Chapter 1
HEALTH IN THE CONTEXT OF DEVELOPMENT

At the dawn of the new millennium, 189 countries committed themselves to reducing poverty by 2015. To that end, they set eight Millennium Development Goals (MDGs), all of which relate in some measure to health. Their commitment underscores a growing recognition that economic growth, the distribution of income, and investment in human capital have a huge impact on peoples' quality of life and on their health. At the same time, a realization of the social determinants of health is fuelling greater emphasis on collaboration among all social sectors to improve the population's health and on the international recognition of human rights.

One of the principal indicators of development, and of health, is life expectancy. The inhabitants of more developed countries tend to live longer than their counterparts in developing countries. National averages, moreover, tend to mask disparities within countries, whose more vulnerable groups tend to have shorter lives. The population's collective years of life lost translate, in turn, into lowered national productivity.

Despite a reduction in the rates of poverty in Latin America and the Caribbean as a result of economic growth that began in the 1990s (as measured by gross national product), that reduction has not been sufficient to counter the increase in poverty that had occurred in previous decades. In addition, no measurable improvements have been registered in indicators of the distribution of income in the region, which continues to show vast inequalities, as discernible from a comparison between the richest and the poorest quintiles of the population in most countries.

In the past couple of decades, the governments of Latin America and the Caribbean have significantly increased public funding for social sectors. In general, however, a disproportionate amount of that funding has gone to social security/social welfare and education, with lesser portions targeting health and housing. Governments also have embarked on various forms of collaboration, as expressed in many international summits designed to advance the human condition throughout the Hemisphere.

Among the social determinants of inequity, the greatest is poverty—defined for Latin America as insufficient income to meet basic needs. Such poverty results, in large measure, from low levels of growth, low productivity, limited development of human capital, and ineffective economic and social policies. Both the rates of poverty and the absolute number of poor people in Latin America and the Caribbean have been dropping in the past several years, but within the region, and within countries, huge disparities persist.

Efforts to reduce hunger and malnutrition, likewise targeted in the MDGs, have also scored gains in Latin America and the Caribbean, but progress is uneven throughout the region, with certain areas actually experiencing upticks in both the numbers and prevalence rates of the undernourished.

Employment is a basic determinant of health from many different angles—access to labor markets, income, and working conditions—and sustained employment is critical to countries' ability to reduce poverty. The unemployment rate has been rising in Latin America and the Caribbean in recent years, during which time informal employment has increased as a share of overall employment. Youth unemployment also is increasing, and that of women is much higher than men.

The reciprocal relation between health and education is clear and explains the MDG focus on universal primary education as a principal strategy for reducing poverty. The Americas is on pace to achieve the goal of 100% completion of primary school by 2015, having already attained coverage higher than 97%.

For the most part, inequitable health conditions—that is, those that are unnecessary, unjust, and remediable—reflect an unfair distribution of the social determinants of health. While the "average" health status in Latin America and the Caribbean is relatively good, great disparities across an array of indicators—such as in infant mortality, child mortality, proportion of births attended by skilled personnel, maternal mortality—exist among and within countries. These and other inequities—such as differential rates of infectious diseases, chronic diseases, access to health care services—disproportionately afflict women, ethnic and racial groups.

The environment is yet another major determinant of health. Latin America and the Caribbean have the highest urbanization level in the developing world, with more than three in every four persons living in cities. While urban areas generally offer advantages over rural areas in terms of access to social services, employment, and the like, many of the cities in the region have grown beyond their capacity to provide adequate services. Access to water and sanitation, although having improved significantly over the past several decades, continues to be inequitable in that coverage is greater in urban than in rural areas. Among other environmental challenges are air pollution, shrinking forests and land degradation, degraded coasts and polluted seas, and the looming global impact of climate change.

THE ECONOMIC AND POLITICAL CONTEXT

Life Expectancy

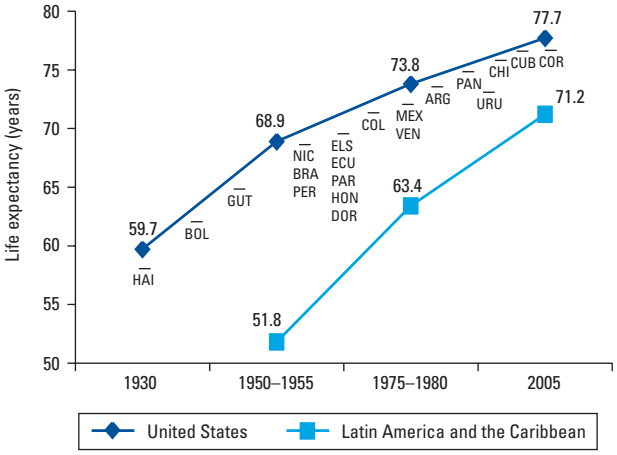
Life expectancy has traditionally been recognized as a key indicator of a country's development, while the life expectancy index reflects the overall health of a population. In examining these indicators, it is necessary to consider not only national averages and possible similarities between the countries of the Americas, but differences within countries as well, in order to be able to identify inequities affecting the most vulnerable groups.

Figure 1 shows the evolution of life expectancy at birth in the United States since 1930 and in Latin America and the Caribbean since 1950–1955. In 2005, life expectancy in Bolivia, Guatemala, and Haiti reached the levels seen in the United States more than 60 years ago. That same year, life expectancy in Brazil, Nicaragua, and Peru was similar to the level attained in the United States in the 1950s.

The difference between life expectancy in Latin America and the Caribbean and that in the United States and Canada is decreasing. While the gap was 10 years in the mid-1960s (57 years in Latin America and the Caribbean and 67 years in the United States and Canada), in 2000–2005, it narrowed to 6 years (71 and 77, respectively). Despite this convergence, there are significant country-to-country differences in Latin America and the Caribbean—for example, life expectancy in Haiti is 59.7 years, in Costa Rica it is 77.7 years.

Figure 2 shows the life expectancy index for a selected set of countries. The index has been pegged to life expectancy in the Netherlands, a country that has the longest-living population and the highest life expectancy rates in the world. The index shows that Chile, Costa Rica, Cuba, and Panama have the best health conditions in Latin America, with survival rates over 0.90, which is close to the maximum potential observed. The potential survival rate for Haiti is just 0.73.

FIGURE 1. Life expectancy at birth in the United States (1930–2005) and in Latin America and the Caribbean (1950–2005) and life expectancy at birth in selected Latin American and Caribbean countries (2000–2005) in relationship to the United States.

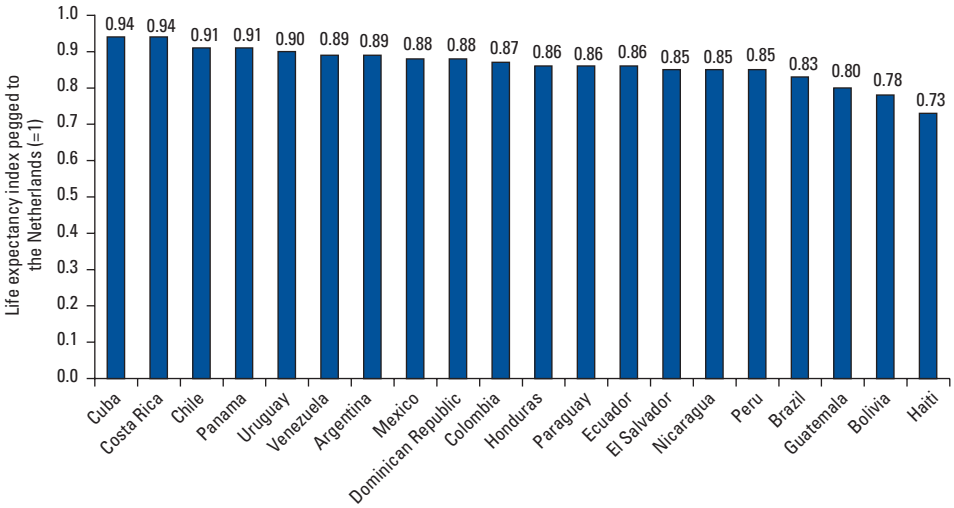


Source: Pan American Health Organization, Area of Health Systems Strengthening, Health Policies and Systems Unit, 2006.

Economic Growth and Inequality

An analysis of data on economic growth, poverty, and inequality in income distribution in Latin America and the Caribbean

FIGURE 2. Life expectancy index, selected Latin American and Caribbean countries, 2000–2005.



Source: Pan American Health Organization, Area of Health Systems Strengthening, Health Policies and Systems Unit, 2006.

TABLE 1. Changes in gross domestic product for Latin America and the Caribbean, Latin America, the Caribbean, and countries in the region, 2000–2006.

Country/region	2000	2002	2003	2004	2005	2006[a]
Antigua and Barbuda	1.5	2.5	5.2	7.2	4.6	11.0
Argentina	–0.8	–10.9	8.8	9.0	9.2	8.5
Bahamas	1.9	2.3	1.4	1.8	2.7	4.0
Barbados	2.2	0.5	1.9	4.8	3.9	3.9
Belize	12.9	5.1	9.3	4.6	3.5	2.7
Bolivia	2.5	2.5	2.9	3.9	4.1	4.5
Brazil	4.4	1.9	0.5	4.9	2.3	2.8
Chile	4.5	2.2	3.9	6.2	6.3	4.4
Colombia	2.9	1.9	3.9	4.9	5.2	6.0
Costa Rica	1.8	2.9	6.4	4.1	5.9	6.8
Cuba	6.1	1.5	2.9	4.5	. . .	. . .
Cuba[b]	. . .	1.8	3.8	5.4	11.8	12.5
Dominica	0.6	–4.2	2.2	6.3	3.3	4.0
Dominican Republic	7.9	5.0	–0.4	2.7	9.2	10.0
Ecuador	2.8	4.2	3.6	7.9	4.7	4.8
El Salvador	2.2	2.3	2.3	1.8	2.8	3.8
Grenada	7.0	1.5	7.5	–7.4	13.2	7.0
Guatemala	3.6	2.2	2.1	2.8	3.2	4.6
Guyana	–1.4	1.1	–0.7	1.6	–3.0	1.3
Haiti	0.9	–0.3	0.4	–3.5	1.8	2.5
Honduras	5.7	2.7	3.5	5.0	4.1	5.6
Jamaica	0.7	1.1	2.3	0.9	1.4	2.6
Mexico	6.6	0.8	1.4	4.2	3.0	4.8
Nicaragua	4.1	0.8	2.5	5.1	4.0	3.7
Panama	2.7	2.2	4.2	7.5	6.9	7.5
Paraguay	–3.3	. . .	3.8	4.1	2.9	4.0
Peru	3.0	5.2	3.9	5.2	6.4	7.2
Saint Kitts and Nevis	4.3	1.1	0.5	7.6	5.0	5.0
Saint Vincent and the Grenadines	1.8	3.7	3.2	6.2	1.5	4.0
Saint Lucia	–0.2	3.1	4.1	5.6	7.7	7.0
Suriname	4.0	1.9	6.1	7.7	5.7	6.4
Trinidad and Tobago	6.9	6.9	12.6	6.4	8.9	12.0
Uruguay	–1.4	–11.0	2.2	11.8	6.6	7.5
Venezuela	3.7	–8.9	–7.7	17.9	9.3	10.0
Latin America and the Caribbean[c,d]	**3.9**	**–0.8**	**2.0**	**5.9**	**4.5**	**5.3**
Latin America[c]	**4.0**	**–0.8**	**1.9**	**6.0**	**4.5**	**5.3**
Caribbean[d]	**3.4**	**3.3**	**5.8**	**3.8**	**4.9**	**6.8**

[a]Preliminary figures.
[b]Data provided by the Oficina Nacional de Estadísticas de Cuba, which are being evaluated by ECLAC.
[c]Does not include Cuba.
[d]Barbados, Dominica, Guyana, and Jamaica GDPs are expressed in factor costs.
Source: ECLAC. Statistical Yearbook for Latin America and the Caribbean, 2006, p. 85.

suggests that poverty reduction during the economic recovery that began in the early 1990s has not been able to offset the growth in poverty in the 1980s. Nor has income distribution changed significantly, remaining as unequal in the 1990s as in the 1980s. This confirms the hypothesis that the rewards of economic growth are not distributed equally among different population strata. In times of economic recession, poverty has grown quickly while in periods of economic growth, poverty has declined very slowly.

During the 1980s, the so-called "lost decade," per capita income in Latin American and Caribbean countries as a whole fell by an annual average of 0.7%. In 1990, average per capita income was approximately US$ 3,300, almost 10% lower than at the start of the 1980s (US$ 3,500). The economic recovery in the 1990s made for significant growth in per capita income, which was US$ 3,800 in 2001, for a 15% increase over 1990.

Since 2000, annual growth in GDP in Latin America and the Caribbean underwent major changes, with significant differences from country to country and variations from one year to the next (Table 1).

In 2000, average growth in Latin American and Caribbean countries was 3.9%, with extremes ranging from –3.3% (Paraguay) to 12.9% (Belize); Argentina, Guyana, and Uruguay showed

"When living conditions improve, as a result of either preventive or curative activities, they promote well-being and, consequently, productivity. In either case the funds assigned to health are an investment; the more prevalent the problem the greater the return it gives."

Abraham Horwitz, 1964

signs of slowing growth. Between 2000 and 2002, many of the countries suffered a sharp slowdown in growth associated with serious problems in South America and Mexico. Argentina, Uruguay, and Venezuela saw their growth shrink by close to 10% or more in that period and faced serious economic difficulties, such as the temporary closure of banks, suspension of payments, and widespread unemployment. Thanks to a series of measures designed to curb inflation and to halt the flight of capital and investments, however, the economy was reactivated between 2003 and 2004, when average growth in Latin America and the Caribbean climbed to 5.9%. The countries that grew the fastest were the ones that had most suffered during the crisis, which experienced rates averaging close to 9% or more. In 2005, average growth in Latin America and the Caribbean was 4.5%. That year, close to one-third of the countries experienced growth of more than 6%, which surpassed the per capita gross national income (GNI)[1] levels seen before the 2002 crisis.

In 2000–2005, the level of wealth in the countries of the Americas, measured by their GNI, also shows uneven advances. By the end of the period, the average weighted GNI for the Americas was about US$ 19,500 (value adjusted by purchasing power parity or ppp), which ranks it among the regions with the highest income in the world. However, there are major differences from subregion to subregion: Central America (US$ 5,687), the Andean area (US$ 5,300), the Latin Caribbean (US$ 6,528), and the English-speaking Caribbean (US$ 7,410) present levels that are below the Latin American and Caribbean general average (US$ 8,771). The Southern Cone (US$ 10,042) and North America (US$ 37,085), on the other hand, are higher. Wide gaps also exist between countries, with GNI values ranging from US$ 1,840 in Haiti to US$ 41,950 in the United States (Table 2).

