INTRODUCTION

The health report for the Region of the Americas has much to celebrate. In the Region as a whole, life expectancy at birth increased from 69.2 years to 76.1 years between 1980 and 2011. In fact, Latin America and the Caribbean boast the highest life expectancy among developing regions. And between 1990 and 2010, the proportion of undernourished persons has consistently dropped in the Americas, with a low rate of child malnutrition hovering at around 4%. Even with the 2008 food crisis, that figure has held steady, at under 10% since 2005 (1).

Regionwide, immunization coverage against measles (with MMR vaccine) reached 94% in 2009 (2). And the mortality rate for children under 5 years old more than halved between 1990 and 2009, decreasing from 42 to 18 deaths per 1,000 live births (3). The Region also ranks high in reproductive health—it was estimated that between 2007 and
2009, 95% of pregnant women received prenatal care and 93% of births were attended by skilled health staff (2).

This progress notwithstanding, inequities persist in the Region, and even some of the glowing indicators presented above mask disturbing differences from country to country. For example, although the 94% Regional average for measles immunization coverage is impressively high, the percentage of children vaccinated against the disease in Haiti, Paraguay, and Bolivia only reached 60%, 71%, and 86%, respectively (2). Reliable herd immunity from measles requires that immunization coverage rates for the disease reach at least 90%, which means that the populations in those three countries remain vulnerable.

Poverty, too, is widespread in the Americas: almost 1 in 5 of the Region’s residents lives on less than US$ 2 a day (4), and 15% of the population in the United States (5) and 11% of that in Canada (6) live below the poverty line. Improvements in life expectancy in the Americas over the past 20 years also hide differences within the Region: for example, life expectancy in Canada in 2010 was 83.4 years, compared to 69.1 years in Bolivia. The Dominican Republic’s life expectancy of 76.3 years is higher than that of Haiti, at 63.5 years, for a gap of 12.8 years in the same island (7).

Persistent social exclusion and inequities in wealth distribution and in access and use of services are reflected in health outcomes. In the Americas, social exclusion and inequity remain as the leading obstacles to inclusive human development, pose barriers to poverty reduction strategies, and hinder social unity and improved health conditions of populations. Social exclusion and inequity are further compounded by racial and gender discrimination.

Three leading measures are commonly used to describe inequities: health disadvantages, due to differences between segments of populations or between societies; health gaps, arising from the differences between the worse-off and everyone else; and health gradients, relating to differences across the whole spectrum of the population.

Evidence increasingly has shown that the poorest of the poor have the worst health. And this is a global phenomenon, seen in low-, middle-, and high-income countries. Within countries, evidence shows that, in general, the lower a person’s socioeconomic position is, the worse is his or her health. This is what is known as the social gradient of health (8), and it means that health inequities affect everyone. For example, if one looks at mortality rates in children under 5 years by levels of household wealth, it can be seen that within countries the relation between socioeconomic level and health is graded. The poorest have the highest mortality rates, and those in the second highest quintile of household wealth have higher mortality in their offspring than do those in the highest quintile.

Inequities are evident, too, when gross national country incomes are examined. We know, for example, that gross national income has an inverse relationship to mortality. We also know that a low educational level is a risk factor for premature death. People with low levels of education in Colombia and Mexico have three times the risk of dying than do those with high levels of education, regardless of age or sex. In Bolivia, the infant mortality among babies born to women with no education exceeds 100 deaths per 1,000 live births, while the infant mortality rate of babies born to mothers with at least a secondary education is under 40 deaths per 1,000 live births (9).

But discrepancies in health are not present only between the most privileged and the most marginalized: research indicates positive, incremental gradient associations between health and many social factors, indicating that these inequalities exist even in middle- and high-income countries (10, 11).

Inequities are similarly reflected in the epidemiological transition that places a double health burden on the Region’s populations. On the one hand, some population subsets are unduly affected by the compounded burden of increased risk of certain noncommunicable diseases (NCDs), such as diabetes and high blood pressure; of health conditions associated with migration and a rural-to-urban transition; and of exposure to increasing rates of violence, accidents, and injuries. On the other hand,
some population groups continue to be plagued by common childhood diseases and maternal health issues. In March 2005, the World Health Organization’s (WHO) Commission on Social Determinants of Health (CSDH) was launched in Chile and charged with gathering evidence on inequities, as a way to understand the social determinants of health and their impact on health equity and issue recommendations for action. The Commission’s 2008 report defined social determinants of health as “the conditions in which people are born, grow, live, work, and age, and the structural drivers of those conditions, that is, the distribution of power, money and resources” (9). Thus, while good medical care is vital, unless the root social causes that undermine people’s health are addressed, well-being will not be achieved. The Commission issued three overarching recommendations:

1) to improve daily living conditions;
2) to tackle the inequitable distribution of power, money, and resources; and
3) to measure and understand the problem and assess the impact of action.

Taking these recommendations into account, a global and regional movement to address health inequities and social-gradient issues has supported the CSDH’s work and the implementation of its recommendations.

This chapter explores the importance of addressing inequities in the Region of the Americas by analyzing the social determinants of health—the causes of the causes. In line with the framework set forth in the CSDH report, the first part of this chapter will describe the distribution of intermediary and structural determinants of health. The second part looks at three megatrends that affect the Region—the demographic transition and the social gradient, urban growth, and migration—complemented by a discussion on how the social gradient shapes health inequalities and inequities, and how this affects people’s well-being in the Americas. Lastly, the chapter examines how the Region’s countries have tried to narrow the equity gap through a social determinants of health approach.

**STRUCTURAL AND INTERMEDIARY DETERMINANTS OF HEALTH**

This chapter’s conceptual framework for analyzing the social determinants of health is based on the work of WHO’s CSDH (2008). It rests on two major pillars: the concept of social power as a critical element in the social stratification dynamic, and the model of social production of disease, developed by Diderichsen and colleagues (12).

An individual’s position in society derives from a variety of contexts that affect him or her, such as socioeconomic, political, and cultural systems. Health inequities can arise when these systems result in a “systematically unequal distribution of power, prestige, and resources amongst different groups in society” (13).

Social stratification determines health inequities through: (a) differential exposures to health hazards, (b) differential vulnerabilities in terms of health conditions and the availability of material resources, and (c) differential consequences—economic, social, and sanitary—of poor health for the groups and individuals in a position of greater or lesser advantage.

**IDENTIFYING THE SOCIAL DETERMINANTS OF HEALTH**

The basic components of the social determinants of health conceptual framework (13) include: (a) the socioeconomic and political context, (b) the structural determinants, and (c) the intermediary determinants.

Figure 2.1 shows the relationships and interactions among the major types of determinants and the pathways that generate health inequities (14). This framework suggests that interventions can be aimed at taking action on:

1) The circumstances of daily life, including differential exposure to influences that cause disease in early life, social and physical environments and work associated with social stratification, and healthcare responses to health promotion, disease prevention, and treatment of illness.
2) The structural drivers, which address the nature and degree of social stratification in society, as well as society’s norms and values, global and national economic and social policies, and national and local governance processes (9).

The Socioeconomic and Political Context

The socioeconomic and political context encompasses the broad set of structural, cultural, and functional aspects of a social system that exert a powerful formative influence on the patterns of social stratification and, thus, on people’s health opportunities (13). It includes the social and political mechanisms that generate, shape, and maintain social hierarchies, including the job market, the educational system, and political institutions.

It is critical not only to acknowledge the impact that the social determinants have on the health of individuals and populations, but also to consider the mechanisms through which redistributive policies, or lack thereof, can shape the social determinants of health themselves. Thus, social stratification mechanisms, in conjunction with the elements of the socioeconomic and political context, constitute what is referred to as the social determinants of health inequities (13). Core elements to consider include: governance and its processes, macroeconomic policies, social policies, public policies, cultural and societal values, and epidemiologic findings.

Structural Determinants

The concept of “structural determinants” refers specifically to those attributes that generate or strengthen a society’s stratification and define people’s socioeconomic position. These mechanisms shape the health of a social group based on its location within the hierarchies of power, prestige, and access to resources. Their designation as “structural” emphasizes the causal hierarchy of the social determinants in the production of social health inequities (13).

Social Position

Improvements in income and education have been demonstrated to have an incrementally positive relationship to health. Occupation is also relevant to health, not only in terms of exposure to specific workplace risks, but mainly due to its role in positioning people along a society’s hierarchy. Health statistics demonstrate the influence of this type of variable on health inequalities at different levels of aggregation.

Figure 2.2 shows a composite of all countries in the Region classified by terciles of gross domestic
product (GDP) per capita from 1980 to 2010, adjusted for inflation and purchasing power during this period (4). The figure illustrates that the countries in the lowest (poorer) tercile have had very little change in their weighted average income in 30 years, whereas the incomes of countries in the highest (wealthier) tercile have doubled. The gap created between the highest and lowest terciles implies that the overall income inequality doubled in magnitude between 1980 and 2010, whereas the weighted average income per capita only grew around 40% in the same period. Income inequality has been consistently growing at a faster pace than income growth in the Region.

In terms of life expectancy in the Region, in 2011 life expectancy for the total population in the Americas was 76.1 years, but the figure for Bolivia was 69.1 years and for Chile, 79.2 years (7)—a gap of 10.1 years of life between two geographically contiguous countries. In Colombia (2001–2010), mortality in children 1 to 4 years old was 11.3 times greater in the poorest-quintile households than in the wealthiest ones—7.9 per 1,000 live births compared to 0.7, respectively (15).

Gender

Together with social position and ethnicity, gender functions as a structural determinant due to its critical influence on the establishment of hierarchies in the division of labor, the allocation of resources, and the distribution of benefits. The division of roles by sex and the differential value assigned to those roles translate into systematic asymmetries in the access to and control over critical social protection resources such as education, employment, health services, and social security.

In the Region of the Americas, women, as a group, have outpaced men in terms of schooling; however, this relative parity has not been reflected in other areas, such as income and political representation. This situation demonstrates that school enrollment, a key determinant of health, is affected by gender and social position.

As observed in Figure 2.3, girls’ enrollment in elementary school exceeds that of boys; in secondary school, enrollment for both sexes somewhat evens out; but by tertiary school, girls have higher enrollment ratios than boys in each human development quartile and particularly in the highest quartile (4).

The following examples further illustrate this point:

- Women’s participation in the labor market is significantly lower than that of their male counterparts. Data from 2009 demonstrate that in 14 of 19 Latin American countries, women’s share in the labor market was approximately 50%, while men’s participation was estimated at 70% in 18 of those 19 countries and even at 80% in 11 of the 19 countries analyzed (16).
- Where women are part of the labor force, they tend to be overrepresented in the informal employment sector, in which workers generally have more limited access to social security benefits (16).
- In terms of income disparities by gender, in 2009 Latin American women’s average income, as a percentage of men’s income, ranged between 62% (Mexico and the Dominican Republic) and 81% (El Salvador) (16).
In terms of economic autonomy, 31.8% of women, compared to 12.6% of men, in Latin America lacked income of their own (16).

