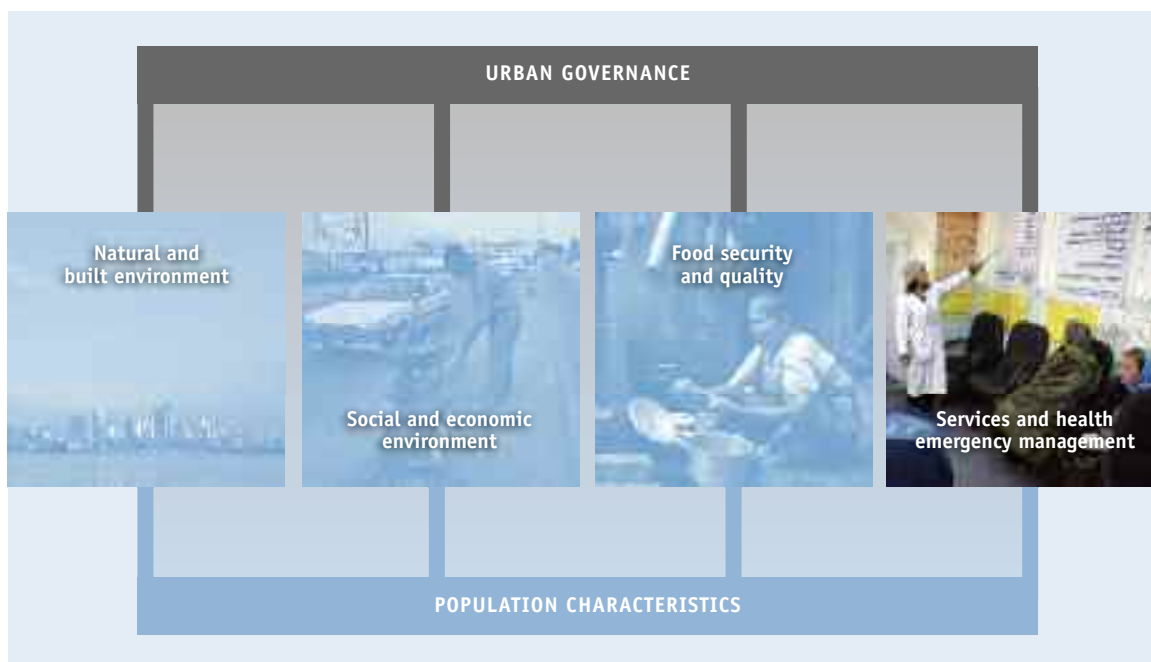
Universal coverage reforms help ensure that health systems contribute to health equity, social justice and the end of exclusion, primarily by moving towards universal access and social health protection.

All city dwellers must have access to health care according to need and regardless of ability to pay. WHO recommends financial pooling and prepayment as financing mechanisms for providing this type of social health protection.¹⁹⁰ These schemes are based on payments made in advance of an illness, held in a pool that can be used to fund health services for the sick.

Universal access in cities can be facilitated by the establishment of networks of primary care centres. They provide an alternative to unregulated commercialized care, and offer a place to go to without paying burdensome fees.

SERVICE DELIVERY REFORMS

Service delivery reforms reorganize health services to better respond to people's needs, so as to make them more socially relevant and more responsive to the changing world while producing better outcomes. The perspectives and choices of patients, families and communities are sought, heard and respected. Their knowledge, values, beliefs and cultural backgrounds are incorporated into the planning and delivery of care.



Integrated and coordinated care – across health workers, clinical settings and time – is another aspect of service delivery reform. This implies that city dwellers have regular entry points for accessing care, in the form of primary care clinics located in their communities.⁸⁴ It also implies that primary care workers have defined clinical populations for which they plan and coordinate care over time. The identified primary care worker (or team) can serve as the overseer and director of care, ensuring that efforts of all involved health workers are integrated and coordinated.¹⁹¹

Formal linkages with communities result in more people-centred and effective services. Community health workers can be trained and deployed relatively quickly, understand the community’s health needs, and give underserved communities access to services.

PUBLIC POLICY REFORMS

A “health in all policies” approach needs to be integrated broadly throughout local government. Specific strategies for doing so have been discussed in Chapter 6 of this report.

LEADERSHIP REFORMS

Many leadership challenges and skills discussed in Chapter 6 pertain equally well to leadership for primary health-care renewal. In cities, leadership is especially important to manage the complex political environment in which many health-care actors prevail, each with their own values, interests and scope of influence.

The national ministry of health usually plays a pivotal role in urban health services. As such, it is essential that local leaders engage ministry officials in regular policy dialogue on primary care renewal in their cities. Where possible, local leaders can also provide an urban dimension to national health planning processes.

HEALTH EMERGENCY MANAGEMENT

Cities have crucial roles to play in preparing for health emergencies and climate-related health impacts. Effective urban policies and plans involve multiple sectors – including the health sector – and complement regional and national policies and plans.

STRENGTHEN THE RESILIENCE OF COMMUNITIES.

Improving the ability of communities to protect themselves from all types of hazards, and involving the health sector in prevention and community-led local planning and training, will help to reduce risks and provide a more effective emergency response.

DEVELOP, DISSEMINATE AND REGULARLY TEST HEALTH EMERGENCY RESPONSE AND RECOVERY PLANS.

Detailed emergency management plans include an early warning system that communicates to the health sector and to the community; a system for coordinating city health emergency response operations, such as an incident management system, standard operating procedures and a roster of trained human resources to provide surge capacity; and a business continuity plan for the health system to ensure that critical health services are provided in an emergency.

DEVELOP ALL-HAZARD HEALTH EMERGENCY MANAGEMENT SYSTEMS.

These systems execute the emergency response and recovery plans. They have the capacity to provide safe and secure health services, food and water, sanitation, protection and shelter across a wide range of situations. As such, they help minimize loss of life in emergencies, disasters and other crises.

STRENGTHEN SERVICE PREPAREDNESS FOR CLIMATE CHANGE.

A strong infrastructure for delivering health-care services must be part of the public health response. Health workers can be trained to recognize and manage emerging health threats associated with climate change, such as malaria and other vector-borne diseases. Other aspects of everyday health services might also need to be improved, including disease surveillance, identification of at-risk populations, laboratory capacity, diagnostic and reporting systems, and facilitation of access to health care for vulnerable populations.

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HIDDEN CITIES

UNMASKING AND OVERCOMING HEALTH INEQUITIES IN URBAN SETTINGS

The global report *Hidden cities: unmasking and overcoming health inequities in urban settings* is one important component of the overall WHO and UN-HABITAT strategy to strengthen the response of the local, national and global health communities to reduce health inequities in an increasingly urbanized world.

The report exposes the extent to which the urban poor suffer disproportionately from a wide range of diseases and health problems, which can be traced back to inequalities in their social and living conditions. It also provides evidence-based information and tools to help municipal and health authorities tackle health inequities in their cities.



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