Figure 3 shows the per capita gross national income for selected countries of the Americas and allows comparisons to be made between groups of countries. According to 2005 GNI levels and the weighted average for each group of countries, the income of the countries in the wealthiest quintile (US$ 22,288) was seven times higher than that in the lowest quintile (US$ 3,218). In addition, the GNI in three of the groups, totaling 20 countries, falls below the Latin American and the Caribbean average.

Growth in GDP and GNI rates, partly owing to their variability, has not translated into significant improvements in poverty rates or income distribution in Latin America and the Caribbean.

Income distribution is generally measured by the Gini coefficient, which uses a value of 0 for greatest equality and a value of 1 for greatest inequality. Latin America and the Caribbean continues to be the region with the greatest inequality in income distribution in the world, except for sub-Saharan Africa (see Figure 4).

Another way to measure income distribution is by using the ratio between the income of the 20% wealthiest population and the 20% poorest. In the Americas as a whole, the ratio of the income of the wealthiest 20% to the poorest 20% is close to 20. Some countries have less economic inequality, with a ratio under 10 (Canada, Jamaica, Nicaragua, the United States); conversely, some have a ratio higher than 25 (Bolivia, Colombia, Haiti and Paraguay), as shown in Figure 5. Both measures reflect significant inequalities between countries in the Americas.

Inequality in Latin America and the Caribbean also is expressed in terms of access to good quality drinking water, sanitation, schooling, and health care; a respect for property rights; and political representation. Large inequalities also exist with regard to the power and influence exercised by individuals and, in many countries, in the administration of justice. Inequalities in consumption—which can be measured more accurately—also are higher in Latin America than elsewhere in the world, although the differences are not as sharp as those for income inequalities (*1*).

Trends in Social Spending

As part of public policy adjustments, to compensate for some of the population's economic difficulties (some of which worsened after structural reforms were put in place), and to provide effective redistribution of wealth, Latin American and Caribbean governments substantially increased the public funds devoted to social spending. Between the start of the 1990s and 2003, social spending experienced a sustained increase in most countries. Social spending as a percentage of GDP rose from 12.8% to 15.1%, representing an increase of 39% in per capita spending in real terms (*2*).

The Economic Commission for Latin America and the Caribbean (ECLAC) estimates that public sector per capita social spending in the 21 countries for which data are available for the 2002–2003 was US$ 610 (US$ 170 more than in 1990–1991 in constant 2002 dollars). In this period, there were significant differences between the countries, ranging from a minimum of US$ 68 (Nicaragua) to a maximum of US$ 1,284 (Argentina). Table 3 shows the wide variation seen from country to country when investments in social spending as percentages of GDP are compared—from a minimum of 5.5% (Trinidad and Tobago) to a maximum of 29.3% (Cuba).

[1]Previously called per capita gross national product (GNP), this indicator measures the total output of goods and services for final use produced by residents and non-residents, regardless of the allocation to domestic and foreign claims, in relation to population size.

TABLE 2. Per capita gross national income (in ppp-adjusted $), countries of the Americas, 2000–2005.

Country	2000	2001	2002	2003	2004	2005
Antigua and Barbuda	9,200	9,190	9,520	9,730	11,100	11,700
Argentina	11,930	11,570	10,380	11,410	12,530	13,920
Bahamas	16,200	16,000	16,140	. . .	16,350	. . .
Barbados	14,840	14,810	14,660	15,060	15,060	. . .
Belize	5,470	5,700	5,850	6,320	6,550	6,740
Bolivia	2,330	2,380	2,430	2,490	2,600	2,740
Brazil	7,150	7,310	7,480	7,510	7,940	8,230
Canada	27,180	28,070	29,170	30,040	30,760	32,220
Chile	8,850	9,200	9,440	9,810	10,610	11,470
Colombia	5,940	6,060	6,160	6,410	6,940	7,420
Costa Rica	8,190	8,340	8,560	9,140	9,220	9,680
Dominica	5,230	5,160	4,970	5,020	5,290	5,560
Dominican Republic	5,830	6,060	6,310	6,310	6,860	7,150
Ecuador	3,050	3,240	3,350	3,440	3,770	4,070
El Salvador	4,610	4,730	4,820	4,910	4,890	5,120
Grenada	6,900	6,630	6,600	7,030	7,050	7,260
Guatemala	3,910	3,990	4,040	4,090	4,260	4,410
Guyana	3,750	3,950	3,950	3,980	4,240	4,230
Haiti	1,760	1,740	1,730	1,730	1,730	1,840
Honduras	2,430	2,510	2,530	2,590	2,760	2,900
Jamaica	3,500	3,610	3,670	3,790	3,950	4,110
Mexico	8,690	8,760	8,830	8,980	9,640	10,030
Nicaragua	3,050	3,130	3,130	3,180	3,480	3,650
Panama	5,920	6,010	6,150	6,420	6,730	7,310
Paraguay	4,610	4,740	4,600	4,690	4,820	4,970
Peru	4,610	4,650	4,880	5,080	5,400	5,830
Puerto Rico	15,090	16,210	. . .	. . .	16,120	. . .
Saint Kitts and Nevis	10,150	10,310	10,550	10,740	10,910	12,500
Saint Vincent and the Grenadines	5,090	5,400	5,540	5,870	5,590	. . .
Saint Lucia	5,250	5,020	5,170	5,310	6,030	5,980
United States of America	34,690	35,320	36,260	37,750	39,820	41,950
Trinidad and Tobago	8,260	8,420	9,080	10,390	11,430	13,170
Uruguay	8,710	8,560	7,690	7,980	9,030	9,810
Venezuela	5,580	5,760	5,240	4,750	5,830	6,440

Source: World Bank. World Development Indicators, 2006.

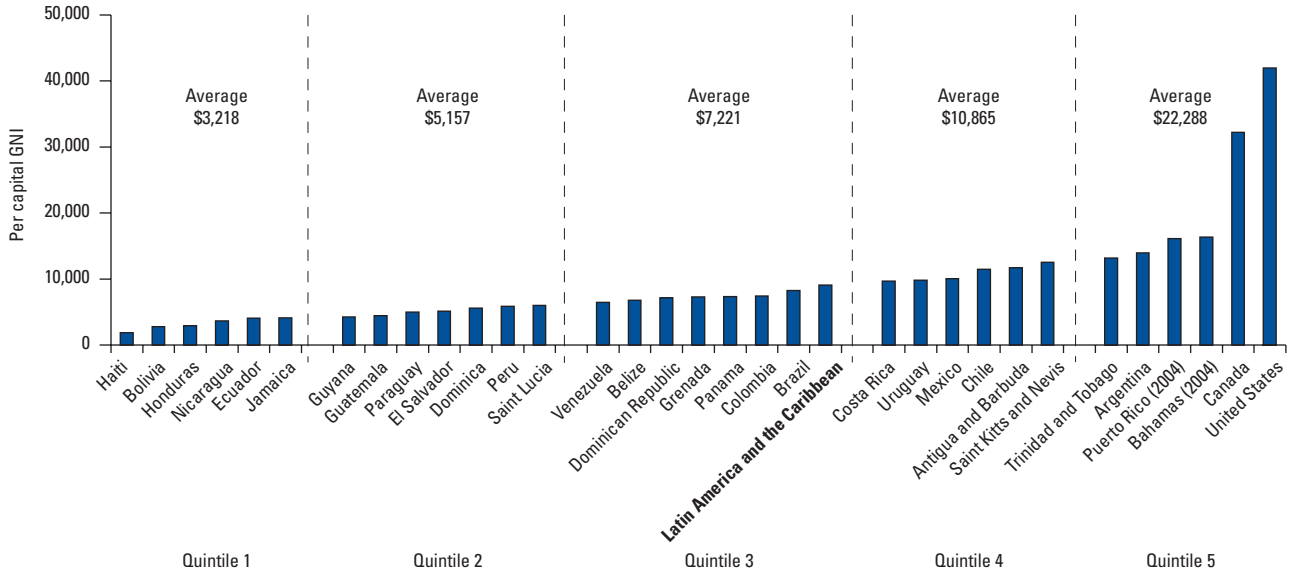
The increase in social spending was not enough to repair the damage caused by the successive economic crises, however, nor did it alter existing differences between countries nor the distribution within them. While Argentina, Brazil, Costa Rica, Cuba, and Uruguay allocated more than 18% of GDP for social spending, Ecuador, El Salvador, the Dominican Republic, Guatemala, and Trinidad and Tobago assigned less than 7.5% to it. These variations mean that despite the efforts of poorer countries to boost social spending, the disparities in Latin America and the Caribbean continue in real terms (*2*).

Also in 2002–2003, it is estimated that Latin American and Caribbean countries directed most of their public spending into social security and social welfare (7.1%), followed by education (4.1%), with spending on health and housing amounting to just 2.9% and 0.9%, respectively (see Figure 6).

Spending on the health sector as a percentage of GDP in 2002–2003 is shown in Figure 7. Figure 6 shows changes in the patterns of public social spending, by sector, since 1990 in Latin America and the Caribbean; Figure 7 shows the large differences that persist in the percentage of GDP that the countries devote to social investments.

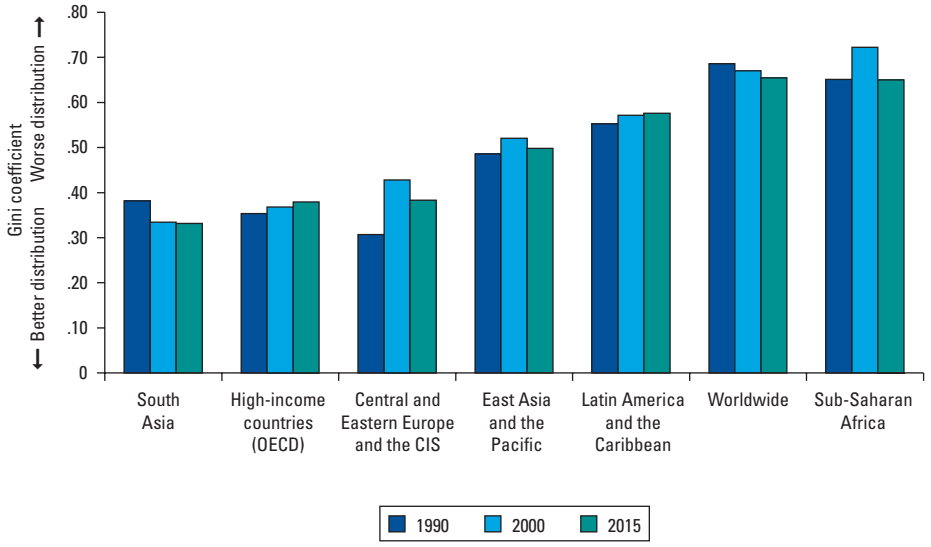
Investments in health, particularly targeting the most vulnerable groups, have an immediate impact on the population's productive prospects. Investments in the health of the most vulnerable persons are a necessary condition for facilitating their access to greater development benefits, such as the possibility of boosting their productivity, building their income, and transferring assets to their descendents. The pattern of social spending on education and health in Latin America shows a positive trend, exemplified by the increase in access to public services and the po-

FIGURE 3. Per capita gross national income (GNI) in US$ adjusted for purchasing power parity (ppp), by income quintile, countries of the Americas, 2005.



Source: World Bank. World Development Indicators, 2006.

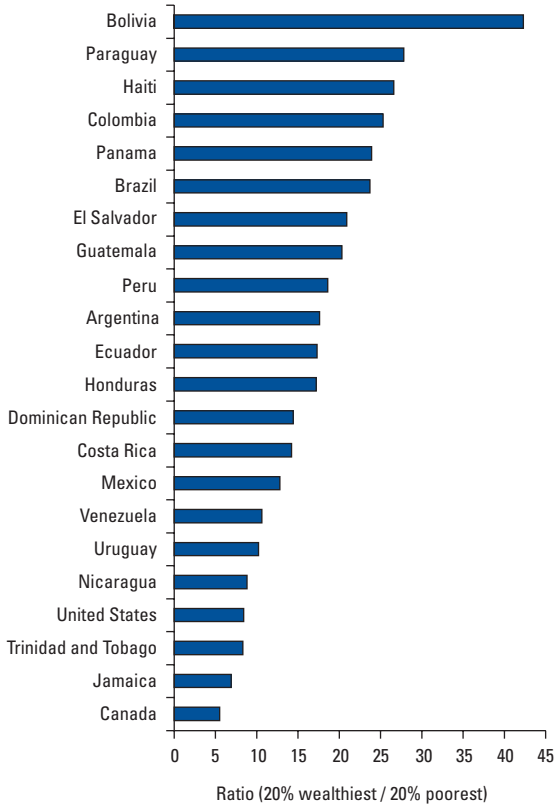
FIGURE 4. Gini coefficient, Latin America and the Caribbean, various regions and country groupings, and worldwide, 1990 and 2000, and projections for 2015.



Sources: Dikhanov Y, Ward M. Evolution of the Global Distribution of Income 1970–1999. 2001. UNDP. Human Development Report 2005, p. 62.

litical will of governments during the 1990s to finance programs for the population's poorest segments, particularly at early life stages, as a way to break the intergenerational cycle of poverty. Social spending varies from country to country, however, and public spending on health shows wider differences than public spending on education. This pattern occurs both because of the structure of the countries' national health systems and of the fact that private sector spending contributes to provide health services. Finally, public spending on social security (pensions) is more regressive, in that it has a negative effect on the poorest sectors, favoring those

FIGURE 5. Inequity gap between the wealthiest quintile and the poorest quintile, selected countries of the Americas, 2000–2005.



Source: Human Development Report 2006, based on data on income or spending from World Bank (2006), World Development Indicators 2006.

who usually contribute to plans (medium- and high-income persons) and receive health care and pension benefits after they retire. The poor tend to work in the informal sector and do not receive a pension or protection from catastrophic events; rather, government resources to assist them are eaten away by the commitment to fund social security. This is a legacy from the recent past, given that social security plans do not provide universal access and only benefit employees in the formal economy.

In general, the low level of per capita public spending and of the amount of funding allocated to social spending by the poorest countries reflect their low tax revenues. Considered in a global context, Latin American and Caribbean countries' government revenues expressed as a percentage of GDP are also relatively low.

Along with the increase in public social spending, in the 1990s several Latin American and Caribbean countries received new financial resources from multilateral institutions, cooperation agencies, and privately funded global initiatives. The strongest economies and some mid-sized ones have been the main beneficiaries, followed by the poorest countries that are part of the Highly Indebted Poor Countries Initiative.

Subregional and Regional Integration

During the 1990s, opportunities arose for consolidating economic agreements in the Americas. In addition, various cooperation mechanisms were created to address political, economic, social, and cultural aspects important for Latin American and Caribbean countries.