The proportion of women in parliaments ranges widely among countries of Latin America, with an average of 22.4% (16).

Gender differences do not always result in favorable outcomes for men, however. For example, the greatest mortality gap between the sexes is associated with accidents and violence—in the Americas, men’s mortality rates from these causes amount to 106 per 100,000 population, while women’s rates are only 28.7 per 100,000 population (16).

Race and Ethnicity

Racial and ethnic discrimination and exclusion affect all spheres of opportunity throughout an individual’s life, including those related to health. But because information disaggregated by race or ethnic group is not readily available, up-to-date, empirical evidence on the effect of racial or ethnic discrimination is fragmented and limited.

Figure 2.4 presents information on Bolivia’s employed population, showing that ethnicity affects income distribution in that country: while Bolivian indigenous people make up 37% of the working population, they only earn 9% of the total national work income (17).

Figure 2.5 shows another example of the role that race and ethnicity play in health outcomes (18).

In nearly 30 years of tracking age-adjusted maternal mortality rates in the United States, rates for white women steadily improved, but rates for African American women were twice to threefold higher, with a marked increase in later years.

Furthermore, data published by the Economic Commission for Latin America and the Caribbean (ECLAC) show that in nine Latin American countries there is a widespread lag in schooling among indigenous and African-descendant children compared to the overall population (19). And in the United States, life expectancy among African Americans, in terms of health indicators, is significantly lower than that of the white population (19). From 2004 to 2008, for example, although the incidence rate of breast cancer (per 100,000 population) was higher among white women (127.3 per 100,000 population) than among African American women (119.9 per 100,000), the mortality rate from this cause was greater for African American women.
women (32.4 per 100,000 population) than for white women (23.4 per 100,000) (20).

Inequalities and inequities with respect to breast cancer are evident in the United States. Screening, diagnosis, and treatment inequities within and between communities and among women of different race, ethnicity, and socioeconomic background is relevant and significant in the case of breast cancer incidence (21).

Daily living conditions, such as work opportunities and conditions for women and work-home life balance, affect socioeconomic status, which, in turn, has an impact on behavioral and environmental risk factors for breast cancer in women (21). A review of social determinants in breast cancer mortality between Black and White women shows that inequalities are evident across the entire breast cancer continuum, from prevention and detection to treatment and survival (22). According to Gerend and Pai, inequalities and inequities are related to poverty barriers, which are linked to lack of a primary care physician, geographical barriers to care, competing survival priorities, comorbidities, inadequate health insurance, lack of information and knowledge, risk-promoting lifestyles, provider- and system-level factors, perceived susceptibility to breast cancer, and cultural beliefs and attitudes.

Figure 2.6 offers some insight on the persistent intergenerational transmission of poverty and disadvantaged social conditions among indigenous populations (23). The figure shows that in Guatemala, expected educational attainment for children is strongly related to their father’s educational attainment. This means the higher the father’s level of schooling, the greater number of years of educational attainment in his children. Furthermore, within the Guatemalan context, indigenous children in Guatemala are at a disadvantage in terms of completed years of education as compared to non-indigenous (Ladino) children, regardless of the educational level of their fathers.

On the one hand, the data from Guatemala show that the expected educational attainment (and chances in life) for Ladino (mestizo) children is strongly correlated with their father’s education—more educated parents can expect to have more educated offspring. This is not true for indigenous children, however. The proportion of indigenous children enrolled in school decreases as the average number of years of schooling increases, indicating that indigenous children drop out of school sooner. Hermida (23) has named this phenomenon intergenerational transmission of educational inequality, which reproduces educational inequality between

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**FIGURE 2.5.** Age-adjusted maternal mortality ratios (per 100,000 live births), by race of the mother, United States of America, 1980–2007.

Source: Reference (18).

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**FIGURE 2.6.** Average years of education, by ethnicity and father’s schooling, Guatemala, 2000.

Source: Reference (23), based on ENCOVI survey data.
two generations and is complicated by ethnicity and gender inequities.

Access to Education

In 2010, the Region of the Americas as a whole boasted high rates of universal access to primary education, but there were differences from country to country: while access to preschool education was universal in some, it was low (around 30%) and inconsistent in others (19). Furthermore, marked differences in access are noted between urban and rural areas and for indigenous groups (19).

Figure 2.7 illustrates the educational conditions in selected countries of the Americas. In the Americas, the median literacy rate is 93% and the median persistence to grade 5 is approximately 90%.

1 Persistence to grade 5 (percentage of cohort reaching grade 5) is the share of children enrolled in the first grade of primary school who reach grade 5.
The median net attendance rates for elementary, secondary, and tertiary education are 94%, 70%, and 25%, respectively, which highlights the lack of continuity in schooling as individuals reach their productive age. The gap in tertiary education among countries reaches an order of eight times between the highest and the lowest quartiles of human development, as seen in Figure 2.8 (24). There are marked differences in the completion of secondary schooling by income quintile, sex, and rural residence. In terms of income, for example, in the poorest quintile, males had a 23% completion rate and females, 26%; in the wealthiest quintile, on the other hand, males had a completion rate of 81% and females, of 86%. The imbalance reverses in indigenous rural communities, however, where males had a completion rate of 22% and females, of 20% (19). Evidence suggests that the stark inequalities observed in education levels by income and by urban versus rural residence lead to a self-perpetuating cycle of poverty, as families with lower levels of education are also at higher risk for child malnutrition and adolescent pregnancy (19, 25).

Education also determines employment opportunities, family income, and participation in social protection programs. Furthermore, these factors strongly influence accessibility to health services, so it is not surprising that families with lower levels of education have poorer health outcomes. In Bolivia between 1999 and 2008, the mortality rate for children under 5 years old was 3.1 times higher among children from women with no education than among those from women with at least secondary schooling—134.2 per 1,000 births compared to 43.6 per 1,000 live births (15).

Access to Employment

As Latin America and the Caribbean enter a period characterized by a demographic bonus, the economy and the labor market also shift. The increase in the working-age population (15- to 64-year-olds) over the last few decades and the rise of urbanization have had an impact on the Region’s economy and labor market, as have globalization and the 2008 economic crisis. Traditionally strong sectors such as agriculture and manufacturing have begun to wane in the Region, and job creation has been concentrated in the service sector.

The most recent data indicate that there is an increase in underemployment and unemployment rates in the Region, which is the result of an increased proportion of the working age population in the midst of the global economic crisis. Under these circumstances, the informal sector has flourished and has had important ramifications for the workers it employs (4). Ramifications are widespread, since much of the labor force in the Region of the Americas is employed in the informal sector, either in informal businesses or through informal arrangements with formal firms. By one estimate, the informal sector employs 70% of the labor force in a typical Latin American country (26).

The nature of the informal sector varies from country to country, but evidence suggests that, no matter the country, it tends to employ the poorest segment of the population, including a large
proportion of women. Since employment in the informal sector often limits employees’ access to benefits such as social protection or health and pension schemes, informal-sector workers are more vulnerable to poverty and lack access to health care. Moreover, employment in the informal sector itself can predispose workers to poor health, as just the perception of work insecurity has been shown to negatively impact health (9).

A study on working conditions and mental health in Mexico, using the longitudinal Mexican Family Life Surveys (MxFLS), provides a good illustration. This research analyzed employment mobility and persistent job insecurity in terms of changes in mental health measures (27), and found that transitions in and out of employment appeared to be related to mental health well-being: lower-wage workers who experienced more job insecurity suffered more mental health symptoms, including sleeplessness and anxiety (27).

Certain groups are more disadvantaged than others in the current economy. An analysis of paid versus unpaid work shows that women’s working days are longer than those of men—in Ecuador, women work an average of 77 hours a week compared with 62 hours worked by their male counterparts, and in Mexico, women work 59 hours a week compared to men, who only put in 48 hours (28). Women continue to shoulder the burden of home care throughout the Region, which drastically limits their ability to participate in the economy, and they have consistently higher urban unemployment rates than their male counterparts. Evidence also demonstrates that women in lower income quintiles are especially disadvantaged, since they often cannot afford outside help for home care. Furthermore, women continue to dominate employment in low productivity sectors such as agriculture, industry, transport, and commerce as compared to men, which limits their access to higher income work and compounds the preexisting gender income gap.

The widening income gap that has occurred over the past 30 years illustrates inequities across the social gradient, not just between the extremes. In several of the Region’s countries, poverty persists across multiple quintiles. In Nicaragua, for example, it is estimated that 42.5% of the population lived on less than US$ 2.50 per day in 2009; in nearby Honduras, the estimated population living on that amount was 39.4% (29).

Throughout the Region, attained educational level plays an important role in determining labor income and job security. People with over 12 years of schooling, often from households in the upper quintiles, continue to earn significantly higher wages and have more job security than other workers. In addition, data show that there is a decreasing gap between workers with intermediate levels of education (9–12 years of schooling) and those with the least education (less than 8 years of schooling). Although the gap is closing between these groups, analysis suggests that this is not due to wage increases for the least skilled workers, but rather due to decreased wages for those with intermediate levels of education. As education efforts have expanded in the Region, a larger proportion of workers have attained an intermediate level of education, leading to increased competition for intermediate-skill jobs.

**Intermediary Determinants**

Structural determinants operate through intermediary determinants of health to produce health outcomes. Intermediary determinants are distributed according to the social stratification and determine differences in exposure and vulnerability to harmful conditions for health.

The principal categories of intermediary determinants of health are material circumstances, psychosocial circumstances, behavioral and/or biological factors, social cohesion, and the health system itself. The following are examples from each of these categories:

- **Material circumstances**—housing and neighborhood quality, consumption potential (financial means to purchase healthy food, warm clothes, etc.), and the physical work environment.
- **Psychosocial circumstances**—psychosocial stressors, stressful living circumstances and relationships, social support and networks.
• **Behavioral and biological factors**—nutrition, physical activity, consumption of tobacco, drugs, and alcohol. Biological factors also include genetic factors.

• **Social cohesion**—the existence of mutual trust and respect among society’s various groups and sections; it contributes to how people and their health are cherished (30).

• **The health system**—exposure and vulnerability to risk factors, access to health services and programs to mediate the consequences of illness in individuals’ lives (14).

**THREE MEGATRENDS IN THE AMERICAS**

The Region of the Americas is experiencing three megatrends: a demographic transition with an increasing proportion of youth and elderly persons in the population, increased migration, and rapid urban growth.

**DEMOGRAPHIC TRANSITION AND THE SOCIAL GRADIENT**

The combination of increases in life expectancy, coupled with declining fertility rates, have dramatically changed the Region’s demographic makeup since the 1950s. Between 1950 and 2000, the population of Latin America and the Caribbean increased threefold, going from 175 million to more than 515 million. Between 1950 and 2050, life expectancy is projected to grow 56% in Latin America and the Caribbean and 21% in North America (7). In other words, someone born in 2050 in Latin America and the Caribbean will be expected to live 29 years longer than someone born in 1950; a person born in 2050 in North America is expected to live 15 years longer than someone born there in 1950 (32).

