



2010 | ECLAC Ad Hoc Committee on
Population and Development
Santiago, 12-14 May 2010

Distr.
GENERAL

LC/L.3216(CEP.2010/3)
10 May 2010

ENGLISH
ORIGINAL: SPANISH

Population and health in Latin America and the Caribbean: outstanding matters, new challenges

2010-206



UNITED NATIONS

ECLAC



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The support of the United Nations Population Fund (UNFPA) for the preparation of this document is appreciated.

CONTENTS

	<i>Page</i>
Executive Summary	7
Presentation.....	13
PART ONE	15
Chapter I	
International agreements: a referent for the region on health issues	17
A. Thirty years after Alma-Ata.....	18
1. The social determinants approach: a renewed framework for primary health care.....	19
B. Fifteen years after the International Conference on Population and Development in Cairo.....	21
C. Ten years after the Millennium Development Goals.....	23
D. Closing health and sexual and reproductive health gaps: a pending task.....	23
Chapter II	
Health and social protection within the framework of the demographic change, development and rights	27
A. The right to health and health protection	28
1. The right to health in the international context	28
2. Content and form of application of the right to health.....	28
B. Health care needs and the protection of health in the demographic context	29
C. Health protection, spending and demographic factors.....	30
D. Specific population groups and health protection.....	31
PART TWO	35
Chapter III	
Mortality trends in Latin America and the Caribbean between 1950 and 2010	37
A. Trends in life expectancy at birth	37
B. Infant and child mortality	39
1. Decline in infant and child mortality and the established goals.....	42
2. Neonatal and post-neonatal mortality	44
3. Social differences in infant and child mortality	46
4. Morbidity, access to health services and prevention of childhood diseases	48
C. Mortality of the young population.....	51
1. Number of life years lost during youth	53
D. Mortality in the older adult population.....	56
Chapter IV	
The epidemiological profile of Latin America and the Caribbean	59
A. The epidemiological evolution of the region.....	61
B. Mortality by cause of death: implications	64

Chapter V		
Towards achievement of sexual and reproductive health goals.....		69
A. Recent fertility trends in Latin America and the Caribbean		69
B. Sexual and reproductive health situation		71
1. Adolescent fertility.....		71
2. Maternal health		74
3. The prevalence of contraceptive use and the unmet need for family planning.....		75
4. Progress with regard to HIV/AIDS		76
5. The persistence of some gaps and the emergence of others.....		77
C. Reproductive rights.....		80
PART THREE		83
Chapter VI		
Demographic transformations and future demands for health care and caregivers.....		85
A. Demographic and health determinants of dependency		85
1. Population ageing as a demographic factor of dependency		85
2. The risks of dependency in old age arising from the state of health		87
B. Scenarios for the demand for caregivers in Latin America and the Caribbean		87
1. Estimate of the need for care based on age		87
2. Estimate of the need for care based on health status.....		89
C. Health and ageing: the need to address dependency as a risk within social protection systems		91
Chapter VII		
Illustrative projection of health care spending in Latin America and the Caribbean in the 2006-2040 period		93
A. Growing use of health services by older persons		93
B. Significant increase in the proportion of GDP allocated to health		95
C. Some conclusions and recommended actions.....		97
Chapter VIII		
The current crisis and health		99
A. General aspects (theoretical relationships)		99
B. Specific aspects (some empirical evidence)		100
C. Public policy alternatives.....		102
Conclusions.....		105
Bibliography		109
Tables		
Table II.1	Essential elements of the right to health	29
Table III.1	Latin America and the Caribbean: classification of countries by level of mortality, measured by life expectancy at birth for both sexes ($e(0)$), 1950-1955 and 2005-2010	38
Table III.2	Latin America and the Caribbean: classification of countries by level of infant mortality in 1970-1975 and by the percentage of reduction achieved by 2005-2010.....	41

Table III.3	Latin America and the Caribbean (selected countries): excess mortality among children under 5 (EMq(5)) in relation to the lowest rate of child mortality observed in the region, 1990 and 2009	43
Table IV.1	Latin America and the Caribbean: grouping of countries by epidemiological characteristics	64
Table V.1	Latin America (selected countries): proportion of women aged 15 to 19 who are mothers, by education level, 1998-2008	72
Table V.2	Latin America (selected countries): proportion of women aged 15 to 19 who are mothers, by wealth quintiles, 1998-2008	73
Table VIII.1	Latin America and the Caribbean: social policies implemented to face the crisis, as of August 2009	103
Figures		
Figure III.1	World and regions: life expectancy at birth for both sexes, 1950-2010	37
Figure III.2	Latin America and the Caribbean: infant mortality rate, 1970-1975, 1990-1995 and 2005-2010	40
Figure III.3	Latin America and the Caribbean: child mortality by country, 1990 and 2009, targets and projections for 2015	44
Figure III.4	Latin America (selected countries): neonatal and post-neonatal mortality rates and their relative distribution, 1950-2007.....	46
Figure III.5	Latin America: infant mortality among indigenous, afro-descendent and remaining members of the population, by country, 2000 censuses	48
Figure III.6	Latin America (selected countries): deaths of persons aged 15 to 29 years as a percentage of the total, by sex, approximately 2000	52
Figure III.7	Latin America and selected countries: potential years of life lost (YLL) for persons aged 15 to 29 years, by sex, 1950-2005	54
Figure III.8	Latin America and selected countries: difference between men and women, potential years of life lost from 15 to 29 years of age, 1950-2005	55
Figure III.9	Latin America (selected countries): deaths of persons aged 65 and older, 1950-2050	57
Figure IV.1	Chile: relative weight of standardized mortality rates by cause of death in men, 1909-2005	63
Figure V.1	Latin America and the Caribbean (selected countries): total fertility rate at different stages of the demographic transition, 1950-2050.....	70
Figure V.2	Latin America (selected countries): estimate of total fertility rate in 2005-2010 according to projections from 1998 and 2008	70
Figure V.3	Latin America (selected countries): proportion of unwanted births to adolescent mothers, 1995-2008	73
Figure V.4	Latin America (selected countries): total fertility rates, desired and undesired, around 2005.....	78
Figure V.5	Colombia, Dominican Republic and Haiti: ideal and actual average number of live-born children, among women aged 40 to 49 years, by household wealth index, 2000-2007	79
Figure VI.1	Latin America and the Caribbean: internal ageing of the older adult population, 2030	86
Figure VI.2	Latin America: care dependency ratio, 2000-2050.....	88
Figure VI.3	Latin America and the Caribbean: number of persons with moderate to severe dependency requiring daily care, by age group, 2000-2050.....	90

Figure VII.1	Selected high- and medium-income countries: health spending by age, around 2000	94
Figure VII.2	Brazil, Cuba and Nicaragua: estimates and projections of the population near death (<10 years), 1950-2050	95
Figure VII.3	Selected countries: projected increase in health spending, disaggregated according to the effects of populational ageing and the intensified use of health services by older persons, 2006-2040.....	96
Figure VIII.1	Latin America (19 countries): trends in per capita public spending on health and infant and child mortality rates, 1990-2007	101
Boxes		
Box I.1	The socio-demographic context in Latin America and the Caribbean.....	25
Box II.1	The right to health of indigenous peoples.....	33
Box III.1	Child undernutrition in Latin America and the Caribbean	50
Box III.2	Young adults and the problem of violence	55
Box IV.1	Emerging and re-emerging infectious diseases.....	60
Box IV.2	Environmental health in Latin America and the Caribbean.....	65
Box V.1	Sexual and reproductive health and rights of the migrant population: a delicate equation in border regions	81
Box VI.1	Demographic dependency ratio and care dependency ratio.....	89

EXECUTIVE SUMMARY

This document provides elements of analysis for ECLAC Member States so that they can evaluate the current situation in Latin America and the Caribbean with respect to health, sexual and reproductive health and mortality; examine the region's accomplishments in this area vis-à-vis the principal agreements, recommendations and goals that are now in effect; identify the problems that continue to pose challenges; and be alert to the new challenges they face due to demographic and epidemiological changes in the region as well as the possible consequences of the most recent crises.

A. FRAME OF REFERENCE

The agreements, recommendations and goals established by the countries in attendance at three major international events related to health and sexual and reproductive health are adopted as reference points: the Alma-Ata Declaration of 1978, on primary health care; the International Conference on Population and Development (ICPD), held in Cairo in 1994, and its Programme of Action; and the United Nations Millennium Declaration of 2000 and its internationally agreed development goals, including the Millennium Development Goals (MDG) and the corresponding targets and compliance indicators. This framework is complemented by viewing health protection through the lens of human rights, which is accomplished by presenting a general overview of the right to health and social protection in terms of both form and substance, and within this scenario, an analysis of the health needs that arise out of the particular demographic dynamic that characterizes Latin America and the Caribbean.

Some key considerations can be derived from this framework with a view to guiding health policy and interventions in the region: i) the need to strengthen primary health care and promote universal coverage, which also implies adopting the approach of prevention and promotion rather than focusing solely on curing disease, with the attendant biases (such as excessive specialization and the fragmentation of services); ii) the need to reduce and attempt to eliminate inequities in access to health care and sexual and reproductive health services and in the quality of such services, these inequities being a manifestation of neglect for the rights of excluded segments of the population; iii) the need to adopt, gradually but effectively, the human rights approach to legislation, public institutions and policies and general health care and sexual and reproductive health programmes, which means guaranteeing discrimination-free availability, affordability, secure physical accessibility, acceptability and quality of public health-care establishments, products and services and of health-care centres.

Reviewing the evaluation of the objectives, recommendations and goals established in the frame of reference, especially in the ICPD Programme of Action and the MDG, it is apparent that the region has made significant progress on health care and sexual and reproductive health, but the goals set for 2014 or 2015 will not be achieved with respect to some of the variables examined. Therefore, continuing challenges remain. These include maternal mortality—which is still at unacceptable levels—and adolescent fertility—which remains high. The evaluations highlight the need to undertake key actions in this regard. Concerning maternal mortality, the essential elements that can contribute to significant achievements are well known: qualified care during childbirth, emergency obstetrical care and family planning. As for adolescent fertility, the measures to be taken should ensure that teenagers and youth have access to information, high quality and comprehensive sex education, amicable sexual and reproductive health services, birth control and HIV prevention, and the prevention of all kinds of pressures, violence, sexual abuse and exploitation.

However, the most urgent challenge facing the region is eliminating the persistent inequity in health care. Although some advances have been made, the gaps in health and sexual and reproductive health indicators remain very large among different countries, geographic areas, social strata, ethnic groups and education levels, among other characteristics. The persistence of this inequality limits the progress that can be made on social goals in general and health goals in particular, thus compounding existing conditions of poverty. For this reason, the States must strengthen their political will and devote more resources and efforts to reducing inequalities resulting from the lack of social justice and from poverty. Not only must the accomplishments already made be consolidated, but the adverse circumstances arising out of the crisis the world and the region have been facing since 2008 must also be addressed.

The examination of the frame of reference also reveals issues and emerging challenges in the relationship between population and health. Among these, most noteworthy are ageing and its implications for the demand for health care and the resultant costs, and for the distribution of care-giving tasks and inter-generational relations; gender relations and the coordination of the productive and reproductive roles of the population; climate change and natural disasters; the humanitarian, economic and food crisis; new trends in the HIV epidemic; urban segregation; the increasing influence of international migration; and the disadvantages of indigenous and afro-descendant peoples.

B. RECENT POPULATION AND HEALTH TRENDS IN LATIN AMERICA AND THE CARIBBEAN

An updated review of the trends in health-related indicators in comparison with the goals in the frames of reference confirms that significant progress has been made in the region. Practically half of the countries have already achieved the goals set forth in the ICPD Programme of Action with respect to life expectancy at birth; those concerning infant mortality had already been exceeded by many countries, and most of the remaining ones will achieve them by 2014. In the case of child mortality, however, only five countries in the region will reach the goal for 2015 contained in MDG 4 (which is more stringent and tailored to the situation in each country), according to current projections.

Despite the advances made on overall indicators, a review of the current situation reveals that there are still major disparities in access to services and opportunities in the area of health care. These disparities translate into differing levels of indicators from one country, geographic region and population group to the next. The exclusion of rural inhabitants, those with a lower level of education, indigenous and Afro-descendent populations, and the poorest segments of the population is especially evident. In addition, some of the most worrisome gaps are apparent: in some countries, the risk of dying before the first birthday is nearly three times higher in rural areas than urban areas, and up to four times higher among indigenous children compared to non-indigenous children; the mortality of children born to mothers with less formal education is five times higher than that of children whose mothers received more education, even in countries that have already achieved low mortality rates. Surveys conducted in some countries also showed that children in the richest quintile were twice as likely to have access to health care for acute respiratory disease as those in the poorest quintile; in some regions, 50% of children suffering from acute diarrhoeal disease in 2005 did not receive any treatment, compared to 90% who did receive it in other regions. With respect to adolescent fertility, teenage girls with a lower level of education may be nearly six times more fertile than their age-mates with more formal education.

Analysis of regional epidemiological trends, which are closely tied to the stage of the countries' demographic transition, leads to the conclusion that the epidemiological profile of Latin America and the Caribbean is characterized by overlapping stages. Consequently, all the countries face the twofold challenge of continuing to reduce mortality caused by infectious and parasitic diseases while contending with rising mortality due to non-communicable causes. An additional challenge in this regard is the need to investigate and confront emerging and re-emerging infectious diseases (zoonosis, malaria, tuberculosis and others).

In terms of sexual and reproductive health indicators, there has been a significant decline in fertility—in keeping with the desires of couples, and especially those of women— associated with a high prevalence of birth control and a reduction in the unmet demand for family planning in the vast majority of countries. However, the goal established by the Latin American and Caribbean Regional Plan of Action on Population and Development, which is to cut in half the unmet need for family planning services by 2014, will be reached by only three of the countries if current trends continue. The situation is promising with regard to the response to HIV/AIDS, especially in terms of the availability of antiretroviral treatment, but there are still challenges in terms of prevention (the weakest element of the countries' responses), improving young people's awareness of AIDS, and eliminating the stigma and discrimination that continue to be widespread, especially among sexual minorities and women living with HIV. Making a stronger political commitment and backing it up with financial resources is a necessary prerequisite for further progress in this field.

The physical and mental health situation of young people in the region is also noteworthy. In some countries, the impacts of various situations of violence are evident, especially among males in this age group, and they translate into an increase in the number of years of life lost due to these causes.

C. DEMOGRAPHIC, EPIDEMIOLOGICAL AND ECONOMIC TRENDS: IMPACTS AND RISKS

As a consequence of the ageing of the population and the ever-increasing weight of chronic, debilitating diseases and more complex and costly treatment, the demand for in-home care for persons rendered dependent by health problems has undergone a rapid transformation. The pace of this change has led to a lag between the demand and the institutional and programmatic frameworks available to satisfy it. Consequently, States are transferring this responsibility to families and creating more vulnerability and overloads on tasks traditionally undertaken by women. In the near future, the Member States must move towards recognizing and including this care in social protection systems, within a context of solidarity, equality, autonomy and well-being for families and individuals, with special attention to the role of women.

As future demographic and epidemiological transformations are incorporated into health-care spending projections, it becomes increasingly evident that this spending will have to increase substantially as a percentage of GDP for the countries of the region over the next three decades. The magnitude of the financing required will probably emerge as a major social concern in Latin America and the Caribbean, since for many countries in the region financing the health sector will probably pose a greater fiscal challenge than paying for pensions. In this regard, the governments of the region must make spending projections for the medium term and, most particularly, for the long term, as demographic change is one of the most important forces in determining the results of social policy, and its effects cannot be appreciated in the short term. In addition, preventive strategies must be put in place to reduce the economic and social impact of chronic diseases.

In addition to future demographic and epidemiological trends, the possible medium- and long-term impacts of the economic crisis and natural disasters plaguing the region may become major obstacles to overcoming the inequities in access to health care and sexual and reproductive health services. The crisis will likely result in a deterioration of health conditions, and those close to the poverty line will be the first and most heavily hit. The impoverishment of some population centres may lead to an increase in infectious intestinal diseases, parasitosis and respiratory illnesses, and thus could undermine progress made to date on mortality. The crisis could also have an indirect influence on health by impacting public revenues, health-care institutions and social protection mechanisms. This is a matter that must be evaluated in each national situation.

D. CONCLUSIONS AND RECOMMENDATIONS

Returning to and summing up the conclusions and recommendations made based on the evaluation of the current health and sexual and reproductive health situation in the region from the standpoint of the frames of reference adopted, we must emphasize once again the need to strengthen primary health care, seek universal coverage, and gradually but effectively adopt a human rights approach in legislation, public institutions and health policies and programmes in general, as well as those related to sexual and reproductive health in particular.

Although important advances have been made with respect to life expectancy, infant and child mortality, the prevalence of birth control, the reduction of unwanted fertility and HIV/AIDS care, among other aspects, these are insufficient. The region still faces important challenges in meeting current objectives and goals. For example, the fourth MDG, reducing child mortality, cannot be attained by 2015 if current trends continue. In the area of sexual and reproductive health, even though significant achievements have been made in recognizing reproductive rights and the use of contraceptives has become more widespread, very few countries will manage to reduce unsatisfied demand for family planning by half, as the Latin American and Caribbean Regional Plan of Action on Population and Development proposes for 2014. There are still drastic disparities in progress and deficiencies with regard to HIV/AIDS prevention. Accordingly, access to comprehensive sexual and reproductive health services must be strengthened and remaining barriers to access removed, primarily in the case of young people and adolescents.

Of the remaining challenges, two very important ones are maternal mortality (which is the most long-standing) and adolescent fertility (an emerging challenge), which remain high in the region. The maternal mortality rate is unacceptable, as these deaths are preventable with the application of known protocols for prevention, prenatal care, quality care during childbirth, emergency obstetrical care and family planning. Moreover, a central aspect of the strategy for dealing with this problem is the cultural adaptation of services and taking an integral approach to the issue during all phases of the life cycle. A key factor in the persistence of adolescent fertility, meanwhile, is the lack of opportunities in the lives of poor youths and teenagers that would offer an alternative to early fertility. To bring down these levels steadily, opportunities for education, training, employment and culture for adolescents of both sexes must be expanded. The health-care system must be adapted to their specific needs, and deficiencies in comprehensive sex education must be overcome. The unique psychosocial features of teenaged boys and girls and the social context in which they live must be taken into consideration, since merely offering sexual and reproductive health services is not enough.

The most decisive obligation in the region continues to be the reduction and elimination of inequities in access to comprehensive health care and sexual and reproductive health services, which are a manifestation of the persistent neglect for the rights of excluded populations, including rural inhabitants, those with lower levels of formal education, indigenous and Afro-descendent populations, and the poorest sectors of the population. These inequities are the result of the absence of public health policies and programmes or the deficiency of their design and implementation. There is also the risk that the disparities will grow as a result of the private or mixed management solutions that were part of the health-care reforms adopted. This underlines the role that States must play in promoting structural and infrastructural improvements in the region to expand availability and enhance the quality and timeliness of services, giving priority to access for groups that have been neglected, marginalized or discriminated against and to measures that encourage the participation and empowerment of communities and individuals to exercise the greatest possible degree of control over the factors that determine their health.

Future demographic and epidemiological trends and the possible medium- and long-term impacts of the economic crisis and natural disasters plaguing the region may become major obstacles to overcoming the inequities in access to health care and sexual and reproductive health services. The rising proportion of older persons in the population and the commensurate increase in the intensity of utilization of more complex and costly health-care services may mean that the least favoured population groups are excluded from access to such services. Furthermore, in the absence of public policies concerning the care of dependent persons, households and some individuals within them —traditionally women— will have to take on the growing burden and cost of caring for this population, which exacerbates the vulnerability of families, persons needing care and their care-givers. Governments must move towards recognition and inclusion of care in public policies as a matter of collective responsibility. It must be sustained through benefits and services that maximize the autonomy and well-being of families and individuals within the framework of social protection systems.

Taking these trends into account in health-care spending projections means that the countries of the region will have to make substantial increases in that spending as a percentage of GDP in the next three decades. According to projections, financing of the health-care sector will probably pose a greater fiscal challenge to many regional governments than pensions. It can be concluded that the governments of the region must make spending projections for the medium term and, most particularly, for the long term, as demographic change is one of the most important forces in determining the results of social policy, and its effects cannot be appreciated in the short term. It is also clear that broad-based preventive health-care strategies must be studied and adopted with a view to modifying certain habits in the population and thereby preventing or reducing the social and economic costs of chronic diseases.

The risks of stagnation or regression in the effort to ensure equal access to health care and sexual and reproductive health services have grown worse in the context of the current crisis. Previous experiences show that this crisis, along with the natural disasters that tend to occur in the region, could result in deteriorating health indicators, and in that case, those close to the poverty line would be the first and hardest hit. The impoverishment of some population centres could aggravate undernutrition and some diseases, particularly infectious and parasitic ones, and thus slow down the progress that has been made on mortality. The crisis could also have an indirect influence on health by impacting public revenues, health-care institutions and social protection mechanisms. The social and economic policies that are implemented to address the impacts of the crisis on the health-care sector must focus on protecting the social achievements made prior to this critical juncture, specifically, quality employment, preserving and boosting current public spending on health, expanding the coverage of transfer programmes, eliminating regressive elements and reinforcing the supportive components of social protection systems, particularly social security and health.

PRESENTATION

The Ad Hoc Committee on Population and Development was established during the twenty-fifth session of ECLAC and met for the first time during the following session, held in San José in April 1996. Its objective is to ensure adequate implementation, follow-up and review of the Latin American and Caribbean Regional Plan of Action on Population and Development, and to examine the region's situation with respect to population and aspects related to the execution and institutionalization of population policies and programmes (ECLAC, 1996, paragraphs 78 and 99).

In fulfilling this responsibility, the Committee has periodically evaluated the execution of the Regional Action Programme and the ICPD Programme of Action, examining different key aspects of the relationship between population and development. Among these are the links between population, reproductive health and poverty (1998) and between population, youth and development (2000); sociodemographic vulnerability: old and new risks for communities, households and individuals (2002); population, ageing and development (2004); international migration, human rights and development (2006); and more recently, demographic transformations and their influence on development in Latin America and the Caribbean (2008).

At the thirty-second session of ECLAC, held in Santo Domingo in June 2008, paragraph 15 of resolution 644(XXXII) recommends that the Ad Hoc Committee analyse the subject of population, development and health, including sexual and reproductive health, at its next regular meeting in 2010, and asks the secretariat of the Ad Hoc Committee to prepare the corresponding substantive documents in collaboration with the United Nations Population Fund (UNFPA).

In order to comply with the countries' request, the Latin American and Caribbean Demographic Centre (CELADE) - Population Division of ECLAC has prepared this document for the purpose of describing the current situation in the region with respect to health, sexual and reproductive health and mortality; examining the achievements made; and determining which problems, despite having been identified long ago, continue to pose a challenge because of their persistence and the difficulty of finding a solution to overcome them. It also seeks to draw attention to new challenges facing Latin America and the Caribbean, both because of the demographic and epidemiological changes the region is undergoing and because of the possible consequences of the recent crises, as well as the reconsideration of the situation demanded by the human rights and social protection approach.

The document consists of three parts: the first sums up the agreements adopted at international meetings and conferences on health held over the last three decades. The degree to which these agreements' targets have been met has been evaluated at major forums. It also analyses the relationship between health and social protection within the framework of the demographic dynamic, development and human rights. The explicit focus of the document is to apply the human rights perspective to matters related to the protection of health.

The second part addresses trends in mortality and other indicators of the population's health status. It begins with an overview of the level and trendline of mortality in Latin America and the Caribbean, paying special attention to the trends and characteristics of mortality in specific age groups (such as mortality during infancy and early childhood); the situation in the region with respect to the

fourth MDG, concerning the mortality of children under the age of 5 years¹; the rising mortality among young people due to external causes, and the specifics of mortality in the group of those aged 60 and over, identifying the socio-economic inequalities in the adult population's mortality burden. The situation in Latin America and the Caribbean is also characterized in terms of the epidemiological transition in order to establish a regional trajectory and a future vision of mortality by cause. Drawing upon the diagnoses and conclusions reached in the follow-up on the ICPD Programme of Action and the fifth and sixth MDGs (ECLAC/CELADE and UNFPA, 2009b and c; United Nations, 2008b and 2009b),² the section presents a general report on the progress the region has made in sexual and reproductive health from the rights perspective, and it suggests some action items for reinforcing the Cairo recommendations in this regard over the next few years.

The third part focuses on the challenges facing the region with respect to health and mortality. It discusses the relationships between demographic transformations and future demands for health care, within the framework of the demographic and epidemiological transition processes, which are redefining the relative weights of care, protection and production capacity in each country. To illustrate this situation, the main changes in the demand for care at the regional level are examined, specifically the trend in the rate of dependency on care and the projection of future demand for long-term care. Along the same lines, the relationships between demographic transformations and inter-generational transfers are analysed in the area of health, with particular emphasis on the impacts of demographic and epidemiological transformations on the demand for health services and the financial and policy implications, especially for health-care spending. This approach is complemented by a review of the relationship between economic and social crises and health, with a view to calling attention to the impact of the 2008 world crisis that can be projected based on theoretical relationships and a certain amount of empirical evidence.

In sum, the focal point of the document is to examine the principal health priorities in the region, stemming both from international agreements and from the human rights approach, in order to alert countries to the major shortfalls and the challenges posed by demographic, epidemiological and political trends for the health sector in the medium term.

¹ Target 4.A of this goal proposes specifically to reduce by two-thirds, between 1990 and 2015, the under-five mortality rate (see [on line] <http://www.un.org/spanish/millenniumgoals/>).

² The fifth goal proposes specifically to improve maternal health, while the sixth aims to combat HIV/AIDS, malaria and other diseases (see [on line] <http://www.un.org/spanish/millenniumgoals/>).

PART ONE

This part of the document presents the frame of reference of the analysis, which consists of the agreements, recommendations and goals established by the countries during three major international events concerning health and sexual and reproductive health: the Alma-Ata Declaration of 1978, on primary health care; the International Conference on Population and Development (ICPD), held in Cairo in 1994, and its Programme of Action; and the United Nations Millennium Declaration of 2000 and its internationally agreed development goals, including the Millennium Development Goals (MDG) and the corresponding targets and compliance indicators. As part of the concern of the countries and international organizations with respect to the health situation in Latin America and the Caribbean, these three sets of recommendations have been evaluated and analysed, the first in 2008 and the other two in 2009. These evaluations are synthesized in this part of the document in order to set the scene and emphasize the important achievements the region has made in the areas of health and sexual and reproductive health, as well as the stagnation and even regression on other goals and indicators. In the latter case, most noteworthy is the profound gaps that still divide countries, genders, territories, and socio-economic and ethnic groups in terms of effective access and quality of services in Latin America and the Caribbean.

The frame of reference of the conferences and declarations is complemented by the approach of interpreting health protection from a human rights perspective, based on the presentation of a general overview of the form and substance of the right to health and social protection. Furthermore, in this context, we analyse the health needs that emerge from the particular demographic dynamic that characterizes Latin America and the Caribbean, primarily those of population groups that face significant barriers to the exercise of their rights, such as persons with disabilities, indigenous peoples, the elderly, women and adolescents. From this analysis we derive elements for the formulation, follow-up and evaluation of policies and reforms in the countries' health and protection systems so that they can make the necessary expansions in coverage and overcome inequities in access to health, within the context of the demographic opportunities that exist in several of the region's countries.

Chapter I

**INTERNATIONAL AGREEMENTS: A REFERENT
FOR THE REGION ON HEALTH ISSUES**

It is particularly important today that we analyse the region's situation and prospects in the area of health, including sexual and reproductive health, for a variety of reasons: the region has made significant achievements on some issues, placing it in an advantageous position compared to the rest of the developing world. In fact, it could be the first region in the world to achieve the commitments undertaken in the ICPD Programme of Action and the MDGs to halt the propagation of HIV/AIDS and begin reducing it, and to achieve universal access to diagnosis, treatment and care for this disease (ECLAC/CELADE and UNFPA, 2009b). At the same time, however, it has failed to make progress in other areas, such as maternal mortality, which remains high in absolute terms and especially in relative terms, considering the region's development level. It is precisely the fifth MDG, which proposes to reduce the maternal mortality rate and achieve universal access to reproductive health, on which the least progress has been made, according to the 2008 regional report on compliance with the Millennium Development Goals (United Nations, 2008a). In other aspects, the region has even lost ground, as in the example of mortality among young people caused by accidents and violence: in nearly half of Latin American countries, rates of mortality due to accidents and suicides increased, and between 1985 and 2000-2002, the homicide-related mortality rate of young people aged 15 to 24 years rose in nearly every Latin American and Caribbean country (WHO, 2006). In short, a young man between the ages of 15 and 29 in the region is three times more likely to die from these causes than one in Spain (ECLAC/OIJ, 2008).