These trade-oriented subregional integration processes were followed by social integration processes that have given rise to bodies and mechanisms designed to study various aspects of economic integration and its social repercussions. Chapter 5 analyzes in detail the Central American Integration System, the integration processes in the Caribbean, the Andean Community of Nations, the Southern Common Market, the Amazon Cooperation Treaty Organization, and the North American Free Trade Agreement.

Charting New Paths through Summits—Regional Political Cooperation

The First **Ibero-American Summit**, held in Mexico in 1991, was convened to establish a forum to advance along a common political, economic, and cultural process. These summits have been a favored forum for conducting political consultation and consensus-building so as to reflect on international challenges and promote cooperation and solidarity among the 22 member countries (Andorra, Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Paraguay, Portugal, Spain, Uruguay, and Venezuela). Since the first, 16 summits have been held. Early on, the issues under discussion did not reflect a central concern for health, but more recently, summits have given special attention to social development with emphasis on human development issues. This, in turn, has translated into commitments related to public health. The Declaration of the Thirteenth Ibero-American Summit, held in Santa Cruz de la Sierra, Bolivia, in November 2003, states that "health is a fundamental human right for sustainable development" and undertakes to "revisit primary health care, the goal of health for all, compliance with the Millennium Development Goals, and improvement of local management capacity in health." In the same declaration, the Heads of State and Government undertake to "target activities to excluded sectors, with the aim of reducing infant and maternal mortality rates and preventing the spread of infectious diseases such as AIDS" (*3*). The Fourteenth Ibero-American Summit, held in San José, Costa Rica, in November 2004, reaffirmed the commitment to the Millennium Development Goals, placing special emphasis on the need to reduce extreme poverty and hunger and to combat social injustice.

The Fifteenth Ibero-American Summit, held in 2005 in Salamanca, Spain, created the Ibero-American General Secretariat, a permanent body designed to support the institutionalization of the Ibero-American Conference and which is charged with promoting "cooperation programs in the field of health that help to combat pandemics and curable diseases" in relation to the MDGs.

TABLE 3. Public spending on social sectors, per capita (in 2000 US$) and as a percentage of GDP, selected countries of Latin America and the Caribbean, 2002–2003.

	Total social sector public spending		Public spending on education		Public spending on health		Public spending on social security[a]		Public spending on housing and others	
Country	Per capita	As a percentage of GDP	Per capita	As a percentage of GDP	Per capita	As a percentage of GDP	Per capita	As a percentage of GDP	Per capita	As a percentage of GDP
Argentina	1,284	19.4	279	4.2	291	4.4	642	9.7	72	1.1
Bolivia	136	13.7	66	6.7	16	1.6	51	5.1	3	0.3
Brazil[b]	678	19.2	128	3.6	102	2.9	444	12.6	4	0.1
Chile	764	14.8	209	4.0	155	3.0	390	7.6	10	0.2
Colombia[c]	268	13.5	86	4.3	87	4.4	76	3.8	19	1.0
Costa Rica	782	20.7	235	5.7	236	5.7	232	7.4	79	1.9
Cuba[d]	784	29.3	328	12.3	168	6.3	209	7.8	79	2.9
Dominican Republic	185	7.4	72	3.0	39	1.6	28	1.1	46	1.7
Ecuador	77	5.7	36	2.7	15	1.1	23	1.7	3	0.2
El Salvador	149	7.1	67	3.2	34	1.6	29	1.4	19	0.9
Guatemala	110	6.5	44	2.6	17	1.0	20	1.2	29	1.7
Honduras[e]	126	13.0	70	7.2	34	3.5	5	0.5	17	1.8
Jamaica	311	9.6	162	5.2	78	2.5	15	0.5	56	1.4
Mexico	603	10.5	233	4.1	136	2.4	144	2.5	90	1.5
Nicaragua	68	8.8	32	4.1	24	3.0	. . .	. . .	13	1.7
Panama	686	17.4	185	4.7	236	6.0	218	5.5	47	1.2
Paraguay	115	9.1	55	4.4	16	1.3	38	3.0	6	0.4
Peru[c]	158	7.8	50	2.5	36	1.8	67	3.3	5	0.2
Trinidad and Tobago	392	5.5	223	3.1	93	1.3	5	0.1	71	1.0
Uruguay	1,072	20.9	173	3.4	125	2.4	754	14.7	20	0.4
Venezuela[f]	489	11.7	213	5.1	67	1.6	170	4.1	39	0.9
Latin America and the Caribbean[g]	641	15.4	171	4.1	120	2.9	314	7.5	36	0.9

Source: ECLAC, based on information from the Commission's database on social spending.

[a]Includes spending on labor.

[b]The figure is an estimate for social spending at the three levels of government (federal, state, and municipal) based on information on social spending at the federal level.

[c]The figure corresponds to the average 2000-2001. This figure is not included in the averages.

[d]The figure in per capita dollars uses the official exchange rate (1 dollar = 1 peso).

[e]The figure corresponds to 2004 and is not included in the regional averages.

[f]The figures correspond to agreed social spending (budget and budget amendments at the end of each year).

[g]Weighted average for the countries, except El Salvador.

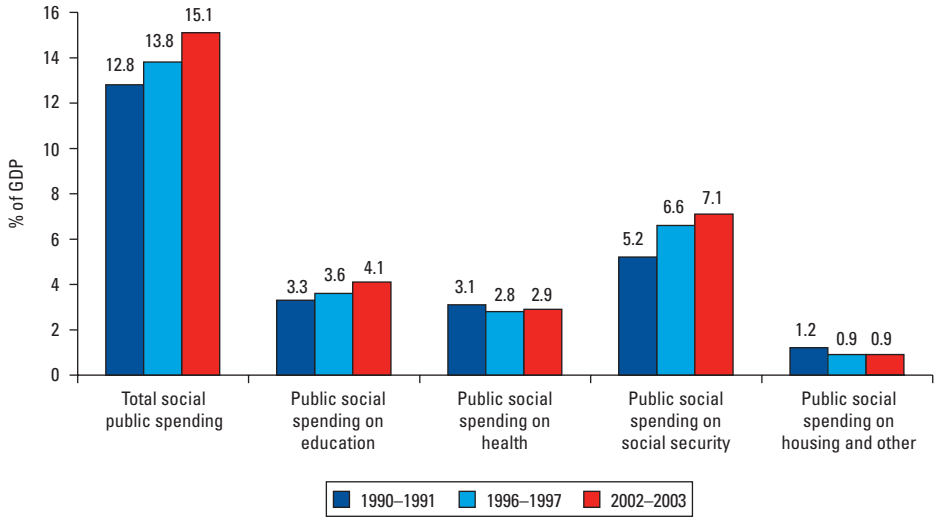
Also, the meeting agreed on the importance of "promoting concrete actions and initiatives to make the universal right to health a reality, placing this objective at the top of the political agenda in our countries and in Ibero-American cooperation" (*4*).

At the Sixteenth Ibero-American Summit, held in Montevideo, Uruguay, in November 2006, the leaders highlighted the importance of addressing the global migration issue from the standpoint of human rights and to acknowledge the cultural contribution that immigrants bring to the host countries.

To carry out the mandates issued from the Ibero-American summits, parallel meetings have been instituted of the Ibero-American Meetings of Ministers of Health, which have approved an Ibero-American space for health and the launching of the first four thematic networks for cooperation in health: the Ibero-American donation and transplant network; the drug policies network; the network to combat tobacco use; and the network for public health teaching and research. The Ibero-American forum has made it easier for the countries to reaffirm their shared values and principles, with a view to building consensus for improving living and health conditions in Member Countries.

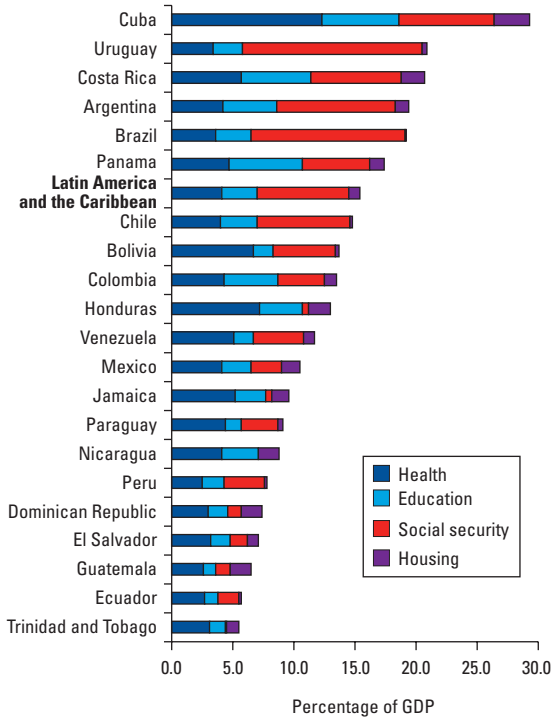
At the urging of the United States, the **Summit of the Americas** met for the first time in 1994 in Miami (USA). From the outset, its objective was to lay the groundwork for a Free Trade Agreement of the Americas, but it was acknowledged that to achieve this goal, agreement would have to be reached and progress made in pending social issues. The Summit of the Americas meets every four years, and its decisions are summarized in a Declaration and an Action Plan signed by the participating presidents and heads of state. Two summits were held in the 1990s, the Miami summit in 1994 and the Santiago summit in 1998. The Third Summit was

FIGURE 6. Evolution of public social spending as a percentage of GDP, by sector, Latin America and the Caribbean, 1990–1991, 1996–1997, and 2002–2003.



Source: Economic Commission for Latin America and the Caribbean, based on information from social spending database.

FIGURE 7. Distribution of public social spending as a percentage of GDP, by sector, Latin America and the Caribbean region and selected Latin American and Caribbean countries, 2002–2003.



Source: Economic Commission for Latin America and the Caribbean, based on information from social spending database.

held in 2001 in Quebec City, Canada, and dealt with the commitment to strengthen democracy, create prosperity, and develop human potential. For the first time, the discussion about hemispheric security included the concept of new health threats, such as the HIV/AIDS pandemic and rising poverty levels (*5*). Discussions also stressed the need to work together on health sector reforms, emphasizing concern with the essential functions of public health, the quality of care, equality of access, and the preparation of standards to govern the performance of the public health profession. Commitments entered into at this summit included strengthening hemispheric programs for the prevention, control, and treatment of communicable and noncommunicable diseases, mental illnesses, violence, and accidents, as well as participating in negotiating a framework agreement to combat smoking (*5*).

In 2004, the Special Summit of the Americas was held in Monterrey, Mexico. Its declaration sets forth a commitment to reinforce the strategies for disease prevention and treatment, health promotion, and investments in health, emphasizing the social protection of health as a pillar of human development. Support was given to the World Health Organization's initiative to provide antiretroviral treatment for three million people worldwide by 2005, and participants committed themselves to provide treatment for at least 600,000 persons in the Americas by that year.

The Fourth Summit of the Americas was held in Mar del Plata, Argentina, in November 2005. The keynote theme was "Creating Jobs to Fight Poverty and Strengthen Democratic Governance." In addition to reaffirming the commitments made at the Millennium Summit of reducing poverty by 2015 (*6*), the summit

"The economic crisis of the 1980s aggravated the social debt, plunging more people into poverty while simultaneously limiting the resources available to the social sectors. The situation seems to be a vicious cycle: lingering economic problems lead to a lack of services that adversely affects the health of the population, but the countries need a healthy population in order to participate in economic and social development."

Carlyle Guerra de Macedo, 1992

supported the creation of a strategic intersectoral partnership among ministries of health, of education, of labor, and of the environment. Under this partnership, a commitment was made to promote public policies "to protect the health and safety of all workers and foster a culture of prevention and control of occupational hazards in the Hemisphere"(*6*). Lastly, the summit recognized the urgency of developing national preparedness plans to fight influenza and avian flu pandemics before June 2006 (*6*).

The purpose of the **Latin American, Caribbean, and European Union Summit**, first held in Rio de Janeiro in 1999, is to promote and develop a strategic association based on full respect for international law; on the United Nations Charter goals and principles; and on a spirit of equality, partnership, and cooperation. The Second Summit was held in Madrid, Spain, in 2002, and stressed the importance of gender equity in combating poverty, achieving sustainable and equitable development, and assuring the well-being of all boys and girls. To that end, it recognized the importance of strengthening assistance in health and social protection. In terms of HIV/AIDS, it recognized the importance of prevention and the need to facilitate access to antiretroviral treatment. The Third Summit, which was held in Guadalajara, Mexico, in 2004, reaffirmed the commitment to achieve the MDGs in 2015 and announced the launching of the EUROsociAL program, whose objective is to promote the exchange of experience, specialized knowledge, and good practices between Europe and Latin America, particularly in the education and health sectors. It also established a commitment to strengthen bi-regional cooperation mechanisms for indigenous peoples, women's empowerment, the rights of persons with disabilities, and children's rights. The Fourth Summit was held in Vienna, Austria, in 2006, and it reaffirmed the commitment to increase official development aid, bringing it up to 0.56% of GNI by 2010 and meeting the target of 0.7% by 2015, recognizing that additional resources are required to achieve the MDGs.

The summits have led to the establishment of commitments among heads of state and government, their respective ministries, and regional and international multilateral organizations to work jointly and determinedly to attain the MDGs in the Region. In this context, the fundamental role played by health in the reduction of poverty and inequity has been strengthened. Consensuses also have been built that have had repercussions on social policy development and planning at the local level, and fundamental values have been disseminated throughout the Region. They include a recognition of the role of social determinants, the particular needs of the most vulnerable population groups, the importance of boosting the efficiency of social spending through a quest for synergies within government agencies, and the need to involve other social players, starting with their own beneficiaries, in social change actions.

THE SOCIAL CONTEXT

Individual health is not an isolated phenomenon. In fact, the greatest health determinants are social in nature, mainly poverty, undernutrition, and unemployment, but also gender, ethnic group, and race. The MDGs are commitments to reduce poverty, hunger, disease, illiteracy, environmental degradation, and gender inequity. They present a vision of development that goes far beyond economic growth, since it stresses health, education, and environmental conservation as the motors of development. Three of the eight objectives, eight of the 16 targets, and 18 of the 48 indicators are directly linked to health, and health also exerts an important influence on attaining other objectives (see the spread on the Millennium Development Goals in Latin America and the Caribbean on pp. 4–9).

The MDGs represent the first political consensus by heads of state and government, whereby they commit themselves, in an act of solidarity that transcends borders, to reduce poverty; at the same time, developed nations commit themselves to increasing official development assistance. Promoting and working towards the MDGs has led, once again, to the acknowledgment of the transcendental role played by social determinants in health, particularly in the health of the most vulnerable groups.

In 2005, the World Health Organization (WHO) established the Commission on the Social Determinants of Health to study the impact of socioeconomic and environmental conditions on health. The commission was set up to create a local and global agenda for the formulation, planning, and implementation of health policies, plans, and programs that would help to reduce health inequities and improve the quality of life and the health of individuals.