Fertility rates have drastically fallen in the Region, which, combined with the aging of the population, makes Latin America and the Caribbean the developing region with the smallest proportion of population growth expected by 2050 (32). The overall total fertility rate (TFR) in the Region is about 2.3 children per woman (32), which is expected to fall to about 1.9 children per woman by 2030 (33). Although fertility rates remain higher in the lower income levels, the contribution to the total population is evident in the higher terciles. This decrease in fertility rates is not homogeneous, however. Fertility rates in the Region range from 1.3 to nearly 4 children per woman.

Population distribution and population age structure are crucial determinants of social, economic, and health-related services (34), as illustrated in Figure 2.9.

Figure 2.9 shows a distinctive demographic scenario for each of the three income groups; the lower the position along the income gradient, the farther behind the society is along the demographic transition (4, 35). And, while the three scenarios advanced in their demographic transition between 1980 and 2010, inequalities persist. Thus, in terms of income distribution, the biggest difference noted is

![Figure 2.9. Population age-and-sex structure, by income tercile, Region of the Americas, 1980 and 2010.](image-url)

*Source: References (4, 35).*
that of age distribution. In 2010, for example, the poorest tercile in the Americas has the same shape as that seen in middle-income countries 30 years earlier. This would suggest that, while the demographic transition has significantly advanced since the 1980s, the distribution of income for the poorest tercile has not changed to the same extent as that of the middle and wealthiest income terciles. This means that the poor have still to “catch up” in terms of income.

Currently, the population of 15- to 24-year-olds in Latin America and the Caribbean is greater than it has been in history, totaling approximately 205 million persons (35). This so-called demographic dividend, or bonus, could be a real asset to the Region in economic terms, as long as young people’s demands for education, health services, employment, and other social determinants are fulfilled.

The growing elderly population, too, is an important trend in the Americas. Combined with the declining fertility rate, this trend has implications for the economic, social, and health status of the Region’s populations. Although people are living longer than ever, they are not necessarily living better. Old age is increasingly weighed down by chronic disease and disability, which, in turn, usually translates into higher health care and long-term care costs, and increases the burden on families who care for their elders. The lack of dependable pension systems in Latin American and Caribbean countries contributes to the percentage of the elderly who are living in poverty. Once more, differences are evident in the Region.

As illustrated in Figure 2.10, the social gradient, defined by income terciles, also reproduces a gradient in the aging index (percentage of population 65 years and older as a percentage of the population 15 years old and younger) (4, 35). The higher the social gradient, the more advanced the aging process in the population, which in turn, increases dependency. In 2010, the total dependency ratio (economic dependency of people younger than 15 years old and older than 64 years old) was estimated to be 53.3 in Latin America and the Caribbean and 49.0 in North America. By the year 2050, these figures are expected to climb to 57.0 and 67.1, respectively (35). In other words, for the Region as a whole, while in 2010 there were two economically active persons for every one non-economically active individual, by 2050, the ratio is expected to be 1.5 to 1.

It is worth noting that the highest dependency ratios in the Region are seen in the lower rungs of the social ladder, as defined by income level (see Figure 2.11). Figure 2.11 illustrates that, although the proportion of the aging population is greater in wealthier countries in the Americas, the higher dependency ratio in poorer countries of the Region may be due to factors other than age alone (35).

![Figure 2.10. Population 65 years and older as a percentage of the population 15 years and younger (aging index), by income tercile, Region of the Americas, 1980 and 2010.](image-url)

Source: References (4, 35).
This means that the economic burden is highest among those with the lowest income, and evidence suggests that this may perpetuate the cycle of poverty.

Trends in the elderly dependency ratio (a component of the total dependency ratio) also are noteworthy. In Latin America and the Caribbean in 2010, there were 9.4 people in the economically active age group for every person aged 65 and older; by 2050, this ratio is expected to drop to 3.3 persons in the economically active age group to 1 person 65 years and older. Data for North America are 5.1 and 2.8, respectively. These data suggest that the elderly may be more vulnerable in terms of care if social measures are not implemented.

**Urban Growth**

The rise of megacities has come to characterize the 21st century, and has given way to a new trend, the growth of metaregions. Latin America and the Caribbean is already the most urbanized region in the world, with 77% of its population residing in urban areas (see Figure 2.12), and this proportion is only expected to grow in the coming years. The United Nations predicts that by 2025, 9 of the 30 largest cities in the world will be in the Americas: Bogotá, Buenos Aires, Chicago, Lima, Los Angeles, Mexico City, New York City, São Paulo, and Rio de Janeiro (36).

Six of these nine megacities will be in countries that are classified as developing countries: Argentina, Brazil, Colombia, Mexico, and Peru. And with the rise of urban centers, evidence increasingly shows that inequities will rise as well. For example, major United States cities such as Atlanta, Georgia; Washington, D.C.; and New York City have the highest levels of inequality in the country, similar to Abidjan, Nairobi, and Santiago, Chile. And there are differences within the Region, too: while in Belize, Guatemala, and Peru, more than 50% of the urban population lives in slums, in Barbados, Chile, Guyana, and Uruguay, less than 10% of the urban population lives in slums (37).

It is also worth noting that infant mortality ranges from 6.5% in one central area of Greater Buenos Aires, Argentina, to 16% in another. Thus, there are inequities even within cities themselves. This is further demonstrated in Bolivia, where 93% of children in small cities and towns are enrolled in
primary education, compared with 68% who are enrolled in the capital and other large cities, and 72% in rural areas (37). Thus, while urban growth has historically been viewed as a sign of economic expansion and prosperity, it is increasingly associated with what has come to be known as the “urban penalty.” This concept considers the notable inequities in health suffered by urban slum residents compared to urban non-slum residents and even rural residents (38).

Since urban centers concentrate resources, their growth can certainly provide more opportunities for social and political participation, as well as access to media, information, technology, and employment. Urban areas, too, increase health workers’ access to target populations, and provide residents with proximity to and greater availability of such services as water, sanitation, education, health facilities, and transportation (39). Population and resource concentrations in urban areas also promote gender equity, by facilitating greater opportunities for women to participate in the workforce and in social support networks (39). Compared with rural areas, cities also offer women better educational facilities and more diverse employment options, which can help break the cycle of intergenerational transmission of poverty.

Yet, unplanned urbanization can also exacerbate social inequities by exposing residents to increased air pollution and to a dearth of basic services. Unchecked urban development can also increase the spread of settings that are not conducive to health and can lead to a sedentary lifestyle and to the adoption of unhealthy diets. Both of these practices are known risks for cardiovascular disease, diabetes, and other noncommunicable diseases that unduly affect the urban poor and the elderly (40). In the Americas chronic, noncommunicable diseases account for 74% of disability-adjusted life years (DALYs) lost in urban centers, and obesity is sharply on the rise, with an unprecedented increase in childhood obesity (40).

According to a UN-HABITAT report (37), the relative incidence of urban poverty in the Region fell from 41% in 1990 to 29% in 2007. The absolute number of urban poor rose from 122 million to 127 million during that same period, however, and this is associated with urban growth. This phenomenon is explained by, on the other hand, the high poverty incidence in the countryside that has spurred the rural population to migrate to urban areas. On the other, the advance of globalization has robbed some cities and countries of the ability to compete effectively and to maintain an adequate level of remuneration for urban employment that keeps pace with population growth.

Migration patterns are changing the epidemiological profile of the Region’s population, and rural-to-urban population shifts are one of the most significant migratory trends in the Americas. Costa Rica, El Salvador, Haiti, Honduras, Panama, and Paraguay are projected to have the largest urban population growth between 1990 and 2030 (36).

Migration can disrupt social support systems and may lead to social isolation, diminished or no social protection, changes in social status and employment, and poor working performance. Migrants often face particular health challenges and are vulnerable to various threats to their physical and mental health. These risks notwithstanding, the specific health needs of migrants are often poorly understood, communication between health care providers and migrant clients remains inadequate, and health systems are unprepared to properly respond to these population groups. This situation is compounded by the challenges migrants face in realizing their human rights, accessing health and other basic services, and being relegated to low paid and often dangerous jobs, with the most acute challenges being faced by undocumented migrants, trafficked persons, and asylum-seekers. The scarcity of data is a major culprit for this lack of understanding (41).

Since 1990, Latin America and the Caribbean have also experienced a steady rise in the number of people leaving the region. The net number of migrants (immigrants minus emigrants) in this region between 2005 and 2010 was −5,232,729
While not all countries had a negative net number of migrants, most Latin American and Caribbean countries reported negative numbers. Of the nine countries that reported a positive number, five were in the Caribbean (Aruba, Bahamas, Barbados, Netherlands Antilles, and French Guiana) and only four fell outside that subregion (Costa Rica, Panama, Chile, and Venezuela).

Insofar as generalizations can be made with available information across countries and migrant groups, migrants seem to be more vulnerable to communicable diseases, occupational diseases, and poor mental health. Vulnerability is in part due to poor living conditions, precarious employment, and the trauma that can be associated with various causes of migration.

A recent study conducted by the University of California, Davis, School of Medicine and Mexico’s National Institute of Psychiatry demonstrated that Mexicans who migrate to the United States are far more likely to experience significant depression and anxiety than fellow nationals who do not immigrate. The study compared migrants with same-aged non-migrant family members who had remained in Mexico. It found that during the period following arrival in the United States, Mexican migrants were nearly twice as likely (odds ratio of 1.8) to experience a first-onset depressive or anxiety disorder as their non-migrant peers. Interestingly, the elevated risk among migrants occurred almost entirely in the two youngest migrant groups—those between 18 and 25 years old and those between 26 and 35 at the time of the study. The greatest risk was experienced by the youngest migrants 18–25 years old at the time of the study. Their odds of suffering from any depressive disorder relative to non-migrants was 4.4—or nearly four-and-one-half times greater—compared with 1.2 in the entire sample. Migrants are likely to experience a wide range of mental problems that are exacerbated by the additional stress of political, social, and economic disenfranchisement.

**THE SOCIAL GRADIENT IN HEALTH IN THE AMERICAS**

This section reviews systematic evidence on the social stratification of health inequalities among and within the Region’s countries. It discusses issues related to the social gradient in health in terms of life expectancy and of health inequalities and inequities that increase the risk of dying from communicable diseases, non-communicable diseases, and injuries. The section also describes health inequalities along the social gradient in terms of morbidity (disease incidence and burden) and in terms of health care access and utilization. As the availability of data allows, the section presents evidence of health inequalities and inequities among and within countries.

**Life Expectancy at Birth and the Epidemiologic Transition Gradients**

In general, mortality rates for all causes are socially distributed in the Region. It has long been known that there is a gender difference in most of the mortality and life expectancy data. Figure 2.13 shows a clear trend in the distribution of general mortality rates in countries stratified by human development index quartiles, with a 1.9/1,000 overall gap between the extreme quartiles (7, 24). It also highlights the homogeneity of the lowest two quartiles of human development.