There have been constant efforts in the international sphere to monitor and improve the health status of the population, as reflected in the numerous agreements aimed at identifying weak points and giving priority to the search for solutions. In the last few decades, three such efforts can be highlighted as benchmarks:

- (i) The Alma-Ata Declaration of 1978, on primary health care, in which the countries pledged to achieve "health for all by 2000, and which underwent a thorough evaluation and renewal of commitments 30 years after its adoption.
- (ii) The International Conference on Population and Development, held in Cairo in 1994, which made a substantial change by transcending the issue of population and putting on the table the concepts of sexual and reproductive health and the discussion of sexual and reproductive rights. Fifteen years after the conference, these matters were also revisited, since only five years remain before the deadline for achieving the goals set forth in its Programme of Action.
- (iii) The Millennium Declaration and the Millennium Development Goals, which were agreed upon in 2000 and established specific, interrelated targets and a series of indicators which, with constant evaluation, have served as a guide for the countries.

The next section contains a brief summary of these three milestones for health, population and development, with an emphasis on the situation in Latin America and the Caribbean.

A. THIRTY YEARS AFTER ALMA-ATA

At the International Conference on Primary Health Care, from which the Alma-Ata Declaration emerged, the primary health care strategy³ was considered the linchpin for achieving the goal of “health for all by 2000”, and the fundamental components of that strategy were identified. Thirty years after the declaration, the World Health Organization (WHO) declared that: The Alma-Ata Conference mobilized a “Primary Health Care movement” of professionals and institutions, governments and civil society organizations, researchers and grassroots organizations that undertook to tackle the “politically, socially and economically unacceptable” health inequalities in all countries (WHO, 2008).⁴

Despite the consensus on the Alma-Ata agreements and the advances made in implementing primary health care, a number of factors intervened to dilute many of the accomplishments. Among them were the structural adjustment programmes adopted in countries’ economies, the reduction in the size of government and the change in its role, which all happened in the 1980s. Then came the sectoral reforms of the 1990s, primarily the tendency towards privatization, which affected the view of what health care entailed and the structure of services. There were also different interpretations of the concept of “primary care”, with the original notion of its being “essential” turning into its characterization as “elementary”, lending support for selective primary care. And perhaps the most frequent distortion is that of reducing primary health care to the first level of care, that is, to primary medical care, without promoting the integration of the health services system at the different levels of complexity or by incorporating intersectoral action or the community as a subject of joint management (Nervi, 2008).

In the 2008 World Health Report published by WHO, five shortfalls in service provision were identified: i) Inverse care, in the sense that public spending on health services most often benefits the rich more than the poor; ii) impoverishing care, since wherever people lack social protection and are forced to finance most of their own health care, the household is at greater risk of falling into poverty; iii) fragmented care caused by the excessive specialization of health-care providers and the narrow focus of many disease control programmes; iv) unsafe care resulting from the fact that many health-care systems have been unable to ensure safety and hygiene standards, which leads to high rates of hospital-acquired infections, along with medication errors and other adverse effects; v) misdirected care, insofar as resource allocation clusters around curative services, neglecting the potential of primary prevention and health promotion (WHO, 2008).

³ Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country’s health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process. (Declaration of Alma-Ata, 12 September 1978, paragraph VI).

⁴ The basic principles of primary health care are the equitable distribution of resources, community participation, appropriate technology, cooperation among different sectors and emphasis on prevention without excluding curative care.

1. The social determinants approach: a renewed framework for primary health care

In order to evaluate the progress made subsequent to the Alma-Ata Declaration, and recognizing that the lack of social justice is the underlying cause of the drastic health inequities observed in the countries of the world, the WHO created the Commission on Social Determinants of Health (CSDH) for the purpose of gathering scientific data on these inequities and making recommendations to address them.

The social determinants approach recognizes the fundamental role of socio-political aspects in the production and reproduction of health inequities and considers their reduction and elimination to be a central objective. For this reason, this approach reorients the primary health-care strategy and establishes goals that can be evaluated through the MDGs.

Social determinants are defined, from this perspective, as forms of social organization that generate exclusion and marginalization, and although they encompass all dimensions of the lives of individuals, communities and peoples, they are expressed most clearly in damage to health, producing significant differences in infant mortality and life expectancy, among other indicators (OMS, 2007a).

In this conceptual model, the basic mechanisms of the social production of disease are: i) the social, economic and cultural context that creates stratification and assigns individuals, collectives and peoples different social positions, and ii) social stratification, primarily based on socio-economic status, ethnicity and gender. The latter implies a differential exposure of individuals and collectives to resources, power and recognition, giving rise to gaps in access to health. In turn, the responses to certain risks create a vulnerability which is also differential, as a result of the accumulation of exposures to different harmful situations or factors; thus, the degree of vulnerability increases in proportion to the frequency and number of exposures that have occurred throughout the person's lifetime.

Stratification mechanisms based on socio-economic position, ethnicity and gender are known as structural determinants, because differential health opportunities are defined by them. In this regard, they affect the proximate or intermediate determinants, which are those that act directly on people's health: quality of housing, psychosocial circumstances, dietary patterns, habits, and others.

That is why it has been stated that “the poor health of the poor, the social gradient in health within countries, and the marked health inequities between countries are caused by the unequal distribution of power, income, goods, and services, globally and nationally, the consequent unfairness in the immediate, visible circumstances of peoples lives —their access to health care, schools, and education, their conditions of work and leisure, their homes, communities, towns, or cities— and their chances of leading a flourishing life.”

This unequal distribution of health-damaging experiences is not in any sense a “natural” phenomenon but is the result of a toxic combination of poor social policies and programmes, unfair economic arrangements, and poor policy management. Together, the structural determinants and conditions of daily life constitute the social determinants of health and are responsible for a major part of health inequities between and within countries (CSDH, 2008).

As can be seen, a key concept in the social determinants approach is that of health inequities, which are understood to be unfair differences that could be prevented with significant, timely, gender-neutral,

culturally relevant health interventions.⁵ From a broad human rights perspective, these inequities are interpreted as gaps in the implementation and enforcement of the fundamental rights of individuals and peoples (ECLAC, 2007). In this regard, a central aspect of the social determinants framework is the notion that exercising human rights with respect to health means empowering marginalized communities so that they can exert as much control as possible over the factors that influence their health (CSDH, 2007).

Given that the burden of disease is especially heavy for disadvantaged social groups, it is necessary to ensure that health-care systems respond to the needs of all sectors of the population. These systems can be a significant mechanism for empowerment, but also a determinant of health inequities. For example, reforms leading to collection of fees for services at the time of treatment for a health problem tend to segregate the poorest sectors. While financial support to improve access to health services among the poor is vital in the short term, there is a need to reduce and remove financial barriers to such services (WHO, 2007a).

For this reason, the CSDH has made three main recommendations for overcoming health inequities: i) improve the population's living conditions; ii) combat the unequal distribution of power, money and resources, and iii) measure and analyse the problem. With regard to the first recommendation, it is emphasized that the following guarantees must be provided: a) equity from the beginning of life; b) a healthful environment for a healthy population, with access to quality housing, potable water and sanitation services as rights enjoyed by all human beings; c) fair employment practices and decent jobs; d) lifetime social protection with a universal perspective; and e) universal health care.

In addition, the Commission has proposed four sets of reforms related to the organization of health and social protection services: i) extend coverage to all, so that health-care systems can promote health equity, social justice and the elimination of exclusion, giving priority to universal access and social protection of health; ii) reorganize service provision in accordance with the needs and expectations of the population to make services more relevant and responsive to changes in the world, as well as more efficient; iii) reform public policies in order to improve the health of communities by integrating public health interventions and primary care with the application of healthy public policies in all aspects of social life and the strengthening of transnational public health interventions; and iv) enhance leadership, in view of the fact that health-care systems are not progressing on their own towards greater justice, efficiency and efficacy (WHO, 2008; PAHO, 2009a).

In the particular case of this region, the evaluation of primary health care carried out by the Consensus Group on a Framework for Evaluating Primary Health Care in Latin America led to the identification of a number of factors that affect the achievement of objectives in this area. Among these factors, most noteworthy are political support for primary health care and a needs-based allotment and distribution of resources; availability of a pool of multidisciplinary human resources sufficient to cover the population's health needs; strengthening of local capacity for planning, follow-up, evaluation and promotion of citizen participation; effective regulation of health-care subsystems and movement towards joint planning among the public, private and social security subsystems; and achievement of the multidisciplinary organization of primary health-care teams and improvement or creation of an information system that links primary health-care organizations with other entities of the system (Haggerty, Yavich and Báscolo, 2009).

⁵ Inequity is not synonymous with inequality: for example, differences in life expectancy between women and men are not necessarily unjust or preventable; they are a probable result of biological differences. Thus, in countries where women have a lower or equal life expectancy compared to men, there is inequity, that is, social conditions that reduce the biological advantage that women have in terms of longevity (CSDH, 2007).

B. FIFTEEN YEARS AFTER THE INTERNATIONAL CONFERENCE ON POPULATION AND DEVELOPMENT IN CAIRO

In September 1994, the International Conference on Population and Development was held in the city of Cairo. Its decisive focus on the relationships between population and development within the framework of human rights has been recognized as the main contribution made by this conference and its Programme of Action. The latter provides that the right to development (social, economic and cultural) is a universal and inalienable right and an integral part of fundamental human rights, and that its objective is to improve the quality of life for all persons. In turn, human persons are regarded as the central subject of development, not just recipients or demanders of services. The principles of the ICPD Programme of Action take different approaches to the right to health, from the standpoint that every person has the right to enjoy the highest attainable standard of physical and mental health, a healthy and productive life in harmony with nature, and a decent standard of living for the individual and his or her family, including food, clothing, housing, potable water and adequate sanitation (UNFPA, 2004).

The ICPD also resulted in significant progress towards incorporating the concepts of sexual and reproductive health and reproductive rights, which fostered a more comprehensive vision of matters related to family planning and gender and their connection with development and rights. Adapting the WHO notion of health, the ICPD Programme of Action incorporated a definition of sexual and reproductive health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes”. Among the reproductive rights considered were the right of all couples to decide freely and responsibly the number of children they would have and the interval between them; to obtain information and access to safe, effective, affordable and acceptable methods of their choice for regulating fertility; to receive adequate health-care services in order to ensure risk-free pregnancy and childbirth; to attain the highest possible level of sexual and reproductive health; and to make sexual decisions without any kind of discrimination, coercion or violence. The Programme of Action provided that the exercise of these rights should form the foundation of the policies and programmes applied in the area of reproductive health, including sexual health and family planning (UNFPA, 2004).

The ICPD Programme of Action also took steps towards developing a more comprehensive concept of health by setting forth a series of considerations and actions to be coordinated in various areas of public policy with respect to the environment, housing, sanitation and basic services such as potable water. It also included observations and measures oriented towards different groups in the population, placing special emphasis on protecting women’s health in the context of promoting their rights and eliminating discrimination against them. Furthermore, it attributed primary importance to the right of children to enjoy the best possible health, and it recommended promoting to the fullest extent the health, well-being and potential of all children, adolescents and youth, with respect to their health in general as well as their reproductive health in particular, including the prevention of early pregnancy, sex education, and the prevention of HIV/AIDS and other sexually transmitted diseases (STDs). The agreements reached in Cairo introduced actions aimed at promoting the active participation of men in adopting responsible and healthy reproductive behaviours, while also pointing out the need to establish health-care systems and to provide economic and social security to the elderly. In particular, an integral approach was taken to sexual and reproductive health, which includes counseling, information, education, communication, prenatal care, infertility prevention, STD treatment, discouragement of dangerous practices, referrals to complementary services, guarantees of privacy and confidentiality of services and other aspects.

The diagnosis of the world health situation that was carried out for this conference revealed that, despite evident progress, the improvements proposed in the action plans of previous conferences and in the Declaration of Alma-Ata had not yet been achieved. It was noted that in some countries and some population groups, high rates of morbidity and mortality, limited access to potable water and sanitation, crowded living conditions and undernutrition still persisted, along with the effects of environmental degradation, exposure to hazardous substances and increased consumption of tobacco, alcohol and drugs. Concern was also expressed about the reduction in spending on health that could result from the structural adjustment of the economy and the transition towards a market economy.

In view of this situation, and within the framework of the approaches described, the ICPD Programme of Action recommended that States adopt all appropriate measures to ensure that both men and women had equal and universal access to medical care—which encompasses services for reproductive health, including family planning and sexual health. As central strategies for reducing morbidity and mortality, it proposed extending primary care to the entire population and emphasizing health promotion.

In the ICPD Programme of Action the countries approved, with a general horizon of 20 years concluding in 2015, a number of interdependent qualitative objectives and quantitative goals. With respect to health, morbidity and mortality, the first goal adopted was to make sure that primary health care, including reproductive health, would be within everyone's reach—meaning universal access—within a short time after the conference, meaning by the end of that decade. With regard to life expectancy, the goals varied between 65, 70 and 75 years for 2005 and 2015, depending on the level achieved by the countries at the time of the conference; in any case, even countries with the highest mortality rates should try to attain a life expectancy of more than 70 years by 2015. As for mortality among infants and children under the age of 5 years, the goal for 2000 was to reduce it to one third of the values reported in 1990, or to 50 and 70 deaths for every 1,000 live births, respectively; the goal for 2005 was 50 and 60 deaths per 1,000 live births; and for 2015, all countries were to try to bring the figures down to 35 and 45 deaths per 1,000 live births, respectively. Given the priority assigned to improving women's living conditions and rights enforcement in the ICPD, the Programme of Action emphasized measures aimed at promoting health and risk-free maternity and reducing maternal morbidity and mortality. The countries pledged to reduce maternal mortality to half the levels recorded in 1990 by 2000, and by an equivalent amount by 2015. Even the countries with the highest levels of mortality were to try to bring their levels below 75 deaths per 100,000 live births by 2015. In any case, the idea was to make significant reductions in maternal morbidity and mortality in order to "attain levels at which they no longer constitute a public health problem". Among the measures proposed in this connection were to reinforce maternity services, coordinated and effective prenatal care, maternal nutrition programmes and qualified personnel attending all births.

The Cairo Programme of Action emphasized repeatedly that there were tremendous and completely unacceptable disparities between developed and developing regions—and among regions, socio-economic strata and ethnic groups within individual countries—with respect to health conditions, morbidity and mortality. Specifically, unequal access to primary care services, potable water, environmental sanitation, adequate housing, information, education, counseling and promotion was cited as one of the key aspects of health. Therefore, in addition to the quantitative goals mentioned above, the countries agreed to develop actions aimed at making substantial reductions and even eliminating the disparities in morbidity and mortality between men and women and among geographic areas, ethnic or cultural groups and socio-economic strata. For this purpose, they expressed their determination to pay special attention to measures to eradicate poverty and improve the living conditions of poor and disadvantaged groups. In connection with this objective, it should be noted that the Latin American and Caribbean Regional Plan of Action on Population and Development adopted the specific goal of reducing the differential to 50% in the same period of 20 years.

C. TEN YEARS AFTER THE MILLENNIUM DEVELOPMENT GOALS

With a view to evaluating accomplishments in living conditions, health and development throughout the world, in September 2000—in the context of the Millennium Summit—the Millennium Declaration was approved. In that document, the leaders of the world made a commitment to work together to improve living conditions in their countries, and they proposed a series of objectives that translated into 21 goals to be achieved over a 15-year period. In the area of health and population, the MDG formulation breathed new life into the primary care strategy and provided added support for international agreements. Among these objectives are eradicating extreme poverty and hunger; achieving universal primary education; promoting gender equality and autonomy for women; reducing infant mortality; improving maternal health and combating HIV/AIDS, malaria and other diseases; guaranteeing environmental sustainability and fostering a worldwide alliance for development. All of them have a major impact on the population's health, three of them directly and five by establishing adequate conditions for improving health.

The goals set forth in the ICPD Programme of Action and the MDGs complement and reinforce one another. In fact, some of the goals related to health and sexual and reproductive health in the former are directly incorporated into the latter, such as those associated with child mortality, maternal mortality and universal reproductive health. The latter goal, included in the MDGs in 2007, represents an improvement on previously established targets for reducing maternal mortality and increasing the percentage of births attended by specialized personnel by extending into indicators such as contraceptive use, adolescent pregnancies, prenatal care coverage and unmet family planning needs (ECLAC/CELADE and UNFPA, 2009b).

For the countries, the MDGs have helped them follow up and monitor fulfillment of the commitments they have made, since they involve tangible and practical targets that can be reached. Even so, in some cases there may have been a failure to grasp the need to identify determinants that must be addressed with the ultimate objective of achieving the MDG in question.

D. CLOSING HEALTH AND SEXUAL AND REPRODUCTIVE HEALTH GAPS: A PENDING TASK

The ICPD Programme of Action and, more recently, the MDGs have made a significant contribution to raising awareness of the need to reduce social inequalities. Without a doubt, the governments of the region have tried to improve their institutions, implement programmes oriented towards combating poverty and boost social spending. Latin America and the Caribbean have a favourable demographic outlook, since many of the countries are going through a “demographic dividend” period.⁶ Moreover, between 2002 and 2008 the region underwent a cycle of sustained economic expansion that translated into progress on poverty, indigence, employment, and in many cases, a reduction of inequities (ECLAC/CELADE and UNFPA, 2009b).

However, the elimination of inequities is still a pending challenge, and major obstacles stand in the way of attaining or surpassing the goals proposed in the ICPD Programme of Action and the MDGs on poverty and hunger reduction. Indeed, Latin America has been and still is the most inequitable region

⁶ The period during which the relative weight of possible dependents (children and older persons) declines and the proportion of the potentially active population increases in the age structure of the population.

in the world, as can be seen in indicators such as the Gini index, or by comparing the groups with the largest and smallest shares in national income (MDG indicator 1.3).⁷ The situation revealed by the latter indicator is disturbing: one fifth of the population in Latin America earns almost 60% of the countries' total income (ECLAC/CELADE and UNFPA, 2009b).

Because of this marked disparity, tracking fulfillment of the goals established for health and sexual and reproductive health solely on the basis of average regional or national indicators leads to erroneous interpretations and overly optimistic assessments. In fact, the majority of the factors contributing to the high rates of morbidity and mortality affect the poorest or most vulnerable population disproportionately. The persistent inequity limits progress on social goals in general and those related to health in particular, thus exacerbating the conditions of poverty.⁸ As shown in box I.1, the region's indicators show many improvements, but at the same time—and as we will see later on—there are still major gaps between countries, geographic areas, socio-economic strata, ethnic groups and education levels, among other characteristics, in terms of health and sexual and reproductive health. Therefore, advancement towards achieving the goals is also very unequal. Recent evaluations have shown that although significant accomplishments have been made with respect to the goals for health and sexual and reproductive health, some challenges remain, such that most of the countries in the region will not reach the targets agreed upon for 2015.

In an evaluation of the ICPD Programme of Action conducted in October 2009, it was concluded that Latin America and the Caribbean have made progress on the recognition of reproductive rights as an integral part of human rights, and that the countries have brought attention to the importance of achieving universal access to sexual and reproductive health, but work remains to be done to ensure access to comprehensive services in this area and to remove existing barriers—particularly those that affect adolescents and young people. Furthermore, the evaluation of the MDGs reveals that although two of the three goals for gender equality and empowerment of women will be fulfilled by 2015, that of equal representation of women in national legislatures will not (ECLAC/CELADE and UNFPA, 2009c).

Both evaluations point out that the levels of maternal mortality in the region are unacceptable, and that based on current trends, the goals established for 2015 will not be reached unless key actions are taken. These actions include ensuring that qualified personnel attend births, providing emergency obstetrical care and family planning and addressing gender inequities, as well as responding to unsafe abortions and to violence against women and overcoming deficiencies in statistical records of maternal morbidity/mortality (ECLAC/CELADE and UNFPA, 2009c).

⁷ In 2008, the Gini index of Latin American countries, with the exception of Uruguay (0.44) and the Bolivarian Republic of Venezuela (0.41), was higher than that of the United States (0.47) and ranged from 0.48 in the case of Peru to 0.59 in Brazil. In 2005, all countries were much higher than the 0.3 recorded in the European Union (ECLAC, Social indicators and statistics, CEPALSTAT [online database]).

⁸ In various studies a correlation has been found between greater inequality of income and deficient health conditions or lower life expectancy, regardless of the income level or the situation of poverty. The relationship between inequality and mortality is likely a result of the action of psychosocial mechanisms such as experiences of relative deprivation, limited social cohesion and the lack of investment in human capital and public services and resources. In this connection, see Wilkinson and Pickett (2006); Subramanian and others (2003); Lynch and others (2000); Larrea and Kawachi (2005); Szwarcwald and others (1999); Szwarcwald, Andarade and Bastos (2002) and Messias (2003).

Box I.1

THE SOCIO-DEMOGRAPHIC CONTEXT IN LATIN AMERICA AND THE CARIBBEAN

In 1978, the year of the Alma-Ata Declaration, life expectancy in Latin America and the Caribbean was 63 years (60.5 years for men and 65.8 years for women), the average number of children borne by women by the end of their reproductive life was 4.46, nearly 69 out of every 1,000 children died before their first birthday, 37% of the population lived in rural areas (United Nations, 2008c), and one in five men and one in four women over the age of 15 were illiterate (20% and 25%, respectively) (UNESCO, 1981). Fifteen years later, after the 1980s had passed (a decade when contradictory economic and social indicators were recorded, such as a decline in real per capita GDP, macroeconomic imbalance and deteriorating social conditions, in contrast to the restoration of democratic systems), the region was preparing to participate in the International Conference on Population and Development (ICPD), for which purpose a report on accomplishments to date was written. By that time —1994— life expectancy had risen to 68.9 years (65.6 for men and 72.3 for women), the average number of children per woman was less than three (2.83), infant mortality had dropped to 38 deaths before the first birthday for every 1,000 live births, the population living in rural areas represented 27% of the total (United Nations, 2008c), and illiteracy among those over the age of 15 years had fallen to 14% for men and 17% for women (ECLAC, “Indicadores para el seguimiento de la Plataforma de Beijing”, on line).

By the end of the first decade of the third millennium, life expectancy at birth has climbed to 73.4 years in Latin America and the Caribbean (70.2 for men and 76.7 for women), the average number of children per woman is approaching replacement level (2.18), infant mortality has declined to 22 deaths before the first birthday for every 1,000 live births, and the population living in rural areas represents 20% of the total (United Nations, 2008c). In turn, illiteracy among those over 15 years of age has fallen to 8.3% for men and 9.7% for women. It should be noted that in the younger generations, the illiteracy differential reversed during the period in question, insofar as 7% of men and 6% of women aged 15 to 24 were illiterate in 1990. By 2006, these figures had fallen to 3.3% and 2.5%, respectively (information from the UNESCO Institute of Statistics). Advancements have also been made on the environmental sanitation front: available information for 1990 indicates that 84% of the population had reliable access to potable water supplies, whereas that figure rose to 92% by 2006. Reliable access to improved sanitation services rose from 68% to 79% during that same period (ECLAC, 2010).

Source: United Nations, “World Populations Prospects. The 2008 Revision. Population Database” [on line] <http://esa.un.org/UNPP/index.asp?panel=2>, 2008; United Nations Educational, Scientific and Cultural Organization (UNESCO), *Dimensión cuantitativa de la situación del analfabetismo en América Latina y el Caribe*, Santiago, Chile, 1981; United Nations, *The Millennium Development Goals Report 2008*, New York, 2008; Economic Commission for Latin America and the Caribbean (ECLAC), *Statistical Yearbook for Latin America and the Caribbean, 2009 (LC/G.2430-P/B)*, Santiago, Chile, 2010. United Nations publication, Sales No. E/S.10.II.G.1.

The persistence of a high level of adolescent fertility is another major challenge. Future opportunities open to young people and adolescents must be expanded; comprehensive sex education must be promoted in schools and gathering places; they must be given better access to information, friendly sexual and reproductive health services, birth control and HIV prevention; and all kinds of pressure, violence, sex abuse and exploitation must be prevented. It is also necessary to keep pregnant teenagers in school and strengthen efforts to prevent additional pregnancies (ECLAC/CELADE and UNFPA, 2009c).

Although the region’s response to HIV/AIDS has been promising, there are still profound inequities in the advancements and deficiencies in prevention. The governments are urged to devise more strategic, better coordinated responses focused on preventing this epidemic, given its growing incidence among young people and women. They should also improve HIV/AIDS information and awareness, and young people and adolescents should improve their sexual behaviour and preventive measures (ECLAC/CELADE and UNFPA, 2009c).

The future agenda of actions and achievements in the area of health and sexual and reproductive health will be linked to the issues and emerging challenges identified in the ICPD Programme of Action: the steady ageing of the population and its implications for health-care demand and costs, the distribution of care and inter-generational relations; gender relations and harmonization of the population's roles with respect to production and reproduction; climate change and natural disasters; the humanitarian, economic and food crisis; new trends in the HIV epidemic; urban segregation; the rising tide of international migration and the disadvantages suffered by indigenous and Afro-descendent populations, among others (EECLAC/CELADE and UNFPA, 2009c).

Chapter II

HEALTH AND SOCIAL PROTECTION WITHIN THE FRAMEWORK OF THE DEMOGRAPHIC CHANGE, DEVELOPMENT AND RIGHTS

Interpreting health protection from a human rights perspective has tremendous advantages in various areas of public policy and the relationship with population and development, given that it contributes to the formulation, monitoring and evaluation of public policies and focuses attention on the groups and individuals who are facing barriers to exercising their right to health. In addition, it stimulates the development of indicators and the creation of frames of reference for monitoring progress on sanitation and access to quality health care.

From this point of view, the close relationship between health protection and the demographic context in which it takes place must be highlighted. It is well known that the region is characterized by disparate epidemiological changes, which vary according to the internal heterogeneity of the countries. Thus, the demographic and epidemiological processes will be more advanced to the extent that the population's socio-economic conditions are better and its access to basic services more favourable. In contrast, in the most depressed areas, communicable diseases continue to be the main causes of morbidity and death for all age groups, including the elderly (Ham Chande, 2003).

As a result of this so-called "epidemiological backlog", health protection is challenged in two ways: on the one hand, there is a higher incidence of chronic-degenerative diseases, and on the other hand, the persistence of some communicable (such as respiratory) and maternal diseases. The complexity of this dynamic points to the need to invest and improve available resources in the treatment of chronic and degenerative diseases, without neglecting measures to prevent and treat communicable diseases.

In this scenario, the health policies of Latin American and Caribbean countries must address new and old challenges alike. The new ones stem from variations in demand, which require new services and treatments. The old ones are a reflection of the region's long-standing shortcomings in terms of equitable real access to timely and quality health services, lack of human and financial resources, and problems of articulation among the different levels of care in the health-care system and the public and private subsectors (ECLAC, 2006a).

As for population, health and social protection, just as important as facing these challenges is the need to pay attention to the population's health patterns before undertaking any reforms, and to ensure at the same time that actions are designed and implemented in such a way that they address the demographic opportunities in each country in a timely and appropriate manner.

The purpose of this chapter is to offer a schematic approach to the relationship between the right to health, population and social protection, with special emphasis on the needs and challenges confronting the region in this regard. Accordingly, first we will present a general overview of the form and content of the right to health and its linkage to social protection, and then we will analyse the relationship between this right and sanitation needs in the context of the regional demographic dynamic. Afterwards, we will look at the ties between the right to health, demographic factors and financing. And finally, we will focus our analysis on the right to health of some specific groups in the population, such as persons with disabilities, indigenous peoples, the elderly, women and adolescents.

A. THE RIGHT TO HEALTH AND HEALTH PROTECTION

1. The right to health in the international context

The right to health is recognized in numerous instruments of international law that have been adopted within the United Nations system, including the Universal Declaration of Human Rights of 1948 and the International Covenant on Economic, Social and Cultural Rights of 1966. In the inter-American system, it is guaranteed in article 10 of the Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights (Protocol of San Salvador). This right has also been incorporated into various sectoral human rights treaties that deal with women, children, migrants and disabled persons, and its importance has been stressed in numerous international accords and declarations, such as the International Conference on Population and Development (1994), the Declaration of Commitment on HIV/AIDS (2001), the Millennium Declaration (2000) and the United Nations Declaration on the Rights of Indigenous Peoples (2007), to mention a few.

From the standpoint of social protection, various human rights agents have developed analytical frameworks or instruments to enhance our understanding of the content and scope of public policies based on economic, social and cultural rights, among them the right to health. ECLAC has not ignored this challenge, and in resolution (626(XXXI) of 2006, its member States recognized that social protection in terms of health care and social security is essential in order to strengthen social cohesion and, hence, the work of the region's Governments. On that occasion, they issued a call to guarantee all citizens, regardless of gender, the health care they need to face the vicissitudes that arise in this connection, and to advance towards the effective implementation and enforcement of this guarantee.