The commission stresses the role played by persistent inequalities, poverty, exploitation of certain population groups, violence, and injustice in the absence of health. Worldwide, socially disadvantaged persons have less access to basic health resources and to the health system as a whole. That is why persons belonging to more vulnerable groups become ill and die more frequently. Paradoxically, despite progress made in medical science and the fact that the planet has never had access to so much wealth, the in-

equity gap continues to widen. The commission underlines that health is not simply a biological and personal matter, but, by its very nature, it is the result of complex and changing relations and interactions between an individual's biology; the surroundings; and living conditions on the economic, environmental, cultural, and political fronts.

The MDGs and the social determinants of health are validated by the Universal Declaration of Human Rights adopted and proclaimed by the General Assembly of the United Nations on 10 December 1948 and, in turn, they reaffirm and strengthen it. In Article 25, the declaration clearly establishes the right to adequate standards of living for the health and well-being of persons and their families, when it affirms that: "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control." It adds that mothers and their small children have the right to special care and support.

The lack of access to health-related goods and services, as well as the absence of social protection plans, are key factors in explaining inequities in Latin American and Caribbean countries. In this context, it is clear that the efforts of society as a whole should focus on improving access to health systems for groups that are currently excluded, through the gradual expansion of health care service coverage and the elimination of barriers—economic, ethnic, cultural, gender-based, and labor-related—to access those services.

In order to attain the MDGs in Latin America and the Caribbean, the social and economic determinants that have a negative influence on equity must be addressed. In so doing, the probability of making headway in the reduction of existing inequality gaps and in building up the political, economic, and social rights of citizens will increase.

Poverty and Indigence

There is close correspondence between the MDGs and the major determinants of inequity. For example, the main determinant of health is poverty, and this is reflected in MDG 1, which proposes to eradicate extreme poverty and hunger.

Despite economic advances, poverty persists in all Latin American and Caribbean countries. The main elements that have caused existing high poverty rates include low growth rates, poor productivity, a limited pool of human capital, ineffective economic and social policies, and sometimes, the negative consequences of external factors.

Income often is used to measure poverty. MDG 1 proposes to reduce by half the percentage of persons earning under US$ 1 a day. For Latin America and the Caribbean, however, ECLAC establishes national indigence lines that consider the cost of purchasing a basic food basket. A broader definition, complementing the income definition, considers poverty as a human condition marked by the ongoing or chronic lack of resources, capabilities, options, security, and the power necessary to enjoy an adequate standard of living and other civil, cultural, economic, political, and social rights (*7*).

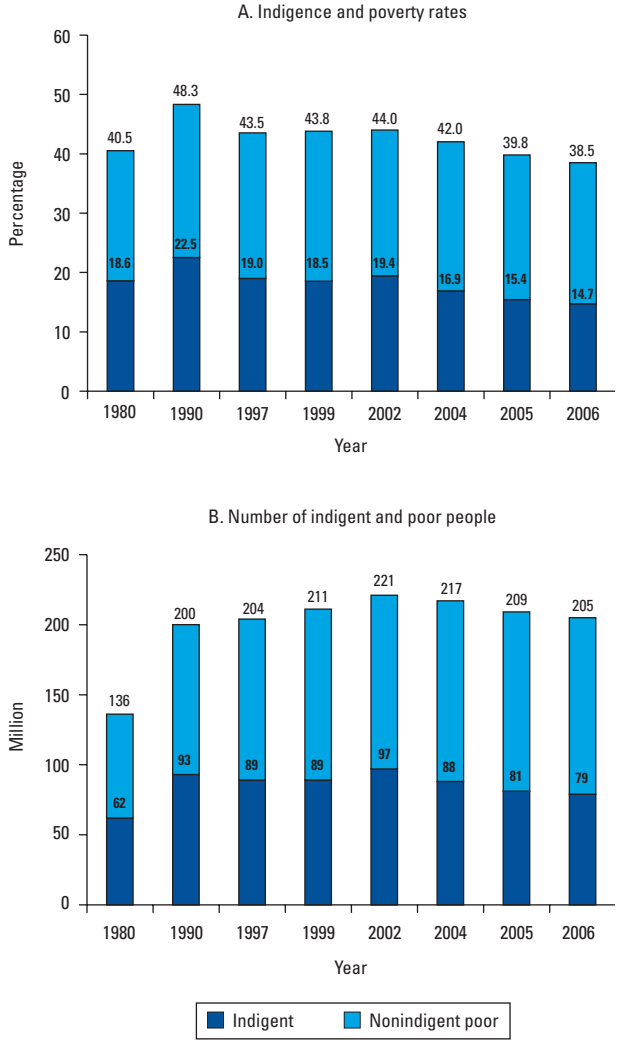
Indigence: A person is classified as "indigent" when the per capita income of the household in which he or she lives is below the "indigence line," or below the minimum income the members of a household must have in order to purchase the cost of a basic food basket, taking into consideration consumption habits, the effective availability of foodstuffs and their relative prices, as well as the differences between metropolitan areas, other urban areas, and rural areas.

Poverty: A person is classified as "poor" when the per capita income of the household in which he or she lives falls below the "poverty line"—or the minimum income the members of a household must have in order to meet their basic needs. To calculate the total value of the poverty line, the indigence line is multiplied by a constant factor of 2 for urban areas and 1.75 for rural areas. Poverty lines are expressed in each country's currency and are based on the calculation of the cost of a particular basket of goods and services, employing the "cost of basic needs" method.

According to the most recent calculations, the monthly equivalent in dollars of the poverty line varies between US$ 45 and US$ 157 in urban areas and between US$ 32 and US$ 98 in rural areas; the figure for indigence lines varies between US$ 23 and US$ 79 in urban areas and between US$ 18 and US$ 56 in rural areas (in all cases, the lowest values correspond to Bolivia and the highest to Mexico).

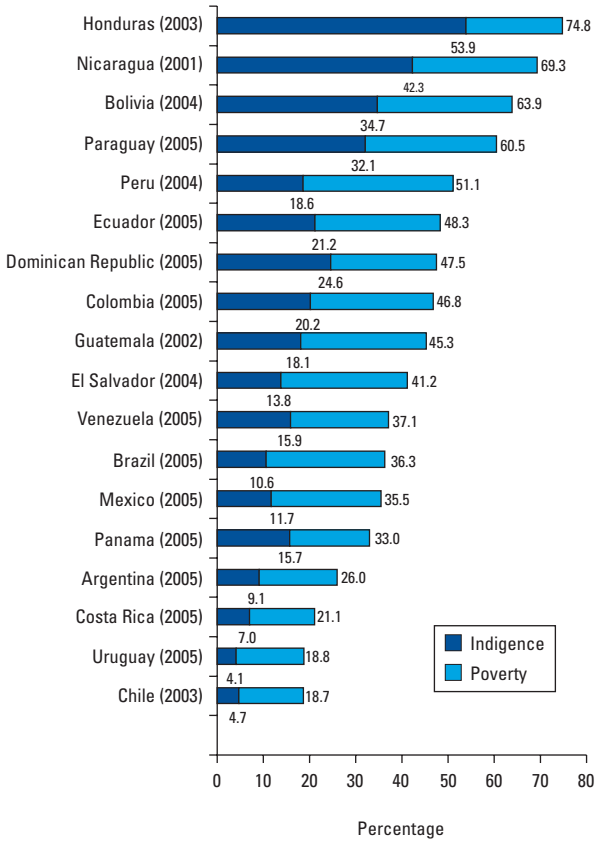
Source: Economic Commission for Latin America and the Caribbean (ECLAC), Social Panorama of Latin America 2006.

FIGURE 8. Indigence and poverty rates (A) and numbers of indigent and poor persons (B), Latin America and the Caribbean, 1980–2006.



Source: ECLAC. Social panorama of Latin America 2006.

FIGURE 9. Poverty and indigence rates, Latin America and the Caribbean, most recent available estimates.



Source: Economic Commission for Latin America and the Caribbean. Social Panorama of Latin America 2006. Statistical Annex.

According to ECLAC estimates, there were significant reductions in poverty and indigence rates in Latin America and the Caribbean between 2002 and 2006. Over that period, the percentage of people living in poverty fell from 44% to 38.5% and the figures for indigence fell from 19.4% to 14.7%. In terms of numbers of poor and indigent, it is estimated that in 2006, 205 million people lived in poverty and 79 million in indigence (*8*) (Figure 8, A and B).

Moreover, the poverty rate is almost twice as high in rural areas as in urban ones and the indigence rate is almost triple. With continuous migration to cities, however, the number of poor and indigent people continues to rise in urban areas.

ECLAC considers that the 2003–2006 period saw the best performance in social issues in the last 25 years. In 2006, the poverty rate fell below 1980 levels for the first time (*9*). In terms of progress toward MDG 1 and its goal of reducing indigence by half between 1990 and 2015, the estimated figures for 2006 indicate 68% progress for Latin America and the Caribbean (*9*).

In Latin American and Caribbean countries, however, poverty and indigence figures for 2002–2005 vary significantly. Despite progress made, several countries still have poverty levels above 60% (see Figure 9).

These results should be viewed with caution, given that they are national averages and can mask significant inequalities between different population groups or between geographic areas within the countries.

Poverty also expresses itself in terms of unsatisfied basic needs, including a lack of access to education (in terms of enroll-

ment and number of completed years), housing (in quality and available per capita space), and certain public services (potable water, basic sanitation, and electricity).

Unlike changes in household income that come about as a result of changes in the economy, improvements in unmet basic needs come more slowly. According to ECLAC, in Latin America and the Caribbean the two most frequent unmet needs that affect more than 30% of the countries' population are the housing shortage, measured by the percentage of overcrowded houses (ranging from 5% in Uruguay to 70% in Nicaragua) and the lack of appropriate waste disposal systems in rural areas (ranging from 8% in Chile to 83% in Guatemala). At least 10% of the Latin American population is affected by one or the other of these needs (*2*).

Poverty is a determinant of health; moreover, poor health is both a cause and a consequence of poverty. Disease can reduce family finances, learning capacity, productivity, and quality of life, leading to the onset or perpetuation of poverty. In turn, poor people lack adequate nutrition and are more exposed to individual and environmental health risks and have fewer possibilities of gaining access to pertinent information and treatment. In short, the poor are at greater risk of disease and disability than other population groups.

Hunger and Undernutrition

One of the targets of MDG 1 is to reduce by half, between 1990 and 2015, the percentage of people who suffer from hunger. Two of the indicators for this target deal with nutrition. Indicator 4 measures "the prevalence of underweight children under 5 years of age" and indicator 5 evaluates the "proportion of population below the minimum level of dietary energy consumption." Undernutrition is as powerful a determinant of health as poverty, and, in most cases, poverty causes undernutrition. Large segments of the population experience social exclusion, having limited possibilities of living a healthy and productive life and, therefore, limited possibilities of escaping from poverty. Undernutrition is one of the leading ways that poverty and inequality get passed on from generation to generation. Undernourishment affects 10% of the Latin American and Caribbean population. Between 1990 and 2003, the number of undernourished persons in Latin America fell from 59 million to 52 million, which means that the region is moving apace toward MDG 1. Progress is uneven, however; most of the advances are concentrated in South America and the Caribbean, while increases in both numbers and in prevalence are observed in Central America (*10*).

According to ECLAC, between 1990 and 2003, the percentage of the Latin American and Caribbean population that suffered from undernutrition fell from 13% to 10%. Over the same period, out of 24 countries with available information, only 5 had been able to reach the goal of reducing hunger by half, achieving the target set for 2015. Nine other countries made significant progress, with about a 60% reduction in undernutrition compared to 1990. Another six, although they also made some progress, will not attain the 2015 goal (Figure 10). In the period in question, undernourishment increased in three countries (*10*).

Nutritional deficiencies have an impact throughout life, but their effects are more harmful during the early years. The development of human capacity requires adequate nutrition from early infancy. Undernutrition hampers the intellectual and physical development of children, placing them at multiple physical and cognitive disadvantages later on in life.

According to Food and Agriculture Organization (FAO) figures, in Latin American and Caribbean countries there are great differences in the percentage of persons who are unable to cover their minimum dietary energy requirements, with extremes ranging from 2% in Argentina, Barbados, and Cuba to 47% in Haiti (Figure 11). Overall, this situation also is reflected in the levels of underweight (low weight-for-age) among children under 5 years old, which ranges from 0.7% in Chile to 22.7% in Guatemala (Figure 12).

Undernutrition is the most direct consequence of hunger and has a series of negative effects on health, education and, over time, on a country's productivity and economic growth. Undernutrition makes individuals more vulnerable to various diseases and affects their survival. Undernourished children are more likely to become ill, which means that they often enroll late in the education system and are absent from school more often. Micronutrient deficiencies, particularly deficiencies in iron, zinc, iodine, and vitamin A, are linked to cognitive deterioration, which translates into decreased learning. These disadvantages, com-

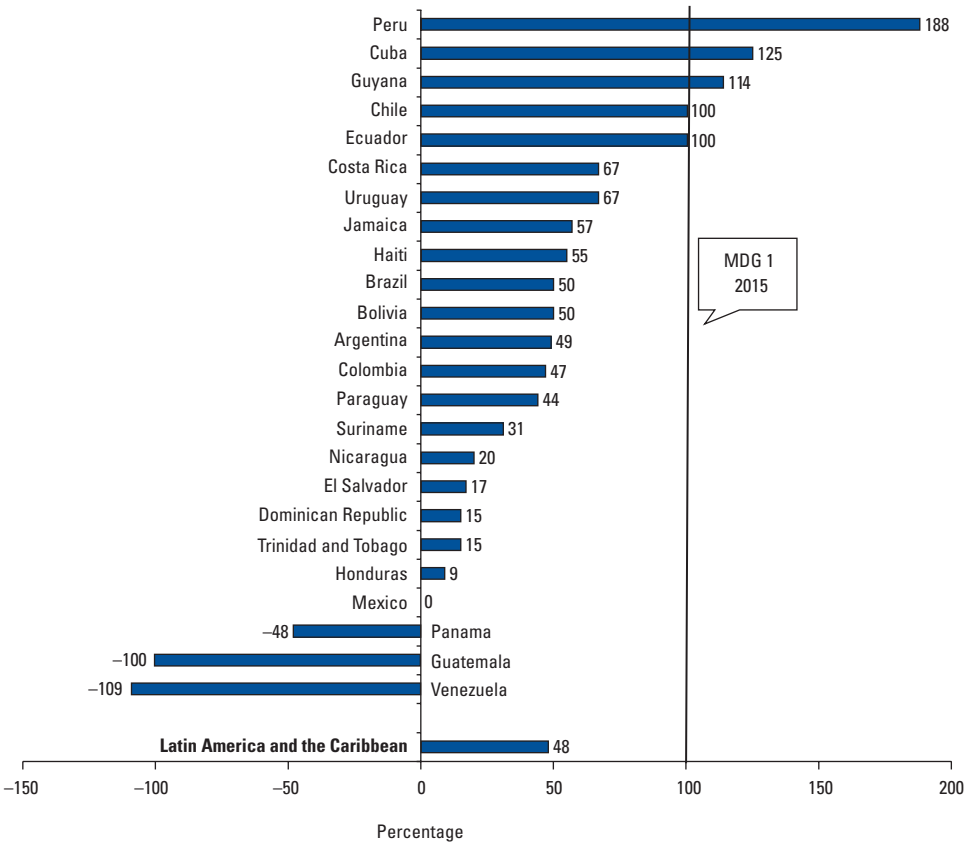
Undernourishment: Food intake that is insufficient to meet dietary energy requirements continuously.