One of the best, currently available indicators that addresses health and well-being in a society is life expectancy at birth. Almost every country has this basic demographic and mortality information to estimate the number of years a newborn can, on average, expect to live. This indicator can be explored by different variables, demonstrating the social gradient. Figure 2.14, for example, demonstrates the social gradient by access to water. In the Region’s countries where social position is advanced
in terms of access to water, life expectancy at birth is higher than those in lower social positions.

Figure 2.15 illustrates the relationship between life expectancy and the cross-sectional economic situation, as determined by income adjusted by Purchasing Power Parity (PPP) for four points in time in the Americas, from 1980 to 2008.

Weighted for country size, the figure demonstrates that once income improves, life expectancy increases. Over time, income rises and premature mortality decreases; the shape, distribution, and trend of life expectancy across the income gradient also change, and the inequality in life expectancy according to income level also decreases. In 1980 there was a 18-year gap (74 versus 56) between countries at the extreme of the income gradient; in 2008 this gap was reduced to 11 years (80 versus 69).

The combination of demographic change; improved survival; and changes in the social, behavioral, and environmental context is what drives the epidemiologic transition. Figure 2.16 shows changes in the epidemiologic transition by income tercile (4, 45). An 8% increase in proportional mortality from noncommunicable diseases in the upper-income tercile countries is the highest difference observed; increases in the middle- and lowest-income countries amounted to 5.4 and 6.1, respectively.

When considering age-adjusted death rates by cause and by human development index quartiles, the Region’s countries are distributed differently. As Figure 2.17 shows, the mortality ratio gap between the lowest and the highest income quartile is 2.78 for communicable diseases, 0.8 for malignant neoplasms, 0.73 for cerebrovascular diseases, 3.3 for diabetes mellitus, and 2.1 for all injuries. The case of
cerebrovascular diseases and diabetes may denote problems of access to adequate care (24, 45).

**Communicable Diseases**

Tuberculosis (TB) is an important cause of morbidity and mortality in Latin America and the Caribbean, and it represents a great economic cost for this region (46). People living in poverty and those affected by overcrowding, malnutrition, and poor ventilation are more susceptible to TB; they also are more likely to lack access to diagnosis and treatment services.

In the Americas, as in most of the world, tuberculosis is more commonly diagnosed in males (62% of cases), with a male/female ratio of 1.6. However, the male/female ratio varies substantially across the Region, from over 3 in Trinidad and Tobago to just over 1 in Haiti (46). Moreover, while in Peru the majority of multi-drug-resistant TB (MDR-TB) patients are men (male/female ratio of 1.53) (47), studies from other regions in the world suggest that the conversion rate from regular TB to MDR-TB is the same or higher for females than for males (48, 49, 50). These variations suggest that differences in TB between men and women are rooted in gender-driven social norms and structural conditions. Additionally, limited evidence indicates that indigenous communities suffer from higher rates of TB infection and that discrimination and stigmatization limit access to TB treatment and care for members of these communities.

Figure 2.18 shows a clear gradient in the tuberculosis incidence rate in the Americas by human development quartiles—the higher the position of a given population along this regional social gradient, the lower the risk of developing a new case of TB. The degree of inequality in the risk of developing TB across the social gradient in the Americas, as defined by human development, is vast (HCl = −0.44). As the concentration curve graph (i.e., the right graph of Figure 2.18) shows, those at the bottom 20% (at the left side of its x axis) are burdened with more than half of all new cases of TB in the Region, whereas those at the top 20% (that is, the country quintile with highest human development) carry just 5% of the TB cases. In fact, the curve shows that at least 30% of all TB cases in the Americas are concentrated in the lowest decile (i.e., 10%) of human development. This evidence shows that TB in the Americas is a disease of poverty, social exclusion, and lack of opportunity for human development; these are its causes of the causes.

**Noncommunicable Diseases**

Noncommunicable diseases (NCDs)—such as cardiovascular diseases, cancer, diabetes, and chronic
respiratory diseases—cause a significant burden of disease in the Americas, and are responsible for an estimated 3.9 million deaths annually. They account for 76% of deaths in the total population in the Region, and 29% of deaths in men and women under the age of 70 (45). In addition, NCDs account for 74% of disability-adjusted life years.

If current trends persist, mortality from NCDs could increase considerably in the Region. And yet, many noncommunicable diseases are highly preventable and can be treated. Furthermore, the burden of noncommunicable diseases does not affect all social groups in the same way. While noncommunicable diseases were traditionally associated with wealth, current evidence suggests that the risk for some NCDs is actually higher at lower socioeconomic levels. For example, estimates show that almost 30% of premature deaths from cardiovascular diseases are in the poorest 20% of the population of the Americas, whereas only 13% of those premature deaths are in the richest 20% of the population (7). The poor may have fewer resources to make lifestyle changes; they may also have less access to quality health services, including prevention, diagnostic services, treatment, and essential drugs.
The burden of disease may also vary by gender or ethnic background, due to differential exposure to risk factors (such as tobacco use, air pollution, or opportunities for physical activity) or differential experiences with health services. This is illustrated by the fact that in the Americas, 15% more men die prematurely from NCDs than do women (45). This further affects women, as they often must care for persons with NCDs, usually in unpaid positions, while they themselves may suffer from a noncommunicable disease. A recent study conducted in Ecuador, Mexico, and Uruguay on the time women and men spend on paid and unpaid work showed that men devote between 22% and 28% of their time to unpaid work, while women spend between 47% and 77% of their time on unpaid work. Between 72% and 78% of men’s working time is spent on paid work, compared to only 23% to 53% of women’s time.

Physical activity is key to preserving health and to preventing NCDs. Historically, physical activity rates have tended to be higher in the Region’s lower income countries, due in part to higher levels of activity needed for work and transportation. Urbanization threatens to quickly reverse that trend, however. Many cities are not pedestrian-friendly, which increases urban residents’ reliance on motorized transport. The transition from a predominantly agricultural sector to a service sector also leads to lower levels of activity on the job (51). And finally, investing in the establishment of public spaces in poorer neighborhoods, particularly in urban slums, often is not a priority, which leaves these residents and children without a space for exercise. Even when there are public parks in poorer neighborhoods, these are usually not properly maintained or they are dangerous due to high levels of street violence and low levels of police protection.

As the level of childhood obesity rises, increased interest has been placed on utilizing the school system to provide access to physical activity and healthy nutrition. Focus has been placed on incorporating more healthful food into school lunches, providing additional meals at school, and emphasizing physical activity. Efforts have also been made to curb excessive advertising by the food industry, much of which targets children directly (51). Urban planning is another important area, as municipalities try to merge their expansion with the development of outdoor spaces and make room for alternative modes of transportation. Such improvements on the environments in which people
live could have a far-reaching impact on the rise of NCDs (51).

**Violence in the Americas**

A complex set of factors—unemployment, high levels of inequality in income, reduced access to education, increasingly fewer opportunities for employment, greater population density in poor areas, and urban divisions between different income groups, to name some—work at multiple levels to produce violence (52).

Violence in the Americas often clusters in a city’s poorest and most marginalized areas. For example, homicide rates are highest in the poorest parts of Belo Horizonte (Brazil), Bogotá (Colombia), Mexico City (Mexico), and Santiago de Chile (Chile) (53). Moreover, where wealth and extreme poverty intersect, violence also seems to occur more frequently, as has occurred in urban areas of Brazil, Colombia, Mexico, and Venezuela (52).

In analyzing age-adjusted mortality rates due to homicide in countries of the Region (PAHO database), both gender and relative position in the social gradient seem to play a determinant role in the production of inequalities in the risk of homicide. On the one hand, males have almost 10 times the rate of homicide than females; on the other, in a social gradient defined by adult literacy, there is an excess risk of homicide equal to 73 extra deaths per 100,000 population for those males at the bottom of the literacy gradient as compared with those at the top. This absolute measure of inequality is 20 times higher than that among women. In fact, in the Americas, almost half of all deaths due to homicide are unfairly concentrated in the bottom 20% less-literate adult male population (Figure 2.19) (45, 54).

Violence is pervasive in the Americas. But evidence suggests that the factors that contribute to violent responses—be they attitudinal and behavioral matters or broader social, economic, political, and cultural issues—can be changed and, in so doing, violence can be prevented and, equally important, its associated inequity can be reduced (55).

An exploratory analysis of mortality data from Venezuela in the last 20 years has brought to light evidence assessing the effect of reducing social inequalities in the risk of death from homicide (Figure 2.20) (56).

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**FIGURE 2.19. Social gradient and inequality in absolute risk of homicide, as determined by adult literacy and gender, Region of the Americas, 2007.**

![Graph showing social gradient and inequality in absolute risk of homicide, as determined by adult literacy and gender, Region of the Americas, 2007.](image)

*Source: References (45, 54).*
In both absolute and relative terms, a dramatic reduction in inequality took place in the first half of the observed period: the slope index of inequality and the health concentration index, as computed from a social gradient defined by income, dropped close to zero (i.e., towards equality). Their values were positive, indicating that the inequality was concentrated in the upper rungs of the social ladder; that is, back in 1990, there was an excess risk of death by homicide among the wealthier groups. More recent evidence suggests that the social gap associated with this indicator is widening again, but in the opposite direction, i.e., higher homicide rates are occurring among those with lower income. This situation illustrates the complexity of the social determination of violence in a scenario dominated by ever rising mean rates of homicide in the population.

**Injuries**

Figure 2.21 shows inequalities in mortality from traffic accidents, by sex, in the Americas. In considering the burden of age-adjusted total external causes of mortality for the Region, there is a gradient between the lower income tercile and the middle one, and a more pronounced gradient with the upper tercile. The gradient is greater for males—overall, the rates for females are 25% less than the rates for males. The profile for suicides is different, however, as these account for approximately 10% of all external causes of mortality in the Region and the age-adjusted rate shows that these peak in the upper and lower income terciles.

Analyzing the age-adjusted mortality rates from traffic accidents by sex in 2007, the data show a trend of higher rates for males at the lower social position to lower rates for males at the higher social position. The risk for males is in general three times higher than for females. Depending on a male’s position along the social gradient, his risk of dying from a traffic accident can double.

**Maternal Mortality**

A quick glance at maternal mortality rates in the Region shows an estimated 71 deaths per 100,000 live births in the Southern Cone, compared to an
estimated 364 deaths per 100,000 live births in the Latin Caribbean, including Haiti. An estimated 30 to 60 maternal deaths per 100,000 live births occur in Costa Rica, while in Guatemala, an estimated 290 (140–1,600) women die per 100,000 live births (2).

Social factors, such as access to health care and living conditions, clearly affect the distribution of maternal mortality. Figure 2.22 shows the maternal mortality gradient by quartile of access to water.