2. Content and form of application of the right to health

In its General Comment No. 14, the Committee on Economic, Social and Cultural Rights (CESCR) noted that the right to health should not be understood as a right to be healthy. It pointed out that good health cannot be ensured by a State, nor can States provide protection against every possible cause of human ill health, since genetic factors, individual susceptibility to ill health and the adoption of unhealthy or risky lifestyles may play an important role with respect to an individual's health (CESCR, 2000).

The right to health entails freedoms and entitlements, the Committee stated. The freedoms include the right to control one's health and body, including sexual and reproductive freedom, and the right to be free from interference, such as the right to be free from torture, non-consensual medical treatment and experimentation. In this context, the right to health should be understood more appropriately as the right to enjoy a variety of facilities, goods, services and conditions that are necessary for the realization of the highest attainable standard of health (CESCR, 2000).

Similarly, the right to health can be defined based on a number of elements that give content and form to the practical application of this right (see table II.1). First, it is important to emphasize that health is an inclusive right that encompasses timely and appropriate care, access to underlying determinants such as clean and potable water, adequate sanitation conditions and healthy work environments, among others (Hunt, 2003). Secondly, it should be recalled that human rights standards proscribe any kind of discrimination in access to health care and to underlying determinants on internationally prohibited grounds and for the purpose of undermining the right to health on equal terms.

Table II.1
ESSENTIAL ELEMENTS OF THE RIGHT TO HEALTH

Availability	Functioning public health and health-care facilities, goods and services and programmes, as well as essential medications, safe and potable drinking water and adequate sanitation facilities, have to be available in sufficient quantity.
Accessibility	The health facilities, goods and services must be accessible, in law and in fact, to the vulnerable and marginalized sectors of the population, without any discrimination on prohibited grounds. Three types of accessibility are identified: <ul style="list-style-type: none"> – Physical and safe accessibility for all, including disadvantaged groups and persons. – Economic accessibility for all, especially for disadvantaged groups and persons. – Access to information, that is, the right to seek and obtain information on health and to impart such information, maintaining confidentiality.
Acceptability	All health facilities, goods and services must be respectful of medical ethics and culturally appropriate for the population in question, sensitive to gender and life-cycle requirements, and designed to respect confidentiality and improve the health status of individuals.
Quality	Health facilities, goods and services must also be scientifically and medically appropriate and of good quality. This requires skilled medical personnel of proven abilities and adequate hospital equipment.

Source: Committee on Economic, Social and Cultural Rights, “The Right to the Highest Attainable Standard of Health”, General Comment No. 14 (E/C.12/2000/4), New York, Economic and Social Council, 2000.

In the third place, even if fulfilling the essential elements of health can only be achieved over time and will depend on the availability of resources, the right to health imposes three kinds of general obligations on States: respect, protect and fulfil. The first requires that States refrain from interfering directly or indirectly with the enjoyment of the right to health; the second, that they adopt measures aimed at preventing third parties from interfering with the application of the guarantees to the right to health; and the third, that they adopt appropriate legislative, administrative, budgetary or other measures towards the full realization of the right to health (CESCR, 2000).

B. HEALTH CARE NEEDS AND THE PROTECTION OF HEALTH IN THE DEMOGRAPHIC CONTEXT

The countries of Latin America and the Caribbean face three types of challenges with respect to the protection of health: the lack of equity in the health sector, the functioning of the health-care system and emerging demands. The first refers to the preventable inequalities and differences in the provision of health services that arise out of discriminatory factors (WHO, 2009). The second takes into account the region’s long-standing shortcomings in terms of access to timely and quality health services, lack of human and financial resources, and problems of articulation of different systems. The third type of challenge stems from changes in demand resulting from the demographic, epidemiological and technological dynamic, which requires new services and treatments that will contribute to rising costs of health services unless the necessary interventions occur (ECLAC, 2006a).

All indications are that the health care problem in the region is much greater than anything facing developed countries, since the demographic transition is occurring at a much more rapid pace and health systems still have numerous deficiencies when it comes to meeting the needs of the young population. In turn, the rapid ageing of the population has led to a notable increase in the demand for health care by older

persons (United Nations, 2007a; ECLAC/CELADE, 2008b). Consequently, while in aggregate terms the region is quickly approaching the scenario of the developed countries with respect to non-communicable diseases, this does not mean that the problem of diseases associated with a lesser degree of development, such as communicable and maternal and childhood diseases, has been resolved satisfactorily.

In short, although in some countries there is a critical need to invest more resources in public health and effective services in order to reduce the high incidence of communicable and maternal and childhood diseases, the growing importance of non-communicable diseases shows that, in the medium and long term, it will be necessary to broaden the spectrum of actions and areas of intervention in the health sector (ECLAC, 2006a). Moreover, the projected ageing of the population means that the burden of non-communicable diseases will increase over time, such that an increasingly significant demand for higher-cost health services can be foreseen.

This complex epidemiological picture is accompanied by the inequality that characterizes the region, which has an adverse effect on the health of the most vulnerable groups, given the disparities in coverage, access and quality of the relevant services. In the low-income population, the healthy years of life lost due to communicable diseases are higher in practically all age groups in comparison with the high-income group, whereas the trend with respect to non-communicable causes is similar across all socio-economic groups. This result suggests a triple disadvantage for the low-income sector, which is not only poor but also has high levels of mortality and morbidity, due to both communicable and non-communicable causes (ECLAC, 2006a).

By the same token, available data on eight Latin American countries indicate that inequities in mortality are significant, and continue to be highly sensitive to socio-economic disparities because of inequalities associated with poverty in the area of health (United Nations, 2005a). For example, in Brazil, Haiti and Nicaragua, the infant mortality rate is at least twice as high in rural areas as in urban locales; and in Brazil, Colombia, Honduras and Nicaragua it is three times higher among children of mothers with a low education level. In turn, in three of the countries mentioned above (Brazil, Honduras and Nicaragua), the probability of dying before reaching the age of five years is three times higher in the poorest 20% of households than in the wealthiest 20% (WHO, 2009).

C. HEALTH PROTECTION, SPENDING AND DEMOGRAPHIC FACTORS

A fundamental feature that distinguishes economic, social and cultural rights from civil and political rights is the strong tie between the former and economic policy, given that effective enjoyment of these rights depends on government spending.

According to the WHO, a good financing system makes it possible to collect enough revenue to ensure that the population has access to the health services it needs and is protected against a financial catastrophe or impoverishment resulting from medical expenses (WHO, 2007b). This situation depends on two key principles of economic, social and cultural rights: progressive realization and non-retrogression. The first concept is based on the assumption that the State has a specific and constant obligation to move as expeditiously and effectively as possible towards the full realization of rights (CESR, 2000). The second imposes an obligation to maintain a basic and appropriate level of enjoyment of the highest attainable standard of health and to prevent any retrogression from the advances made. In this context, the population's right to health is inextricably linked to the coverage and quality of health care available in each country.

A wide variety of institutions and mechanisms aimed at financing, guaranteeing, regulating and providing the appropriate health services can be found in the region. However, the inequities in terms of access to services represent a common problem that has specific consequences for the population's health (ECLAC, 2006a). The demographic factor poses an additional challenge in this regard, given that in the future the ageing of the population will exert pressure on available health-care resources, while at the same time the countries must still resolve a lot of basic health problems affecting other sectors of the population.

The increase in health spending can be attributed to other factors besides age, however. For example, countries with a higher per capita GDP tend to spend more on health than others (OECD, 2009). An examination of the countries in the region revealed that the two are in fact very closely linked. In countries with a higher-than-average per capita GDP (Argentina, Chile, Mexico and Uruguay, among others), total spending on health is much higher than in poorer countries (including Guatemala, Honduras and Nicaragua), although that does not necessarily mean the spending is more equitable.

Indeed, to be equitable health systems must have a large public-spending component —above 60%— and a low out-of-pocket contribution (ILO/PAHO, 1999). In the countries of the region for which information is available, government spending in this sector in 2006 amounted to nearly 55% of the total, whereas the private contribution averaged about 45%, and 80% of that amount was paid directly by households. These differences make it clear that the level of spending on health also depends in large measure on political decisions about the amount of investment required and on the value placed upon additional health spending compared to spending on other goods and services. Thus, there is still plenty of room to expand the role of public spending in this sphere.

In the coming decades, financing of health care will continue to be the most conspicuous factor in the formation of demand for care, equal access to services and feasibility of supply (Guerra, 2001). The demographic change now taking place will open up opportunities, but it will also bring important challenges for the health sectors of different countries in the region that are further behind in the demographic transition. On the other hand, in countries where the ageing process is further along, reforms will be necessary to adapt the system to demographic change and to move towards sustainability of spending, access, and quality of care.

D. SPECIFIC POPULATION GROUPS AND HEALTH PROTECTION

The major social and economic disparities in the region's population and its diverse ethnic and racial composition mean that certain specific groups —persons with disabilities, indigenous peoples, older persons, women and adolescents, among others— require explicit recognition by States, which must guarantee full health protection and access (Brena, 2006; Hunt, 2003).

The main reason for extending particular protection to these groups is that they are often victims of discrimination, as reflected in the distribution of diseases and the trends in health status, which affects their ability to exercise the right to health. Consequently, the health system should be made accessible to all persons and communities, with special emphasis on the most disadvantaged groups. In addition, the countless vertical interventions focusing on different diseases with little coordination are not enough; the effort must encompass health care in general and effective, integrated accessibility to basic determinants, as well as an adequate response capability (Hunt, 2006).

In practical terms, guaranteeing the right to health among the most disadvantaged groups requires identification and analysis of the complex ways in which they are stigmatized and discriminated against (Hunt, 2004). This means collecting and analyzing specific, disaggregated data in order to identify existing gaps and apply whatever special or affirmative measures are needed to reduce or eliminate discriminatory conditions in exercising the right to health. In turn, actions must be implemented to prevent or offset disadvantages or discrimination and to provide substantive equality, taking into consideration the specific situation of the disadvantaged groups and breaking the cycle of disadvantage that belonging to one of these groups entails (Rodríguez-Piñero, 2010).

For example, the principal objective of the measures that would have to be put in place for persons with disabilities is to enable them to carry out the functions and responsibilities incumbent upon them as citizens, and to give them the same freedom of choice and control over their lives as the rest of the population enjoys. Actions taken in this regard must necessarily be aimed at guaranteeing access, accessibility and integration under equal conditions. In this context, one of the most important priorities is access to long-term care and support services. Among the factors to be addressed are compensation for disabilities, training and rehabilitation, and amelioration of the economic and social consequences of disability and health inequities (United Nations, 2007a; PAHO, 2008).

With regard to indigenous peoples, the United Nations standards call for States to facilitate access to health protection and to do so with respect for traditions and customs (see box II.1). In the opinion of the Committee on Economic, Social and Cultural Rights (2000), indigenous peoples are entitled to the implementation of specific, culturally-appropriate measures —affirmative measures— that enable them to improve their access to health services. Preventive care, curative practices and traditional medicines must be taken into account. Moreover, protection must be provided for the medicinal plants and minerals that indigenous peoples need for full enjoyment of good health (United Nations, 2007b; ECLAC, 2007).

As for older persons, in General Comment No. 6 of 1995, the Committee on Economic, Social and Cultural Rights stated that exercising the right to health during old age requires access to all necessary means to live in dignity in the final stage of life, including care for the terminally ill. Similarly, in General Comment No. 14 of 2000, the committee reaffirmed the importance of a comprehensive approach to health that includes prevention, treatment and rehabilitation. These measures must be based on periodic medical exams for both sexes, provision of physical and psychological rehabilitation services aimed at maintaining the functionality and autonomy of the elderly, and care and attention for the chronically or terminally ill, sparing them from pain and allowing them to die with dignity (PAHO, 2009b).

Adolescents, for their part, should benefit from a safe and propitious environment that enables them to participate in decisions about their health, acquire experience, gain access to sufficient information, receive advice and negotiate matters that affect their health. The Committee on Economic, Social and Cultural Rights (2000) has placed special emphasis on the fact that for adolescents, exercising the right to health also and above all depends on respectful care that allows for confidentiality and privacy.

Together with the foregoing, it is advisable to take a gender-based approach when invoking the health rights of specific groups of the population, since biological and sociocultural factors have a major influence on the health of men and women. Disaggregation of socio-economic and health data by gender is essential for identifying and overcoming inequities in this area. Regarding health problems that specifically affect women, in its 11th session the United Nations Human Rights Council issued resolution 11/8, on preventable maternal mortality and morbidity and human rights. In that document it acknowledged the unacceptably high rate of female mortality and morbidity in the world, which is associated with women's reproductive function; it reaffirmed previous international commitments and

expressed the conviction that there is an urgent need for the States that are parties to conventions to increase their political will, commitment, cooperation and technical assistance to reducing this rate. It also expressed concern about this issue and recognized that the majority of maternal mortality and morbidity cases are preventable, that they constitute a problem of health, development and human rights, and that they demand the promotion and effective protection of women's and girls' human rights, particularly their right to life (United Nations, 2009c).

Box II.1

THE RIGHT TO HEALTH OF INDIGENOUS PEOPLES

Given the new sociopolitical context, States should recognize, promote, protect and guarantee health care in keeping with the concepts and practices of the health-illness-healing process of indigenous peoples, to the extent that this constitutes a specific collective right.

In this regard, when policies are developed it is imperative to consider the fact that the indigenous concept of health transcends the internationally accepted definition of the World Health Organization (WHO) and to holistically incorporate elements of spirituality, collectivity and the close bond with the ecosystem.

Based on International Labour Organization (ILO) Convention 169 and the United Nations Declaration on the Rights of Indigenous Peoples, and considering the five dimensions of the minimum standard of rights for these peoples (ECLAC, 2007), the specific health rights associated with each of them can be synthesized as follows:

- Right to non-discrimination in access to health care.
- Right to social development and well-being, that is, to the highest attainable level of physical and mental health by means of adequate and quality access.
- Right to cultural integrity, which entails the right to use an indigenous language, to apply the concept of integral health and well-being and to use, strengthen and control traditional medicine.
- Right of ownership, use, control and access to land, territories and resources, which involves the conservation of plants, animals, minerals and territorial spaces of vital interest for the health-illness-healing process.
- Right of political participation, in this specific case the right to participate in the design, responsibility and social control (resources) of health programmes and policies.

With respect to social protection policies, the States currently face the challenge of improving the unfavourable health situation of indigenous peoples and the structural inequity they must contend with. The States must incorporate a rights-based approach that takes into account the above-mentioned standard, whose fundamental characteristics are the fact that these are the rights of peoples, meaning that they are attributes of social entities rather than of persons and collectives, and they include political and development rights that interact with each other and exist independently of their recognition by the State.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Social Panorama of Latin America, 2007* (LC/G.2351-P), Santiago, Chile, 2007. United Nations publication, Sales No. E.07.II.G.124.

The focus on rights definitely favours the human rights entitlement of all social groups, and thus contributes to the equal treatment and respect for the human dignity of those who have been excluded in the past (United Nations, 2005b). From this perspective, one of the central challenges of the rights-based approach is to help build a society in which all persons, regardless of gender, age, state of health or any other factor, enjoy the same opportunities to enjoy full respect for and exercise of their human rights and liberties.

PART TWO

In the first chapter of this part —the third chapter of the document— current mortality and morbidity trends in Latin America and the Caribbean are reviewed. Sections A and B show that there has been a significant increase in life expectancy and a decline in infant and child mortality. The rate at which the former indicators have progressed has already enabled many countries to surpass the goals set in the ICPD Programme of Action, and nearly all the others will likely achieve them by 2015. In the case of child mortality, however, if the current slow rate of progress continues, more than half of the countries will be unable to achieve the goal established in the fourth MDG by 2015.

The same chapter details the marked differences in access to services and opportunities in the health sector, which translate into disparate indicators by country, geographic area and population group. It refers in particular to the lag in rural areas and among persons with a lower education level, as well as indigenous and Afro-descendent populations. In addition, it describes the barriers that the poorest sectors of the population face in gaining access to maternal and child health services, which result in a high prevalence of low birth weight, complications during childbirth and neonatal mortality, as well as a much lower frequency of complete vaccination series and institutional care for acute diarrhoeal disease and acute respiratory infection. Section C of this third chapter examines the problem of mortality among young people in the region. It reveals that in some countries, various situations of violence and conflict have had a major impact on males in this age group. Lastly, section D addresses the issue of mortality among older persons.

Chapter IV deals with the epidemiological trends in the region, which are closely related to the countries' stage in the demographic transition. The analysis leads to the conclusion that the epidemiological profile of Latin America and the Caribbean is characterized by overlapping stages, such that all the countries of the region face the dual challenge of continuing to reduce mortality due to infectious and parasitic diseases and addressing rising mortality due to non-communicable causes. An additional challenge in this connection is the need to study and confront emerging and re-emerging infectious diseases.

Lastly, chapter V identifies and analyses the changes in various indicators of sexual and reproductive health in the region, in comparison with the targets agreed upon at the Cairo Conference and those established in the MDGs. There is evidence of a significant reduction in fertility, associated with high levels of contraceptive use, and of unmet needs for family planning in the vast majority of countries. It is also noted that maternal mortality is still at unacceptable levels in the region, insofar as all of these deaths could be prevented by applying known prevention and treatment protocols. The chapter further points out the high rate of adolescent fertility and the persistence of this phenomenon, which is the result of the barriers that still exist in access to comprehensive sexual and reproductive health services for teenage boys and girls. A promising outlook can be seen in the response to HIV/AIDS, primarily due to the coverage of anti-retroviral therapy.

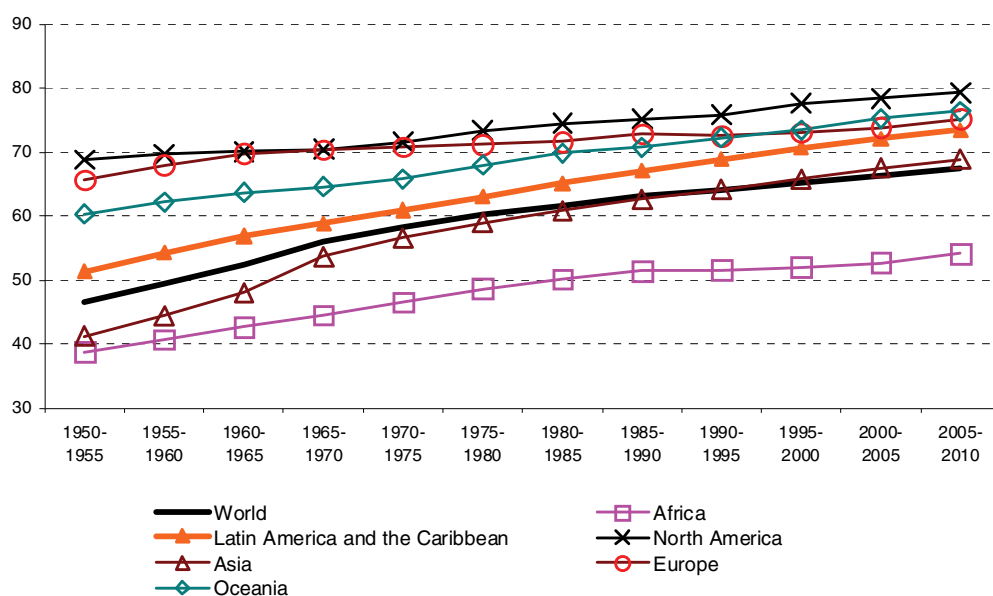
Chapter III

MORTALITY TRENDS IN LATIN AMERICA AND THE CARIBBEAN BETWEEN 1950 AND 2010

A. TRENDS IN LIFE EXPECTANCY AT BIRTH

At the middle of the last century, average life expectancy at birth in the region was 51.4 years for both sexes; it is estimated that this figure will reach 73.4 years for the five-year period of 2005-2010. At first, this major inroad against mortality was mainly a result of the decline in deaths caused by infectious, parasitic and respiratory diseases among children. Later on, it expanded to other age groups as a consequence of the epidemiological transition (ECLAC/CELADE, 2008a). Figure III.1 shows the advances made in this regard in Latin America and the Caribbean, in comparison with other regions of the world. Although the levels of life expectancy at birth were always higher than the global average, by the middle of the last century they were closer to those of Africa and Asia than to those of North America and Europe; however, at present they are similar to the levels of the most developed regions.

Figure III.1
WORLD AND REGIONS: LIFE EXPECTANCY AT BIRTH FOR BOTH SEXES, 1950-2010



Source: United Nations, "World Populations Prospects: The 2008 Revision, New York, 2008.

Table III.1 contains a description of the regional situation in the 1950-1955 period and the achievements made to date (2005-2010), with countries classified according to the relative level of mortality in each five-year period. In the 1950-1955 period, nine countries of the region had high mortality rates, with a life expectancy at birth of less than 50 years for both sexes. At the opposite end of

the spectrum was Uruguay, with a life expectancy of more than 65 years. At present, the life expectancy for the region as a whole, except for Haiti (61 years), is above 65 years. In seven countries (Barbados, Chile, Costa Rica, Cuba, Guadalupe, U.S. Virgin Islands and Martinique) it is above 77 years, which is the average for the most developed countries. The countries that made the most progress, Guatemala, Honduras, Nicaragua and Peru, gained about 30 years. Haiti, which had a life expectancy of 36 years in 1950-1955, achieved an increase of 0.4 years of life per calendar year, similar to the regional average. In recent years, it even exceeded the average. It is still about 30 years behind the region as a whole, however. Haiti is 46 years behind Martinique, which currently has the highest life expectancy at birth.

Table III.1
LATIN AMERICA AND THE CARIBBEAN: CLASSIFICATION OF COUNTRIES BY LEVEL OF MORTALITY, MEASURED BY LIFE EXPECTANCY AT BIRTH FOR BOTH SEXES (e(0)), 1950-1955 AND 2005-2010

Mortality in 1950-1955	Mortality in 2005-2010				
	High (less than 65 years)	Medium-high (65 to 69.9 years)	Medium (70 to 74.9 years)	Medium-low (75 to 76.9 years)	Low (more than 77 years)
High (less than 50 years)	Haiti	Bolivia (Plurinational State of)	El Salvador, Honduras, Guatemala, Nicaragua, Peru, Dominican Republic	Ecuador	
Medium-high (50 to 54.9 years)		Guyana	Brazil, Colombia, Saint Vicente y las Granadinas, Saint Lucia	French Guiana, Mexico	Chile
Medium (55 to 59.9 years)		Suriname, Trinidad and Tabago	Bahamas, Venezuela (Bolivarian Republic of)	Belize, Panama	Barbados, Costa Rica, Cuba, Guadalupe, U.S. Virgin Islands, Martinique
Medium-low (60 to 64.9 years)			Aruba, Jamaica, Paraguay	Dutch Antilles, Argentina, Grenada	
Low (more than 65 years)				Uruguay	

Source: CELADE-Population Division of ECLAC, population estimates and projections, 2008 revision, and United Nations, *World Population Prospects: The 2008 Revision, New York, 2008*.

Initially, Uruguay and Argentina were in the vanguard with respect to the low level of mortality, as this indicator had fallen prior to 1950.⁹ Nevertheless, they have had less significant reductions in the period under study, to the extent that they have been surpassed by the seven countries that are listed in the low mortality column for the current five-year period in table III.1. Thus, although mortality figures have

⁹ To a certain extent, the same thing happened in Cuba and Paraguay. However, their trends in those countries have been different, since Cuba today is one of the countries with very low mortality, whereas in Paraguay the life expectancy at birth is below the regional average.

tended to converge compared to the great disparities seen in the middle of the last century, there are still some significant differences today. This situation “demonstrates that much remains to be done to increase the survival of people in the region, given that the level of mortality is similar to that of more developed countries 25 years ago” (ECLAC/CELADE, 2008b).

There are major differences between countries and between the sexes in the way mortality rates have evolved. In general, women have been favoured with a higher average life expectancy and a continuing upward trend in that regard. Looking at the differential by sex, it is apparent that the advantage enjoyed by women tends to grow from approximately 2.5 to 3.5 years when life expectancy at birth is approximately 50 years, to a gap of more than 6 years when life expectancy at birth exceeds 70 years. In Latin America and the Caribbean, life expectancy at birth for females in 1950-1955 was 3.4 years greater than that of males, and now that differential is 6.5 years. The epidemiological transition must have contributed to that trend, as it translated into a decline in deaths due to complications of pregnancy and childbirth as well as those due to certain communicable diseases that were more prevalent among women. Moreover, excess mortality among men is most likely higher because of cardiovascular diseases and external causes.

According to the latest revision of population estimates and projections (United Nations, 2008c), between the 1950-1955 and 2005-2010 periods, life expectancy at birth in the region increased by an average of 22.1 years for both sexes, 20.5 years for men and 23.6 years for women. The most significant gains were seen between 1950-1955 and 1990-1995, when the average life expectancy for both sexes rose by 17.5 years, 15.9 years for men and 19.3 years for women. By comparison, the period between 1990-1995 and 2005-2010 showed a more modest increase (4.5 years for both sexes, 4.6 for men and 4.4 for women).¹⁰ The reason for this was that diseases considered to be easily prevented, such as infectious and parasitic diseases, were reduced first, and most of that reduction happened before the 1990s. The countries in the region that reported greater-than-average gains with respect to life expectancy were Brazil, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Martinique, Mexico, Nicaragua, Peru and the Plurinational State of Bolivia.

Average life expectancy in Latin America and the Caribbean, at 74 years in the 2005-2010 period, exceeded the goal of 70 years established by the WHO for 2000 and that established in the ICPD Programme of Action for 2005 (United Nations, 1995). Of the 36 countries considered, only Guyana, Haiti, the Plurinational State of Bolivia, Suriname and Trinidad and Tobago failed to reach that level. According to United Nations projections, the region will probably achieve the target of 75 years set by the ICPD by 2015. However, the country-by-country estimates indicate that nearly half the countries will have to make significant efforts to achieve this goal by the deadline.

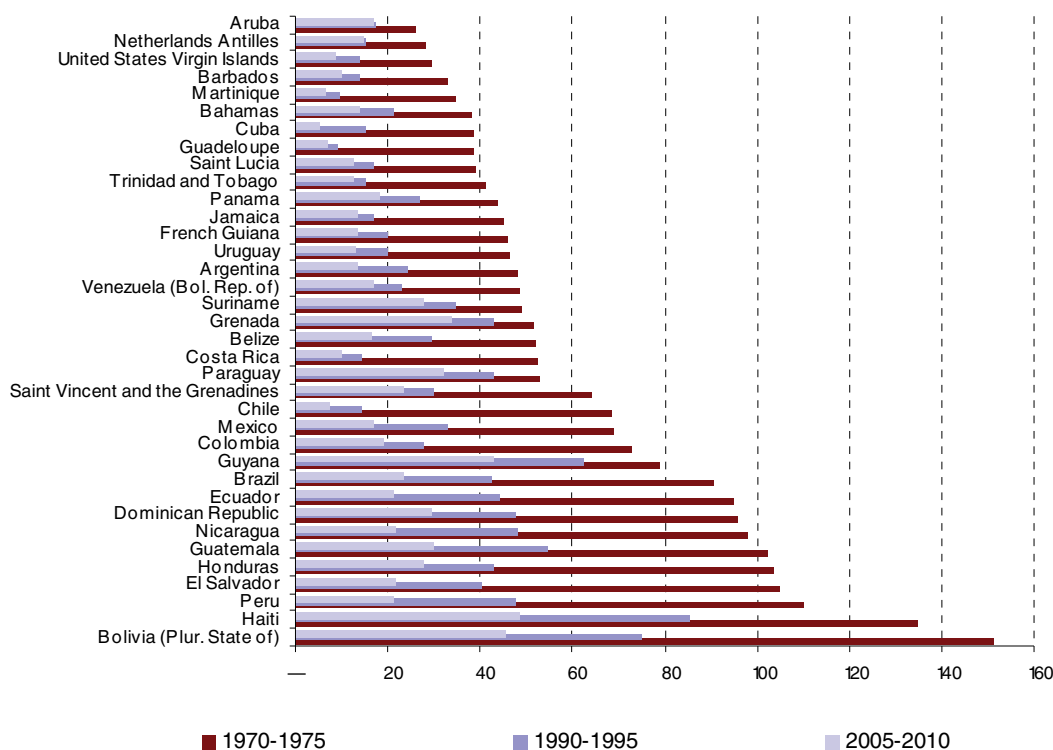
B. INFANT AND CHILD MORTALITY

The rise in life expectancy at birth, for both women and men, is primarily the result of the decline in mortality at early ages, especially infant mortality. This decrease has occurred in all countries, even those

¹⁰ The average annual increase in life expectancy between 1950-1955 and 1990-1995 was 0.45 years, and between 1990-1995 and 2005-2010 it was 0.3 years.

with relatively high mortality (see figure III.2). In the second half of the twentieth century, the region's infant mortality rate fell by 80%, from 138 deaths per 1,000 live births to 26 per 1,000.¹¹

Figure III.2
LATIN AMERICA AND THE CARIBBEAN: INFANT MORTALITY RATE,
1970-1975, 1990-1995 AND 2005-2010
(Per 1,000 live births)



Source: CELADE-Population Division of ECLAC, "Population projection", *Demographic Observatory*, No. 7 (LC/G.2414-P), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), April 2009, forthcoming, and United Nations, *World Population Prospects. 2008 Revision*, New York, 2008.