Undernutrition: The result of undernourishment, poor absorption and/or poor biological use of nutrients consumed.

Malnutrition: An abnormal physiological condition caused by deficiencies, excesses, or imbalances in energy, protein, and/or other nutrients.

Source: FAO glossary, available at http://www.fivims.net/glossary.

FIGURE 10. Trends in the rate of undernourishment, in terms of progress (%) towards MDG 1—which proposes to eradicate extreme poverty and hunger by 2015—Latin America and the Caribbean and selected countries, from 1990–1992 to 2000–2002.



Source: Food and Agriculture Organization of the United Nations. The State of Food Insecurity in the World 2004.

pounded over the life cycle, can result in adults who cannot develop to their maximum intellectual or physical potential, nor reach their productive potential.

Unemployment

Employment is a basic health determinant that acts in various ways. Access to labor markets is a contextual determinant, income is a structural determinant, and labor conditions are intermediate determinants. Sustainable employment is crucial if Latin American and Caribbean countries are to reduce poverty and reach MDG 1.

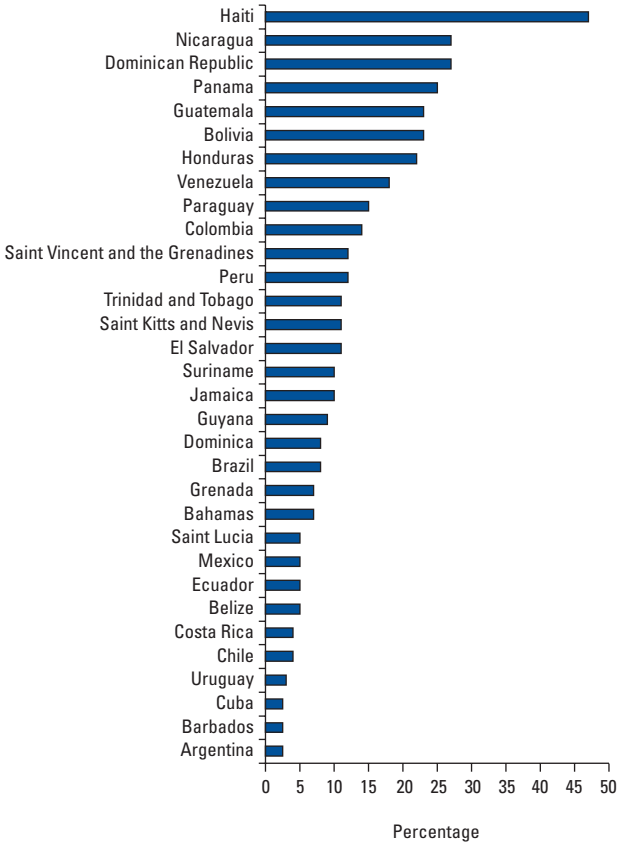
Between 1995 and 2005, the unemployment rate[2] in Latin America and the Caribbean held steady at about 10%, while the employment rate tended to decline up to 2002, after which it began to rise again (Figure 13). Employment in the informal sector represents a very high percentage of total employment, as does the informal economy's contribution to GDP (Figure 14).

The main disadvantages of working in the economy's informal sector include lack of access to social welfare and pension benefits, which leaves these workers vulnerable to unforeseen events such as serious illnesses, accidents, loss of income, or death. In 2005, 58.9% of the employed urban population in Latin America had health protection and/or pensions. However, informal workers continue to experience coverage rates that are significantly lower than those for the employed taken as a whole, since just 33.4% of them are covered by some kind of health protection and/or pension plan (*11*).

Juvenile unemployment is another expression of social exclusion in many Latin American and Caribbean countries. Youths' inability to find work leads to feelings of marginalization and uselessness and can contribute to their involvement in illegal activities. Furthermore, for many youths, not having a job means

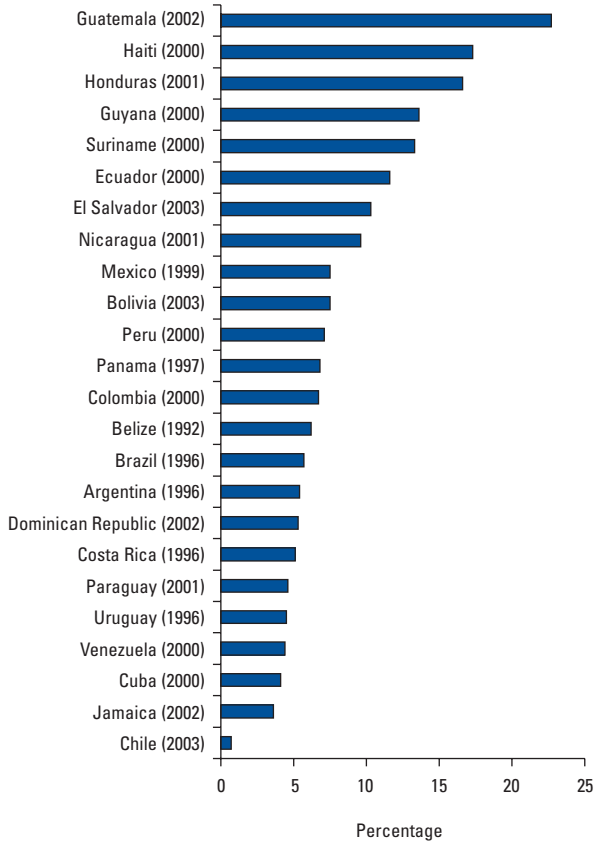
[2]Number of persons who are not working, are available to work, or are seeking work, as a percentage of the total labor force.

FIGURE 11. Percentage of persons living below the minimum dietary energy level, Latin American and Caribbean countries, 2001–2003.



Source: Economic Commission for Latin America and the Caribbean. Social Panorama of Latin America 2006.

FIGURE 12. Percentage of underweight (low weight-for-age) children under 5 years old, selected Latin American and Caribbean countries, most recent year available.



Source: Economic Commission for Latin America and the Caribbean. Social Panorama of Latin America 2006. Statistical Annex.

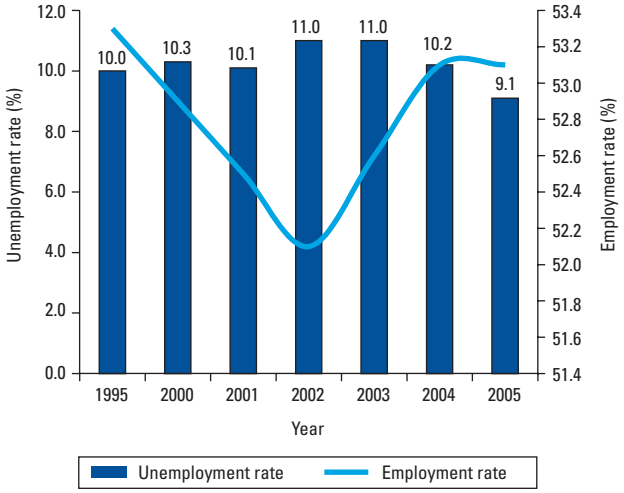
not having the chance to escape from poverty, which helps to perpetuate the needs they have experienced practically since they were born. According to ECLAC, in 2003–2004, the unemployment rate among youths 15–24 years old in Latin America and the Caribbean averaged 19.6% for males and 26.2% for females. These figures were much higher than in 1990 (11.5% and 13.9%, respectively) (*12*).

Figure 15 shows the wide variations seen in youth unemployment in Latin American and Caribbean countries. In every case except for El Salvador, unemployment is higher among females than males. In Argentina, the unemployment rate is almost the same for both sexes, although the figures are high: one out of every three youths in Argentina is unemployed. Unemployment among males 15–24 years old ranges from a minimum of 5.6% in Mexico to a maximum of 34.1% in Uruguay, while the figures for females range from 7.6% in Mexico to just over 41% in Colombia and Uruguay. For the most recent year for which information is available, the average unemployment rate among females 15–24 years old is more than 8% higher than the rate for males in the same age group.

These figures often refer to urban or metropolitan areas, or only reflect open unemployment, failing to consider other aspects such as underemployment or employment in the informal sector, which is extremely high in some countries. Employment figures among youths do not take into account the quality of work or whether it pays sufficient wages or provides social protection mechanisms to enable young people to escape poverty.

Target 16 of MDG 8 refers to youth unemployment, extending the commitment to, "in cooperation with developing countries, develop and implement strategies for decent and productive work for youth." This commitment is consistent with the quest for labor conditions that will produce good health for future generations. And yet, according to data reported by the International Labor Organization (ILO), the percentage of underemployed youths is increasing, with some working for fewer hours than they would like and others working long hours without fair compensation (*13*).

FIGURE 13. Unemployment and employment rates (%), Latin America and the Caribbean, 1995–2005.



Source: Economic Commission on Latin America and the Caribbean. Economic Study of Latin America and the Caribbean, 2005–2006, p. 85. 2006.

Access to Education

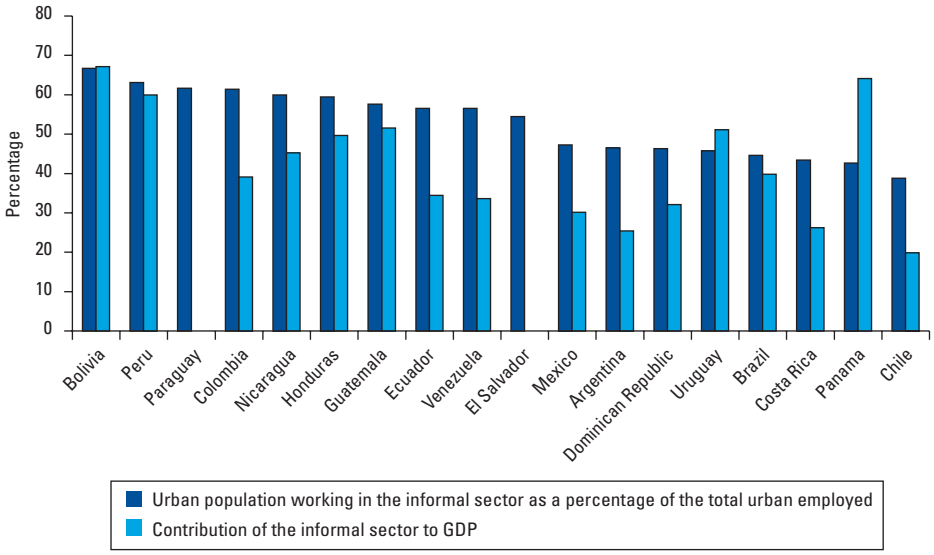
The relationship between education and poverty is clear, particularly the relationship between years of schooling and extreme poverty. The poorest children have fewer opportunities for completing primary school, and by failing to do so they replicate the conditions of extreme poverty that halted their education in the first place. Given these circumstances, MDG 2 proposes the attainment of universal primary education as a strategy for combating poverty.

The impact of education on the productive potential and income prospects of individuals has been widely documented (*14*). Many studies have also linked the amount of education to the health of individuals and that of their families. Figure 16 shows the relationship between the mother's years of schooling and infant mortality. The link between education and health problems and conditions such as maternal mortality, HIV/AIDS, obesity, and various lifestyle problems also has been proven (*15*).

Given the key role that education plays in the distribution of opportunities for well-being, particularly its impact on health, it is fundamental to pursue an approach to achieving the MDGs that is comprehensive, synergistic, and indivisible. Progress has clearly been made in attaining universal public education (*16*)—Latin American and Caribbean primary-school enrollment rates have increased, on average, from 86.2% in 1990 to 91.5% in 2004 (Figure 17). Yet, inequity in access by the most vulnerable groups and disparities within countries continue to be the greatest challenge in education.

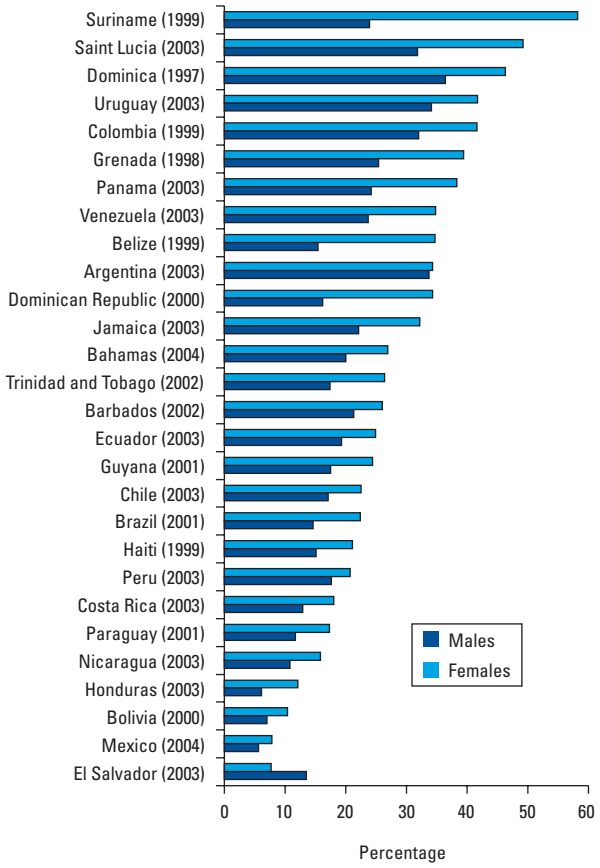
An ECLAC analysis in 2002 found that at least one in four youths 15–19 years old from the poorest 20% of Latin American and Caribbean households failed to complete primary school. The same study indicated that the opportunities for completing primary school for children in rural areas are much lower than for children in urban areas, and that there also were significant differences in primary school completion rates between indigenous and nonindigenous populations, particularly in Bolivia, Brazil, Ecuador, Guatemala, Nicaragua, Panama, and Paraguay (*9*).

FIGURE 14. Urban employment in the informal sector and contribution of the informal economy to the GDP, selected Latin American countries, 2003–2005.



Sources: Economic Commission for Latin America and the Caribbean. ECLAC Review 88. 2006; World Bank, Doing Business Database.