The social determination of maternal mortality can be observed in Figure 2.23. The figure shows deep inequalities in the risk of dying from maternal mortality as determined by schooling, although the social gap is narrowing (54, 57). In 1990, the anchor point for the Millennium Development Goals (MDGs), more than half of all maternal deaths in the Region of the Americas (including those in North America) were concentrated in the population quintile with the lowest schooling, whereas only 6% of maternal deaths occurred in the most educated quintile. By 2010, the quintile representing the least educated still accounted for more than 35% of maternal deaths, while the most educated quintile accounted for almost 10%.

The analysis also shows the non-linear nature of the relationship between schooling and risk of maternal death. In fact, the relationship is exponentially inverted: a single year of education added at the bottom of the social gradient defined by schooling in the female population has a considerably higher effect in reducing maternal mortality than the same unit of change in any higher position in the social gradient. Given the aggregate, exploratory nature of this analysis, the evidence may favor geographically targeted (i.e., focalized) schooling interventions to reduce maternal mortality and to improve maternal health.

**Child Mortality**

Differences across socioeconomic position, place of residence, and gender are reflected in both regional

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2 The source for the years-of-schooling data is the well-known Barro-Lee data set from the U.S. National Bureau of Economic Research (NBER), which has been used by the UNDP in its most recent (and revised) version of the Human Development Index. The source for the maternal mortality figures is the PAHO Core Health Indicators Initiative, which uses the WHO-UNICEF-UNFPA-World Bank joint 1990–2008 maternal mortality estimates (published in 2010).
and national health outcomes for children. According to the 2005–2006 demographic health surveys gathered by UNICEF, the prevalence of underweight children under 5 years old in Honduras was 16% in the poorest 20% of the population, compared to 2% in the wealthiest 20% of the population (31); in other words, the poorest 20% of children in Honduras were 8.1 times more likely to

**FIGURE 2.22. Social gradient and inequality in the risk of maternal death, as determined by improved access to water, Region of the Americas, 2008.**

![Diagram](image)

Source: Reference (7).

**FIGURE 2.23. Social gradient and inequality in maternal mortality, as determined by years of schooling, Region of the Americas, 1990 and 2008.**

![Diagram](image)

Source: References (54, 57).
be underweight. Despite significant improvements over the last few decades, mortality rates in children under 5 years old remain higher in rural than in urban areas in Peru.

In looking at mortality rates in children under 5 years old by human development index quartiles (Figure 2.24), those in the lowest quartile have a 4.9 times higher risk of dying before the age of 5 years, representing an excess mortality of 34 deaths per 1,000 live births (54). This gradient’s profile is quite similar to that of the distribution of under-5 mortality by access to water, which points to the fact that environmental conditions influence observed distributions, and are a consequence of the social gradient.

Data from Brazil illustrate how broad economic distributive policies can affect the health of children (Figures 2.25 and 2.26) (58, 59, 60). Figure 2.25 shows income growth by income decile for three time periods: 1998–2001, 2001–2004, and 2004–2007. Between 1998 and 2001, every decile experienced a reduction in income, although this reduction was more pronounced in the highest and lowest deciles (with the relative impact being higher in the lower deciles); during 2001–2004, the lowest income deciles had the highest growth; and during 2004–2007, all deciles grew fairly evenly, indicating structural improvements throughout the society.

These improvements were reflected in the performance of infant mortality over the same period. On the one hand, Brazil reduced its infant mortality rate from nearly 40 deaths per 1,000 live births to almost 20. On the other, the country also reduced the slope index of inequality (from 52 to 23 excess deaths per 1,000 live births) across the social gradient and its health concentration index (from −0.23 to −0.19) (52). This reflects a decrease in both absolute and relative inequality.

**RURAL/URBAN INEQUALITIES**

Significant concerns for rural populations include water and sanitation issues, distribution of health centers, and staffing of rural health care facilities. Rural residents also have a different burden of disease than urban residents, in that they are exposed to different risk factors related to occupation and environment. This is seen in the case of communic-
In Brazil, 87% of the urban population has access to improved sanitation facilities, but only 37% of the country’s rural population does (13). In Peru, 39% of rural residents rely on inadequate drinking water sources. With a rural population of almost 30%, this translates to three million people, or over 10% of the population who rely on substandard water sources (13).

How various social conditions manifest themselves in rural versus urban settings can be observed in Figure 2.27. Using Suriname’s latest census data (2004), the figure shows that the proportion of urban residents with a tertiary education was 14 times higher than among rural residents (6.6% versus 0.4%), the unemployment rate was three times higher among rural than among urban populations, access to water was four times higher among urban populations, and the pregnancy rate in adolescents was 1.5 times higher among rural residents (61, 62).
Proximity to health centers is another important concern in rural areas. Rural residents generally must travel greater distances to reach local health care facilities than city-dwellers. This not only requires adequate and affordable transportation from rural communities to health centers, it also creates an increased burden on rural residents in terms of time. It requires rural residents to negotiate and pay for transportation and to take time off from work to travel to the clinic, which could translate into lost wages or crops. In many cases, residents of rural communities might have to go even greater distances for more complex health issues, such as those requiring surgery, further complicating the travel burden.

CLOSING THE EQUITY GAP: ADDRESSING THE SOCIAL DETERMINANTS OF HEALTH IN THE AMERICAS

While the Region of the Americas has historically been considered the most unequal region in the world, Latin America has long had a tradition of targeting inequalities and inequities, of attempting to address the determinants of health, and of striving to translate these efforts into political action (14). The Region’s countries have worked to address social determinants of health in the following areas: governance to tackle the root causes of health inequities, the role of the health sector, promoting participation, global action
on social determinants, and monitoring progress (8).

**GOOD GOVERNANCE**

A growing recognition that the population’s health cannot be sustained by focusing solely on the financing and distribution of medical services has led some policymakers and stakeholders to propose more comprehensive and integrated strategies that foster “health in all policies.” This approach helps leaders and policy-makers to integrate considerations of health, well-being, and equity in the development, implementation, and evaluation of policies and services (63). Some of the Region’s countries have already acknowledged the importance of incorporating the determinants of health into their health reform processes and have adopted a range of policy changes such as the regulation of alcohol and tobacco products, the expansion of healthier transportation systems (bicycle paths, pedestrian-friendly roads, and pathways), improvements in water and air quality, expansion of primary health care services, and improvements in nutrition programs. This “health in all policies” focus has helped to shift the emphasis away from individual lifestyles and from a focus on disease towards broader determinants and actions that have an impact on population health (8).

Within the framework of the social determinants of health, the goal is to achieve health equity in all policies and, to that end, instruments such as health impact assessment, risk assessment, and cost-benefit analysis have been developed and promoted. Urban health is a case in point, as addressing this health issue’s challenges requires that several sectors be involved. A lack of urban planning, urban sprawl, and the Region’s aging cities all affect the quality of life of urban dwellers, the functioning of public service infrastructures, and the rising inequalities and inequities in access to services and opportunities designed to improve quality of life and well-being. Yet, good urban planning that actively engages citizen participation and fosters multi-sectoral collaboration can help to prevent and even reverse these inequities, thereby contributing to create conditions in which people can live healthy lives.

Chile’s social protection system also incorporates the determinants of health into health reform processes. Approved by Congress in 2009, Law N° 20.379 established *Chile Crece Contigo* (Chile Grows with You), a program that guarantees social protection for all children up to 4 years of age (65). The law’s key components address direct psychosocial support, financial support, and priority access to social programs. Through the direct psychosocial-support component *Chile Crece Contigo* identifies families in extreme poverty according to pre-defined criteria and invites them to enter into an agreement with a designated social worker. The social worker helps these families to strengthen their links with social networks and to access social benefits to which they are entitled. Financial support is also provided as cash transfers and pensions, as well as subsidies for raising families or for covering water and sanitation costs. The social protection system also grants these

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3 Health impact assessment (HIA) is a means of assessing the health impacts of policies, plans, and projects in diverse economic sectors using quantitative, qualitative, and participatory techniques. HIA helps decision-makers make choices about alternatives and improvements to prevent disease/injury and to actively promote health.

4 Risk assessment is a systematic approach designed to quantify the burden of disease or injury resulting from risk factors. Risks are defined as the probability of an adverse event (e.g., admission to the hospital for respiratory problems when pollution levels increase) and/or a factor that raises the probability of an adverse event (e.g., living close to a busy road).

5 Building on the risk assessment work that quantifies burden of disease, cost-benefit analysis of interventions is undertaken to help identify interventions that will reduce burden of disease. There are many ways to undertake such analyses and standard methods are available. Often within public health it is difficult to get the necessary information to carry out cost-benefit analyses of population-based interventions: far more information exists for individual-based interventions.
families preferential access to preschool programs, adult literacy courses, employment programs, and preventive health visits for women and children.

Perhaps more importantly, this program complements a multisectoral effort that promotes early childhood development for every child from birth to 4 years old through preschool education programs, preventive health checks, improved parental leave, and increased child benefits. Better access to child-care services is also included, as is enforcing the right of working mothers to breastfeed their babies, the latter intended to stimulate women’s participation within the employment market. This experience is a model for addressing “the causes of the causes” and working with all sectors to ensure equity in health.

Conditional cash transfer (CCT) programs are another type of intersectoral collaboration initiatives.

Box 2.1. Healthy public policies in the Americas.

Regional policies to control alcohol
In 2008, drunk-driving laws in Brazil were modified to considerably decrease the legal limit of blood alcohol allowed while driving (known as “zero tolerance”) (Law 11.705/08). After implementation of a local ordinance that prohibited the sale of alcoholic beverages after 11:00 p.m., the city of Diadema, Brazil, observed a 30% decrease in homicides and a significant decrease in reports of domestic violence.

In Costa Rica, marketing of alcoholic beverages has been severely restricted, and approval is required by an independent council (WHO global alcohol database, http://apps.who.int/globalatlas/default.asp).

Regional policies to control tobacco use
Columbia, Guatemala, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay have enacted national legislation that prohibits smoking in public spaces and workplaces. Argentina, Brazil, and Mexico have national and/or subnational (state, province, city) policies in this regard.

Source: Reference (64).

Box 2.2. The Bogotá experience: addressing the social determinants of health.

Since 2004, Bogotá has promoted a “Health in Your Home” program, using a human rights lens to address five core components:

1. Literacy needs of populations,
2. Inequity assessment,
3. Promotion of intersectoral action,
4. Implementation of participatory budgeting, and
5. Empowering communities.

As a result Bogotá has achieved significant results in terms of classic public health indicators that, in turn, have improved the human development index. Moreover, Bogotá’s experience is often cited as a successful alternative in management of public policies, given the efforts to address social determinants and to broaden the debate on health and disease. Today, the city has a new policy-oriented vision that takes into account the quality of life and well-being of the population, a vision to which all sectors contribute in an effort to break down the barriers of a linear sectoral approach. The program has been complemented by a reorganization of the State district as a way to strengthen social participation and, in turn, reinforce active citizenship.
These programs are an important social-policy tool, in that they address poverty through economic, educational, and health benefits, and involve coordination among various sectors. Brazil’s Bolsa Familia is an excellent example—the program has 53 million beneficiaries and is the largest conditional cash transfer program in the world. Brazil’s Ministry of Social Development manages the program, but beneficiary payments are made through the banking system, and many aspects of the program’s implementation are decentralized to Brazil’s 5,561 municipalities (66).