Around 1970, one in every 12 children born in the region would die in the first year of life. In six countries of Latin America and the Caribbean (El Salvador, Guatemala, Haiti, Honduras, Peru and the Plurinational State of Bolivia), out of a total of 36, the infant mortality rate was more than 100 deaths per 1,000 live births; and in two countries (Haiti and the Plurinational State of Bolivia), it was even as high as 150 per 1,000 or more.

In the ensuing decades, there was a marked decline in infant mortality. The rate for the region as a whole fell from 81 deaths per 1,000 live births in 1970-1975 to 38 per 1,000 in 1990-1995 and to 22 per 1,000 in 2005-2010. To a greater or lesser extent, all of the countries have seen a significant decrease in this figure (see figure III.2 and table III.2). This reduction in the risk of dying in childhood came about

¹¹ The infant mortality rate refers to the probability of dying before reaching one year of age, calculated as the ratio between deaths of children under one year of age and the total number of live births in the same period, usually one year.

despite the limitations imposed by the prevailing inequity and poverty in the region's countries and the numerous economic and political crises that many of them have undergone in recent decades. In 2005-2010, the infant mortality rate in Barbados, Chile, Costa Rica, Cuba, Guadalupe, Martinique and U.S. Virgin Islands has been equal to or less than 10 deaths per 1,000 live births. Only in Guyana, Haiti and the Plurinational State of Bolivia has it been as high as 45 per 1,000. Infant mortality in most of the countries fell by 60% to 80%, regardless of the initial levels. The countries that reported low figures in 1970-1975 have shown decreases greater than or similar to those of the countries with higher rates.

Table III.2
LATIN AMERICA AND THE CARIBBEAN: CLASSIFICATION OF COUNTRIES BY LEVEL OF INFANT MORTALITY IN 1970-1975 AND BY THE PERCENTAGE OF REDUCTION ACHIEVED BY 2005-2010

Infant mortality level in 1970-1975	Percentage of reduction in infant mortality between 1970-1975 and 2005-2010			
	40% or less	Between 40% and 60%	Between 60% and 80%	80% or more
100 deaths or more			Bolivia (Plurinational State of), El Salvador, Haiti, Honduras, Guatemala	Peru
Between 50 and 100 deaths	Grenada, Paraguay	Guyana	Belize, Brazil, Colombia, Ecuador, Mexico, Nicaragua, Dominican Republic, Saint Vincent and the Grenadines	Chile, Costa Rica
50 deaths or fewer	Aruba	Dutch Antilles, Panama, Suriname	Argentina, Bahamas, Barbados, French Guiana, U.S. Virgin Islands, Jamaica, Saint Lucia, Trinidad and Tabago, Uruguay, Venezuela (Bolivarian Republic of)	Cuba, Guadalupe, Martinique

Source: CELADE-Population Division of ECLAC, "Population projection", Demographic Observatory, No. 7 (LC/G.2414-P), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), April 2009, forthcoming, and United Nations, World Population Prospects. 2008 Revision, New York, 2008. *2008 Revision, New York, 2008.*

This radical change in the risks of death in infancy is most likely due to the combination of several simultaneous processes, including advances in maternal-child health programmes based primarily on high-impact, low-cost primary care (such as large-scale vaccinations, oral rehydration therapy and well-child checkups); ongoing socio-economic and demographic transformations, such as expanded coverage for basic services, above all potable water and sanitation; and increased education levels in the population and reduced fertility.

The analysis of child mortality makes it possible to look at progress in child health from another perspective, taking into account the risks that exist after the first birthday, when living conditions and other exogenous factors have greater weight.¹² In 1990, about 55 boys and girls under the age of 5 years died for every 1,000 live births, but by 2009 that figure had fallen to 27 per 1,000. This means that mortality in this age group dropped by slightly more than that of children under 1 year of age (51% and 42%, respectively).

¹² Child mortality refers to the probability of dying before reaching five years of age, calculated as the ratio between the number of deaths of children under five and the number of live births in the corresponding cohort.

As with infant mortality, although there is an evident convergence in rates, the differences from one country to another in the region are still marked. In table III.3, the countries were classified by excess mortality figures for children under five years of age in 1990 and 2009, using as a benchmark the country with the lowest mortality rate in each year (Martinique in 1990 and Martinique and Cuba in 2009). The figures in parentheses represent excess mortality in 2009, when a Honduran child, for example, was five times more likely to die before his fifth birthday than a Cuban child. The countries on the diagonal line (24) maintained the same range of excess mortality during the period in question. The three countries above the diagonal line, in contrast, saw a deterioration in their relative level of mortality, and the eight countries below the line saw an improvement. In 2009, as in 1990, Haiti had the highest excess mortality rate; a Haitian child was 12 times more likely to die before the age of five than a child in Cuba or Martinique. The Plurinational State of Bolivia and Guayana are in a similar position, though their excess mortality ratios are around 7.

1. Decline in infant and child mortality and the established goals

The infant and child mortality goals of the ICPD Programme of Action called for a two-thirds reduction in the 1990 rate by 2000; that is, to a total of 50 deaths of children under one year old and 70 deaths of children under five years old for every 1,000 live births. By 2005, the goal was to reach levels below 50 and 60 deaths per 1,000 live births, and by 2015 all countries were to reduce the number of deaths per 1,000 live births to 35 and 45, respectively.

With regard to infant mortality, as has been stated previously and illustrated in figure III.2, the countries in the region have made substantial progress. In fact, in the 2005-2010 period the vast majority of them achieved the goal set by the ICPD Programme of Action for 2015, with the exception of the Plurinational State of Bolivia, Haiti and Guayana.

As for child mortality, target 4A of the fourth MDG, which is more demanding and more reflective of the current situation and the rate of decline in the countries of the region, calls for “reducing by two thirds, between 1990 and 2015, the under-five mortality rate” (United Nations, 2008b). Figure III.3 shows the estimates of mortality for children under five in 1990 and 2009 and the projections for 2015 by country, along with the levels they are supposed to achieve by that year according to the MDGs. As noted earlier, the child mortality rate has fallen in all countries of the region, though the pace has varied: in the 1990-2009 period, 16 of 35 countries for which pertinent information is available reduced this indicator by more than 50%. Even so, current projections suggest that only five countries will achieve the MDG target for 2015: Nicaragua (which reached it in 2009), Cuba, Ecuador, Grenada and Peru.

Table III.3
**LATIN AMERICA AND THE CARIBBEAN (SELECTED COUNTRIES): EXCESS MORTALITY
 AMONG CHILDREN UNDER 5 (EMq(5))^a IN RELATION TO THE LOWEST RATE
 OF CHILD MORTALITY OBSERVED IN THE REGION,^b 1990 AND 2009**

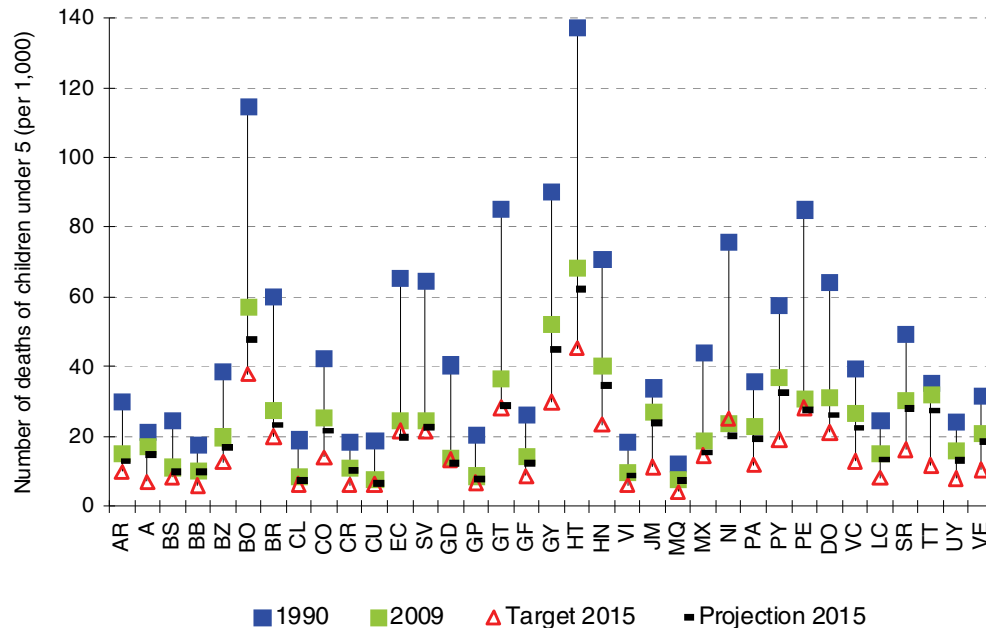
		2009			
		1 < EMq(5) ≤ 1.5	1.5 < EMq(5) ≤ 3	3.0 < EMq(5) ≤ 6	EMq(5) > 6
1990	1 < EMq(5) ≤ 1.5	Barbados (1.3) Costa Rica (1.4) Chile (1.1) Cuba (1.0) Martinique (1.0) U.S. Virgin Islands (1.3)			
	1.5 < EMq(5) ≤ 3	Bahamas (1.5) Guadalupe (1.1)	Argentina (1.9) Aruba (2.3) French Guiana (1.9) Saint Lucia (2.0) Uruguay (2.0) Venezuela (Bolivarian Republic of) (2.7)	Panama (3.0) Jamaica (3.5) Trinidad and Tobago (4.2)	
	3.0 < EMq(5) ≤ 6		Belize (2.6) Grenada (1.8) Mexico (2.4)	Brazil (3.6) Colombia (3.3) Dominican Republic (4.1) Ecuador (3.2) El Salvador (3.2) Grenadines (3.5) Honduras (5.2) Paraguay (4.8) Saint Vincent and the Suriname (3.9)	
	EMq(5) > 6			Guatemala (4.7) Nicaragua (3.1) Peru (4.0)	Bolivia (Plurinational State of) (7.4) Guyana (6.8) Haiti (8.9)

Source: CELADE-Population Division of ECLAC, "Population projection", Demographic Observatory, No. 7 (LC/G.2414-P), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), April 2009, forthcoming, and United Nations, World Population Prospects. 2008 Revision, New York, 2008.

^a Child mortality rate of the country indicated/child mortality rate of Latin America and the Caribbean.

^b In 1990, Martinique reported the lowest rate (12 deaths of children under 5 for every 1,000 live births), and in 2009, Cuba and Martinique reported the lowest rate (8 deaths of children under 5 for every 1,000 live births).

Figure III.3
LATIN AMERICA AND THE CARIBBEAN: CHILD MORTALITY BY COUNTRY, 1990 AND 2009,
TARGETS AND PROJECTIONS FOR 2015
(Per 1,000 live births)



Source: CELADE-Population Division of ECLAC, population estimates and projections, 2008 revision, and United Nations, World Population Prospects: *The 2008 Revision, New York, 2008.*

2. Neonatal and post-neonatal mortality

Considering the components of infant mortality, it is estimated that each year, four million neonatal deaths (that is, those that take place on the first day of life or within the next 28 days) occur worldwide. Of those deaths, 99% are in low- and medium-income countries, and at least 50% are the result of home births (Black, Morris and Bryce, 2003; Lawn, Cousens and Zupan, 2005), which in most cases take place without adequate professional care, much less with an emergency care plan.

In 2000, approximately 38% of deaths among children under five in the world occurred during the first month of life, while between 25% and 50% of neonatal deaths came in the first 24 hours, 75% in the first week of life (Lawn, Cousens and Zupan, 2005). In Latin America and the Caribbean, the percentage of neonatal deaths is reportedly just over 44% (Barros and others, 2005). It is estimated that between 60% and 80% of neonatal deaths correspond to babies with very low birth weight, although they represent only 14% of all babies born (Bang, Reddy and Deshmukh, 2002; Lawn, Cousens and Zupan, 2005). Extremely low birth weight is related to premature birth and intrauterine growth restriction, problems which are most prevalent in the poorest sectors of society. Poverty leads to a higher propensity for neonatal mortality because it increases risk factors, such as maternal infections, as well as the lack of access to effective health services (Lawn, Cousens and Zupan, 2005). Maternal complications, especially during labour, are also a risk factor for neonatal death. In addition, this analysis should also take into account the fact that girls have a biological advantage for survival during the neonatal period.

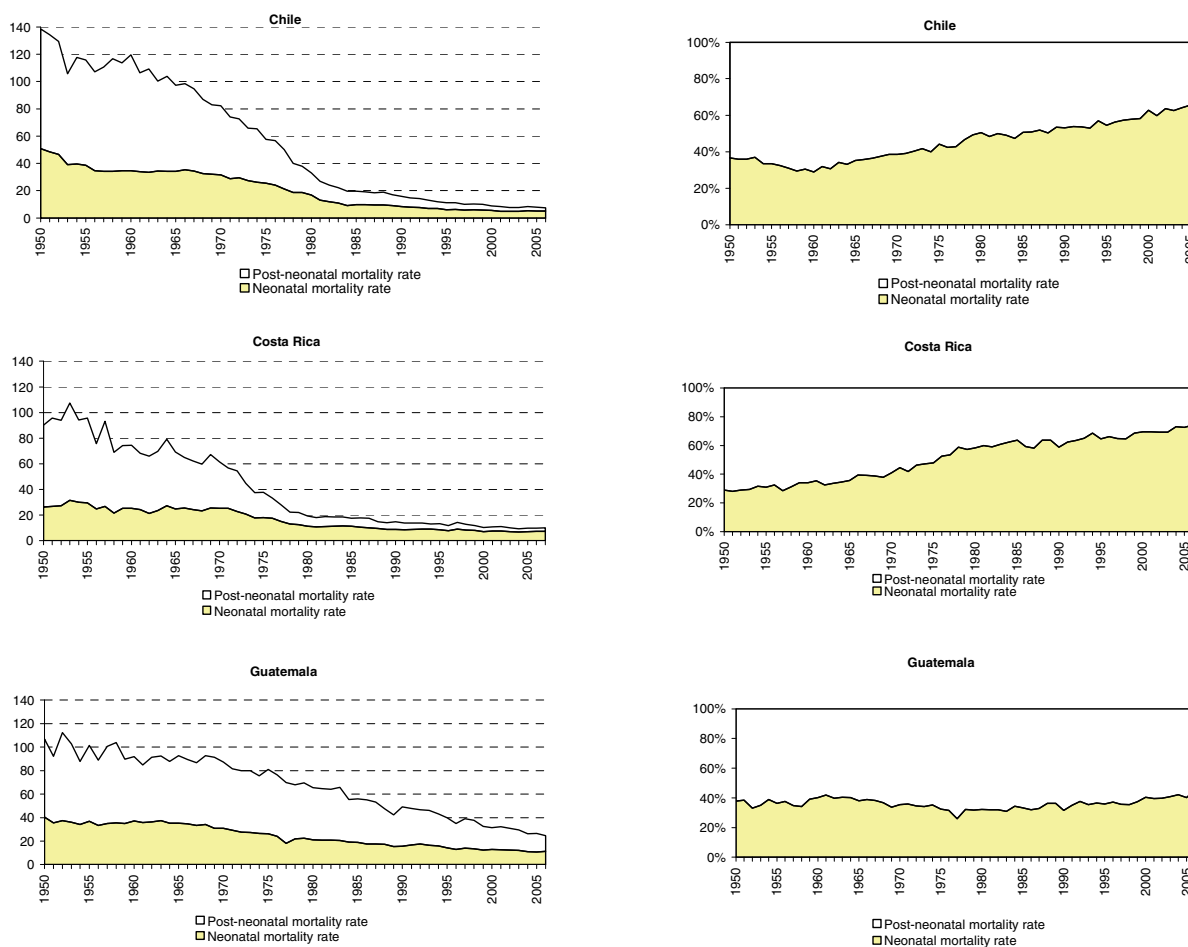
Early neonatal deaths—that is, those that occur during the first week of life, and especially in the first 24 hours—represent 75% of all neonatal deaths in the world. In general, they are caused by prematurity and birth asphyxia (Lawn, Cousens and Zupan, 2005). To prevent these deaths, coverage needs to be expanded to provide qualified personnel to attend births, individualized clinical care and access to emergency obstetrical care and early neonatal care. Later neonatal deaths and post-neonatal deaths are due primarily to infections, which means that they are preventable, especially through interventions such as immunization by vaccinations, breastfeeding and hygiene. In Latin America and the Caribbean, coverage for interventions aimed at promoting the survival of children is quite high, except in Haiti, although there are major differences and inequities between and within countries (Barros and others, 2005).

As infant mortality decreases, the first deaths to decline are those due to exogenous causes—or those that are easily prevented because they are environmental—and, as noted previously, they occur principally during the post-neonatal period (from 1 to 11 months of age). Therefore, the relative weight of mortality due to endogenous causes, such as congenital malformations and other diseases related to conditions of pregnancy and childbirth, is rising; and these types of mortality usually occur during the first 28 days of life (the neonatal period). It should also be recalled that this increase in mortality could be caused by the fact that greater access to prenatal care has meant that foetuses that formerly would not have been born alive are now born; but because the pregnancies were high-risk, there is still a high risk of death during the first days of life.

Despite the limited information available in the region, some countries have considerable time-series data. Figure III.4, which shows trends in neonatal and post-neonatal mortality in the 1950-2007 period in three selected countries with different levels of infant mortality, demonstrates the relatively greater weight of neonatal deaths in countries that achieved a significant reduction in infant mortality. In 1950, the percentage of neonatal deaths compared to deaths of children under one year old was between 30% and 40%, and the infant mortality rate was between 120 and 140 deaths per 1,000 live births. In 2007, Chile and Costa Rica reported rates of 8 and 10 deaths per 1,000, respectively, and the proportion of neonatal deaths reached nearly 80%. In Guatemala, in contrast, the rate remained at about 40% throughout the period, despite the drop in infant mortality to 25 deaths per 1,000 live births.

As mentioned previously, one in every three deaths of children under five occurs in the first month of life, so if the countries in the region intend to achieve a major reduction in infant and child mortality, they will have to place the emphasis on the causes of neonatal mortality. At the same time, they must maintain and boost the achievements they have made with respect to post-neonatal deaths and those among children aged one to four years.

Figure III.4
LATIN AMERICA (SELECTED COUNTRIES): NEONATAL AND POST-NEONATAL MORTALITY RATES AND THEIR RELATIVE DISTRIBUTION, 1950-2007
(Number of deaths and percentages)



Source: CELADE-Population Division of ECLAC, on the basis of World Health Organization (WHO), mortality database [online] <http://www.who.int/healthinfo/morttables/en/index.html>.

3. Social differences in infant and child mortality

Although the figures analysed show progress in the region, the mortality goals will be difficult to achieve without reducing inequities within countries. The *Social Panorama of Latin America 2005* (ECLAC, 2005), in its chapter on demographic and social inequalities, shows that infant mortality may have decreased in the most disadvantaged socio-economic sectors, but the same cannot be said of territorial gaps. Furthermore, it points out that the indigenous populations are furthest behind when it comes to reducing mortality, and as we will demonstrate below, there are major disparities between them and the non-indigenous populations.

To analyse the social differences in child mortality, the estimates of under-five mortality are examined by area of residence, mother's education level and ethnic group (indigenous or Afro-

descendent), among other disaggregations. However, because of problems associated with the basic information and the methodologies used, these estimates must be viewed with caution, especially in terms of the disaggregations by sub-populations.

With respect to place of residence, when mortality is very high in urban areas it also is high in rural areas. The differences can be expected to increase later on, because the urban middle classes tend to reduce mortality first, followed by lower-income urban residents and finally by those living in rural areas, at which point the rates tend to converge. In Latin America, urban infant mortality in the 1970-2000 period fell from 87 to 27 deaths of children less than one year old for every 1,000 live births, and the rural counterpart fell from 101 to 38. In 1970, a boy or girl living in a rural area had 1.2 times more risk of dying than one in urban areas. Since 1990, that gap has increased to 1.4 times the risk. The most significant urban-rural differences can be seen in Panama and Peru, where the risk of dying before the first year of life has been nearly three times greater in the rural sector than the urban one. This difference lasts at least to the age of five years.

The inverse correlation between the level of child mortality and mothers' education level is well known. Some studies even show that it continues to be significant, though less so, when other variables related to infant mortality are controlled (Behm, 1992). In Latin America, infant mortality among children born to women with less than three years of schooling in 1970 amounted to 102 deaths per 1,000 live births, while that of children whose mothers had seven or more years of education was 47 per 1,000. By the year 2000, these figures had fallen to 48 and 22 deaths per 1,000, respectively. What this means is that, since 1970, mortality among children under one year old has been twice as high when their mothers received less than three years of formal education as that of children whose mothers had seven years of education. Within the region, there are countries where this excess mortality of children of mothers with a lower level of education is five times greater than mortality among children whose mothers were better educated. This is true even in countries with low mortality, such as Argentina.

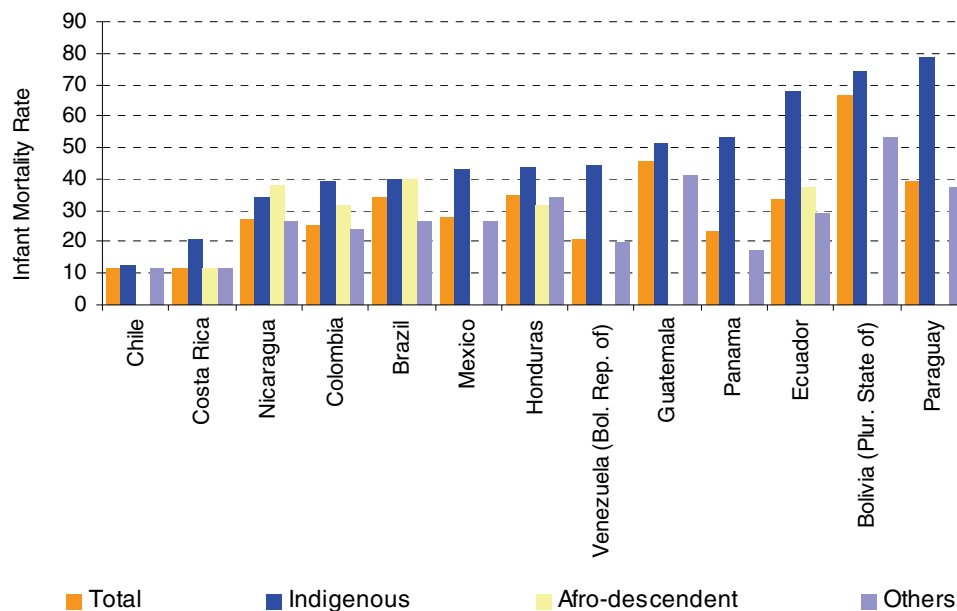
The regional situation is heterogeneous in terms of the intensity of mortality among indigenous boys and girls. In Paraguay and the Plurinational State of Bolivia, the probabilities of dying in infancy are the highest in the region, where as in Chile and Costa Rica they are just the opposite. It is worth pointing out that relatively low national rates of infant mortality do not always apply to indigenous children, as is the case in Panama (see figure III.5). The highest risks are in fact found in that country, along with the Bolivarian Republic of Venezuela, Ecuador and Paraguay. A Panamanian indigenous child is three times more likely to die before his first birthday than a non-indigenous child, and the risk is higher among children under five. In the other three countries mentioned, the risk of mortality is twice as high for indigenous children, both in infancy and in childhood. As far as the Afro-descendent population is concerned, in the six countries analysed the pattern of mortality is mixed in comparison with that of children who are not Afro-descendent. The inequities are clear in Brazil, Colombia and Nicaragua, but not in Costa Rica and Honduras (see figure III.5).

When infant and child mortality rates are compared between indigenous and Afro-descendent children, it can be observed that, in general, an indigenous child is more likely to die before his first birthday than his Afro-descendent counterpart. This is true in Costa Rica, Honduras and Ecuador, but not in Brazil and Nicaragua, where Afro-descendent children even run a slightly higher risk than indigenous children.

The examination of mortality patterns by area of residence, mother's education level and ethnic origin, in addition to other variables such as the occupation of the head of household and the housing conditions, makes it possible to identify groups that are at greater or lesser risk of dying. Together with

geographic location, this is very valuable information for implementing any plan of action, that seeks not only to achieve the national targets set for 2015, but also to attain the maximum possible equity.

Figure III.5
LATIN AMERICA: INFANT MORTALITY AMONG INDIGENOUS, AFRO-DESCENDENT AND REMAINING MEMBERS OF THE POPULATION, BY COUNTRY, 2000 CENSUSES
(Number of deaths among children under one year old per 1,000 live births)



Source: A. M. Oyarce, “Salud materno- infantil de pueblos indígenas y afrodescendientes de América Latina: una relectura desde el enfoque de derechos”, Project documents, CELADE-Population Division of ECLAC/Pan American Health Organization (PAHO), 2010, forthcoming.

Note: The source document contains the methodological details and the definitions of indigenous and Afro-descendent used in each country.

4. Morbidity, access to health services and prevention of childhood diseases

Programmes designed to combat infant mortality in lesser-developed countries have focused on pneumonia, diarrhea and diseases preventable by vaccination, which are important causes of death after the neonatal period. Globally, the main causes of death at this stage of life are severe infections (36%)—above all, sepsis and pneumonia— premature birth (28%) and complications from asphyxia (28%), but their distribution depends on the level of the mortality rate. In places where mortality is very high, nearly 50% of deaths are caused by infections such as tetanus and diarrhea, whereas those with lower levels (neonatal mortality rate of <15), sepsis and pneumonia are responsible for about 20% of these deaths. Tetanus and diarrhoea are practically non-existent in the latter areas (Lawn, Cousens and Zupan, 2005).

Coughing, accelerated breathing and fever are symptoms of acute respiratory infection (ARI), the main complication of which is pneumonia. This is the cause of a significant number of infant deaths.

According to the information available on some countries of the region, derived from Demographic and Health Surveys (DHS) conducted in approximately 2005, 23% of children under the age of five had a cough or fever in the weeks prior to the survey.¹³ Nearly 56% of them were taken to medical centres for treatment, but a correlation between efforts to seek treatment and the wealth index was not seen in all countries. Other figures, however, indicate that children in the highest socio-economic quintile were twice as likely as those in the lowest quintile to go to healthcare institutions.

On average, the surveys conducted in six countries of the region —Colombia (2005), the Dominican Republic (2007), Ecuador (2004), Guatemala (2002), Haiti (2005-2006) and Honduras (2005-2006) —revealed that acute diarrhoeal disease (ADD) affected about 18% of the population, and that one in six children who had the disease did not receive any treatment. In this case, no really evident correlation was found between the number of treatments and the wealth index, although geographical differences were found: in some countries there were regions where nearly 50% of sick children received no treatment, and others where nearly 90% did get the care they needed.

According to data from the aforementioned surveys, this time referring to 11 countries in the region —Colombia (2005), the Dominican Republic (2007), Ecuador (2004), El Salvador (2008), Guatemala (2002), Haiti (2005-2006), Honduras (2005-2006), Nicaragua (2006), Paraguay (2004), Peru (2004-2006) and the Plurinational State of Bolivia (2008)— 62% of children under five years old received the full series of vaccinations.¹⁴ It should be emphasized that the Plurinational State of Bolivia and Nicaragua had high rates of vaccination: 79% and 85% of children, respectively, received the full series. In the six countries for which it was possible to analyse the gap in terms of wealth —Colombia, the Plurinational State of Bolivia, Haiti, Honduras, Peru and the Dominican Republic— it was found that, on average, 49% of children in the poorest quintile had completed their vaccination series, compared to 65% in the wealthiest quintile. In this regard, once again the Plurinational State of Bolivia stood out as having very little variation between the two groups. There are also geographical differences in this indicator (the full series of vaccinations): in some countries there were regions where nearly half of children had not received all their vaccinations, while in others nearly 90% had.