FIGURE 15. Unemployment rate among 15–24-year-olds, by sex.



Source: United Nations Statistics Division. Available from: http://mdgs.un.org/unsd/mdg/data.

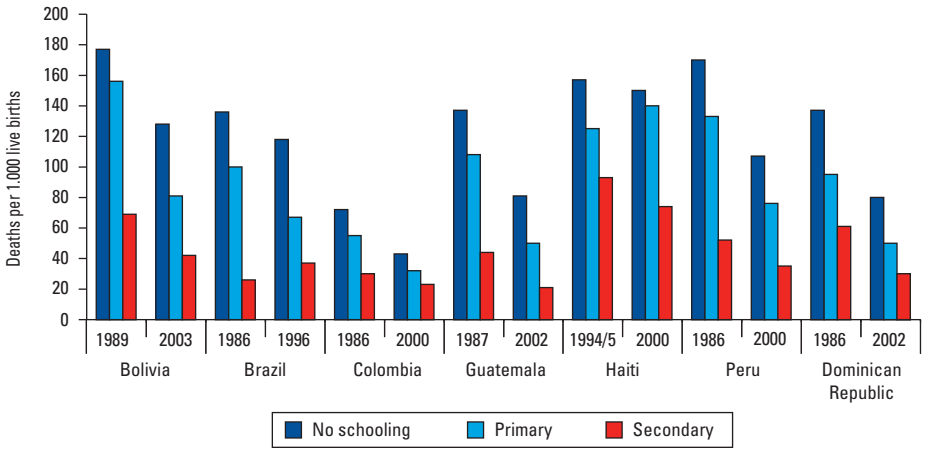
One of the greatest challenges for reducing poverty, and one that has an impact on health determinants, is the educational lag in adults. Based on the 2000 round of censuses, in 2005 UNESCO estimated that 9.5% of the population older than 15 years old in 28 Latin American and Caribbean countries was illiterate, with figures of 8.8% for men and 10.3% for women (*17*). Although significant progress was made in attending to this priority group, wide gaps remain between countries, as shown in Figure 18. In Guatemala, Haiti, Honduras, and Nicaragua more than 20% of the adult population is illiterate and in Bolivia, Brazil, the Dominican Republic, El Salvador, and Jamaica more than 10% of the population is illiterate.

Inequities in Health Conditions

Inequities are inequalities that are described as and considered to be unfair and avoidable. Consequently, actions to reduce inequities in health seek to correct the injustice that poor health conditions of the most vulnerable groups represent. Inequality in health is a generic term used to designate differences, variations, and disparities in the population's health status. Most inequities in health between social groups (differences by class or race, for example) reflect an unfair distribution of social determinants of health (*16*).

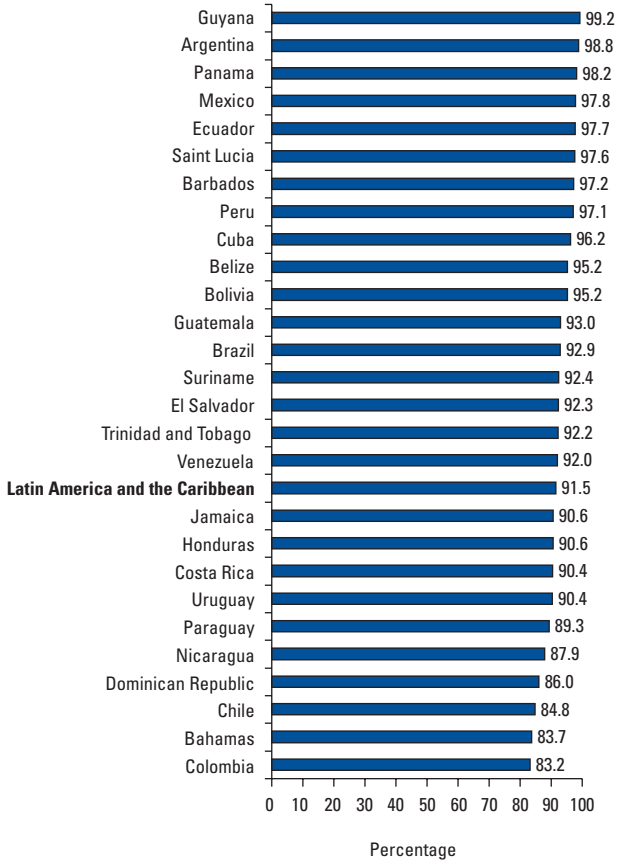
The average health status in Latin America and the Caribbean is relatively good. However, an examination within subregions and within countries reveals inequities. Inequities in access to health services manifest themselves as wide gaps in subregional health indicators, some of which are exemplified in Table 4. In addition, inequities within countries are very pronounced. In a group of selected countries (Bolivia, Brazil, Colombia, Guatemala, Haiti, Nicaragua, Paraguay, and Peru) 34% of the poorest quintile

FIGURE 16. Trends in infant mortality rates, by level of schooling of the mother, selected Latin American and Caribbean countries, 1986–2003.



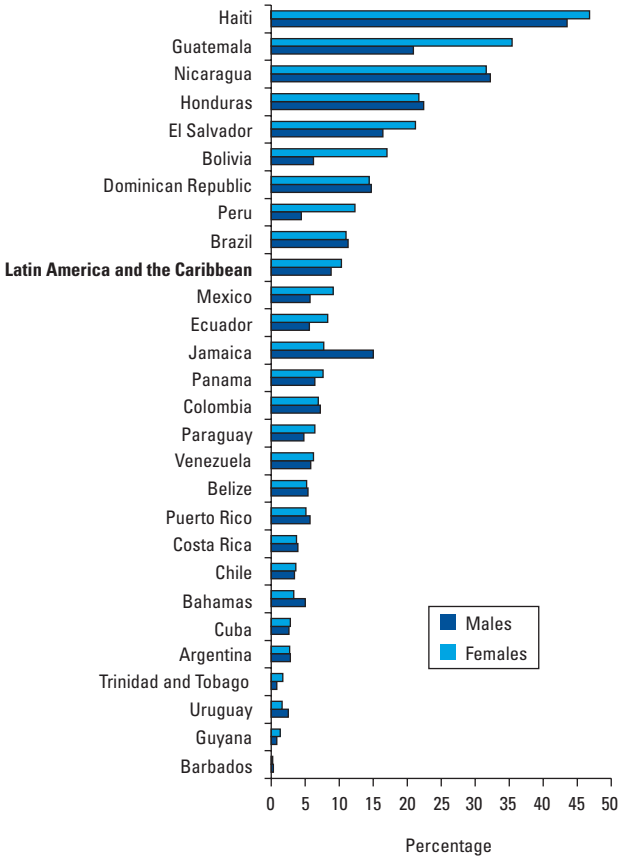
Source: Economic Commission for Latin America and the Caribbean. Millennium Development Goals: a Latin American and Caribbean Perspective. 2005.

FIGURE 17. Net primary-school enrollment rates, selected Latin American and Caribbean countries, 2004.



Source: Economic Commission for Latin America and the Caribbean. Social Panorama of Latin America, 2006. Statistical Annex.

FIGURE 18. Trends in illiteracy rates, population older than 15 years of age, Latin America and the Caribbean and selected countries in the region, 2005.



Source: UNESCO-IEU. Online database.

and 94% of the wealthiest quintile have access to health care services (Table 5).

These levels of inequality in access translate into yawning gaps in health indicators, such as childhood malnutrition and maternal mortality. For the same group of eight countries, the simple average for undernutrition in children in the poorest quintile is 6.3 times higher than in the richest quintile. There are also large differences between countries, with the quotient ranging from 3.6 in the least unequal cases to 10.1% in countries with the greatest inequality. In Bolivia, for example, the percentage of births attended by health care professionals (an indicator for MDG 5) in 1998 was just 39% in the poorest quintile, compared to 95% in the richest. Moreover, the percentage of children 0–2 years old who were immunized against diphtheria, tetanus, and polio in the richest quintile is 9% higher than that in the poorest quintile (*18*).

The World Bank's concentration index (*1*) shows that in several Latin American countries, the greatest inequities in health are concentrated in the poorest households.[3] For mortality in children under 5, the concentration index worldwide in 2002 was –0.12; it was –0.17 for Latin America, meaning that it was more concentrated in the poorest households there than in the rest of the world. The index was even higher in Brazil, Bolivia, and Peru, for –0.26, –0.25, and –0.22, respectively. In terms of underweight, Latin America again had a concentration index that was farther from zero than did the rest of the world (–0.28, while the global index was –0.17), with extremes such as the Dominican Republic and Peru with –0.44 and –0.40, respectively. Brazil, Paraguay, and Peru had values farthest away from zero in the prevalence rates for diarrheal diseases. In indicators such as the coverage of

[3]The concentration index is a measurement for determining the degree to which a variable is distributed unequally along the income profile of a population. Aspects such as infant mortality ("bad") produce a negative concentration index and aspects such as immunization ("good") produce a positive value. A concentration index of zero indicates absolute equity.

TABLE 4. Selected health indicators: worldwide; Latin America and the Caribbean; and Bolivia, Guatemala, Guyana, Haiti, Honduras, and Peru.

Indicator	World average	Latin America and Caribbean average	Countries with the greatest difference from Latin America and Caribbean average
Infant mortality rate[a]	54	27	Haiti 74 Bolivia 54 Guyana 48
Mortality rate among children under 5 years[b]	79	31	Haiti 117 Bolivia 69 Guyana 64
Percent childbirths attended by trained personnel	62	88	Haiti 24 Guatemala 41 Honduras 56
Maternal mortality rate[c]	410	194	Haiti 680 Bolivia 420 Peru 410

[a]Number of deaths among children under 12 months for every 1,000 live births.
[b]Number of deaths among children under 5 years for every 1,000 live births.
[c]Number of women per 100,000 who die from complications during pregnancy or delivery, according to the estimation model.
Sources: World Bank (2006) World Development Indicators Database 2004 and PAHO (2006) Regional Core Health Data Initiative.

TABLE 5. Access to health care services, by income quintile, selected countries in Latin America and the Caribbean, 1996.

Country	Average	1 (poorest)	2	3	4	5 (richest)
Bolivia	56.7	19.8	44.8	67.7	87.9	97.9
Brazil	87.7	71.6	88.7	95.7	97.7	98.6
Colombia	84.5	60.6	85.2	92.8	98.9	98.1
Guatemala	34.8	9.3	16.1	31.1	62.8	91.5
Haiti	46.3	24.0	37.3	47.4	60.7	78.2
Nicaragua	64.6	32.9	58.8	79.8	86.0	92.3
Paraguay	66.0	41.2	49.9	69.0	87.9	98.1
Peru	56.4	14.3	49.6	75.4	87.2	96.7

Source: Inter-American Development Bank (2004). Millennium Development Goals in Latin America and the Caribbean, p. 139.

basic universal vaccination plans, prenatal care, and assistance during childbirth by trained personnel, Latin America had concentration indexes that indicate that these "good" conditions are concentrated in the richest households more frequently than in the rest of the world.

For all the indicators analyzed, Latin America had concentration indexes farther away from zero than did the rest of the world, which is consistent with the findings of a study on socioeconomic inequality that indicated that Latin America appeared systematically as the most inequitable region on the planet (*19*).

Gender, Ethnic, and Racial Inequities

One of the most important social determinants in public health is inequity in access to goods and services. When examining these inequalities from the standpoint of gender, ethnic group, and race in Latin America and the Caribbean, it can be seen that poor women, indigenous people, and Afro-descendents are at a disadvantage in terms of access to health services.

Autonomy for women and gender equality are acknowledged to be key objectives in the Millennium Declaration. For Latin American and Caribbean countries, the pursuit of equity and the

TABLE 6. Estimates of the indigenous population as a percentage of the total population, selected countries of the Americas.

	Total indigenous population		
Percent of total population	<100,000	100,000 to 500,000	>500,000
More than 40%			Peru Guatemala Bolivia Ecuador
5%–40%	Guyana Belize Suriname	El Salvador Nicaragua Panama	Mexico Chile Honduras
Under 5%	Costa Rica Guyana Jamaica Dominica	Argentina Brazil Paraguay Venezuela	Canada Colombia United States

Sources: Reports on the Evaluation of the International Decade of the Indigenous Peoples of the World, PAHO, 2004. Hall G, Patrinos AH. Indigenous Peoples, Poverty and Human Development in Latin America: 1994–2004. Washington, DC: World Bank, 2005. Montenegro R, Stephens C. Indigenous Health in Latin America and the Caribbean [Indigenous Health 2]. Lancet 2006; 367:1859–69.

provision of culturally sensitive services for indigenous peoples and communities of African descent is a social debt that can no longer be postponed; an effective means to combat poverty, hunger, and disease; and a way to stimulate truly sustainable development (*10*). Because these are cross-cutting objectives, the adoption of policies that take into consideration gender, ethnic, and racial issues will contribute to attain all the MDGs, because the goals are related to the development of capabilities (education, health, nutrition); access to resources and opportunities (jobs, income, property rights, political participation); and security (protection from violence and abuse).

In Latin America and the Caribbean, cultural diversity is largely determined by the existence of some 40 million indigenous people, who represent more than 10% of the total population (see Table 6). There are about 400 different ethnic groups, each with a different language, view of the world, and social organization, as well as different forms of economic organization and modes of production responsive to their ecosystems (*20*). As shown in Table 7, different countries of the Americas face major challenges related to health care for indigenous populations. The Inter-American Development Bank (IDB) estimates that in countries where household surveys are broken down by ethnic group, up to one-fourth of the difference in income levels can be attributed simply to the fact of belonging to an indigenous or Afro-Latin ethnic group (*21*).

Causes of Inequity in Access to Essential Health Care Resources

Women, particularly indigenous women, suffer most from the consequences of poverty. In Bolivia, for example, illiteracy is highly concentrated among the indigenous women, affecting one out of four women over the age of 35. The same holds true in Peru, where indigenous women who are heads of households have 4.6 fewer years of schooling than nonindigenous women (*22*).

When society ascribes a domestic role to women, it limits women's opportunities to participate in the productive arena; the lack of recognition of the economic and social worth of women's work at work and at home is the root of gender inequity.

While indicators relating to women's education have shown progress, such is not the case for indicators of women's participation in the labor or political arenas. Women participate in the workforce less than men, and although the figure for urban women in Latin America rose from 37.9% to 49.7% between 1990 and 2002, the difference with men's participation averaged more than 30% for the period (*23*). Urban males' participation in the workforce ranged from 71% (Uruguay, 2004) to 83% (Venezuela, 2003 and Nicaragua, 2001), while the figures for women ranged from 45% (Costa Rica, 2004 and Chile, 2003) to 57% (Bolivia, 2002; Colombia, 2002; and Paraguay, 2000) (*2*).