A study conducted by the United Nations Development Program’s International Policy Centre for Inclusive Growth looked at Bolsa Familia’s successes and challenges, and found that more than 80% of the program’s benefits go to families living in poverty (those making below half of the minimum per capita wage). Bolsa Familia was also found to have been responsible for approximately 20% of the drop in inequality in Brazil since 2001, a significant achievement in a country with stark inequalities and inequities. Educational equality and enrollment numbers also have been on the rise in Brazil over the past decade as a result of increased public spending in education. Net secondary school enrollment increased by 13% between 2000 and 2008, rising from 68.5% to 81.5% (67). Clearly, these social policies have had a direct result in the reduction of education inequality and in the growth in school enrollment. The expansion of Bolsa Familia, together with changes in social security and increases in public education spending, has played an important role in reducing inequality and poverty in Brazil.

With the implementation of this social policy, Brazil met its first Millennium Development Goal—reducing the proportion of the population living in extreme poverty by half—almost a decade before the 2015 deadline (68). According to the Economic Commission for Latin America and the Caribbean, distribution contributed to 54% of the decline in poverty from 2001 to 2009, whereas economic growth contributed to 46% (69). Therefore, while Brazil’s strong economic growth has played an important role in raising overall wealth in the country, its politically mandated social policies have certainly helped to distribute this wealth.

Although it is important to consider the social determinants of health across the entire socio-economic spectrum, the extreme inequities evident in the distribution of health in the Americas often will require more focused interventions. These include conditional cash transfer programs as already discussed above. Evidence shows that cash transfers to low-income households are an important contribution to public health objectives and could significantly improve access to health systems. These programs identify a country’s neediest populations and aim to improve their circumstances, usually focusing on health and/or on education. Although such programs represent only a small portion of the public social spending in each country, their benefits have been considerable, which is why they have been recognized internationally. Birdsall and colleagues (71) have identified these programs as a core element of social policy in those Latin American countries that have made the most gains in equality in the past decade. Thus, while the final goal of a social-determinants approach to health is to address differences across all levels of society (the social gradient), regional circumstances often require initial interventions directed at the most vulnerable and neediest populations.

**The Health Sector’s Role**

In addition to its critical role in building momentum to address the social determinants of health, the health sector also has a vital role to play in addressing its own contribution to health inequities. Health systems can become redistributors of wealth in countries. If a health system is based on equity and solidarity in the distribution of health-related goods, supplies, and services in a way that responds to the needs of various population groups, this will translate into an important wealth redistribution mechanism. While implementation of policies across the social determinants is essential to improve health and reduce inequities, the health sector can similarly be instrumental in establishing a dialogue on why
health and health equity are shared goals across society, and in identifying how other sectors (with their own specific priorities) can benefit from action on social determinants.

Within a given health system, the actors, institutions, and resources (including public health programs) that act to improve health constitute a social determinant. While health systems can be a determinant of health, they, in and of themselves, do not always foster equity or move towards greater equity (72). In fact, in some cases the health sector may increase inequities. Inequities become apparent when better access and quality of care benefits some segments of society that are in less need. Direct payment, otherwise known as out-of-pocket payments, for health services drives 100 million people into poverty every year worldwide (73).

Despite Latin America’s moderate economic growth and significant progress in reducing poverty in recent years, adverse health events or normal life-cycle events (such as old age) not only sap an individual’s health, they also can impoverish the whole household. Besides treatment costs, households bear the cost of productive time lost from work while taking care of ill family members. This combination of costs can force individuals and households to cut nonmedical consumption, a situation that affects the already poor population the most. A study conducted by the World Bank shows that in Argentina, 5% of all non-poor households fell below the poverty line for at least three months in 1997 as a result of health spending, and similar results were observed in Chile and Honduras. In Ecuador, 11% of non-poor households fell below the poverty line in 2000 (74).

If the health sector is to reduce health inequities, rather than increasing them, equity will need to be placed at the core of the design of health services and programs and it must also be institutionalized within the governance of health systems. Thus, while implementation of policies across the social determinants is essential to improve health and reduce inequities, the health sector has a vital role to play.

The health sector also has an important role to play in bringing other sectors together to plan and implement work on the social determinants of

### Box 2.3. El Salvador’s CISALUD and Peru’s Crecer.

In 2009, El Salvador outlined a social policy, and the strategic lines of its development plan centered around the proposal of a universal social protection system. This system encompassed urban and rural solidarity communities, a temporary income support program, universal basic pension and elder-adult integral programs, actions directed to vulnerable populations, increased social security coverage, and single registration of beneficiaries.

Within this context, the Ministry of Health has formulated a health policy, has outlined strategies for its implementation, and has institutionalized the Inter-sectoral Health Commission (CISALUD). The Commission includes representatives from the government, civil society, and other main stakeholders, and functions as a forum for discussing the country’s main health challenges and their determinants.

**Source:** Ministry of Health, El Salvador, 2012.

Peru’s national “Crecer” program involves many sectors—including education, the environment and living conditions, and access to health care—in an effort to address the social determinants of hunger. The program emphasizes the importance of going beyond improving health, and actively seeks ways to work with other sectors including education, water and sanitation, housing and agriculture, and social sectors. Working across sectors in addressing the social determinants of health is one of the recommendations of the Commission on Social Determinants of Health.

**Source:** Reference (70).
health. In its role as facilitator, the health sector can identify issues that require collaborative work, build relationships, and craft strategic partnerships with other sectors.

Chile provides a good example. The country recently began to reorient its public health programs to reduce health inequities. In 2008, equity assessments using a Tanahashi-based framework were undertaken for six major public health programs: child health, reproductive health, cardiovascular health, oral health, workers’ health, and red tide (algal bloom). This assessment aimed at identifying differential barriers and facilitators to prevention, case detection, and treatment success, and issuing recommendations for improving each program’s equity in access to care.

Multidisciplinary teams conducted the assessments with the participation of health workers from all levels of the health system, community representatives, health bureaucrats, and decision-makers from other sectors. By 2010, all programs had applied the resulting recommendations. The cardiovascular health program implemented 67 best-practice interventions identified by its assessment and worked with all regional health teams to develop action plans to put them into practice. The red tide program developed strategies to better handle the issue and reduce negative effects on fishermen. As part of this effort, indicators and methodologies were developed for assessing equity of access to public health programs (65).

Chile’s experience provides a foundation for reorienting health services and programs to reduce inequities, to foster ongoing collaboration with other sectors, and to monitor whether changes have had the intended effect. This approach also can be aligned with human rights–based approaches to strengthening health systems, which focus on ensuring that health-related facilities, goods, and services are available; accessible at affordable cost; acceptable; appropriate; and of good quality.

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**Box 2.4. Costa Rica: advancing toward the social production of health.**

Costa Rica has recognized that its population’s health status does not depend exclusively on the action taken by institutions traditionally linked with health and health services. Rather, it views its population’s health as a product of a coordinated development of society as a whole, understood as the social production of health. This historic realization has been key to improving Costa Rica’s health indicators. The country’s national health system encompasses a series of entities that act synergistically, resulting in a positive impact on the health of the population as a whole, while giving priority to the most vulnerable population groups. The Ministry of Health is responsible for governance in the social production of health, guaranteeing protection and improvement of the health status of the population through its management and stewardship of the different social actors. Stewardship is exercised through eight substantive, nonexclusive functions that are performed in a continuous, systematic, multidisciplinary, intersectoral, and participatory manner: (1) policy direction, (2) marketing of the health promotion strategy, (3) a culture of inclusiveness, (4) health surveillance, (5) strategic health planning, (6) health financing, (7) harmonization of health service delivery, and (8) regulation and assessment of the impact of health-related action. The country has no army, so it can channel investments toward education and health that might be taken up in financing its armed forces.

Source: Reference (75).

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6 The Tanahashi model considers access to, provision of, and use of health care services to conceptualize the necessary steps a person takes between experiencing a health issue and receiving effective care from health services. At each step, “loss” of people by health services and programs results in avoidable suffering. For example, to receive effective care, individuals with high blood pressure need to know that they have a problem, seek care for this condition, gain access to care, receive appropriate advice, obtain the prescribed treatment, adhere to the treatment, and obtain effective relief from the treatment with satisfactory resolution of their problem.
Participation

Latin American and Caribbean countries have traditionally pursued social-mobilization and community-driven movements as a way to improve living conditions for their populations. For example, movements geared towards the adoption of health promotion approaches have been taking place in the Region for decades. Starting in the 1950s, the concept of local development took hold in many countries as a way to improve the quality of life, primarily in rural areas. Most of these initiatives continued to be implemented through a top-down approach, however, and assumed that communities would accept the ideas and health priorities as defined by outsiders. By the 1970s community resistance mounted, and new, integrated community-development strategies that focused on promoting more active community participation and greater access to health services began to be introduced.

Since the 1980s, Latin American and Caribbean countries have undertaken in-depth democratization and decentralization processes that significantly reshaped their social, political, cultural, and economic profiles. These processes have had varying effects on the Region’s health systems. On the one hand, neo-liberal policies centered on free-market principles have influenced the development of health systems in some countries. As a rule, these have led to policies and programs that were incompatible with health promotion principles and values. On the other hand, the decentralization processes that occurred to one degree or another in the Region also led to a redistribution of decision-making and resources through political and administrative reforms.

In Brazil, participatory approaches to decision-making on health issues have been inspired by the social movements that drove the establishment of the country’s universal health system, as well as by subsequent improvements in primary health care and social protection. The 1988 Brazilian Constitution established health—including the right to participate in health governance—as a human right for all. This commitment opened the opportunity for institutionalizing public participation in health matters at the municipal, state, and national levels. Participation through health councils at each of these levels (including municipal health councils in 5,564 cities, where half the counselors represent health-system users) is supplemented by regular national health conferences. Innovative models, such as participatory budgeting, have also been implemented in some jurisdictions.

Box 2.5. Peru: the Government and the community forge a partnership to improve health.

In 1994, the Government of Peru began to undertake a unique management program in several public health facilities. The program began in the aftermath of political unrest and Shining Path activities in areas where distrust of the Government ran high and health facilities were in poor condition. Through this program, community members in Local Health Administration Communities (CLAS) share decision-making with federal and municipal authorities on fiscal and personnel matters, directing resources to the community’s needs and fostering good relationships between the government and the community.

The CLAS program had a double benefit: it helped to restore good relations with the Government by involving the community in the management process, and it allowed for health services to be tailored to the needs of the population. CLAS facilities have been subjected to numerous evaluations, which have consistently shown higher rates of utilization than non-CLAS facilities and better outcomes than in non-CLAS facilities. Moreover, CLAS facilities provide more fee exemptions, increasing the ability of the population to access care and promoting health equity. Since its implementation, the CLAS program has been expanded nationwide, and now covers 31% of the Ministry of Health’s primary health care facilities.