Measles, a major cause of infant mortality, can be prevented effectively with a relatively economical vaccination and subsequent booster to provide lifetime protection (United Nations, 2009a). The combination of improving vaccination routines and providing booster shots has made it possible to reduce deaths due to measles by a considerable amount in the region. Since 1990, when the proportion of children aged 12 to 23 months who had received at least one dose of the measles vaccine was 76%, the level of coverage has expanded steadily, reaching 93% in 2007. The latter figure was similar to that reported in developed regions in 2007 (United Nations, 2008a and 2007c). However, there are differences within the region: In Haiti, barely 30% of children were covered in the early 1990s, a figure that rose to 58% by 2007. In the Plurinational State of Bolivia, the percentage grew from 50% to 80% between 1990 and 2007. Coverage is nearly universal —more than 95%— in several countries (Antigua and Barbuda, Argentina, Chile, Cuba, Dominica, Guyana, Saint Kitts and Nevis, Saint Vincent and the Grenadines and Saint Lucia), but there are others in which it varied. In the Bolivarian Republic of Venezuela, for

¹³ The data on symptoms and treatment of acute respiratory infection and diarrhoea come from DHS surveys conducted in a total of 14 countries in the region. This document draws on the results of the latest round of surveys conducted in Brazil (1996), Colombia (2005), Ecuador (2004), El Salvador (2002), the Plurinational State of Bolivia (2003), Guatemala (2002), Haiti (2005-2006), Honduras (2005-06), Nicaragua (2006), Paraguay (2004), Peru (2000) and the Dominican Republic (2007) (see [on line] www.measuredhs.com).

¹⁴ The complete vaccination series consists of a dose of BCG at birth, three doses of anti-poliomyelitis vaccination and the pentavalent in the first year of life, plus a dose of triple viral in the second year.

example, the coverage went from 68% in 1990 to 88% around 2000, only to fall to 55% by 2007. At present, coverage in the majority of countries exceeds 80%. Even so, there are still gaps within countries according to education, wealth and place of residence.

Box III.1

CHILD UNDERNUTRITION IN LATIN AMERICA AND THE CARIBBEAN

Despite the achievements of the last few years, chronic child undernutrition in Latin America and the Caribbean still affects 8.8 million children under the age of five —16% of the population in that age group. This situation is particularly serious in Central American and Andean countries, and could prevent attainment of the Millennium Development Goals (MDG). A study based on the results of a technical cooperation programme between the World Food Programme (WFP) and ECLAC (ECLAC/UNICEF, 2006) asserts that the region's nutritional situation is yet another indicator of social inequalities, and is both a cause and consequence of poverty. Thus, while the production of foodstuffs and dietary inputs is three times greater than the population's caloric needs, 53 million persons have insufficient access to food.

According to this study, to greater or lesser degrees, the countries of the region are affected by both insufficient food intake and imbalances in dietary composition. The latter involves the lack of micronutrients (iron, iodine, zinc, and vitamin A), and a growing excess of macronutrients rich in saturated fats, which leads to obesity and other pathologies.

Those most vulnerable to hunger and undernutrition are the region's poor who live in rural sectors, belong to indigenous or Afro-descendent groups and have a low level of education and limited access to potable water and sanitation. For example, a child living in a rural area is between 1.5 and 3.7 times more likely to be underweight than a child living in an urban area. Similarly, indigenous children are four times more likely to be underweight than non-indigenous children (ECLAC/UNICEF, 2006).

Given that undernutrition has effects on health, education and productivity, it is one of the major mechanisms for the intergenerational transmission of poverty and inequality. In addition, poor diets among children under the age of five increases their risk of death, inhibits their cognitive development and affects their health for their whole lives (ECLAC/UNICEF, 2006).

Chronic undernutrition (that is, stunting or low height for age) produces irreversible effects and is directly related to extreme poverty. The most serious situation in the region in this regard is seen in Central American countries such as Guatemala, where 46% of children under five suffered from chronic undernutrition in the 1995-2002 period, higher than the average in Asia and Africa. There was also a high incidence of this problem in Honduras (29%) and the Andean countries —Ecuador (27%), the Plurinational State of Bolivia (26%) and Peru (25%).

Being underweight for one's age is a condition that varies from one country to another. In the 1995-2002 period, 7.5% of all children under five in the region were underweight, but whereas some countries have already achieved target 1C of the first MDG, to "halve, between 1990 and 2015, the proportion of people who suffer from hunger", others, such as Argentina, Costa Rica, Ecuador and Paraguay, have made very little progress or have even regressed.

Another way of measuring this problem is to consider the implications that undernutrition has for national economies. Along these lines, a joint study by ECLAC and the WFP revealed that in 2004 alone, child undernutrition cost the economies of Central America and the Dominican Republic US\$ 6.7 billion. This is equivalent to 6.4% of the subregion's GDP (between 1.7% and 11.4% of GDP in the countries studied), and constitutes a burden that weighs heavily on national and international efforts to eradicate hunger and poverty (ECLAC/WFP, 2007). According to information derived from surveys conducted in 2005 in four South American countries (Ecuador, the Plurinational State of Bolivia, Paraguay and Peru), the economic impact of undernutrition amounted to an average of 3.3% of GDP (ranging from 2% and 5.9%), and represented a total cost of US\$ 4.331 billion.

As noted above, undernutrition has direct effects on health, education and productivity; it has an indirect influence on rising health-care and education costs; and it also leads to a decline in economic activity due to low productivity. In Central America and the Dominican Republic, economic losses caused by increased mortality due to diseases related to undernutrition and the resultant low levels of formal education represented 90% of the costs mentioned above (ECLAC/WFP, 2007). In the four South American countries studied, productivity losses caused by the higher mortality and lower education levels that result from undernutrition accounted for as much as 95% of the costs (Martínez and Fernández, 2009).

Box III.1 (concluded)

The impact of child undernutrition on morbidity rates in the Plurinational State of Bolivia added more than 28,000 cases to the number of diseases recorded in 2005. Moreover, it was estimated that of all deaths in the population under five years of age, nearly 16,000 cases (18%) were associated with undernutrition. Public and private spending on health rose by US\$ 13.9 billion on account of increased care required for pathologies derived from child undernutrition. This figure amounts to 0.15% of GDP and 4.3% of national public spending on health; 95% of the spending came from the public sector (Ministry of Health and Sports of the Plurinational State of Bolivia/WFP/ECLAC, 2009).

Bolivian primary and secondary school students who suffered from undernutrition in 2005 had received an average of 2.8 years less education than children not suffering from undernutrition. This was partly due to the fact that a large number of children who suffered from undernutrition during their preschool years did not even enter the first grade of primary school. This problem also increased the number of repeated grades (44% in primary and 56% in secondary school), mostly among those who had suffered from undernutrition before the age of five. The rate of failure in school cost the Bolivian education system more than US\$ 400,000 in additional operating costs, equivalent to 0.6% of social spending on education. Education shortfalls caused by undernutrition translated into a loss of productivity amounting to US\$ 219 million, 12.6% of social spending, 32.1% of public spending on education and about 2.3% of GDP. Furthermore, the loss of productivity resulting from the deaths of persons with undernutrition who could have belonged to the labour force that year amounted to US\$ 319 million, 3.4% of GDP. If the goal of eradicating child undernutrition by 2015 is achieved, as proposed in the MDGs, savings would amount to US\$ 254 million (Ministry of Health and Sports of the Plurinational State of Bolivia/WFP/ECLAC, 2009).

The findings of these studies reinforce the sense of urgency that should drive efforts to eradicate undernutrition (measured as the ratio of weight to age), which causes irreparable physical and mental damage to boys and girls. Although these actions represent an ethical imperative, and therefore there is no room for argument about them, the benefits that they would yield should also be taken into consideration, as should the economic impact of failing to act in time to address this problem (ECLAC/WFP, 2007). National programmes aimed at reducing the prevalence of undernutrition would have significant repercussions on inhabitants' quality of life and would generate major savings for society (Martínez and Fernández, 2009).

To deal more successfully with the problem of child undernutrition, the countries of the region should develop comprehensive government policies for the long term, actively involving all stakeholders. It is also essential that they target their interventions towards boys and girls under the age of three and pregnant and breastfeeding women, as these are the critical times of nutritional vulnerability in the life cycle. In addition, they should promote breastfeeding, keep and improve programmes to fortify foods with micronutrients, provide dietary supplements to pregnant and breastfeeding women and promote the consumption of them, create monetary and food transfer programmes for the populations living in extreme poverty and strengthen preventive actions, among other measures.

Source: Economic Commission for Latin America and the Caribbean (ECLAC)/United Nations Children's Fund (UNICEF), *Challenges. Newsletter on progress towards the Millennium Development Goals from a child rights perspective*, No. 2, Santiago, April 2006; Economic Commission for Latin America and the Caribbean (ECLAC)/World Food Programme (WFP), *Análisis del impacto social y económico de la desnutrición infantil en América Latina. Resultados del estudio en Centroamérica y República Dominicana. Panorama general*, Santiago, Chile, 2007; R. Martínez and A. Fernández, "El costo del hambre: impacto social y económico de la desnutrición infantil en Bolivia, Ecuador, Paraguay y Perú", *Project documents*, N° 260 (LC/W.260), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), 2009; Ministry of Health and Sports/World Food Programme/Economic Commission for Latin America and the Caribbean (ECLAC) *El costo del hambre en Bolivia. Impacto social y económico de la desnutrición infantil*, Santiago, Chile, 2009.

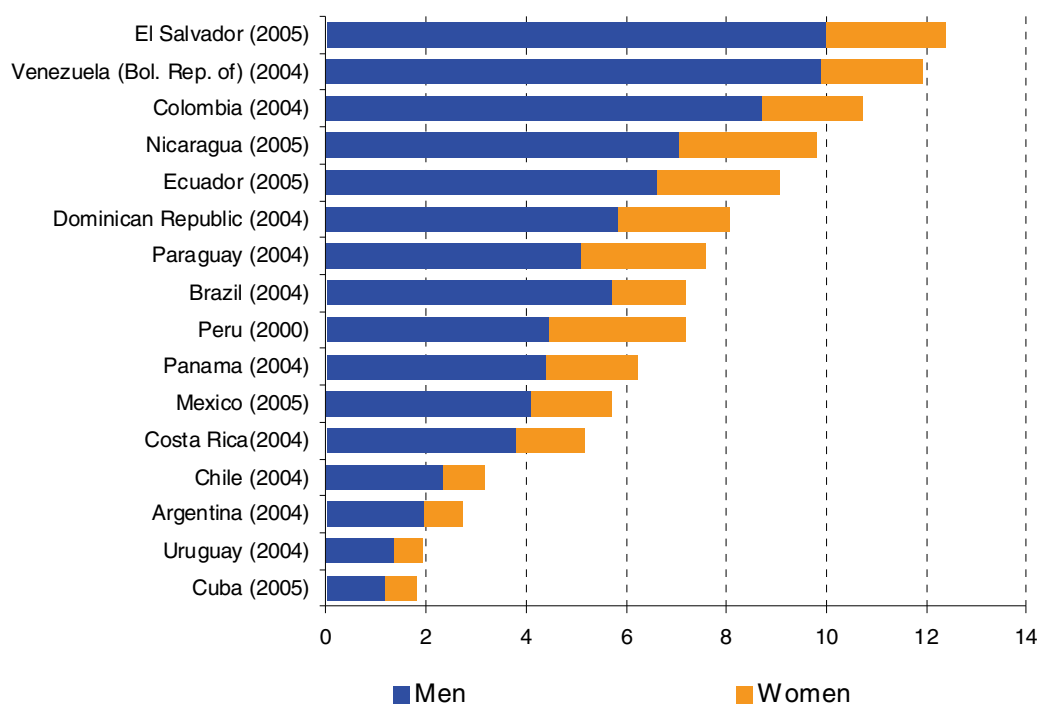
C. MORTALITY OF THE YOUNG POPULATION

The lowest rates of mortality are seen in the young population, which means that the turning-point for mortality by age comes at about 12 years of age. Mortality starts at a relatively high rate among newborns and infants, declines to its lowest point between 5 and 14 years, as noted, and then rises steadily with age. In Latin America and the Caribbean, the mortality rate for both sexes in the group aged 10 to 14 years was 5 deaths per 10,000 inhabitants in the 2005-2010 period. At these ages, there is less impact from

deaths due to infectious, parasitic or degenerative diseases, and therefore deaths due to external causes (accidents, suicides and homicides) predominate.

For this very reason, deaths of young people represent a small percentage of overall deaths. However, there are major differences in the region in this regard: while in El Salvador they account for more than 12% of all deaths, in Cuba they amount to just over 1% (see figure III.6). Although deaths of young people as a percentage of total deaths is an indicator that depends on the population's age structure—in countries with an older population, the percentage is lower—it is an initial sign of health and social conditions in this age group. For example, the high proportion of deaths among youths in El Salvador and Colombia is an indication that these two countries have a higher number of deaths caused by violence. The gender breakdown of deaths highlights the weight of mortality among young men, which is directly related to the different lifestyles of men and women, at least in this region.

Figure III.6
**LATIN AMERICA (SELECTED COUNTRIES): DEATHS OF PERSONS AGED 15 TO 29 YEARS
 AS A PERCENTAGE OF THE TOTAL, BY SEX, APPROXIMATELY 2000**
(Percentages)



Source: CELADE-Population Division of ECLAC, population estimates and projections, 2008 revision.

Male mortality in Latin American countries is quite high. A man aged 15 to 29 years is three times more likely to die than a woman of the same age. In countries such as the Bolivarian Republic of Venezuela, Brazil, Colombia and El Salvador, this risk is four to five times greater, whereas in Cuba or Peru, there is a less significant difference between the two sexes (almost two times) (ECLAC/OIJ, 2008).

Two factors may explain this situation. First, gains in life expectancy are primarily due to progress in the epidemiological transition (a decline in deaths caused by infectious or communicable diseases, precisely those which have the least impact on young people); and second, it is possible that the differences among countries are a result of different socio-economic conditions that lead to a greater or lesser risk of death (degree of urbanization, rising disparities or polarization, among others).

1. Number of life years lost during youth

Two indicators that make it possible to compare the level of mortality among youths from one country to another and as it evolves over time are life expectancy between 15 and 30 years of age ($e(15-30)$)¹⁵ and the potential years of life lost (YLL)¹⁶ with respect to life expectancy. Available data enable us to calculate the YLL indicator for both sexes in 20 countries of the region for the five-year periods from 1950 to 2005 (ECLAC/CELADE, 2008a). This indicator provides important information on changes in young people's health and socio-economic conditions, primarily because, once the epidemiological transition has advanced, their mortality is due to external causes. Figure III.7 shows the Latin American average and that of selected countries where noteworthy situations were identified for the period in question.

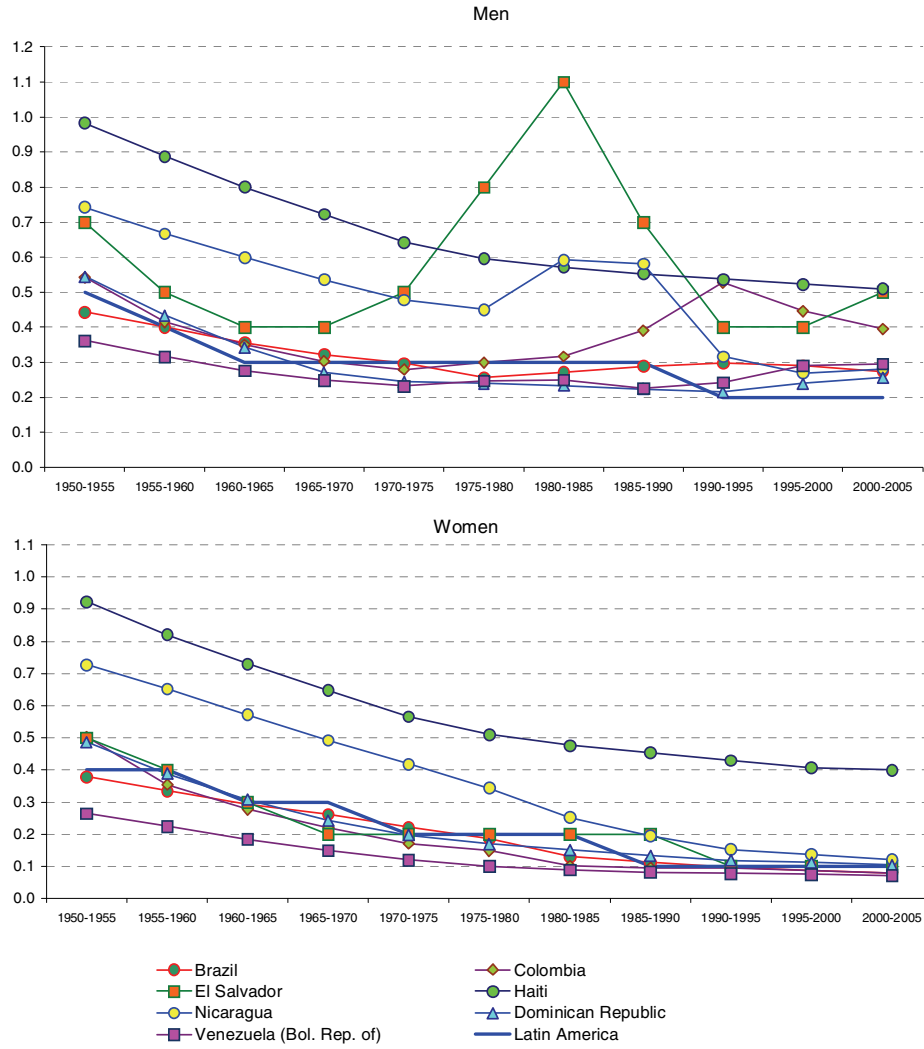
Around 1950, Latin American men between 15 and 29 years of age lost an average of 0.5 years of life expectancy as a result of different causes of death. The corresponding figure for women was 0.4 years. In Haiti, the country with the highest mortality in the region, men lost nearly a year of life expectancy (0.98) out of the total of 15 potential years during this age range, and women lost slightly less (0.92). Despite the steady reduction, this loss is still the highest in the region (0.51 years for men and 0.4 for women in 2005). The country with the most extreme fluctuations is El Salvador, where by 1960 the YLL for men in this age group had fallen, but reversed later on and reached a maximum of 1.1 years in the 1980-1985 period, mainly as a result of the internal conflict in that country. After a new descent, the figure rose again to 0.5 years in the 2000-2005 period, bringing El Salvador together with Haiti as the two countries with the highest rates. In Nicaragua, though to a lesser extent, the impact of the armed conflict in the 1980s was felt, as it has been in Colombia from that time forward. In several of the countries selected, men's YLLs have been on the rise in recent years, possibly due to various factors related to internal conflicts such as the social problem of *maras* or gangs (El Salvador), or changes in lifestyle reflected, for example, in traffic accidents.

In the case of women, YLL trends are less variable, although in El Salvador and Nicaragua there was a deterioration during periods of internal conflict. An analysis of the gender differential in YLL, measured by the coefficient between male and female YLLs, reveals that the gap has widened. In the beginning of the period under study, men lost 30% more years of life than women; now the figure is 100%. In the 1985-1990 period, the total YLL for men was three times that of women. Although this widening gender gap throughout the period is noteworthy, even more significant is the increase seen in recent five-year periods. For example, in Colombia and El Salvador, young men are losing five times more years of life than women, and in the Bolivarian Republic of Venezuela and Brazil, the differences are four and 3.5 times, respectively (see figure III.8).

¹⁵ This indicator represents the average length of the life of persons making up a hypothetical cohort of survivors at exact age 15, subjected to the risks of mortality from 15 to 29 years of age during the period under study. It is calculated as the ratio between the time lived from 15 to 30 years and the number of survivors at exact age 15.

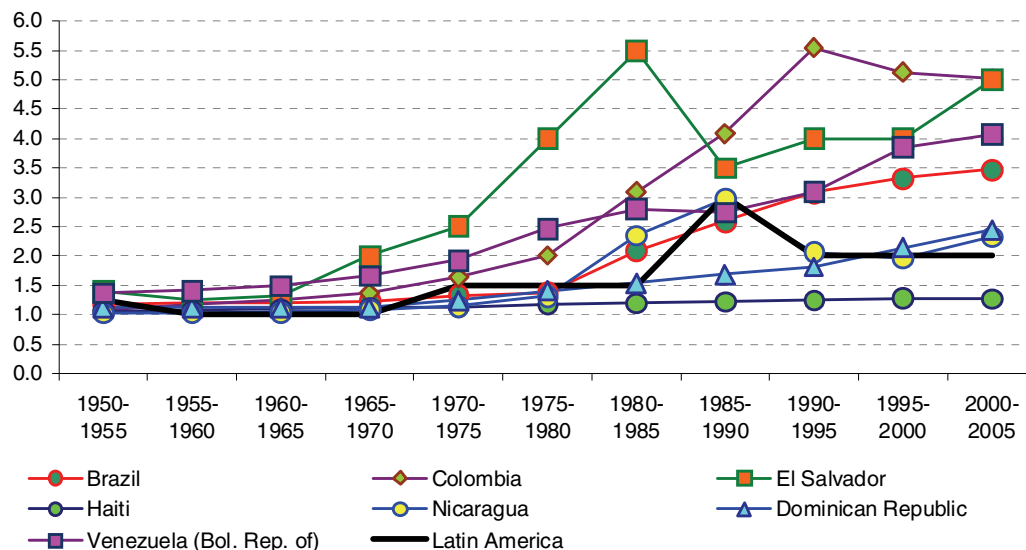
¹⁶ It corresponds to the estimate of the number of years of life lost between 15 and 30 years of age, considering that a person in this age range would live a maximum of 15 years, and bearing in mind that $e(15-30)$ may be calculated by subtracting $e(15-30)$ from those 15 years.

Figure III.7
LATIN AMERICA AND SELECTED COUNTRIES: POTENTIAL YEARS OF LIFE LOST (YLL) FOR PERSONS AGED 15 TO 29 YEARS, BY SEX, 1950-2005



Source: CELADE-Population Division of ECLAC, population estimates and projections, 2008 revision.

Figure III.8
**LATIN AMERICA AND SELECTED COUNTRIES: DIFFERENCE BETWEEN MEN AND WOMEN,
 POTENTIAL YEARS OF LIFE LOST FROM 15 TO 29 YEARS OF AGE, 1950-2005**
(Ratio of men's and women's YLLs)



Source: CELADE-Population Division of ECLAC, population estimates and projections, 2008 revision.

When mortality trends are examined according to cohorts, it can be seen that the mortality rate of young adults is rising in some countries of the region. This reveals a major gender gap to the detriment of the male population, although gender violence against women —more difficult to detect— is also apparent. For example, if the decline in the estimated infant mortality rate for both sexes in Colombia in the 1970-1975 is compared with the estimate for the 1990-1995 period, a reduction of about 62% can be seen. In contrast, the mortality rate from external causes in the population aged 20 to 24 years climbed by 166% during the same period. This situation underlines the fact that the important achievements in reducing infant mortality are “lost” when children reach young adulthood because of increased mortality due to external causes, especially violence.

Box III.2

YOUNG ADULTS AND THE PROBLEM OF VIOLENCE

Violence has grown in most of the region in recent years, and young people are clearly over-represented in the incidence and severity of this trend, as both victims and perpetrators. In many Latin American countries, young people commit violent crimes at increasingly early ages, and at the same time they also die prematurely because of such crimes. Although it is very difficult to measure the various forms of violence, violent deaths among young people are one indicator that can be used. The figures show that violence is an increasingly frequent cause of death among Latin American youth, and there is a marked gender bias, insofar as well over twice as many men as women in this age group are likely to die from homicides, traffic accidents and suicides. Although the gender biases in youth violence figures are evident, violence affecting young women in the region has become invisible, as it is not reflected in vital statistics and society is reluctant to speak openly of the matter. Violence against women is a major public health problem and is associated with a higher risk of sexually transmitted diseases. About one in three Latin American women has been a victim of physical, psychological or sexual violence at the hand of a family member. The World Health Organization (WHO) estimates that in 2002, between 10% and 36% of Latin American women had been subjected to physical or sexual violence, and that between 70% and 80% of victims of sexual violence were girls. In almost half of those cases, the aggressors lived with their victims and in three quarters of the cases they were family members of the girls or boys who suffered abuse.

Box III.2 (concluded)

In 2008, ECLAC conducted a survey among officials of Latin American Interior Ministries regarding their policies and programmes for preventing and controlling youth violence. The authorities indicated that the main problem of violence in this age group is organized youth violence (gangs, street violence and the carrying of weapons) in certain urban areas of several countries in the region. The gang situation (*maras* in Central America, *quadrilhas* in Brazil), increased crime in Southern Cone countries and rising violence in Andean countries are clear indications of the need to develop specific interventions targeted at young people. Above all, they are concerned about the relationship between youth gangs and drug consumption, drug trafficking and human trafficking.

Secondly, the authorities highlighted the importance of domestic violence, that between intimate partners as well as that between generations. Although there has been an increase in the number of reports of gender violence, girls and young women suffering abuse are still seriously unprotected. They also mentioned self-inflicted violence or violent acts against others, associated with alcohol and drug use. The officials surveyed stated that the greatest problem facing young people of both sexes is poverty, whereas the youths themselves cited unemployment (for men) and domestic violence (for women) as their principal problems. It was also observed that addiction to drugs and other substances, the lack of access to education, and the absence of a system of support and participation affected young people of both sexes equally.

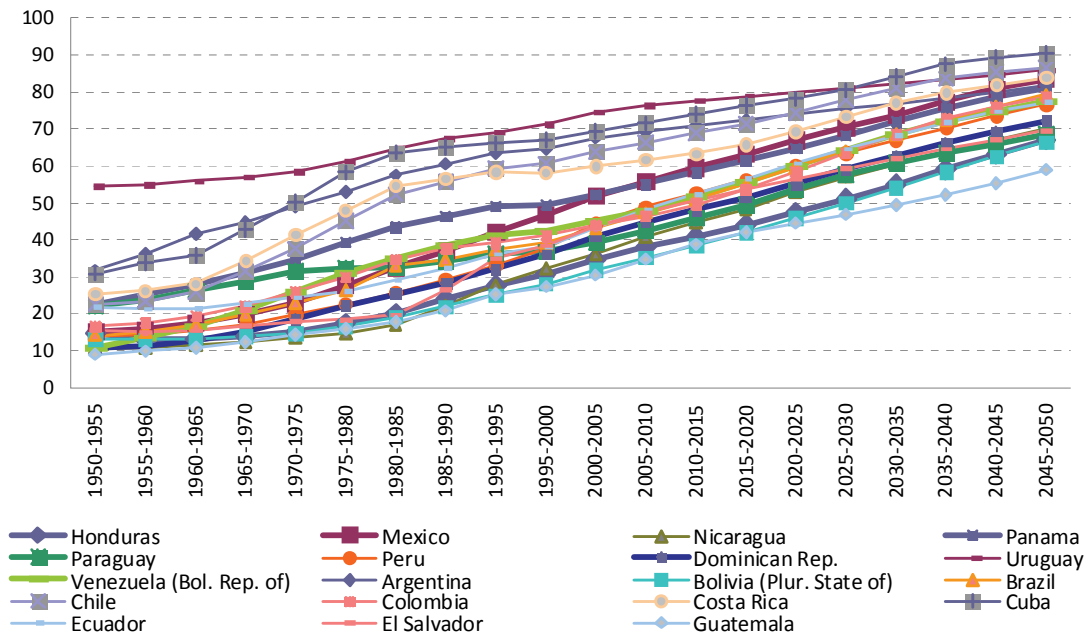
Source: Economic Commission for Latin America and the Caribbean (ECLAC), *Social Panorama of Latin America, 2008* (LC/G.2402-P), Santiago, Chile, 2008. United Nations publication, Sales No. S.08.II.G.89.

D. MORTALITY IN THE OLDER ADULT POPULATION

Since the middle of the last century, Latin America has experienced a major increase in life expectancy at the age of 65 years (e(65)), amounting to an average of 5.5 years for both sexes. For the 2005-2010 period, the figure rose to 18.7 years for women and 16.6 years for men.

These changes in the mortality rate by age, coupled with the ageing of the population, will continue changing countries' mortality profiles. The age structure of deaths can be used as indicators to analyse this phenomenon. To appreciate the effects of mortality forecasts on the progression of epidemiological transition, figure III.9 shows the percentage of deaths among persons 65 and older in selected countries of the region during a historical period of 50 years (1950-2000), and as a function of the projections of mortality and population for an equivalent period (2000-2050). This information reveals the profound alteration that has occurred in the mortality structure, the heterogeneity of the countries and the changes that can be expected to occur during the first half of this century. Figure III.9 demonstrates that in the previous half century, deaths among persons 65 and older rose from 16% to 47% in the region, and it can be projected that they will account for 76.5% of the total in the 2045-2050 period. It should be noted that whereas in Cuba the number of deaths in this age group in 2050 will represent 88% of the total, in Haiti the opposite will be true, as they will account for only 57%. This points to a lag of approximately three quarters of a century between the two countries, since that percentage had already been attained in Cuba in the 1975-1980 period. Similar cases can be found within countries as well, both among geographic regions and among different socio-economic strata.