Unemployment is higher among women in all Latin American countries, except for El Salvador, Mexico, Nicaragua, and Peru. In the Dominican Republic, open unemployment among urban males was 13% in 2003; for women, the figure was 31% (*2*). Women also earn less then men, and in Latin America they are paid 35% less, on average (*2*). In 2002, women earned 58% of what men earned in Guatemala and 77% in Colombia (*23*). Figure 19 shows the average income of women compared to men.

In Latin America and the Caribbean, the percentage of women working in the economy's informal sector and at part-time jobs is higher than for men. One of the reasons is that women seek to make their domestic and labor responsibilities compatible. But both informal and part-time jobs tend to receive less protection or to be left out of social security coverage and health insurance plans. In 2002, the average percentage of urban women working in low productivity sectors (informal sector) was 56%, while the figure for men was 48% (*2*). This difference is greater in Bolivia (76.7% and 58.5%, respectively) and in Peru (71.7% and 56.7%, respectively) (*24*).

During the 1990s, 40% of women and 20% of men worked part time in Argentina; 33% of women and 12% of men worked part time in Venezuela; and 41% of women and 17% of men worked part time in Bolivia (*25*).

Indigenous people and descendents of Africans tend to work at low-paying jobs, mainly in the informal economy, which means that they lack social protection and health insurance. Their work often entails health risks. In Bolivia, according to a 2000 study, indigenous people work at 67% of insecure jobs and 28% of semiskilled jobs. Just 4% of indigenous workers have jobs that require

TABLE 7. Health care challenges for indigenous peoples.

Poverty

Ecuador. In rural zones in the sierra and the Amazon, which are areas with indigenous populations, it is estimated that 76% of children are poor (PAHO, 1998).

Illiteracy

Peru. In the Peruvian Amazon, 7.3% have no schooling whatsoever, compared with 32% in indigenous communities (INEI-UNICEF, 1997).

Unemployment

El Salvador. Unemployment among the indigenous population is 24% (PAHO, 2002).

Undernutrition

Guatemala. The chronic undernutrition rate is 67.8% among indigenous peoples and 36.7% among nonindigenous (PAHO, 2002).

HIV/AIDS

Honduras. Garífunas and English-speaking groups are most affected by HIV/AIDS (PAHO, 2002).

Basic services

El Salvador. Among the indigenous population, 33% has electricity, while 64% use candles; 91.6% drink river water or well water (PAHO, 2002).

Ethnic and cultural heterogeneity

Brazil. The indigenous population is estimated to be 350,000 persons belonging to nearly 210 different groups who speak 170 languages. Although they constitute 0.2% of the total population, indigenous people are present in 24 of the 26 states (PAHO, 2003).

Infant mortality

Mexico. The infant mortality rate among indigenous children was 59 per 1,000 live births in 1997, which is twice as high as the national rate (PAHO, 2002).

Maternal mortality

Honduras. The national average for maternal mortality is 147 deaths per 100,000 live births. In the departments of Colón, Copán, Intibucá, Lempira, and La Paz, which are areas with indigenous populations, the maternal mortality rate fluctuates between 255 and 190 deaths per 100,000 live births (PAHO, 1999).

Infectious diseases

Nicaragua: The municipalities affected by sickle-cell trait are located in the autonomous regions on the Atlantic coast, which is where indigenous people and Afro-descendents live (PAHO-NIC, 2003).

Diabetes, obesity, alcoholism

United States. The indigenous population has a far greater probability of dying from liver disease related to alcohol abuse that the general population (PAHO, 2003).

Suicide

Canada. The suicide rate is two to seven times higher among the indigenous population than the general population and is a cause of concern, particularly among young males in Inuit communities (PAHO, 2002).

Location

Indigenous populations are generally scattered, sometimes are on the move, and are difficult to reach; they mostly live in rural, marginal urban, and border areas. Several indigenous peoples are multinational, such as the Miskito of **Nicaragua** and **Honduras** and the Quechua of **Colombia**, **Ecuador, Peru, Bolivia, Argentina** (PAHO, 2002).

Culturally appropriate care

In the evaluation of essential public health functions, function 8 (human resources development and training in public health) ranks poorly in Latin America and the Caribbean (38%); the component for providing culturally sensitive care also rates poorly (17%) (PAHO, 2002).

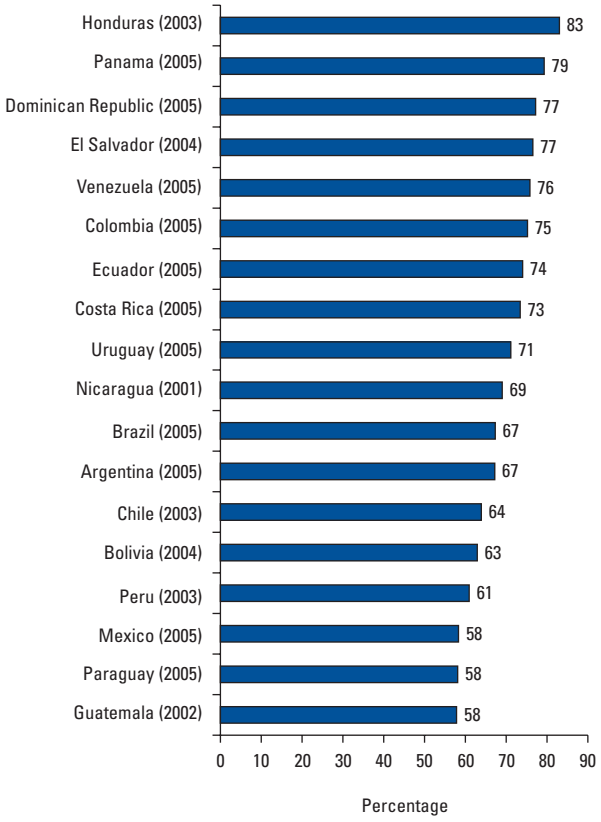
Source: PAHO (2003) Health of indigenous peoples initiative. Strategic directions and plan of action 2003–2007.

higher skills. In 2000, one out of every five indigenous workers in Chile had a temporary job. In Guatemala, 81% of indigenous people worked in the informal economy (*26*)

Unemployment is also higher among indigenous people and Afro-descendents. In Brazil, unemployment is higher among Afro-descendents than among whites (13.8% for Afro-descendent women and 8.4% for men). In 2001, average wages earned by black women were 53% of white women's (*27*).

Women, indigenous people, and Afro-descendents have less access to social benefits and long-term health care plans. Also, given their roles in childbearing and in child rearing and because culturally they are the main caregivers for the elderly and the chronically ill, women experience more breaks in their work history, which diminishes their access to insurance. The gap in contributions between men and women is extremely large and widens with age in every Latin American country. On average, in 2002 among 15–64-year-olds, 19% of women and 32% of men, on average, made contributions to the social security system in 2002 (*23*). These factors translate into pensions for women at age 65 that are equivalent, on average, to 77% of the pensions received by men (*23*).

FIGURE 19. Average income of women compared to men, selected Latin American and Caribbean countries, most recent year for which information is available.



Source: Economic Commission for Latin America and the Caribbean. Social Panorama of Latin America 2006. Statistical Annex.

Health and Equity in Gender, Ethnicity, and Race

Analyzing health status from the gender equity standpoint underlines conditions and problems that: (a) are exclusive to one sex or the other; (b) respond differently to risks by sex; (c) affect men and women differently; and (d) can be avoided. The categories that usually respond to these criteria are: sexual and reproductive health (fertility regulation, teenage pregnancy, maternal health, HIV/AIDS and other sexually transmitted infections); malignant neoplasms (breast and uterine cancer, prostate cancer, lung cancer); and several conditions that present clear differences by sex in prevalence and risks, such as accidents and violence (murder, suicide, violence against women), diseases of the circulatory system, nutritional problems, diabetes, and cirrhosis of the liver.

In all Latin American and Caribbean countries, women have longer life expectancy at birth and lower mortality than men in all age groups, except in the perinatal period and early infancy—in the Americas, women live an average of 5.9 years longer than men. The advantage ranges from 7 years longer in Argentina, Brazil, and Uruguay and 1.3 years longer in Haiti. Women's greater longevity means that they are the majority of older adults. Women account for 56% of the population over 60 years old in Latin America and the Caribbean (*28*).

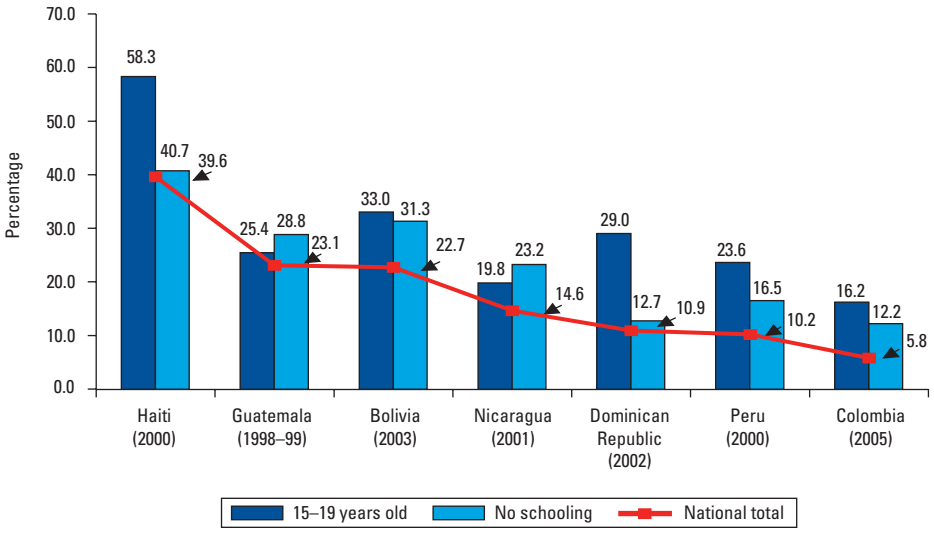
Women's greater longevity does not necessarily mean a better quality of life, however. Estimates of healthy life expectancy expressed in years of life free from disability indicate that differences by sex tend to be smaller when quality of life is included in the consideration. In the Americas, figures show that the gap in healthy life expectancy between men and women removes almost two years from the life expectancy at birth figure, and this difference is proportionally higher in the poorer countries (*29*). PAHO's SABE-2000 survey shows that in seven Latin American and Caribbean cities, the frequency of disability among persons 60 years old and older was 27% to 52% higher for women than for men (*30*). Although they live longer, women experience more illness and disability than men throughout their lives. This differential is more pronounced in cases of acute conditions and short-term disability during the reproductive years, and in chronic conditions and disabilities in the elderly. In contrast, men experience fewer illnesses and disabilities, but their health problems, when they occur, tend to be lethal (*31*).

There are also differences between the life expectancy figures of indigenous populations compared and those of nonindigenous persons, as well as between Afro-descendents and whites. A study conducted in Mexico comparing indigenous and nonindigenous municipalities found that in 1900–1996, indigenous Mexicans lived for 64 years and nonindigenous, for 68 (*32*). In Brazil, life expectancy in 2000 was 71 years for whites and 64 years for blacks (*27*).

The nature and size of the gender gaps related to length and quality of life vary substantially depending on the socioeconomic and the cultural contexts. WHO documented an example of the interaction between gender and socioeconomic inequality in 13 Latin American countries by estimating the risk of premature death (death between 15 and 59 years old) for poor and non-poor men and women (*33*). Calculation of the ratio for the risk of premature mortality between poor and non-poor persons showed the impact of poverty on the probability of survival of men and women. In 1990, in 10 Latin American and Caribbean countries, the risk of premature death among poor men was 2 to 5 times higher than that for non-poor men; for poor women, the same risk was 4 to 12 times higher than for non-poor women.

Women older than 60 years of age are the majority of the older adult population, and they also are one of the most vulnerable groups in society. These women are affected by loneliness, poverty, disease, and a lack of social and economic benefits. Women living longer means that that they experience higher rates of widowhood and years lived without a partner. In addition, the cumulative effect of their diminished participation in the workforce, lower wages and, consequently, lower contributions to retirement systems during their lives, means that women reach

FIGURE 20. Unmet contraception needs among women and adolescents with no schooling, selected Latin American countries, most recent year for which information is available.



Source: Demographic and health surveys performed in each country.

old age at a disadvantage, not just in economic terms, but also in terms of their entitlements to health and social security benefits.

Gender and Access to Health Care

Inequities in access to health services vary by socioeconomic stratum and age and by type of service. In some poor countries and in low-income sectors, women's use of services for illness or injury deviates from the norm and is lower than men's. In terms of age, women in their childbearing years use services more than men; in some countries, the percentages of boys and girls who received treatment for illnesses revealed that when showing symptoms of fever, acute respiratory infection, or diarrhea, boys were brought to medical services more often than girls (*34*). Evidence shows that women tend to use preventive services more, while men resort to emergency services more often (*34*).

Information on the use of health services based on the specific needs of each sex has not been widely systematized and available data tend to relate to women's reproductive health services, for example:

Contraception. In 2000–2005, more than 60% of Latin American and Caribbean women regulated their fertility with modern contraceptive methods. Access to those methods is highly uneven, however, and disparities are tied to a given country's socioeconomic context, the national reproductive health policies, education, socioeconomic stratum, rural or urban residence, and a woman's ethnic origin. Another relevant inequality is related to distribution by sex of the responsibility for obtaining and using modern contraceptive techniques, which women bear in 84% to 98% of cases (*35*).

Family planning. The unmet-needs index in family planning for a group of countries shows that the percentage of women with unmet contraceptive needs ranged from a minimum of 5.8% in Colombia (2005) to a maximum of 40.7% in Haiti (2000) (Figure 20). The highest levels of unmet demand were among adolescent women (17% to 58%), women with less education (13% to 41%), indigenous women (39%), and women living in rural areas (8% to 40%) (*36*).

Births delivered by qualified personnel. Although 91.4% of births in the Americas were delivered by qualified personnel, about 7 out of every 10 births in Guatemala (2004) and Haiti (2000) and 4 out of every 10 in Bolivia (1999–2003) received no qualified care (*37*). This indicator also reveals inequalities: in Ecuador, just 30% of deliveries among indigenous women were seen by qualified personnel, while 86% of white women and 80% of mixed-race women received such assistance (*38*).

Gender Equity and Health Care Financing

Gender inequity in access to health care services also is linked to how health care is financed. Systems that do not have solidarity-based financing place a disproportionate burden on women, since their more frequent need for care (particularly because of the reproductive function) means that women use more

health services and spend more on them. Information from household surveys shows that in Chile, private insurance premiums for persons in childbearing age were 2.5 times higher for women than for men (*39*), and in Brazil, the Dominican Republic, Ecuador, Paraguay, and Peru, out-of-pocket spending on health care was between 16% and 60% higher for women (*40*). Given women's diminished economic capabilities, this absolute inequality in spending restricts their access to basic services or imposes a disproportionate financial burden on them.