Source: Reference (76).
Brazil’s first full participatory budgeting process came to be in the city of Porto Alegre in 1989. Participatory budgeting was part of a number of innovative reform programs started that year to overcome severe inequalities in living standards among city residents. Today, Porto Alegre spends about US$ 200 million each year on construction projects and services, all of which are subjected to participatory budgeting. Annual spending on fixed expenses such as debt service and pensions is not subject to public participation. Around 3.5% (50,000 individuals) of Porto Alegre residents take part in the participatory budgeting process, and the number of participants increases every year.

Participatory budgeting has significantly transformed the political system and nature of civic life in Porto Alegre. It has brought more equitable public spending and greater government transparency and accountability. In addition, it has increased the extent of public participation, especially by marginalized residents, though the very poor still lack representation.

In terms of citizen involvement, participatory budgeting is often referred to as “a democracy school” (77). Since its emergence in Porto Alegre, participatory budgeting has spread to hundreds of Latin American cities and dozens of cities in Europe, Asia, Africa, and North America. More than 1,200 municipalities are estimated to have initiated participatory budgeting (78). In some cities, participatory budgeting has been applied to school, university, health, and public housing budgets (77).

Since the 1980s, most countries in the Americas have undertaken decentralization processes to some degree or another. These efforts have led to a redistribution of power, greater decision-making autonomy, and more resource control by local authorities. Regional and local governments have acted as facilitators of community participation. In turn, there has been increased and strengthened community capacity-building and mobilization of resources by authorities at the local level. These experiences have demonstrated that local-level authorities can help establish conditions that foster health promotion and improve social participation. As their capacity to act increases, local governments have also demonstrated greater motivation and commitment to initiatives aimed at improving the population’s living conditions.

Because local authorities are responsible for establishing policies for a given catchment area and population, they are better able to influence the mobilization and integration of actions and resources of other local stakeholders. Local authorities also can effectively position health at the top of their political agendas, and adapt their policies and programs to the cultural and ethnic composition of their communities. Therefore, local governments are in a privileged position to implement programs based on decentralized and participatory models.

Box 2.6. Bolivia: a fight against malnutrition.

Bolivia’s Zero Malnutrition program, which is part of the country’s National Development Plan, is an inter-sectoral program that benefits some 321,000 families in 360 communities. Nearly four years after it began, the program has improved nutrition through the use of native food products (Kallpawawa), promoted food production at the community level, designed and circulated educational materials related to nutrition, and provided nutrition education for trainers in 166 municipalities. These efforts reach 100% of those persons identified as a national priority because of their nutritional vulnerability. Today, the program has been able to bring together broad and diverse social movements, critical inter-culturalism, the deployment of specially trained doctors to practice in rural areas, and the participation of 106 of the 166 eligible municipalities that have committed themselves to improve nutrition.

Source: Reference (79).
Many of the Region’s countries have applied one or more of these strategies successfully. Their experiences have demonstrated the effectiveness of incorporating an integrated concept of health and positioning the local level as a central element in community development processes.

**ADDRESSING THE GLOBAL AGENDA**

As the global economy becomes increasingly interconnected, so rises the cross-border flow of goods, services, money, and people. This increase affects health and equity both directly and through economic consequences, which raises concern that economic exigencies may take precedence over health considerations (8). Given this scenario, acting upon the social determinants of health requires not only country-level efforts, but also work at the international level. In order for a country—be it rich or poor—to embrace a social-determinants approach, its government must coordinate and align the work of various sectors and types of organizations in the pursuit of health and development. Building governance, whereby all sectors take responsibility for reducing health inequities, is essential to achieve this global goal. Intersectoral action—that is, the effective implementation of integrated work between different sectors—is key to the process (8). Thus, governance must align across sectors in order to monitor health inequities and bring to light any policy incoherence.

Attaining the Millennium Development Goals (MDGs) is a case in point. Progress on climate change, for example, is necessary to ensure that MDG gains are not endangered. If coherence across policies is poor, however, progress on one priority can undercut other development goals. The failure to consider equity within countries with respect to the original MDG targets raises the issue that progress seen in some countries reflects progress in average outcomes and actually masks inequities.

Compared to other regions of the world, the Americas as a whole seems poised to attain the MDGs. Regionwide, for example, the Americas is likely to meet the goals of reducing hunger, infant malnutrition, and mortality and improving access to safe drinking water and gender equity in education. Analyses suggest, however, that no country in the
Americas is likely to reach all of the MDG targets, and some of the greatest challenges for the Region’s countries lie precisely within the areas of health and poverty reduction. Clearly, progress varies vastly from country to country and even within countries, which is why it is essential to look beyond regional averages and to focus on the most vulnerable groups in the areas that lag farthest behind.

Positioning health equity as a cross-cutting goal of development can facilitate greater alignment among governments. Social determinants of health are relevant to all major global priorities, as seen with the MDGs, which require public health interventions to tackle specific risk conditions accompanied by interventions to reduce poverty and promote social protection, education, and empowerment.

Although noncommunicable diseases are not addressed in the MDGs, they are increasingly recognized as a major threat to social and economic development in all countries. Tackling the noncommunicable disease epidemics will be impossible without acting on the social determinants of health. And, in order to address those challenges a range of sectors, including finance, trade, agriculture, community planning, transport, and environment, must become engaged. For example, in tackling the risk

Box 2.8. Argentina, Mexico, and Colombia: battling noncommunicable diseases through innovative intersectoral efforts.

Because risk factors for noncommunicable diseases mainly lie outside the health sector, preventing these diseases requires concerted work with other sectors. Lack of physical activity is a case in point: tackling it requires joint efforts by such sectors as education, urban planning, security, labor, economy, and agriculture. Some countries already have embarked on such efforts.

**Argentina:** An intersectoral noncommunicable disease (NCD) commission, composed of the ministries of Education, of Social Development, and of Public Finance, among others, is spearheading the government’s NCD plan of action. NCD risk reduction policies are combined with national-level population-based interventions for NCD prevention and control. The intersectoral commission has created policies to limit the use of harmful trans fats in the food supply and salt in processed foods. The commission also has helped raise public awareness and demand for fresh, affordable, and healthy foods, and has worked directly with national food distribution networks to ensure that fresh fruits and vegetables are available in underserved areas (Ministry of Health, Argentina).

**Mexico:** The National Council for Chronic Disease Prevention (CONACRO) was created by Mexico’s President Felipe Calderón in February 2010 to establish a government-wide response to the NCD problem. The council is composed of high-level representatives from the ministries of Health, of Treasury, of Labor, of Education, of Agriculture, and of Social Development. CONACRO has aided the cross-sector understanding of the NCD burden and the policy changes required by each sector to have an impact on the NCD problem. The linkages between health, food supply, and the physical environment, for example, are being strengthened in Mexico to create more opportunities for consumers to be able to live well (Ministry of Health, Mexico, 2011).

**Colombia:** Ciclovias, or bicycle pathways, have been created in Bogotá to fight NCDs. Rapid urbanization, physical inactivity, and rising rates of NCDs inspired the creation of a program with a vast network of streets closed to traffic that walkers, bikers, and joggers can use throughout the city. As the program has grown, it has attracted street vendors—creating new jobs for the underemployed—and provided equal access to public space for all city dwellers.

Ciclovias involve the participation of many sectors of city government—transportation, parks and recreation, the police, urban planning, and health—and the engagement of civil society. This sort of program has been widely recognized as being a low-cost way to encourage exercise, build communities, and reduce environmental pollution (Ministry of Health, Colombia, 2011).
factors for noncommunicable diseases, fiscal policies can be used to reduce tobacco consumption and the intake of fat, alcohol and salt; prevent obesity; and promote physical activity.

Enabling mothers to give birth safely is a human right. To this end, the Region’s countries have made it a priority to reduce maternal mortality in the Americas. And yet, reducing maternal mortality remains one of the greatest MDG challenges in the Region, especially because efforts so far have not yielded expected outcomes (24).

Currently, pregnancy-related illnesses are the largest contributors to the disease burden affecting women in developing countries (87). And maternal mortality rates show a greater inequality between rich and poor nations than does any other public health indicator. Within countries, these rates are significantly higher among the most disadvantaged populations, namely the poor, indigenous communities, and rural populations. In Bolivia, for example, coverage of institutional births in 1998 was only 39% in the poorest quintile, compared with 95% in the wealthiest.

Other MDG challenges that persist in Latin America and the Caribbean are related to children’s immunization, universal primary education, basic sanitation, and environmental sustainability. Within this context, health plays a pivotal role in addressing these challenges. Thus, striving to attain the MDGs represents an historic opportunity for harnessing the highest possible level of political will in an effort to reduce poverty and, in doing so, to improve health.

As considered in a recent discussion paper (8), today’s interconnectedness will render national efforts to address social determinants insufficient unless these are part of a larger, global context. On the one hand, international organizations, non-governmental agencies, and bilateral cooperation partners must broadly align their efforts on social determinants with those of national governments. On the other, there is room for global players to have greater alignment with one another. Among closely linked global priorities that these global players should consider are the challenges of achieving the MDGs, building social protection, addressing climate change, promoting sustainable development, and tackling noncommunicable diseases. All of these priorities require action on social determinants and intersectoral efforts that, in turn, will have an impact on health inequities. Aligning global priorities needs

Box 2.9. Linking the different global agendas.

In the United States, socioeconomic and racial disparities in health have been wide, pervasive, and have persisted over time. The elimination of these disparities requires tackling their root causes and focusing policy attention on the social determinants of health, which include the environment. For many years, the environmental justice movement and communities affected by multiple environmental issues have advocated for environmental policies that address disproportionate environmental health burdens and impacts. This movement led to the signing of the 1994 Executive Order 12898 that requires federal agencies, including the Environmental Protection Agency (EPA), to include environmental justice as part of their mission by identifying and addressing the disproportionate impacts of their policies, activities, and programs on racial minorities and low-income populations.

The EPA is developing guidelines for its regulatory analysts and decision-makers that will provide direction on how to: (1) assess the disproportionate environmental health impacts of their regulatory policies on racial minorities and low-income populations, and (2) apply the results of the assessment to inform regulatory policy choices. The proposed guidance represents a significant effort by the EPA towards eliminating health disparities attributable to environmental factors.

Source: Environmental Protection Agency, 2011.
to be buttressed by an ongoing focus on equity and by positioning health equity as an overarching development goal for all sectors.

**Monitoring Inequities**

In order to measure and report on the social determinants of health and to be able to study inequalities in health outcomes there must be data systems in place that can collect, analyze, and produce information relevant to policies. Such information systems should include quality data on relevant socioeconomic indicators, as well as health indicators of morbidity and mortality stratified by age, sex, ethnicity, geographic location, employment, and housing. Disaggregation of data is essential for policies that address inequities, but it also allows for better decision-making and accountability at the local level. Gathering disaggregated data continues to be a challenge in the Region of the Americas, but key efforts have been made in some countries that the public health community can learn from.