Figure III.9
**LATIN AMERICA (SELECTED COUNTRIES): DEATHS OF PERSONS
 AGED 65 AND OLDER, 1950-2050**
(Percentages)



Source: CELADE-Population Division of ECLAC, population estimates and projections, 2008 revision.

This information, along with the epidemiological profile derived from the statistics on morbidity and causes of death, highlights the urgency of the need for health and social security reforms in the countries of the region. In most of them, this scenario implies changes in the health sector, where the considerable demands of the groups that are still in the early stages of the epidemiological and demographic transition continue to coincide with the demands of groups that have advanced further in these processes. These overlapping demands will likely continue at least into the medium term.

Regional mortality estimates, of course, conceal important variations that are characteristic of each country, as well as differences within countries. It is useful to recognize that variability—an inherent attribute of any distribution—and the fact that it is not necessarily itself evidence of inequality in terms of the risk of dying faced by different populations. Moreover, the very variability of the mortality risk profiles and their effects on life expectancy means that specific health interventions are required in each case to improve survival rates, the compression of morbidity and the quality of life for the elderly in the region.

To determine the extent of variability among the countries of Latin America and the Caribbean, the comparative impact of mortality on the life expectancy of older adults can be examined while at the same time observing changes in mortality (measured in terms of life-years gained, LYG) and in the mortality burden (measures in terms of years of life lost, YLL) in each country. The effects on life expectancy of mortality caused by infectious, neoplastic and cardiovascular diseases and external causes in the countries of the region make clear the tremendous differences from one country to the next and between the sexes, in terms of what has been achieved compared to what remains to be achieved in reducing the risk of death attributable to those causes.

From this perspective, it can be assumed that LYG figures reflect the capacity to accumulate health gains in the recent past, and YLL figures show the potential changes the near future can bring. The differences between the two attributes, expressed in the inherent modifications of the risk of dying with respect to life expectancy at 60 or 65 years, are even more visible among countries, causes or genders when the age distribution of the real and potential impact of mortality on life expectancy is considered. For example, whereas in the female elderly population in Argentina the contribution of LYGs attributable to ischemic heart disease increases at older ages, in Mexico the opposite is true. On the other hand, the number of YLLs due to diabetes mellitus is disproportionately higher in the male elderly population of Barbados than in that of Panama in particular and that of the other countries in general, especially before the age of 75 years (ECLAC/CELADE, 2003). These differences in the repercussions of mortality on life expectancy in the elderly can be attributed in part to the various stages of the demographic and epidemiological transition that these countries have reached. They can also be explained by the performance and response capacity of the region's systems for providing health care for the older adult population (ECLAC/CELADE, 2003).

From the management standpoint, the health and mortality situation of older adults in Latin America and the Caribbean (the trends and inequities that can be identified) can be seen as the product of the public policies that governments follow in organizing the implementation of the social agenda, the mechanisms the population uses to adapt to these policies and the efficiency of both processes.

In sum, the region has made considerable progress in reducing overall mortality from 1950 to the present. Although there are major differences within the region, all of the countries have advanced, and in many of them it is expected that the level of mortality, measured in terms of life expectancy at birth, will exceed world averages.

It is important to point out that despite the advances made in reducing infant and child mortality, several of the countries will probably not reach the target established in the MDGs, so improving children's health is still a major challenge for the region. Post-neonatal mortality is still significant, and major gaps can be seen as a function of the mother's level of education, the area of residence, socio-economic status or ethnicity. The fact that mothers are less likely to have received an adequate education in rural areas and in indigenous and Afro-descendent populations underlines the importance of this factor in the health of their children.

It is worth noting that in some countries of the region there has been an increase in the mortality of the young adult population, especially men, which is explained by the lifestyles of modern society (the degree to which countries have become urbanized, for example) as well as the widespread increase in violence (the presence of gangs, among other phenomena). There is no doubt that this is an important aspect that cannot be ignored.

Another major challenge stems from the ageing of the population, which undoubtedly requires careful planning and policies in the areas of health, medical care and social security that can address the fact that communicable diseases have a lesser impact while the degenerative diseases characteristic of the older adult population have a greater impact.

Population dynamics, accompanied by the transformation of society, brings with it important challenges. Above all, there is a need for flexible and timely public policies that take into account these demographic and social changes in order to improve the health and general well-being of the population.

Chapter IV

THE EPIDEMIOLOGICAL PROFILE OF LATIN AMERICA AND THE CARIBBEAN

In recent decades, all developed countries and a large proportion of developing countries have experienced a substantial rise in life expectancy at birth thanks to the gradual decline in mortality levels. As numerous authors have documented, this process—which is part of what is commonly known as the demographic transition—has a direct impact on the age structure of the population. This impact is caused in particular by its effect on the age distribution of deaths, which are concentrated in older age groups (Notestein, 1945; Leibenstein, 1957; Miró, 2003; Chackiel, 2004; Janssen and Kunst, 2004; ECLAC/CELADE, 1993, 2005 y 2008b). This shift has been both a cause and a consequence of a variation in the mortality profile, as a decline in deaths due to infectious causes (related to basic needs going unmet) is accompanied by a rise in those associated with degenerative diseases (which are more attributable to genetic factors and the failure to meet secondary needs) (Omran, 1971 and 1998).

Mortality, particularly by specific cause of death, is an extremely important subject to analyse because of its effects on health and social assistance systems, in terms of costs, policies and actions. However, studying the causes of death, whether looking at historical patterns or at future projections, depends on numerous factors that undermine and hinder proper evaluation (Murray and López, 1996).

In the second half of the 1970s, in light of demographic changes (the rise in life expectancy at birth and the changing age structure of the population) as well as current economic circumstances, Omran (1971) proposed a model explaining the process in which each country, sooner or later, would go through the epidemiological transition. According to his theory, this transition represents the shift from a period when communicable diseases play a large role to one in which chronic and degenerative diseases become more important.

The epidemiological transition theory has been widely criticized, however, because of its theoretical and practical limitations (Mackenbach, 1994; Bolaños, 2000), and some modifications have been suggested. For example, beginning in the mid-1970s, medical and technological advancements in the treatment and prevention of cardiovascular diseases boosted the estimated life expectancy at birth to 85 years (Olshansky, Cranes and Cassel, 1990).

In addition, the unexpected drop in mortality caused by some degenerative diseases was accompanied by an increase in the morbimortality of certain infectious diseases (Khasnis and Nettleman, 2005) such as vector-transmitted diseases resulting from global warming, or AIDS, and a resurgence of other diseases such as tuberculosis (Caselli, 1991; Barrett and others, 1998; Sanders and others, 2008) (see box IV.1). This evidence suggests the existence of a new phase in the epidemiological transition and has prompted several authors to define an additional stage in the process: “the age of delayed degenerative diseases” (Olshansky and Ault, 1986; Rogers and Hackenberg, 1987).

Despite its limitations, empirical problems and theoretically debatable aspects, the epidemiological transition model is still used as a theoretical schema for identifying changes in patterns of mortality by cause. The usefulness of this theoretical framework lies in the possibility of establishing a point of reference for identifying similarities, anomalies, exceptions and systematic features in different situations.

Box IV.1

EMERGING AND RE-EMERGING INFECTIOUS DISEASES

Emerging infectious diseases are those whose incidence has increased in the last 20 years, and re-emerging diseases are those that have reappeared after a period of significant decline. Both represent a global health security problem because of factors related to the interconnected and interdependent world of today, especially the increased mobility of the population (migration, disasters and tourism, among other phenomena); increased international trade in biological products and foods and the associated processing and distribution methods; and social and environmental changes linked to urbanization, deforestation and climate change. These factors have made it more evident that episodes of infectious disease that occur in one country or region are potentially of concern to the entire world. Diseases that can be transmitted from animals to humans (zoonoses) account for three quarters of the emerging pathogens. In the 2001-2006 period, there were significant outbreaks of infectious diseases in the Americas. They included Chikungunya disease in Martinique, West Nile virus in Belize, Rocky Mountain spotted fever in Urabá (Colombia) and *Escherichia coli* in the United States and Mexico. Severe acute respiratory syndrome (SARS) was recognized for the first time in February 2003 in Hanoi (Vietnam), and was described as a worldwide threat by the World Health Organization (WHO) by mid-March. Canada and the United States were the only countries in the Americas that reported probable cases of SARS: 438 (44 deaths) and 27, respectively. Hantavirus pulmonary syndrome (HPS) was described for the first time in North America in 1993. From that time until 2004, a total of 2,196 cases were reported, the average being 108 (in Argentina, Brazil, Canada, Chile, the Plurinational State of Bolivia, the United States, Panama, Paraguay, the Bolivarian Republic of Venezuela and Uruguay). After the cholera pandemic in 1991, there was a steady decline in the number of reported cases in the region. In 2002 there was a marked decrease, with only 23 cases reported to the WHO: 16 in Peru, four in Canada, two in the United States and one in Guatemala.

Target 6C of the sixth Millennium Development Goal (MDG) calls for having “halted by 2015 and begun to reverse the incidence of malaria and other major diseases”. However, at present there are areas where malaria is actively transmitted, and it is estimated that 124 million people are in danger of contracting it. In 2006 there were 919,877 cases in the region, 20% less than in 2000, and 219 malaria-related deaths were reported, 37% less than in 2000. In 14 out of the 21 countries where the disease is endemic, its incidence fell in the 2000-2006 period. In four countries, the decline was more than 75% (Ecuador, El Salvador, Nicaragua and Paraguay), which achieved the MDG target in this regard. Four other countries reported reductions of 50% to 75%, while in six the reductions were less than 50%. During the same period, however, the Bolivarian Republic of Venezuela, Colombia, Costa Rica, the Dominican Republic, French Guiana, Haiti and Panama reported an increase in the number of cases. Considering the Annual Parasitology Index (API), endemic patterns and epidemiological trends, among other elements, it is possible to say that Argentina, El Salvador, Mexico and Paraguay are in the stage leading up to elimination, and they have a strong possibility of reaching elimination. The epidemiological trends in the Dominican Republic and Haiti, in contrast, suggest that they are not moving in that direction. Since 2000, in the countries and territories of the Americas that can be considered transmission-free, a yearly average of 1,300 cases have been reported, involving travellers from countries where malaria is endemic.

In 2006, the Americas managed to halve the prevalence of tuberculosis compared to 1990 (from 96 to 44 cases per 100,000 inhabitants) and to achieve a 44% reduction in mortality caused by this disease (from 9 to 5 deaths per 100,000 inhabitants). This is very close to the MDG target of cutting in half the rates of incidence, prevalence and mortality associated with tuberculosis from 1990 levels. However, there are major disparities between the countries in their progress in this regard. Argentina, Brazil, Chile, Costa Rica, Cuba, the Dominican Republic, Mexico, Nicaragua and Panama, which have more economic resources or successful control programmes, reached the target before 2005. Peru did so before 2006, and the other countries are expected to reach it by 2015. To achieve that, however, the countries with a high burden or risk of tuberculosis (namely, Belize, Colombia, Ecuador, El Salvador, the Plurinational State of Bolivia, Guatemala, Haiti, Honduras, Paraguay, the Bolivarian Republic of Venezuela and Suriname) must undertake activities intended specifically to control this disease, and they must make a strong political commitment to guaranteeing financing for the struggle against tuberculosis.

Source: Pan American Health Organization (PAHO), *Health in the Americas*, vol. 1, Washington, D.C., United Nations, *Millennium Development Goals. Progress towards the right to health in Latin America and the Caribbean* (LC/G.2364), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), 2008.

A study of the global burden of disease (Murray and López, 1990) shows a clear relationship between the weight of communicable, non-communicable and external causes and the level of economic development in countries.¹⁷ Thus, the epidemiological profile of the African continent is characterized by a prevalence of communicable diseases, whereas in North America and Europe non-communicable diseases prevail. The same results can be seen when analyzing the distribution of disability-adjusted life years (DALY).

Latin America and the Caribbean have some distinctive features. As Frenk and his colleagues (1991) demonstrated, the region's health profile has the following characteristics: i) overlapping stages (high incidence of both communicable and non-communicable diseases), ii) a counter-transition (break with the principle of transitional unidirectionality), iii) prolonged transition (epidemiological stagnation) and iv) epidemiological polarization (heterogeneity among social groups and geographic areas within each country). The region today faces the typical dynamics of a "modern" context while still bearing a heavy burden of elements characteristic of the "old" models.

A. THE EPIDEMIOLOGICAL EVOLUTION OF THE REGION

Before delving into our analysis of the region's epidemiological evolution, it is worth mentioning the strengths and weaknesses on which the analysis is based, and their development during the period in question. Death certificates are the principal source of information for the study of mortality by causes of death. In these documents, generally a physician or a person authorized by the health authorities records the data associated with the event (the death), including the principal cause of death, defined as the disease or accident that began the morbidity process leading to death, or the circumstances of the accident or violence that produced the fatal injury.

Every death must be recorded on a certificate and accounted for in the vital statistics system, so the mortality analysis depends on the quality of those records. The WHO mortality database is one of the most inclusive sources for analyzing mortality at a global level.¹⁸ All countries, through the appropriate authority, send information to the database about deaths and population collected at the national level. This allows the WHO to keep in a single database all official information on mortality by causes of death, codified by the competent national authority in each country. Precisely because this is just a collection of national vital statistics, however, it suffers from the same shortcoming: not all countries have 100% coverage, meaning the number of recorded deaths compared to estimates. According to available information for the last few years, the situation in the region is rather heterogeneous. The index ranges from very low levels of coverage such as Haiti's, which amounted to only 10% in 1999-2001; to countries like the Dominican Republic, Peru and Nicaragua, where coverage is around 50%; to total coverage in countries such as Argentina, Cuba and the Bolivarian Republic of Venezuela. This means that the data

¹⁷ The study of the Global Burden of Disease was an initiative of the World Bank, in collaboration with the WHO and the Harvard University School of Public Health. In the beginning of the 1990s, the health effects of more than 100 diseases and injuries and 10 risk factors were quantified, analysing the global health impact and the impact on eight regions of the world considered for this Project. In addition to generating estimates of mortality and morbidity by age, gender and region, a new measurement was designed to quantify the burden of disease, called disability-adjusted life years (DALY). This indicator combines in a single measurement the years of life lost to premature death and the years lived in a less healthy state or with a disability. It enables us to estimate not only the number of years lost due to death before a certain age (years of potential life lost or YLL), but also the equivalent in healthy years of the years lived with a disability caused by disease or injury (Rubinstein, 2007).

¹⁸ See "WHO mortality database" [on line] <http://www.who.int/healthinfo/morttables/en/index.html>.

must be treated very cautiously, especially in a comparative analysis. Therefore, we will try to emphasize the countries that are considered to have the best information systems.

For more than 100 years, the principal cause of death has been recorded based on criteria and codes contained in the International Statistical Classification of Diseases, Injuries, and Causes of Death (ICD). Its roots can be traced back to the nineteenth century, particularly to the statistical and medical work of the Englishman William Farr (1807-1883). The ICD was adopted for the first time in the early twentieth century for the purpose of generating information on causes of death that was consistent and comparable from country to country. Since that time it has been modified on ten occasions to keep pace with medical and technological discoveries as well as nomenclature and etiology (Anderson and others, 2001). Despite these periodic revisions, inconsistencies have constantly cropped up in the process and it has been difficult to systematically track levels of mortality over time. In the period between ICD-2, ICD-9 and ICD-10, the number of categories grew from about 300 to 5,000 and 8,000, respectively. In addition, in no small number of cases, a particular country has decided to apply its own classification rules, with immediate effects on the pattern of mortality by cause.

Together with the problems of the ICD, frequent improvements in medical knowledge have affected diagnoses, and consequently the definition of causes of death. One example is Alzheimer's disease, whose rise in the epidemiological profile in recent years is due to growing familiarity with the disease and its characteristics, which improves diagnosis. At the same time, throughout the history of medicine, certain causes have periodically become "fashionable". And finally, the experience of the doctor or the person certifying death affects the identification of the principal cause of death.

It should be stressed that the concept of "principal cause of death" is better suited to the case of infectious diseases, whereas often chronic-degenerative diseases are characterized by the presence of a number of causes of death (Mackenbach and others, 1995). In some cases, this makes it impossible to determine how much weight each cause has. Among the various examples of this situation are diseases such as Alzheimer's and dementia, for which the causes of death are frequently underestimated. All of these factors, along with the changes in the ICD, produce "noise" in the classification of deaths by cause. Even so, the information does shed some light on the health of the population.¹⁹

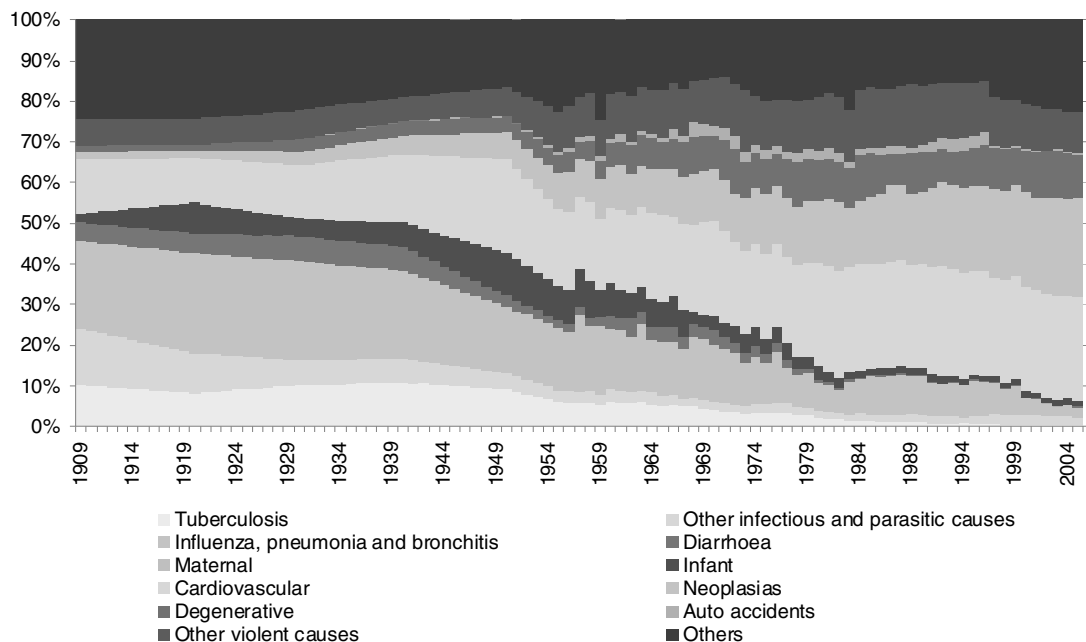
As for the analysis of the epidemiological profile, as mentioned earlier, the region is characterized by overlapping stages, which means that in addition to the high incidence of communicable diseases, it is also necessary to tackle the increase in non-communicable diseases, accidents and violence. The differential analysis of mortality by cause, taking gender and age variables into account, shows the typical features of each population group. Thus, children are more vulnerable to communicable diseases, young people to external causes, and the adult population to chronic-degenerative diseases. Once again, a combination of causes is seen in the deaths of older persons, which requires multi-pronged efforts. The analysis of gender differences reveals the surprising impact of external causes on the mortality burden of young men in comparison with women of the same age group.

The epidemiological profile of Chile has been reconstructed for the entire twentieth century and the beginning of the twenty-first century, allowing us to identify a gradual shift in the burden of disease in that country (see figure IV.1, which shows men only). In the early part of the last century, communicable

¹⁹ There are many studies and a great deal of documentation on the possibility of creating abbreviated tables of causes of death among the various revisions of the ICD: Halbert and Sbackley (1944); Faust and Dolman (1964); Klebba (1975); Klebba and Scott (1980); Anderson and others (2001); Janssen and Kunst (2004); NCHS (2009); Meslé and Vallin (1996); Wolleswinkel-van de Bosch, van Poppel and Mackenbach (1996).

diseases accounted for more than 50% of the burden, whereas in 2005 they represented less than 10%. In contrast, chronic-degenerative diseases have gone from a little over 15% of the causes of death in 1909 to more than 60% in 2005. During that same time span, cardiovascular and neoplastic diseases remained at the same level for men, but went from 25% to 32% for women. The most evident change in the burden of communicable diseases can be seen in the three decades from 1950 to 1980. In fact, it was only at the beginning of the latter decade that the profile of the communicable disease burden began to plateau. At present, the relative burden of chronic-degenerative causes of death is on the rise. And finally, a gender comparison reveals that external causes are more significant for men, three times more in terms of the overall burden of disease.

Figure IV.1
CHILE: RELATIVE WEIGHT OF STANDARDIZED MORTALITY RATES BY CAUSE OF DEATH IN MEN, 1909-2005
(Percentages)



Source: Latin American and Caribbean Demographic Centre (CELADE) - Population Division of ECLAC, on the basis of World Health Organization (WHO), "WHO mortality database" [on line] <http://www.who.int/healthinfo/morttables/en/index.html>.

It has also been possible to reconstruct briefer periods of observation in Belize, Colombia, Guatemala and Paraguay. In the case of Colombia, there has been a shift from communicable to chronic-degenerative diseases, although this process has been impeded somewhat by the burden of external causes (accidents and violence), especially for men. In the early 1960s, 50% of Guatemala's disease burden consisted of communicable diseases, compared to a burden five times smaller (a little over 10%) of chronic-degenerative diseases. Over a 40-year period, national efforts to reduce deaths due to communicable causes brought the proportion of deaths in this category down to 20%, while the deaths attributed to chronic-degenerative diseases rose by 20 percentage points. The importance of external causes for men's deaths is also much greater than that for women in that country.

Paraguay's epidemiological profile over the last 50 years indicates that deaths caused by cardiovascular diseases predominate, although in recent years neoplasias have shown a tendency to overtake that category. And finally, Belize's profile is quite similar to Paraguay's, in that the importance of communicable diseases has remained more or less constant over the period of observation, and there is a significant proportion of deaths caused by cardiovascular problems.

The four countries mentioned above are representative of other countries in the region. In fact, analysis of the available information has made it possible to identify groups of countries that, at least in general terms, can be considered homogeneous for the purpose of defining their specific needs. The groups shown in table IV.1 were identified based on four indicators (mortality rates classified by deaths due to communicable diseases, circulatory system diseases, malignant neoplasias and external and violent causes).

Table IV.1
**LATIN AMERICA AND THE CARIBBEAN: GROUPING OF COUNTRIES
BY EPIDEMIOLOGICAL CHARACTERISTICS**

	Causes of death			
	Communicable diseases	Cardiovascular diseases	Neoplasias	External causes
Countries	Peru, Bolivia (Plurinational State of), Guatemala, Haiti, Bahamas	Nicaragua, Paraguay, Dominican Republic, Grenada, Trinidad and Tobago, Saint Vincent and the Grenadines, Barbados	Chile, Costa Rica, Cuba, Argentina, Uruguay, Guadalupe, Martinique, Colombia, Venezuela (Bolivarian Republic of), Puerto Rico, Panama	French Guiana, Belize, Ecuador, El Salvador, Venezuela (Bolivarian Republic of) ^a , Colombia, Puerto Rico

Source: Latin American and Caribbean Demographic Centre (CELADE) - Population Division of ECLAC, on the basis of World Health Organization (WHO), "WHO mortality database" [on line] <http://www.who.int/healthinfo/morttables/en/index.html>.

^a The repetition of these countries is due to the fact that both types of cause of death are common.

B. MORTALITY BY CAUSE OF DEATH: IMPLICATIONS

In this chapter we have analysed the epidemiological profile of the region, emphasizing both the variations over time and the heterogeneity of the region. The study of changes in the burden of disease on the basis of causes of death represents a challenge for public, health, social-service and pension policies (Delwarde, Denuit and Eilers, 2007).

As noted earlier, the epidemiological trends in Latin American and Caribbean countries have been characterized by the coexistence of infectious and parasitic diseases alongside chronic-degenerative ones (see box IV.2). This situation is aggravated by the weight of external causes, whose effects on some population subgroups, such as young men, are significant.

Box IV.2

ENVIRONMENTAL HEALTH IN LATIN AMERICA AND THE CARIBBEAN

There is a strong correlation between inequity, health and the environment that takes different forms. Inequities in education, employment and health, for example, affect persons' vulnerability to negative environmental effects and can produce significant burdens of disease and death. In addition, differences between the centre and the periphery of cities and between urban and rural areas, in terms of access to services and exposure to environmental risk factors, exacerbate the vulnerability of the poor. The accelerated and disorderly growth of the industrial sector has a direct influence on biological, chemical and physical pollution, while problems stemming from urban settlements and overcrowded housing facilitate the propagation of infectious diseases and contribute to increases in the use of illicit drugs and violence. It is estimated that 24% of the world morbidity burden and 25% of mortality in developing countries can be attributed to environmental causes.

The lack of an adequate sanitation infrastructure and the poor functioning of what does exist, resulting mainly in the pollution of underground waters and the discharge of household sewage without proper treatment, are the source of major public health problems in Latin America and the Caribbean. The risk posed by waste water has been linked to the transmission of enteric diseases such as cholera and typhoid fever. Other gastrointestinal diseases such as dysentery, giardiasis and infectious hepatitis can be spread by contaminated vegetables. One quarter of the region's population lacks access to potable water and sanitation, and in the areas and communities most seriously impacted by socio-economic inequalities, this lack is suffered by half the population.

Although the region managed to reduce the lack of access to potable water by eight percentage points between 1990 and 2004 (from 17% to 9%), the total reduction required to attain target 7C of the seventh MDG—halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation—is nine percentage points. If this trend continues, some of the countries in the region could reasonably reach this target, but others will have to make a greater effort to do so. This is especially true of rural areas in countries like Brazil, Chile, Colombia, El Salvador, Haiti, Nicaragua, Paraguay, Peru and the Plurinational State of Bolivia. The reduction of the lack of sanitation during the same period was nine points (from 32% to 23%), but it would be necessary to achieve a decrease of 17 percentage points to achieve the target set by the MDGs for 2015. The disparities between urban and rural areas in this regard are quite obvious: of 53 million persons who have no supply of potable water in the region, the majority—more than 68%—live in rural areas. Although basic sanitation is more scarce than potable water, the proportion of the population lacking this vital element is six times greater in rural areas than urban ones, compared to three and a half times greater with respect to sanitation.

Taking water resources into account, by 2000 only 14% of the effluents of the sewerage system in Latin America and the Caribbean received any kind of treatment before being discharged. With respect to potable water, surface and underground water represent the primary source and must be protected from any kind of pollution in order to promote sustainable development. The underground water resources of the region were abandoned to their fate, and consequently they have been polluted by agricultural activities, deficient sanitation, the elimination of solid waste and industrial activities, among other sources of contamination. This makes the recovery of the aquifers very difficult.

Another set of factors that undermine health and the environment in the region are improper storage, collection, separation, recycling and elimination of solid waste. The associated problems include gastrointestinal, parasitic, respiratory, dermatological, degenerative, infectious and vector-borne diseases, allergies and poisonings. The principal groups exposed to this type of risk are those who lack adequate storage or collection systems, workers in the solid waste sector and individuals involved in the separation of garbage, among others.

In the last decade, the region of Latin America and the Caribbean was the second most likely to be affected by natural disasters. The impact of catastrophic disasters on all aspects of the economy and development has been clear, with economic losses amounting to nearly US\$ 650 million just between 1994 and 2003.

The burning of fossil fuels is the principal source of air pollution in many cities of the region and the world. Short- and long-term exposure to pollutants and temporary variations in particulate matter have been linked to increased mortality and morbidity due to respiratory and cardiovascular diseases. They have also been associated with an increase in hospital admissions for all types of respiratory causes. For this reason, the prevention or mitigation of exposure to chemical pollutants is one of the priorities for regional government action.

Pesticides also constitute a serious public health problem in the countries of Latin America and the Caribbean. In the past 40 years, nearly 85,000 tons of DDT (an extremely stable toxic compound that accumulates in living organisms) was sprayed in Mesoamerica for the purpose of combating agricultural pests and malaria-carrying mosquitos.

The chemical and microbiological contamination of food continues to be a significant public health problem, which indirectly affects tourism and international trade in food. Foodborne diseases (FBD) are a worldwide problem that has been exacerbated over the past several decades due to changes in the international arena, such as population growth, poverty, rapid urbanization in developing countries, and increasing international trade in food, in addition to the appearance of new foodborne disease-causing agents and mutant microorganisms with greater pathogenicity.

Source: Pan American Health Organization (PAHO), *Health in the Americas 2007*, vol. 1, Washington, D.C., 2007.

Together with the coexistence of transitional stages, this analysis showed that the temporal dynamic of the two main groups of causes of death (communicable and non-communicable diseases) is different: on the one hand, communicable diseases declined notably between the 1970s and 1980s, depending on the country, and then levelled off, prolonging the transitional phase; on the other hand, the importance and weight of non-communicable diseases rose quickly, which partly explains the coexistence of stages mentioned earlier.