Health care coverage for indigenous people is much lower than for non-indigenous groups. In Bolivia, where coverage rates are low, 10% of indigenous people are covered by the public system and 2% have private coverage. In Mexico, close to 45% of the population has health coverage, but just 18% of the indigenous population is covered. In Peru, access to health coverage is extremely low for the indigenous and the non-indigenous population alike, and 55% of Peruvians have no coverage at all. Close to 42% of Peruvians have public health coverage and just 1.1% of indigenous and 2.8% of non-indigenous have access to private plans (*41*).

THE ENVIRONMENTAL CONTEXT

Urban Growth

Latin America and the Caribbean have the highest rate of urbanization in the developing world: 77% of the population (433 million people) lives in cities, and projections suggest that the figure will rise to 81% by 2030.

Although urban settings have been recognized historically as a favorable health determinant, the unplanned urban growth currently occurring in the developing world can threaten health. The rapid growth of cities seriously affects the environment and the social context, and has detrimental consequences for the population's quality of life and health. Haphazard urban expansion, particularly in suburban areas, leaves the urban population's poorest sectors living in sites that are highly vulnerable to natural disasters and have limited access to basic services such as housing, electricity, drinking water, drainage, and solid waste removal. Violence and marginalization are growing at alarming rates.

Green spaces, recreational areas, and sports grounds that foster physical activity and entertainment and that strengthen the sense of community are increasingly scarce or nonexistent in large cities, particularly in marginal areas. Vast urban areas with scant natural spaces have produced so-called "hot zones," which can create conditions that favor infestations of disease-transmitting vectors. Finally, environmental pollution problems are aggravated by rapid economic development and industrialization in cities, and are associated with delays in adopting effective air pollution control measures.

The health repercussions from unplanned urban growth are manifested in an important group of infectious diseases (diarrhea, dengue, respiratory infections), chronic diseases (cancer, diabetes, obesity, cardiovascular problems), and accidents and injuries.

Access to Potable Water, Water Pollution, and Waste Disposal

Since ancient times, societies have acknowledged that water and sanitation are health determinants. Science has further demonstrated their causal relationship to health.

Although more than 90% of households in urban centers have access to water, there are large social and spatial inequities within cities. The cost of drinking water is rising, due to growing demand, to decreasing accessibility, and, particularly, to declining groundwater levels. Sewage treatment also is a major challenge in urban settings. In Latin America and the Caribbean, just 14% of sewage is adequately treated. Anecdotal evidence points to rising pollution of surface- and groundwater with nitrates and heavy metals, yet monitoring and systematic protection of water sources has only been introduced very recently, and it still is not a high priority on the research agenda. Water pollution has a significant impact on coastal areas, where 60 of the 77 major cities of Latin America and the Caribbean are located and 60% of the population lives (*42*).

Per capita solid waste production has doubled in the last 30 years and its composition has changed from waste that was fundamentally dense and organic to waste that is bulky and nonbiodegradable. Almost 90% of the waste produced is collected, but more than 40% is not adequately disposed of and goes on to pollute land and water (*43*).

These services are extremely important for human health. In Latin America, mortality caused by infant diarrhea is a major consequence of the lack of water, poor quality water, and the lack of sanitation.

Air Pollution

Air quality is a basic determinant of health. Human beings take in oxygen from the atmosphere, and oxygen is one of the main elements that keep cells alive. Modern air pollution reduces the oxygen in the atmosphere, contaminating air and lungs.

Today, some mega cities, such as Mexico City and São Paulo, monitor and control air pollution from intensive use of fossil fuels in transportation and industry. Bogotá also has reduced air pollution from motor vehicles, but it still struggles to control emissions from several urban industries. Air pollution and its impact on health are rising in medium-sized and smaller cities, where resources and technologies for controlling it are less readily available. Indoor air pollution, which mainly affects poor urban dwellers who use biomass for cooking or heating, has an even lower profile on the urban agenda (*42*).

Although average per capita carbon dioxide emissions appear to have peaked in 1998 and have recently fallen, very few countries have improved their energy efficiency. Only one-third of Latin American countries have set air quality standards or emission limits. Urban sprawl has increased travel times and the demand for public transport, with an estimated combined cost of 6.5% of the region's GDP (*43*).

Air pollution contributes to infectious and chronic respiratory diseases, cancer, and cardiovascular disease. Air pollution seriously affects the health of 80 million people in Latin America and the Caribbean and is the primary cause of more than 2.3 million cases of respiratory insufficiency in children each year and more than 100,000 cases of chronic bronchitis in adults.

Shrinking Forests and Land Degradation

In the 1990s, 46.7 million hectares of forest were destroyed in Latin America and the Caribbean—half the global loss at twice the rate. Almost half of this loss occurred in Brazil. Unrestrained globalization, haphazard urbanization, and a lack of territorial planning are driving the conversion of forests into pastureland (to produce more livestock for export), an increase in monoculture plantations (including coca and soy), infrastructure growth (such as mega dam and road projects), and rising human settlements. Other pressures come from land speculation, wood harvesting (61.7% of the wood is used for fuel, mainly in Brazil and in Central America), and to meet demand for timber by Asian furniture industries that supply northern markets (*44*).

Deforestation depletes water sources and diminishes their quality; it increases soil erosion and the sedimentation of bodies of water, and is responsible for the severe decline or loss of biodiversity. Deforestation also is an important source of greenhouse gas emissions. Deforestation in Latin America and the Caribbean is responsible for 48.3% of total global carbon dioxide emissions.

Moreover, some 313 million hectares in Latin America and the Caribbean (15.7% of the territory) have been degraded (*42*). Degradation is more severe in Mesoamerica, affecting 26% of the territory; 14% is affected in South America (*45*). Erosion is the main culprit in degradation of the land, but the gradual intensification of agricultural production plays an important role in depleting nutrients from the soil and wind erosion also is significant in some areas. Desertification, which affects 25% of the territory, is largely determined by natural conditions, but also has been influenced by deforestation, overgrazing, and inadequate irrigation.

Shrinking forests and degraded land pose serious health risks, such as acute and chronic diseases caused by a lack of water, use of contaminated water, nutritional imbalances due to poor quality nutrients or their absence, and death and injury due to increased vulnerability to natural disasters.

Coastal Degradation and Ocean Pollution

Degraded coasts and polluted seas can harm health in various ways. More than half of the population in Latin America and the Caribbean lives within 100 km of the coast, compared to 38% globally (*42*). A 1996 estimate of global threats to coastal ecosystems indicates that 50% of South America's coast and 29% the coast in North and Central America was at moderate or high threat from cities, ports, and other sites with high population density (for example, tourism infrastructure), and oil or industrial pipelines (*46*). In the Caribbean, 61% of coral reefs are under moderate or high threat from sedimentation, marine- and land-based pollution sources, and overfishing. Coastal groundwater contamination (including salt-water intrusion) and depletion are occurring throughout the Region, taking an enormous economic toll (*42*).

> *"The permanent denial of fundamental rights has led to the marginalization of the indigenous population, leading to alarming poverty rates, lack of land, low earnings, high unemployment, high rates of illiteracy especially among women, high rates of school dropouts, and an epidemiological profile with high rates of illnesses and premature death where preventable causes are predominant. The communities and municipalities with the highest percentage of indigenous population are those furthest from the goals set by the Millennium Declaration."*
>
> **Mirta Roses, 2006**

Some 86% of sewage in Latin America and the Caribbean is dumped raw into rivers and oceans. In the Caribbean, the figure hits 90% (*42*). There is a high level of oil pollution from Greater Caribbean refineries, particularly in the Gulf of Mexico, and offshore drilling in the Gulf of Mexico and Brazil. Agrochemical runoff is also a source of pollution, and highly toxic concentrations have been found in Caribbean estuaries and in Colombia and Costa Rica. Shipping also contributes, with cargo volume doubling between 1970 and 2000. Hazardous waste, including radioactive materials from other regions of the world, is shipped around South America or through the Panama Canal. Many invasive species come in freight and ballast, such as crustaceans, mollusks, and insects that have inflicted great economic damage on infrastructure and crops.

Overfishing also is a matter of grave concern, particularly in the Caribbean. Estimates indicate that most central Caribbean local production systems are threatened by over-exploitation of commercially valuable species. The Caribbean deep-sea fishery peaked in 1994, accounting for nearly 28% of the global catch. Fish harvests in Peru and Chile, which represent most of the catch, doubled or tripled compared to the 1980s (*47*). Catch levels fell by 50% in 1998, however, although they climbed again by 2000, reaching 85% of the 1994 levels. These fluctuations are warnings of the dangers of overfishing.

The health effects of degraded coasts and polluted seas are seen in infectious diseases, injuries, and deaths caused by such factors as an increased vulnerability to natural disasters, malnutrition, and the violence associated with unemployment. Warm sea-surface temperatures promote algal growth that can play a part in cholera epidemics. Finally, rising sea levels also can increasingly threaten coastal communities (*42*).

Regional Variability and Climate Change

Climate change will damage health worldwide through direct effects, such as increased temperatures on the earth's surface, or through indirect effects, such as food shortages, water shortages in arid and semiarid regions in particular, a wider reach of vector-borne diseases (dengue, malaria), or an increase in vulnerability to natural disasters.

The Intergovernmental Panel on Climate Change has predicted that the impact of global warming and climate change in Latin America and the Caribbean will include rising sea levels, higher rainfall, increased drought risk, stronger winds and rain linked to hurricanes, and more pronounced floods associated with El Niño (*47, 48*).

Environmental, social, and productive pressures increase the vulnerability of Latin America and the Caribbean to this impact. Central America's tropical rainforests, the Amazon river basin, the Caribbean coral reefs and other tropical areas, the Andean mountain ecosystems, and wetlands are particularly vulnerable (*49*). Water cycle changes may affect arid and semiarid areas, with consequences to electric power generation and agriculture.

Rising temperatures, modification of land cover, changing precipitation patterns, and shrinking spending on health lie behind the re-emergence in Latin America and the Caribbean of epidemics that were once under control (*42*). Climate conditions linked to the El Niño Southern Oscillation (ENSO) or to global climate change cause temperature and precipitation extremes, contributing to the proliferation of vector-borne diseases such as malaria, dengue, yellow fever, and bubonic plague. The loss of plant cover and extreme weather events will help bring about water pollution and an increase in pests.

Glacier loss due to rising temperatures in the Andes and saltwater intrusion due to rising sea levels will put pressures on the availability of drinking water. Agricultural production, food security, and tourism will be affected.

The increase in extreme weather events since 1987, such as tropical storms and hurricanes, floods, landslides, and droughts is evidence of the impact of climate change. The number of episodes of this kind doubled in Central America between 1987 and 1997 and grew by nearly 60% in South America between 1998 and 2005. Loss of human life tripled in Central America and grew 4.3 times in the Caribbean islands and 6.5 times in South America, while economic damage doubled in Central America and grew by 80% in South America and by 50% in the Caribbean islands (*42*).

Where there is flooding or drought, respiratory diseases can increase due to overcrowding. Excess fungal growth also can cause respiratory diseases, and there often is a rise in psychiatric disorders such as anxiety and depression, probably related to damages to the domestic environment and financial losses. Higher suicide rates have been reported and the number of behavioral disorders in children can rise. Droughts can have an impact on health in developing countries owing to their adverse effects on food production and hygiene, given that water is mostly consumed, rather than used for cleaning. Finally, outbreaks of malaria also can occur during droughts as a result of geographic changes that affect the disease's vector (*47*).

INTERNATIONAL HUMAN RIGHTS LAW

Legal Sources for the Right to Health in Latin America and the Caribbean

The right to the highest attainable standard of health ("the right to health") is enshrined in different national and international legal sources. The right to health and/or the right to health protection is established in 19 of the 35 national constitutions of Latin American and Caribbean countries. The most important international sources of the right to health include the Constitution of the World Health Organization, international and regional human rights conventions, and international guidelines or standards on health and human rights. The United Nations System has a Special Rapporteur to cooperate with the States in promoting and protecting the right to health (*50*).

WHO's Member States have reached agreement on important principles related to public health that appear in the preamble to the Organization's Constitution. This document establishes a fundamental international principle to the effect that the enjoyment of the highest attainable standard of health is not just an individual concern but is "one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition."

With regard to international and regional conventions, Article 12 of the International Covenant on Economic, Social, and Cultural Rights sets forth "the right of everyone to the enjoyment of the highest attainable standard of physical and mental health" (*51*) and the measures that Member States should adopt to ensure that this right is effective, including the prevention and treatment of diseases and epidemics and the provision of medical treatment and services. Article 10 of the Protocol of San Salvador (Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights) (*52*) also enshrines the right to health. International and regional human rights conventions have incorporated the principles established by the Universal Declaration of Human Rights, which is considered a fundamental legal source of civil, political, economic, social, and cultural rights, and fundamental freedoms.

At the international level, the most important conventions for the protection of human rights in the United Nations System include: the International Covenant on Civil and Political Rights (*53*); the Convention on the Rights of the Child (*54*); the Convention against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment (*55*); and the Convention on the Elimination of All Forms of Discrimination against Women (*56*). The Inter-American system includes the American Convention on

Human Rights (*57*); the Inter-American Convention on the Elimination of All Forms of Discrimination against Persons with Disabilities (*58*); the Inter-American Convention on the Prevention, Punishment, and Eradication of Violence against Women; and Article 10 of the Protocol of San Salvador, mentioned earlier.

A series of declarations, recommendations, and reports promulgated by the General Assembly of the United Nations Organization; the General Assembly of the Organization of American States; the United Nations Commission for Human Rights; the United Nations Committee on Economic, Social, and Cultural Rights; the Inter-American Human Rights Commission; WHO; and PAHO also set forth important guidelines (although not binding) that can be incorporated into national plans, policies, legislation, and practices related to different areas of health.

Initiatives in Bioethics

In October 2005, UNESCO's General Conference approved by acclamation the Universal Declaration on Bioethics and Human Rights, whereby Member States undertake to respect and apply the fundamental principles of bioethics. The declaration represents a major step toward the recognition of rules that govern respect for the dignity of individuals, human rights, and fundamental freedoms in the field of bioethics.

As an applied discipline, bioethics deals with issues related to health; interventions involving life, death, and genetic heritage; and the social accountability of scientists, physicians, and other professionals. In Latin America and the Caribbean, equity in the access to health care services coupled with the provision of quality services remain as major challenges. The first of these issues is of concern to the authorities, opinion shapers, and service managers. The second has to do with financing, research, and human resource training, which entail bioethical responsibilities.

Bioethics demonstrates that improvements in health care and scientific and technological advances merit special attention. It is difficult to gauge the impact of work done on bioethics, since it is basically qualitative, but evaluations by health systems managers, health professionals, the public, and policymakers indicate that its inclusion in the policy-related and technical mandates of international organizations is fundamental.

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