Canada offers an excellent example. A population-health framework has guided the development of Statistics Canada’s health data for the past 20 years. Statistics Canada is the central statistical agency within the Government of Canada responsible for both economic and social statistics. Advances included the launch of longitudinal and cross-sectional health surveys and the growth and development of databases supporting ecological and unit-record data linkage, such as the Census of Population, the Cancer Registry, vital statistics, and acute care hospital admissions. Thus, Canada has grown its body of data and published research exploring and monitoring social determinants of health and health inequalities (82).

Similarly, Chile has put in place a systematic approach to generate, link, synthesize, and disseminate data and information on the social determinants of health and on equity in health. Through this effort, Chile has been able to report more comprehensively and systematically on inequities. Based on the WHO Commission on the Social Determinants of Health framework, indicators were selected for each dimension of the core set proposed by WHO; they included a mix of existing and new indicators designed to provide a systematic and comprehensive picture for monitoring and assessing the social determinants of health equity at the country’s regional level on a routine basis.

The ultimate goal of this approach was to help reduce inequalities in health by using available information that detects and quantifies inequities that exist at the regional level, and by producing useful information for the design of strategies and policies aimed at closing these gaps. The regional health diagnoses have helped to improve local health teams’ capabilities to make informed decisions based on available information, to support the public health programs so they can perform more efficiently, to help the staff to decide on interventions to reduce equity gaps based on local evidence, to evaluate and monitor the overall health situation and distribution based on the CSDH analytical framework, and to quantify the results of programmatic interventions aimed at the most disadvantaged groups (9).

In many settings, the availability of data for integrated action on social determinants is poor, but by making use of surveys and of input from communities and civil society organizations and by prioritizing the strengthening of systems to capture the most vital required data, governments can develop policies that are reflective of population needs and informed by the best available information as seen in the examples above.

**The Way Forward**

As a response to the Commission on the Social Determinants of Health’s recommendations, several of the Region’s ministries of health have set up national commissions on the social determinants of health to address these issues and enhance intersectoral efforts to address inequalities and inequities.

In 2006, Brazil created a National Commission on the Social Determinants of Health (CNDSS). This intersectoral commission produced and disseminated information on the relationship between
Box 2.10. Mexico: the use of monitoring and evaluation to continuously improve the “Oportunidades” program.

In 1997, Mexico introduced “Oportunidades” (Opportunities), a program designed to break the intergenerational transmission of poverty by providing incentives for parents to invest in the human capital of their children. Program beneficiaries were phased in based on federal resource availability, which allowed for an ethical evaluation of program effectiveness. Coverage expanded from some 300,000 rural families in 1997 to approximately 2.6 million rural families in 2000. By 2007, the program served approximately five million low-income families (more than one in five of all families in Mexico) in both rural and urban settings (83).

One of Oportunidades’ elements from the onset was an evaluation component meant to identify and measure the program’s impact. Both quantitative and qualitative evaluations are undertaken by well-known national and international research and academic institutions. Although evaluation design and implementation continue to be adjusted, there remain four main areas of evaluation: (a) measurement of short-, medium-, and long-term results and impacts; (b) identification of results and impacts directly attributable to the program versus those attributed to other individual, family, or community contextual factors; (c) analysis of the indirect effects of the program; and (d) provision of continuous feedback for program improvement.

Oportunidades’ evaluation component has become a benchmark in social policy in the Region. Besides its diversity of methodologies and sources, the program’s evaluation has been characterized by the wide variety of social factors it assesses, especially on gender issues. Some of these issues include:

- Education: school enrolment, nutrition and scholastic achievements, extracurricular development, educational expectations, transition rates to secondary education.
- Health: health services utilization, morbidity and health status, obesity, chronic illnesses, reproductive health.
- Nutrition: nutritional status, child development, language acquisition in urban children.
- Social and economic aspects: rural and urban consumption, effects on rural microenterprises, demographic and migration effects, child and youth labor, female participation in the labor force, gender equity.

In addition to measuring the program’s direct impact, the evaluation also assesses some indirect effects such as its impact on family relations, both between the couple and between parents and children. Since cash transfers are directly received by women beneficiaries, there was a particular concern in assessing its potential impact on violence by the male partner (psychological, physical, sexual, and economic), one of Mexico’s major public health problems (84).

social determinants of health and health status, and improved policy and program design. The CNDSS incorporated the concept of social determinants of health and the consequences of inequities into the education of health professionals, and mobilized civil society to raise awareness about the relationship between health and living conditions. In 2007, Argentina’s Ministry of Health established the Secretariat of Health Determinants and Research, which is charged with integrating strategies for responding to health problems and facilitating the implementation of national programs that specifically address the social determinants of health. And in 2008, Chile created the Secretariat of Social Determinants of Health within the Ministry of Health, which produced local assessments on social determinants of health, established a process to reorganize public health programs at the national and local level taking into account the social determinants of health, and held health forums to analyze the social determinants of health at national and local levels. This experience enabled the country
to develop intervention proposals aimed at improving the overall health and well-being of communities crafted with the public’s participation.  

In considering and endorsing the Commission on the Social Determinants of Health’s report, and in response to the resolution (WHA62.14) adopted by the World Health Assembly in May 2009, a Global Conference on the Social Determinants of Health was held in Rio de Janeiro, Brazil, in October 2011. Representatives of more than 125 countries attended the conference, where they shared experiences on policies and strategies aimed at reducing health inequities. During this three-day event, plenary sessions, parallel sessions, and a dedicated ministerial track allowed participants to share experiences on policies and strategies that could help to reduce the dramatic 36-year gap in life expectancy around the world. Participants also discussed how the Commission’s recommendations and the suggestions outlined in the WHO Conference Discussion Paper could be translated into concrete policy action. 

The Rio Political Declaration on Social Determinants of Health was adopted during the World Conference. The declaration expresses global political commitment for the implementation of a social determinants of health approach to reduce health inequities and to achieve other global priorities. This declaration is meant to build momentum within countries for the development of dedicated national action plans and strategies. 

Although considerable progress has been made in reducing inequality and poverty in the Region, some countries continue to be plagued by a range of detrimental socioeconomic factors. No society has ever seen a broad-based reduction in poverty without major and sustained investments in the rights of its people and their access to health, nutrition, and basic education. Health status reflects a broad range of determinants, which include access to good-quality water, sanitation, and a healthy environment.

Today it is well known that breaking the cycle of poverty depends on investments by governments, civil society, and families themselves in children’s rights and well-being, and in women’s rights and well-being. Spending on a child’s health, nutrition, and education; on his or her social, emotional, and cognitive development; and on achieving gender equality is not only an investment in a more democratic and a more equitable society, it is also an investment in a healthier, more literate, and, ultimately, more productive population.

Policies that promote equity can boost social cohesion and reduce political conflict. To be effective, most policies require broad political support, which is more likely to be forthcoming when the distribution of income is seen as fair. Many necessary policies for action on social determinants require intersectoral action. Successful implementation of such action requires a range of conditions, including the creation of a conducive policy framework and approach to health; an emphasis on shared values, interests, and objectives among partners; the ability to ensure political support and to build on positive factors in the policy environment; the engagement of key partners at the outset, with a commitment to inclusiveness; sharing of leadership, accountability, and rewards among partners; and facilitation of public participation.

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GLOSSARY

Access to improved water source: This is the percentage of population with access to an improved drinking water source in a given year.

Conditional cash transfers (CCTs): These are programs that transfer cash, generally to poor households, on the condition that those households make prespecified investments in the human capital of their children. (copied from http://siteresources.worldbank.org/INTCCT/Resources/5757608-1234228266004/PRR-CCT_web_noembargo.pdf)

Demographic bonus: The demographic bonus, or dividend, refers to the rise in the rate of economic growth due to a rising share of working age people in a population. This usually occurs late in the demographic transition when the fertility rate falls and the youth dependency rate declines. During this demographic window of opportunity, output per capita rises.

Disparities: Disparities are differences or conditions that lead to inequalities, as in age, rank, or degree.

Epidemiologic transition: The epidemiologic transition describes changing patterns of population age distributions, mortality, fertility, life expectancy, and causes of death. (copied from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2805833/)

Gender: Gender refers to the socially constructed characteristics that society attributes differentially to the sexes. Gender, accordingly, does not refer to women or men per se, but to the relations of inequality among the sexes in terms of the distribution of work, resources, and power.

Herd immunity: Not only do vaccinations lower an individual's risk for developing particular diseases, they also protect the community through what is known as “herd immunity”; according to this concept, even if unvaccinated, an individual’s chances of contracting a disease will be decreased if those around him/her are vaccinated.

Inequality: Inequality is understood as a lack of equality, as of opportunity, treatment, resources, or status. For example, health inequality implies that a person or group does not have the same opportunity to access health or to receive equivalent services as do others.

Inequity: This refers to the presence of avoidable or remediable differences among populations or groups defined socially, economically, demographically, or geographically (adapted from WHO definition of equity, http://www.who.int/trade/glossary/story024/en/index.html).

Megacities: The United Nations defines megacities as metropolitan areas with a population of more than 10 million.

Mid-sized cities: Mid-sized cities are cities with a population of 1 to 5 million inhabitants.

Participatory budgeting: This is a process of democratic deliberation and decision-making, and a type of participatory democracy, in which citizens decide how to allocate part of a municipal or public budget. Participatory budgeting allows citizens to identify, discuss, and prioritize public spending projects, and gives them the power to make real decisions about how money is spent.

Various studies have suggested that participatory budgeting results in more equitable public spending, higher quality of life, increased satisfaction of basic needs, greater government transparency and accountability, increased levels of public participation (especially by marginalized or poorer residents), and democratic and citizenship learning.

Population pyramid: Also called an age-structure diagram, a population pyramid is a graphical illustration that shows the distribution of various age groups in a population.

Purchasing Power Parity (PPP): Purchasing Power Parity (PPP) is a condition where an amount of money has the same purchasing power in different countries. The prices of the goods between the countries would only reflect the exchange rates.
Race and ethnicity: Race/ethnicity refers to social groups who frequently share cultural heritage and ancestry, and whose contours are forged by systems in which “one group benefits from dominating other groups, and defines itself and others through this domination and the possession of selective and arbitrary physical characteristics, for example, skin color” (14). Ethnicity is about tradition, learned behavior, and customs, whereas race is a person’s biologically engineered features. It can include skin color, skin tone, eye and hair color, as well as a tendency toward developing certain diseases. It is not something that can be changed or disguised. Race does not have customs or globally learned behavior.

Total dependency ratio: The number of people younger than 15 years old, plus the number of people older than 65 years, divided by the number of people 15–64 and expressed as a percentage.

Total fertility rate (TFR): The average number of children that would be born to a woman or a group of women if all lived to the end of their childbearing years and bore children according to a given set of age-specific fertility rates, such as those for a given year/period and country. Usually referring to women aged 15 to 44 or 15 to 49, it is calculated by adding the age-specific fertility rates for all the ages considered and multiplying by the interval into which the ages are grouped, which is usually 5 years.