In the design and implementation of health policies, it is useful to have a clear idea of the implication of terms such as overlapping stages, counter-transition and polarization for economic investments in health. All of the countries in the region are facing a twofold challenge: to continue reducing mortality due to infectious and parasitic diseases while dealing with the rising mortality caused by non-communicable factors. It is obvious that the two groups have tremendous differences in terms of costs with respect to both morbidity and mortality. In the first group, the causes are generally preventable and curable with low-cost measures (Kent and Yin, 2006) such as antibiotics, vaccinations and hydration, among others. In contrast, the prevention and treatment of the second group are considerably more onerous. The cost of the diseases that are inevitably followed by death is also different, since a much more significant investment is required for the second group. In the majority of cases, however, the countries are striving to tackle the challenges posed by both causes, which means parallel investments and efforts.

The differential analysis presented in this chapter has shown that there are specificities within population subgroups. This has numerous implications for health-related public policies: though it is not possible to stop investing in the strategies necessary to improve children's health, it is very likely that the demographic transition that each country has begun to go through, is going through or has already completed will result in a rising number of deaths among elderly persons. Therefore, if we also assume that mortality rates due to infectious diseases will remain at the current level, in absolute terms there will always be a greater number of deaths. Thus, health programmes will somehow have to strike a balance in costs through the effective management of the population's health profile.

One element that has not been observed in this context is the internal variability of social conditions within countries in different ethnic or religious groups, among others. The profile of each country presented in the analysis represents an average of the national situation. However, it is well known that the realities on the ground that make up each situation differ considerably in terms of the availability of economic resources and access to services, education and health, and therefore, each context has a different epidemiological profile. This creates the coexistence of several epidemiological profiles within each country, meaning that plans and actions must be developed with specific contexts in mind.

Finally, it is worth pointing out that although investment is needed in specific health structures, technologies and programmes, that is not sufficient for improving the population's health conditions. A greater effort must also be made to ensure that each society is more socially and economically equitable. In this regard, many studies have analysed the relationship between inequities—especially economic ones—and health (Wilkinson, 1992; Wilkinson and Pickett, 2006 and 2009). Wherever societies are less equitable, health conditions are worse. This result obtains even when variables such as economic investments in services and technologies are controlled. In other words, in determining the level of mortality and health in a given society, what matters is not the overall well-being of the society but the manner in which this well-being is distributed. Thus, the more equitable the distribution of well-being within a society, the better its state of health (Editor's Choice, 1996).

The effort made by each country and by the region as a whole to deal with health-related challenges must, therefore, aim for the following objectives:

- Manage the coexistence of different health profiles, specifically gender, age, regional, ethnic and socio-economic specificities.
- Continue investing in the battle to eradicate communicable diseases in the most vulnerable population groups —children and the elderly— by both prevention and treatment.
- Implement actions oriented towards prevention and treatment of non-communicable diseases. In this connection, it would be especially important to promote healthy behaviours, considering that preventing chronic-degenerative diseases to the greatest extent possible can lead to lower treatment costs.
- Invest in infrastructure and technologies.
- Make health services universal, avoiding inequities.
- Reduce the socio-economic gaps in the population at the regional and national levels, considering that the suggestions in the preceding points would have a limited effect in highly inequitable situations.

Chapter V

TOWARDS THE ACHIEVEMENT OF SEXUAL AND REPRODUCTIVE HEALTH GOALS

Sexual and reproductive health was recognized as a universal right in the ICPD and was included in the Millennium Development Goals. Without guaranteeing this right, it is impossible to improve women's health and to achieve social stability and well-being. Given the importance of this issue, this chapter is devoted to an assessment of the progress that has been made on this front. The situation of sexual and reproductive health is described from the standpoint of the principal indicators identified to monitor it, and the gaps that have historically characterized the region are analysed, along with the shortfalls emerging as countries reach the advanced stages of the fertility transition.

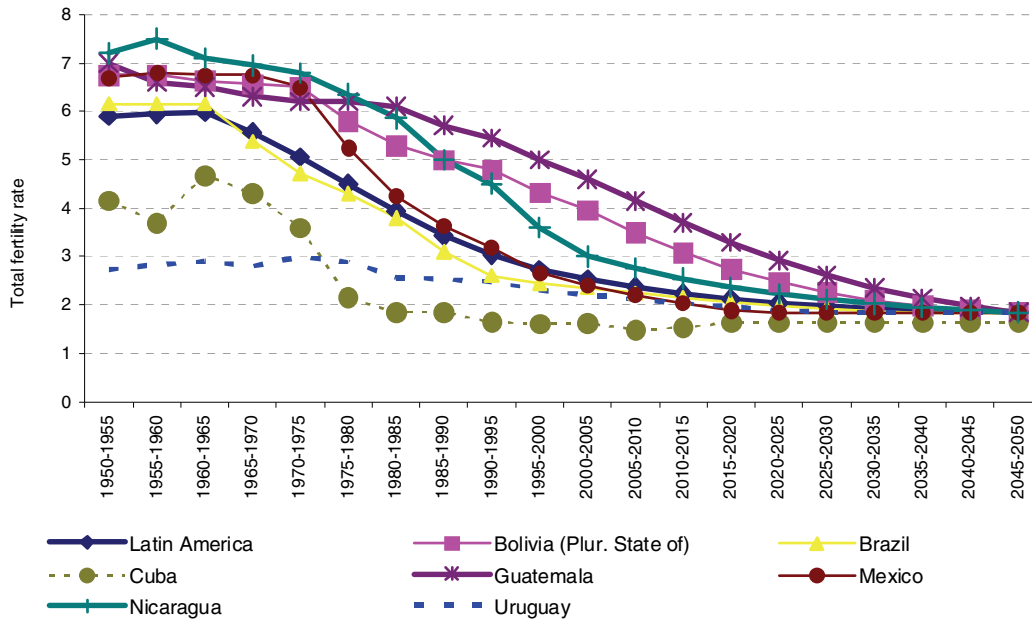
A. RECENT FERTILITY TRENDS IN LATIN AMERICA AND THE CARIBBEAN

As demonstrated previously, since the second half of the twentieth century there has been a pronounced decline in mortality in the region. In the case of fertility, the changes have also been noteworthy and have had broad repercussions. It is safe to say that this variable has had more impact than any other on the age structure of the population. In Latin America and the Caribbean, the total fertility rate fell from 5.9 children per woman in 1950-1955 to 2.1 in 2010-2015, which amounts to a 64% reduction. Consequently, the region is at replacement level or below (that is, 2.1 children per woman or less). According to the medium variant of future trends in this variable (United Nations, 2008c), fertility will remain at lower than replacement levels through the end of the projection period. In the current five-year period (2010-2015), 16 of the 35 countries in the region for which estimates are available will have fertility rates at below replacement level, 18 will have rates slightly higher (between 2.2 and 3.1), and two countries will be more than one child above replacement level (3.2 per woman or more).

Figure V.1 depicts trends in total fertility rates (TFR) for the 1950-2050 period in countries that are at different stages in the demographic transition. Different trajectories can be observed, with a convergence towards replacement level. Most countries will reach replacement level close to the end of the projection period. In 2005-2010, differences can still be seen, equivalent to more than three children per woman, between the countries representing the two extremes, Cuba and Guatemala, whose respective total fertility rates are 1.5 and 4.2 children per woman (ECLAC/CELADE, 2008b).

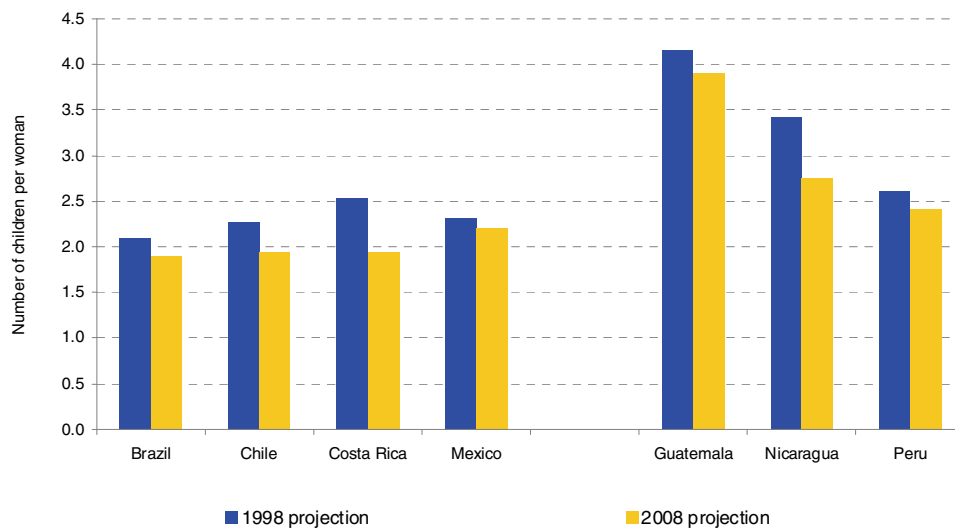
This marked downturn in fertility in the region has been somewhat unexpected. When projected figures are compared with observed figures, it can be seen that the former are higher than the latter, which indicates that the rate of decline was higher than expected. Figure V.2 provides a comparison of TFRs in several countries of the region for the 2005-2010 period, estimated on two different dates: the projection done in 1998 and then revised in 2008. Both estimates were based on vital statistics, demographic surveys and population censuses for the purpose of obtaining a consolidated figure. Countries were selected because their fertility was either relatively high or relatively low during the 1990s. Both groups show a significant reduction in TFR over time, and it is evident that the post-1998 sources led to lower estimates than those projected for that year. This situation is repeated in many different countries of the region. In the case of Costa Rica, the projected TFR for the 2005-2010 period, based on levels and trends apparent as of 1998, was 2.54 children per woman; but the level actually observed during that period was 1.94. In Nicaragua, the figures were 3.43 and 2.76 children per woman, respectively. The same thing happened in countries with larger populations, such as Brazil and Mexico, although there was a smaller gap between projected and observed rates.

Figure V.1
LATIN AMERICA AND THE CARIBBEAN (SELECTED COUNTRIES): TOTAL FERTILITY RATE AT DIFFERENT STAGES OF THE DEMOGRAPHIC TRANSITION, 1950-2050
(Number of children per woman)



Source: Latin American and Caribbean Demographic Centre (CELADE) - Population Division of ECLAC, *Demographic change and its influence on development in Latin America and the Caribbean (LC/G.2378(SES.32/14))*, Santiago, Chile, 2008.

Figure V.2
LATIN AMERICA (SELECTED COUNTRIES): ESTIMATE OF TOTAL FERTILITY RATE IN 2005-2010 ACCORDING TO PROJECTIONS FROM 1998 AND 2008



Source: CELADE-Population Division of ECLAC, population estimates and projections, 1998 and 2008 revisions.

There have also been changes in the age structure of fertility, especially at the extreme ends of the fertility period. In the 1950-1955 period, fertility of women 35 years or older accounted for 23% of the total, whereas in 2000-2005 the weight of this group had fallen to 14%, and is expected to continue falling to 12% by 2050. This decrease has been and will continue to be offset by adolescent fertility, which has increased in relative terms. Fertility in the middle of the age range (20 through 34 years) will represent between 67% and 70% throughout the 100 years from 1950 to 2050 (ECLAC/CELADE, 2008a). The reduction at the end of the fertility period is due to the desire of women to concentrate births at certain ages and to the decline in multiple births, as well as the growing understanding of the need to reduce the risk of maternal complications, which increase with age. The rising relative weight of adolescent fertility is attributed to the fact that it has not fallen at the same rate as fertility in other age groups; however it is not clear why this resistance to decline has occurred.

B. SEXUAL AND REPRODUCTIVE HEALTH SITUATION

The concept of sexual and reproductive health is polysemic and complex. For this reason, it may be difficult to monitor as well, although there is some consensus on what indicators should be used. This section will describe the advancements made towards achieving the established targets through the activities carried out in the region. The aspects considered are adolescent fertility, maternal health, the prevalence of contraceptive use, the unmet need for family planning and the prevalence of HIV/AIDS in the population of reproductive age.

1. Adolescent fertility

In the 2005-2010, the specific fertility rate for ages 15 to 19 years at the regional level was 69 births per 1,000 women. For Latin America, the range was from 50 per 1,000 in Cuba and Haiti to nearly 115 per 1,000 in Nicaragua, Guatemala and the Dominican Republic; in the English-, French- and Dutch-speaking Caribbean (excluding Haiti), the range was from 30 per 1,000 in Martinique to 79 per 1,000 in Belize. According to regional estimates, the adolescent fertility rate has declined (in 1950-1955 it was 100 births per 1,000 women), but the rate of decline has been much slower than that of total fertility. Thus, while adolescent fertility fell 37% between the middle of the last century and the beginning of the present one (from 1950-1955 to 2005-2010), total fertility dropped by 63%. This difference resulted in an increase in the relative weight of adolescent fertility in the total figure: in the 1950-1955 period, 8 out of 100 births were to women aged 15 to 19 years, but in 2005-2010 that number was 14 out of 100 (ECLAC/CELADE, 2008b and 2009).

It has been remarked in connection with other indicators that the regional average encompasses dissimilar situations, and this indicator is no exception. According to the surveys, countries such as Brazil, Colombia, Ecuador and the Plurinational State of Bolivia recorded increases in adolescent fertility between the last decade of the twentieth century and the first decade of the twenty-first (Rodríguez, 2009).

From a socio-economic point of view, adolescent fertility is tremendously unequal. Moreover, it is likely that the decline has occurred in a significant group of young women who have the means to achieve it—that is, access to sex education and adequate reproductive health services, among other things—which accentuates the gap between them and others with fewer resources and opportunities for attaining a high level of education and well-paid employment.

The gaps in access to information and services in this regard are due primarily to socio-economic differences, but they become much more evident when reproductive behaviour is observed by education level. According to Jiménez and Rodríguez (2009), the proportion of mothers with an adequate education is a more sensitive indicator than the age-specific rate, and indeed, the proportion of adolescents who are mothers among young women with less formal education can be up to six times higher than that of young women who have received a secondary education or higher (see table V.1). It bears mentioning that a major increase in the education level of young women has taken place in the region, such that the number of people with little education is growing smaller and smaller; sometimes, the samples are not large enough for comparative purposes.

Table V.1
**LATIN AMERICA (SELECTED COUNTRIES): PROPORTION OF WOMEN AGED
 15 TO 19 WHO ARE MOTHERS, BY EDUCATION LEVEL, 1998-2008**
(Percentages)

Education level	Bolivia (Plurinational State of)		Colombia		Dominican Republic		Haiti		Peru ^a	
	1998	2003	2000	2005	2002	2007	2000	2005-2006	2000	2007-2008
No education	40.1	36.4	45.5	36.6	55.7	46.1	41.4	24.4	36.9	58.0
Primary	23.9	20.8	28.3	35.8	28.4	25.7	13.9	14.2	22.9	27.3
Secondary or higher	7.4	7.7	11.3	12.6	10.9	11.3	7.1	6.7	7.2	8.4
Gap ^b	5.4	4.7	4.0	2.9	5.1	4.1	5.8	3.6	5.1	6.9

Source: Macro International Inc., “MEASURE DHS STATcompiler” [on line] <http://www.measuredhs.com> [date of reference: 5 December 2009]; National Institute of Statistics and Informatics (INEI), *PERÚ. Encuesta Demográfica y de Salud Familiar (ENDES) Continua 2007-2008*, Lima, 2009.

^a In the ENDES survey of 2007-2008, only eight cases were recorded in the category “no education”.

^b Calculated as the ratio of the highest value (no education) to the lowest value (secondary or higher).

As noted above, there are also differences in adolescent fertility by wealth quintile (see table V.2): a young woman from a household in the lowest wealth quintile has as much as six times the fertility of one in the highest quintile, and this disparity reached as much as ten times in some cases, such as Peru in 2000. According to this disaggregation, the socio-economic gap in adolescent fertility—the comparison between the top and bottom wealth quintiles—narrowed in three countries and widened in two. Although this is an improvement on the overarching trend towards a wider gap that had been found in previous studies (ECLAC, 2005), it is far from indicating a general downward trend. Therefore, the initiatives and the institutional arrangements aimed at protecting the sexual and reproductive rights of young people must be stepped up, since it is foreseeable that the positive byproduct of these efforts will be a reduction in adolescent fertility, particularly among the most vulnerable groups.

Table V.2
LATIN AMERICA (SELECTED COUNTRIES): PROPORTION OF WOMEN AGED 15 TO 19 WHO ARE MOTHERS, BY WEALTH QUINTILES, 1998-2008
(Percentages)

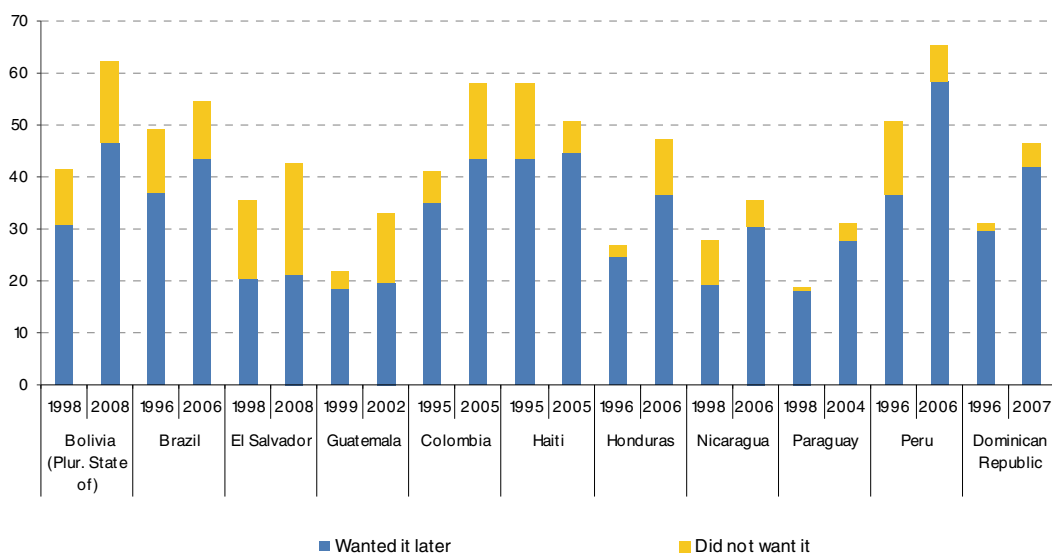
Wealth quintiles	Bolivia (Plurinational State of)		Colombia		Dominican Republic		Haiti		Peru	
	1998	2003	2000	2005	2002	2007	2000	2005-2006	2000	2007-2008
Lowest quintile	22.9	24.8	25.6	25.2	34.0	30.5	17.0	19.2	26.3	28.1
Second quintile	18.6	17.4	23.5	21.0	27.4	23.1	9.6	12.4	17.2	15.7
Third quintile	12.3	11.9	16.1	17.3	19.9	14.4	19.8	13.1	8.6	15.2
Fourth quintile	8.4	10.9	7.0	10.4	12.0	11.3	17.5	11.4	5.6	7.0
Highest quintile	4.7	5.5	6.8	8.5	6.6	5.7	8.0	6.2	2.7	4.3
Gap ^a	4.9	4.5	3.8	3.0	5.2	5.4	2.1	3.1	9.7	6.5

Source: Macro International Inc., “MEASURE DHS STATcompiler” [on line] <http://www.measuredhs.com> [date of reference: 5 December 2009]; National Institute of Statistics and Informatics (INEI), PERÚ. *Encuesta Demográfica y de Salud Familiar (ENDES) Continua 2007-2008, Lima, 2009.*

^a Calculated as the ratio of the highest value (lowest quintile) to the lowest value (highest quintile).

Another important element to analyse is the frequency with which the children of adolescent mothers have been desired. According to surveys conducted over the last two decades, in 11 countries of the region there was a decrease in the proportion of children born to mothers aged 15 to 19 who wanted children when they became pregnant, offset by an increase in the number of children who were unwanted at that time —albeit at a later stage in the mother’s life cycle— or who were born to mothers who did not want children (see figure V.3).

Figure V.3
LATIN AMERICA (SELECTED COUNTRIES): PROPORTION OF UNWANTED BIRTHS TO ADOLESCENT MOTHERS, 1995-2008
(Percentages)



Source: Macro International Inc., “MEASURE DHS STATcompiler” [on line] <http://www.measuredhs.com> [date of reference: 7 March 2010].

2. Maternal health

Maternal mortality remains unacceptably high in the majority of countries in the region, which means that target 5A of the fifth MDG, oriented towards reducing maternal deaths, is the one on which the least progress has been made (ECLAC/CELADE and UNFPA, 2009b). Furthermore, evaluation of the progress on this objective is difficult because the indicator used for that purpose —the maternal mortality rate (MMR)— is very imprecise because of the uncertainty of the underlying data and changes in the composition of the denominator (live births). Thus, the MMR is sometimes subject to increases without that necessarily signifying a structural deterioration in maternal health services.²⁰ However, the absolute magnitude of the figures is something that cannot be overlooked: in the region, about 15,000 women die during their reproductive years (WHO, 2007d), which is cause for concern and reveals the pressing need to take additional measures.

Like adolescent fertility, maternal mortality is closely linked to social conditions. In particular, the situation in countries like Ecuador, Guatemala, Guyana, Haiti, Honduras, Peru and the Plurinational State of Bolivia is disturbing, in light of the MMR of more than 200 deaths per 100,000 live births. This scenario poses a challenge that draws attention to the efficacy and intensity of the policies applied and demands a redoubling of efforts to make improvements in this area. This is a top priority from the standpoint of rights.

On a positive note, it should also be mentioned that deaths caused by unsafe abortions have fallen by more than 40% in recent years (WHO, 2004b and 2007c), which would suggest that health services have been improved.

Regional coverage of prenatal care (measured in terms of the proportion of pregnant women who made at least one prenatal visit) is reasonable. As a result, women are less likely to have unexpected developments when they give birth, which is well known to be the most critical time. However, a stricter indicator, such as the proportion of pregnant women who had at least four prenatal visits, suggests that there is still a significant shortfall in Latin America and the Caribbean when it comes to access to reproductive health. Indeed, among the countries for which relevant information is available, only one exceeds 90% coverage (the Dominican Republic), and two others (Brazil and Peru) approach that level. It should be mentioned that Peru and Haiti saw the largest increases in prenatal care between the end of the 1990s and the present; and it should be noted further that Colombia and Paraguay stand out for their relatively important accomplishments in this regard.

In recent years, some achievements have also been made in narrowing social gaps. For example, there are fewer disparities among social groups in terms of prenatal care by health professionals, although there are still inequities. For example, in the Plurinational State of Bolivia, it has been reported that in 1998, for every 10 women with a secondary or higher education receiving prenatal care, only four with no formal education received it. In 2003 that gap narrowed, but it was still significant, with a ratio of 10 to seven (Macro International Inc., 2009).

²⁰ There are different factors affecting the reliability of statistics on maternal deaths, especially deficient detection and under-registration. Both are high, because maternal mortality occurs most frequently among poor women and those in vulnerable populations, those who suffer from discrimination due to their ethnic or racial identification condition, or because of circumstances such as abortion, which in most countries of the region is hidden because it is illegal (Bergsj, 2001).

The levels of maternal mortality and care received during childbirth show that although there has been progress, there are still major health inequities. National actions on this front have been numerous, but efforts to eliminate these unacceptable gaps must be stepped up, giving priority to the identification of population segments that are at risk. Nationwide interventions that do not make this distinction will surely translate into wasted resources, because the groups that need the most support will not be identified.

Finally, it is very important to stress that the priority issue for maternal health in the region is improving the quality of health services, particularly emergency obstetrical care. Another key aspect is improving vital statistics and monitoring the data produced by the health system.

3. The prevalence of contraceptive use and the unmet need for family planning

Available information for the post-2005 period indicates that the prevalence of all kinds of contraceptive methods in Latin America is relatively high, at around 75% in countries with large populations —Brazil (2006), Colombia (2005) and Mexico (2006)— as well as those with a smaller number of inhabitants —El Salvador (2007), Nicaragua (2007) and Paraguay (2008).

One important peculiarity in the use of contraceptives in Latin America is the fact that the gaps are not as wide in this area as in other aspects of sexual and reproductive health. The prevalence of contraceptive use in Brazil, for example, ranges between 75% among women with less formal education and 82% among those with more formal education. However, in poorer countries like the Plurinational State of Bolivia, the disparities by education level are significant: women who have had fewer years of schooling and who use contraceptives amount to half the number with more formal education who do so.

In Brazil, there was an important unifying process that incorporated primarily the most disadvantaged social strata into contraceptive use, including both men and women. According to the *Pesquisa Nacional de Demografia e Saúde da Criança e da Mulher* [National Demographic Survey of Infant and Maternal Health], published in 2006, men's use of contraceptives reached double digits for the first time in that country (Perpétuo and Wong, 2009). This convergence has also taken place in Mexico, where contraceptive practices increased proportionately more in rural areas, among women with no education and in indigenous populations (Mendoza, 2009).

The heterogeneity that still exists in the use of contraceptives is likely the result of an equally heterogeneous socio-economic context. Studies such as that of Stupp, Daniel and Daniels (2009) indicate that the recent convergences in contraceptive use, at least in Central America, are associated with social improvements in the least advantaged sectors. Diversity can also be seen in the types of contraceptive methods used, as one might expect in a broad and diversified set of populations. In Brazil, Dominican Republic and Mexico, modern and effective methods such as hormone-based contraceptives and sterilization prevail, whereas the countries of the Andean region are those most likely to be characterized by the extensive use of traditional methods.

The degree to which demand for family planning methods is unmet has decreased in the majority of countries in the region, falling to 6% to 15%. In addition, the gaps according to social group, area of residence and education level have also been narrowed (ECLAC/CELADE and UNFPA, 2009b).

The situation in countries for which information is available is heterogeneous. Despite the advances, if current trends continue, only Ecuador, El Salvador and Nicaragua will reach the target set by the Latin American and Caribbean Regional Plan of Action on Population and Development, to halve the

unmet need for family planning methods. It should be recalled that a higher unmet demand for family planning does not necessarily mean a smaller supply of contraceptives; it also depends on couples' motivations for avoiding pregnancy, which may be enhanced if women have more alternatives to motherhood or if the socio-economic situation makes it more difficult to have (more) children.

The international initiative known as the Global Programme to Enhance Reproductive Health Commodity Security has had a major impact on the region, as it has provided a structure with rational, planned and sustainable approaches for ensuring contraceptive use.²¹ Bridging the gap between contraceptive demand and supply is an ongoing challenge in Latin America and the Caribbean, which is part of a larger challenge: eliminating differences in the exercise of reproductive rights and access to sexual and reproductive health.

4. Progress with regard to HIV/AIDS²²

In 2006 there were 65,000 deaths due to AIDS in the region, and 1.7 million persons were living with the disease at that time. One third of those were women. HIV transmission in Latin America and the Caribbean reveals two epidemic profiles: that of a “persistent epidemic” and that of a “new epidemic”. The latter is characterized by an increase in HIV in all subpopulations, which is very disturbing; whereas the persistent epidemic is limited to men who have sex with men, sex workers of both genders, and in the Southern Cone, users of intravenous drugs (UNFPA, 2007).

One positive note in this respect is the important regional advancement in access to anti-retroviral therapy. In Brazil (whose model has been adopted by other countries), exceptional achievements have been recorded. In Argentina, the Bolivarian Republic of Venezuela, Chile, Costa Rica, Cuba, Mexico, Panama and Uruguay, access to the treatment is considerable. It is the poorest countries that face the challenge of expanding this access.

In more general terms, the progress made in the region could make it the world leader in achieving the commitments made in the ICPD Programme of Action and the MDGs in this regard. Most of the countries have made a political commitment to this issue and have better coordination among stakeholders (UNFPA, 2007). There are some shortcomings, however: many of the national plans to combat HIV/AIDS in Central America do not include the gender perspective (UNIFEM, 2007); prevention programmes are not reaching those at greatest risk, and prevention is still the weakest component of national responses to HIV throughout the region (UNFPA, 2007). Furthermore, efforts to increase young people's knowledge about AIDS are still inadequate; the associated stigma and discrimination are still widespread, especially with regard to some groups such as sexual minorities or women living with HIV, who are frequently denied their rights, including reproductive rights. The response to AIDS is not based primarily on the promotion, protection and respect for human rights. Making a deeper political commitment and backing it up with financial resources is a necessary condition for achieving further progress in this area.

²¹ The countries joining in this initiative are the Bolivarian Republic of Venezuela, Costa Rica, the Dominican Republic, Ecuador, Guatemala, Haiti, Honduras, Nicaragua, Panama, Paraguay, Peru, the Plurinational State of Bolivia, Uruguay and the Caribbean subregion. The support organizations participating are the Pan-American Health Organization (PAHO), the International Family Planning Federation (IFPF), Latin American Consortium for Emergency Contraception (LACEC), the United States Agency for International Development (USAID), Project DELIVER, the Health Policy Initiative (HPI) and the UNFPA.

²² In this section of the chapter, some relevant texts from the CELADE-Population Division of ECLAC are included, and in some cases reproduced.

5. The persistence of some gaps and the emergence of others

In general, the evidence presented reveals important accomplishments with respect to sexual and reproductive health, although full access is not yet on the horizon. Maternal mortality and adolescent fertility are much higher than could be expected on the basis of average mortality and fertility indices. They have shown no signs of declining steadily, and their levels are much higher among poor women, those with less education, and indigenous women. Concerning the link between adolescents and reproductive health, it has been pointed out that “in Latin America and the Caribbean, the dissemination of information and access to sexual and reproductive health among young people continues to be insufficient, and it shows marked differences by social sector” (ECLAC/CELADE and UNFPA, 2009b).

In the case of maternal mortality, it is worrisome that the high levels of institutional care during childbirth, a key step towards reducing this mortality, have not had a bigger impact. Although the number of maternal deaths caused by unsafe abortions has fallen —thanks to specific post-abortion care programmes, among other measures— there is a need for consistent guidance on contraceptive practices, and women who have had abortions must be incorporated into this type of reproductive health service. Although the increase in contraceptive use is favourable, it is not enough to cover the need for family planning. This need has probably increased proportionately more than the use of contraceptive methods, and therefore the goals of reducing the amount of unmet demand are far from being achieved.

Despite national efforts to reach the goals for sexual and reproductive health and the strong social commitment to reducing inequities in this regard, the so-called “implementation gap” in carrying out proposals —that is, the distance between stating or even formalizing an objective and taking concrete steps to achieve the results— is the hardest one to close.

Under these circumstances, it is evident that in spite of insufficient access by men and women to sexual and reproductive health, fertility (an indicator of the results of reproductive behavior) continues to fall in the region. Considering adverse indicators such as an adolescent fertility that is among the highest in the world, stagnant maternal mortality and persistent unmet demand for family planning, it is worth asking what conditions are allowing couples to control their fertility.

From the standpoint of reproductive rights, it is important to examine fertility trends, as it is known that a significant proportion of the population desires a small family. Thus, it is possible that a steeper drop in fertility than had been foreseen, as is the case in Latin America, is a reflection of broad access to modern and effective methods of contraception as well as advances towards universal access to sexual and reproductive health services. Considering the traditional socio-economic heterogeneity of the region, however, it may also be a more profound manifestation of the social gaps, that is, the emergence of gaps at the opposite end of the spectrum of well-being.

It is also important to evaluate recent fertility trends in order to identify the most likely scenario in the region’s short- and long-term reproduction. If the decline continues and very low levels of fertility are seen, government officials will be concerned about depopulation —which is already occurring in Cuba— and will rethink strategies so that the trend can be altered. Policies oriented towards administering the complex social reality implicit in those levels must necessarily be redesigned,²³ which will run the risk that reproductive rights will take the back seat, as has already happened in several Southeast Asian countries (Jones, Straughan and Chan, 2009).

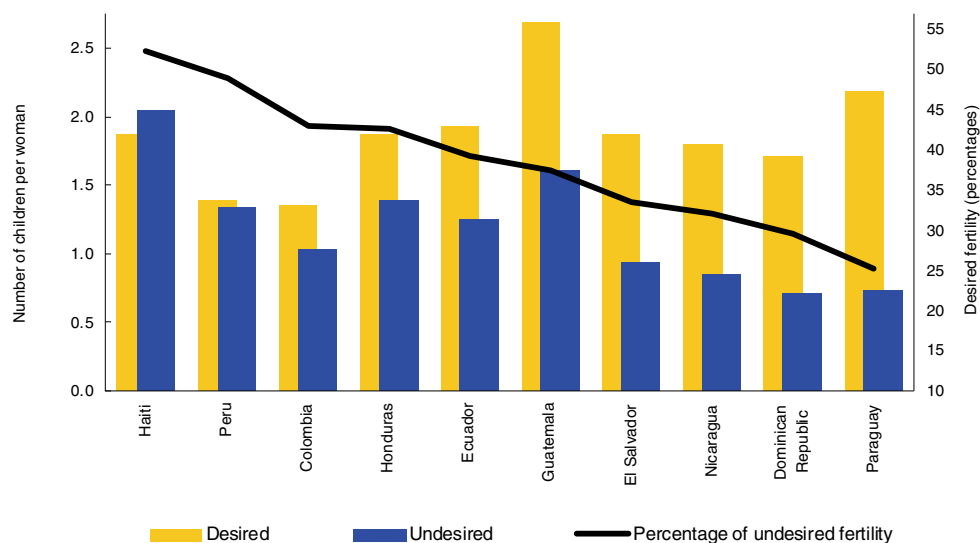
²³ In this regard, see for example Baochang (2009).

Desired and undesired fertility, an expression of reproductive preferences, is of great interest because it reveals to what extent fertility would increase or decrease if women were able to make those preferences a reality. This indicator is also used to predict the potential decline in real fertility, as was noted in the case of adolescent fertility, and it is a rather good reflection of the degree of women's empowerment as far as desired family size is concerned. Finally, undesired fertility is an indicator of the absence of means to implement reproductive preferences. In addition, it tends to be differentiated quite clearly by socio-economic level, in recognition of the fact that often it is the most vulnerable women who have the greatest proportion of unwanted pregnancies.

Figure V.4, which provides a comprehensive look at the magnitude of undesired fertility in Latin America, suggests that practically none of the countries has a desired fertility higher than replacement level, and it is easy to find countries in which the undesired component of fertility is still above 35%. In Haiti, for example, undesired fertility represents more than 50% of total fertility.

Although the total fertility rate has fallen, the fact that its “desired” component has kept pace with the “undesired” component in the decline means that the latter has remained steady in relative terms. In other words, a significant proportion of current fertility is still undesired.

Figure V.4
LATIN AMERICA (SELECTED COUNTRIES): TOTAL FERTILITY RATES,
DESIRED AND UNDESIRE, AROUND 2005



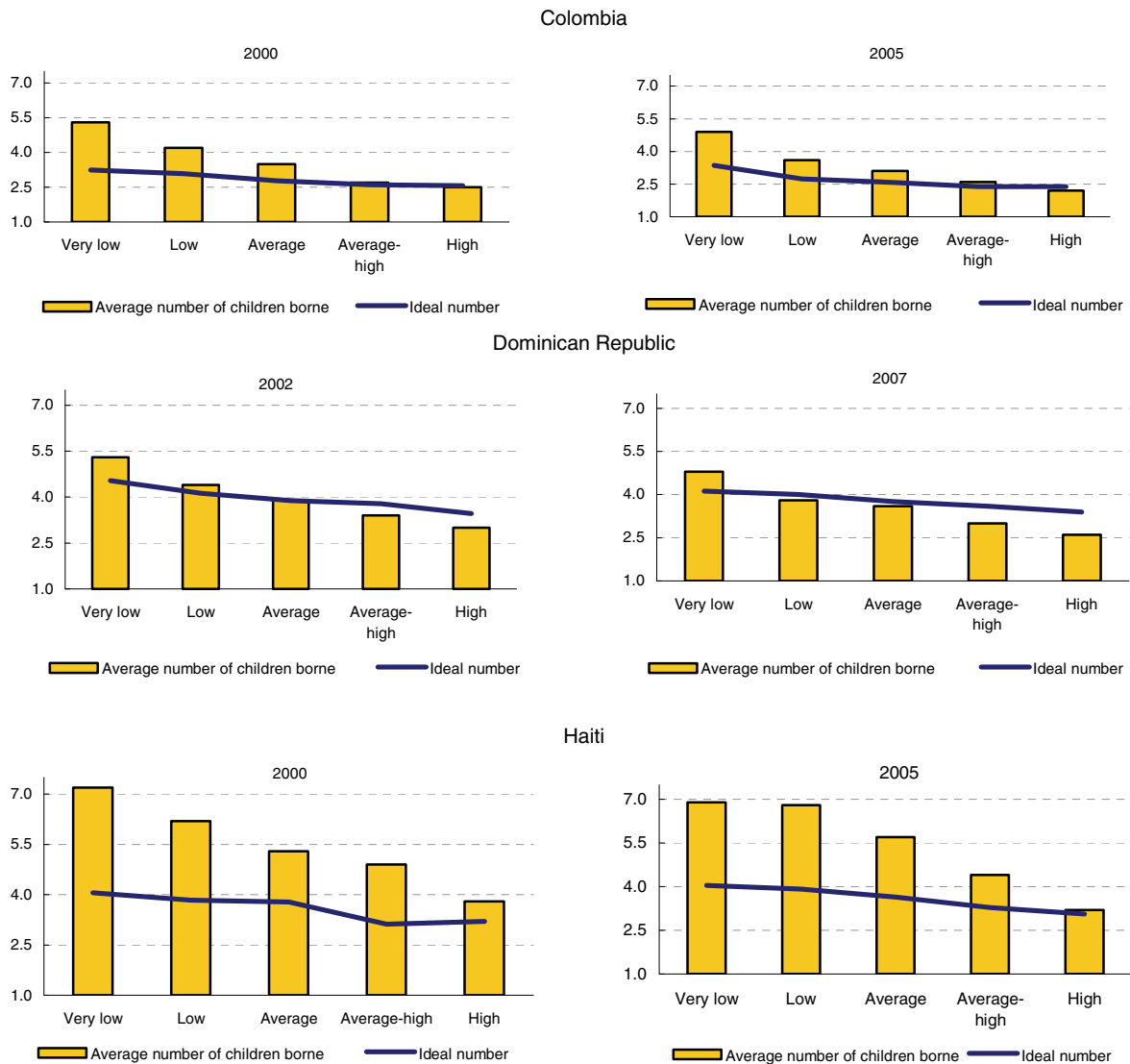
Source: Latin American and Caribbean Demographic Centre (CELADE) - Population Division of ECLAC, on the basis of data from J. B. Casterline and M. J. A. Adams, “Unwanted fertility in Latin America: historical trends, recent patterns”, document presented at the meeting of the Population Association of America, 30 April-2 May 2009, p. 26.

Another aspect related to the exercise of reproductive preferences that should be taken into consideration in the context of an accelerating decline in fertility is the correlation between ideal family size and the actual number of live-born children.²⁴ To discuss this aspect, the group of women aged 40 to 49 years,

²⁴ The ideal number of children is a complex concept, and there are some controversies regarding its interpretation, given that it may include religious, social and cultural values that influence the responses of those interviewed. According to Hagewen and Morgan (2005), it can be interpreted as the preferred number of children in a hypothetical family in a not very clearly defined context, but one with which the interviewee would identify.

at the end of the reproductive period, is analysed in order to minimize the known bias of rationalization, in that mothers tend to bring the desired number of children in line with the number they actually had.²⁵ Figure V.5 shows the evolution over time of this correlation in countries in different phases of the fertility transition.

Figure V.5
COLOMBIA, DOMINICAN REPUBLIC AND HAITI: IDEAL AND ACTUAL AVERAGE NUMBER OF LIVE-BORN CHILDREN, AMONG WOMEN AGED 40 TO 49 YEARS, BY HOUSEHOLD WEALTH INDEX, 2000-2007



Source: Macro International Inc., "MEASURE DHS STATcompiler" [on line] <http://www.measuredhs.com> [date of reference: 15 December 2009].

²⁵ It is important to emphasize that, despite the changes or continuities in opinion on desired fertility, it is possible to identify young cohorts who report a number of desired children less than the number reported by women who were the same age five years earlier. This would suggest that, aside from any rationalization effect, younger women are preferring to have fewer children.

Although the inverse relationship between the number of children borne and socio-economic level remains the same, the link to the ideal number of children is considerably less evident. In addition, there are cases in which the ideal number of children is larger than the number actually borne, which usually happens among women with a high household wealth index (HWI) and is most evident in recent years. It is well known that this is a characteristic of post-transitional societies, and there is information about this phenomenon from at least the beginning of the 1990s (Bongaarts, 2001).

Whereas in the poorest groups the difference between the two indicators translates into a larger number of children borne than desired, at other socio-economic levels actual fertility is less than desired. This circumstance had already been detected by ECLAC, which recognized that reproductive rights may not be respected in either poor or rich sectors, even though the reasons and the consequences are different (ECLAC, 1998). In general, this type of difference has emerged more frequently in Latin America and the Caribbean in recent periods.

Apparently, abortion is still going on actively in the region. Measuring the incidence of induced abortion in Latin America is and will continue to be a challenge as long as legal, cultural and moral aspects interfere with women's decisions and actions to interrupt pregnancy.²⁶ Even so, it is estimated that the number of unsafe abortions, as defined by the WHO (WHO, 1992), increased from around 3.7 million in 2000 to 3.9 million in 2003 (WHO, 2004b and 2007c).

Despite the methodological rigour implicit in the WHO studies, it is still difficult to determine the trend of this phenomenon, partly because of the constant improvement in the quality of the data, insofar as a numerical increase could merely indicate undercounting in previous years. Moreover, it is worth mentioning that the denominators used to calculate the incidence of abortion, whether they are ratios or rates, have been undergoing some significant changes. Thus, the annual comparison of the numbers of abortions and births—the latter on the decline—suggests an increase in the ratio of unsafe abortions. A similar conclusion can be drawn with respect to the rate of unsafe abortions. In either case, the incidence is relatively high in Latin America. WHO statistics reveal a proportion of 30 unsafe abortions for every 100 live births, and there are national figures that corroborate this estimate.²⁷

C. REPRODUCTIVE RIGHTS

The topics developed in the preceding sections support the hypothesis that in Latin America and the Caribbean fertility has declined much more than predicted; recent data on the postponement of motherhood corroborate this hypothesis. They also confirm that the desire to have fewer children, even in the presence of a decline in fertility, is consistent with a significant proportion of fertility being undesired.

The simultaneous rise of modern contraceptive methods and unsafe abortion is apparently contradictory, according to the experience in Europe and countries where fertility has levelled off (Marston and Cleland, 2003). However, in Latin America and the Caribbean, where it is still falling sharply, there is another aspect to consider: the variation in the ratio between desired and undesired

²⁶ Vigoya (1997) contains a rather extensive review of the ethical and sociocultural aspects of induced abortion.

²⁷ In Brazil, abortions reportedly amount to between 35% and 40% of all live births. In Mexico, the corresponding figures range from 37% to 52%, or one induced abortion for every 2.3 live births (Juárez and others, 2009). In Argentina, it has been estimated that 37% of pregnancies may end in induced abortion, and according to some studies, the probability would be one abortion for every live birth (Steele and Chiarotti, 2004).

fertility. *“The counterintuitive parallel rise in abortion and contraception is that desired family sizes were changing rapidly and that increased contraceptive use alone was unable to meet the growing need for fertility regulation”* (Marston and Cleland, 2003).

Thus, what is probably happening in Latin America and the Caribbean is that the demand for smaller families has increased more than the supply of family planning services. It must be that unsafe abortions are the way this demand is being met. It has been determined that there is a desire to have and raise a smaller-sized family, although the ideal number of children may be greater. The message behind these observations is almost certainly related to serious deficiencies in sexual and reproductive health services, and therefore to a flagrant violation of reproductive rights.

Lastly, although in the majority of cases the inability to exercise one’s reproductive preferences means having more than the desired number of children, on many occasions it is also related to the impossibility of having as many children as one desires. In either case, society is denying the means to bring actual fertility in line with desired fertility, thereby limiting the exercise of the most basic reproductive right.

Although access to sexual and reproductive health has improved considerably since the International Conference on Population and Development (ICPD) was held, and by and large national actions have been successful, the persistence of inequities is a clear demonstration of the fact that reproductive rights continue to be violated. In addition to adolescents, persons living with HIV/AIDS and women who want to regulate their fertility, there are other groups whose sexual and reproductive rights are threatened when these inequalities combine with other factors. That is the case of migrant populations, especially if the conditions in which the migration takes place involve forced displacement due to states of emergency or other circumstances that increase their vulnerability (see box V.1).

Box V.1

SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS OF THE MIGRANT POPULATION: A DELICATE EQUATION IN BORDER REGIONS

The complex problems associated with international migration and its relationship to the conditions necessary to promote and guarantee the human rights of migrants and access to sexual and reproductive health become most obvious at the borders between countries in the region. It is there that circumstances are most conducive to vulnerability and exposure to risks affecting mobile populations, especially young people and women (violence against the latter being a clear example).

Three factors make the exposure, spread and propagation of sexually transmitted diseases more likely in the migrant population crossing these border areas, and at the same time hinder the promotion and defense of human rights, including sexual and reproductive rights:

- i) The sexual and reproductive behavior of the migrant population or of groups that show a great propensity for geographic mobility. There is unprotected sex, barriers to access to health services, ignorance and underestimation of the risk of contagion, and a host of prejudices, taboos and socio-cultural stigmas that have an impact on disease and carriers of disease.
- ii) The nature of the migratory process, which makes the issue much more difficult to grasp. Its characteristics include a high percentage of migrants who do not have proper papers, cyclical or seasonal migration patterns that lead to greater mobility and diversification of the phenomenon, violations and threats to the human rights of people as they are travelling, and the practice of sexual commerce as a survival strategy.
- iii) Difficulties of integration and the problems or changes encountered at the migrants’ destination, which translate into the adoption of risky practices. The main phenomena identified in this connection are reduced inhibition in sexual practices, precarious living and working situations, and difficulty accessing protection and prevention campaigns (Canales and others, 2009).

Box V.1 (concluded)

In the last few years, it has become apparent that a shift is needed in the approach to studying, analysing and designing programmes to address STDs and HIV/AIDS. It has been recommended that the perspective be broadened so that traditional epidemiological efforts will encompass not only a human rights approach—which was developed primarily in the first half of this decade and promoted by international organizations working in this field—but also a more contextual perspective that takes into account the conditions of inequity, discrimination and poverty that render this population vulnerable to the spread and contagion of the virus and the development of the disease.

Border regions tend to be considerably behind others in terms of economic and social development. Specifically, they usually have worse social and economic indicators than other parts of the country, the pertinent national average, or both. In addition, the social and economic gulf separating them from the rest of the country helps unite them with other border areas. Accordingly, there is a kind of local and regional convergence in these areas against a backdrop of national divergence and distancing.

As far as regulation is concerned, the legal instruments of international law and national legislation have gradually begun to recognize the problems associated with migration, although at different paces and to different extents. Nevertheless, the main obstacle to public policies focused on the sexual and reproductive health of migrants in border regions is the lack of coordination with local governments, coupled with the traditional weakness of the State in these areas.

With reference to government action, most political initiatives oriented towards the health of the migrant population have operated in a scattered fashion at different levels—local, provincial, state or national—which translates into fragmentary responses. It is therefore essential that intergovernmental coordination measures be applied. Health services in border areas are clearly deficient or insufficient to meet existing demand, even for the native population. Consequently, local governments must be incorporated into the design and the implementation strategy of policies so that the government presence can be strengthened and the provision of services can be adjusted to the actual needs of the border population, both local and migrant.

The action of civil society organizations must be reinforced: more support should be given to the work of non-governmental and international organizations in the area, whether financial or in the form of political commitments from governments. Furthermore, initiatives, programmes and projects on health and migration undertaken by governmental and non-governmental organizations must become regular and systematic. It is clear that migrants in border regions must be recognized as special subjects for protection, taking into account the heterogeneous nature of these populations. There is a need for measures aimed at the most vulnerable groups, such as boys, girls and adolescents, particularly those travelling unaccompanied, as well as women migrants.

Source: A. Canales and others, “Migración y salud en zonas fronterizas: informe comparativo sobre cinco fronteras seleccionadas”, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC)/United Nations Population Fund (UNFPA), 2009, unpublished; A. Canales; P. Vargas and I. Montiel, “Migración y salud en zonas fronterizas: Guatemala y México”, *Población y desarrollo series*, N° 91, Santiago, Chile, ECLAC, 2009, forthcoming; “Migración y salud en zonas fronterizas: Haití y República Dominicana”, *Población y desarrollo series*, N° 90, Santiago, Chile, ECLAC, 2009, forthcoming; C. Courtis; G. Liguori and M. Cerrutti, “Migración y salud en zonas fronterizas: el Estado Plurinacional de Bolivia y la Argentina”, *Población y desarrollo series*, N° 93, Santiago, Chile, ECLAC, 2009, forthcoming.

In the heterogeneous context of Latin America, actions should now focus on eliminating the differences in order to guarantee these rights. It is possible, given the experience gained in recent years in terms of the relationship between the many proposals on the table and the institutional and legal mechanisms available to make them a reality, that greatest gap of all is implementation. If the goal is better results in eliminating social gaps, priority must be given to targeted policies.

PART THREE

This part of the document contains a review of some factors that should be taken into account when predicting the demand for health services in the population in the region because they bear so much present and future relevance in the context of the demographic and epidemiological transitions.

One of these factors is the demand for care, which is changing rapidly as a consequence of the ageing of the population and the growing weight of chronic and incapacitating diseases among older persons. Because of the speed and magnitude of these changes, the institutional frameworks available have not kept pace with the demand for care, prompting States to transfer this responsibility to households. As a result, vulnerability has increased and women, who traditionally assume these tasks, have become overburdened. Hence the emphasis on the need to advance towards recognition and inclusion of care in social protection systems, within a framework of solidarity, equality, autonomy and well-being for families and individuals, with special attention to the role of women.

This section also presents an exercise in projecting the rising proportion of spending that societies will have to devote to health care as a consequence of the demographic and epidemiological transitions. The purpose of the exercise is to draw attention to the magnitude of the effort required, which will pose an even greater fiscal challenge than maintaining pensions in some countries. Emphasis is also placed on the need to implement preventive strategies to cushion the economic and social impact of chronic diseases.

Next, some theoretical and empirical elements are examined with a view to facilitating understanding of the processes whereby the current economic crisis could have adverse effects on the state of health in the region. We analyse the measures that are currently being taken by some countries to deal with the repercussions of the crisis in the sector, and we highlight the need to push for appropriate actions where none are being pursued, to maintain and expand the scope of those actions that are under way, and to magnify their focus on the right to health.

Chapter VI

**DEMOGRAPHIC TRANSFORMATIONS AND FUTURE DEMANDS
FOR HEALTH CARE AND CAREGIVERS**

In the coming decades, the most salient aspect of the demographic situation in the countries of the region will be the growing importance of the older adult population and the decline of the young population. This change, which will accompany the movement towards more advanced stages in the transition, will undoubtedly not happen at the same time in all countries. In most of them, it will open a window of opportunity for undertaking the institutional, programmatic and practical reforms necessitated by the alteration of the age structure of the population and the consequent variations in sectoral demand. One of the most obvious variations will take place in the demand for health and the burden of care, in the context of changes in the family and in the role of women.

This chapter contains a description of the demographic panorama in order to contextualize the demand for health services and care. Specifically, it illustrates the heterogeneity of the demographic transition within and among countries, placing emphasis on the progressive ageing of the population and its direct impact on the demand for care, as well as the demographic possibility of responding to that demand. In the second section, scenarios of the demand for care are presented and analysed on the basis of the indicators used internationally to study this issue, which to date have not been used to this extent in the region. In addition, we assess the effects of increased dependency on care for reasons of health.

The confluence of the elements analysed in this chapter creates a new scenario in which —because of their demographic, economic and social impact— dependency and care in old age will undoubtedly come to the forefront as the most pressing social issues of the twenty-first century with respect to social protection systems in general and health systems in particular.

A. DEMOGRAPHIC AND HEALTH DETERMINANTS OF DEPENDENCY**1. Population ageing as a demographic factor of dependency**

Older persons currently represent 10% of the region's population, equivalent to 57.3 million inhabitants. The ageing process will continue to accelerate over the next few years, especially in the 2010-2030 period, when the growth rate of those 60 and older will be 2.3%. Although this rate will slacken to 1.5% in 2030-2050, the elderly will still be the fastest-growing segment of the population. Thus, by 2050 the number of older persons will total 182.8 million, equivalent to one fourth of the inhabitants in the region.

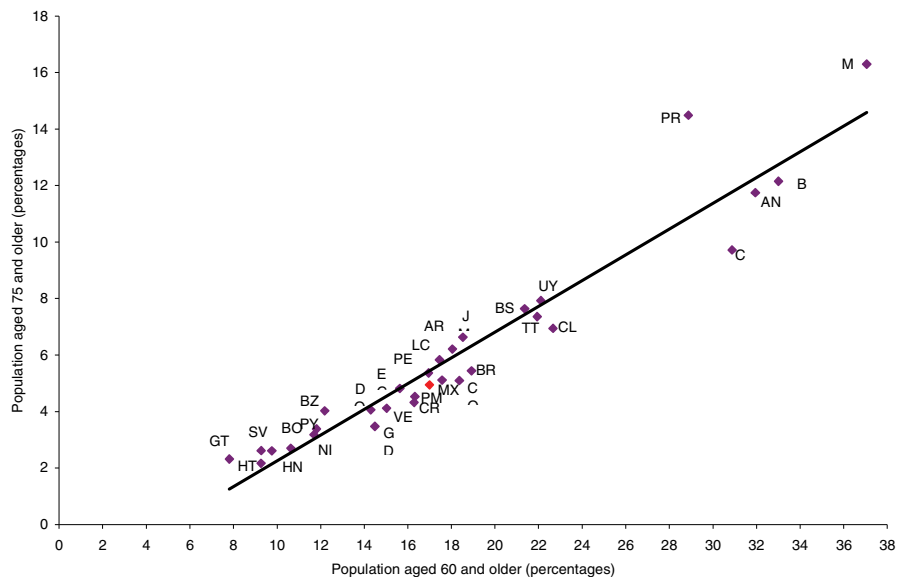
Despite this overall tendency, there are major differences in the way it will unfold in each country. In some of them, the growth rate of the older adult population will continue its upward climb for the entire period under study (2010-2050), while in others, the elderly will represent a much larger than average percentage of the population by 2050.

Another characteristic of the ageing process that will continue to accelerate in the future is the growth of the very elderly within the group aged 60 and older in the population. Over the next four decades, there will be a rapid growth in the number of persons aged 75 and older, even more rapid than

that of the elderly population as a whole. It is expected that in 2025, the number of individuals in this group will double, amounting to 4% of the population, and by 2050 it will approach 9%.

There is heterogeneity among the different countries. In those where the ageing process began early, the population aged 75 and above at present is more numerous than in the other countries. Some countries in the English-speaking Caribbean stand out in this regard, as do Cuba and Uruguay. They are now grappling with the consequences of demographic ageing in a number of areas, such as social security, health and family care. In contrast, there are countries at a moderate stage of ageing (Belize, Brazil, Costa Rica, Mexico and Peru, among others), where the effects of this phenomenon are beginning to be seen in the demand for pensions. Strictly speaking, however, they are not yet feeling as profoundly the other implications stemming from the need for care of the most elderly members of society.

Figure VI.1
**LATIN AMERICA AND THE CARIBBEAN: INTERNAL AGEING^a
 OF THE OLDER ADULT POPULATION, 2030**



Source: Latin American and Caribbean Demographic Centre (CELADE) - Population Division of ECLAC, population estimates and projections, 2008.

^a The term “internal ageing” refers to the growth in the percentage of persons aged 75 and older within the total population aged 60 and older.

Argentina, Chile and Jamaica are in a situation closer to that of Uruguay and Cuba. Although the process of secondary ageing is not as pronounced, the demand for social and health services is soaring, and the effects are beginning to be felt sharply. And finally, the Plurinational State of Bolivia, Guatemala, Haiti and Honduras still have a young older adult population, as the percentage of those aged 75 and older is very small. It is projected that in 2030, several countries of the Caribbean will still have the oldest elderly population in the region, followed by Cuba, Uruguay and Chile. Furthermore, in many of the countries, the population aged 75 and older will have doubled in just two decades (see figure VI.I).

2. The risks of dependency in old age arising from the state of health

The ageing process in the region is characterized not only by an unprecedented growth rate, but also by an accelerated increase in the demand for health services. It is very likely that the cohorts that reach the age of 60 in this century will be in worse health than older persons in developed countries (ECLAC/CELADE, 2003).

By deriving an estimate of healthy life expectancy from the life expectancy at birth, it is possible to obtain an indication of the number of years a person will spend in poor health. Available data suggest that, on average, the population of Latin America and the Caribbean not only has a lower life expectancy at birth than that of developed countries, but a larger proportion of this population's life will be spent in poor health. In 2000, the healthy life expectancy at birth in the countries of the region was 58 years, compared to 66.1 years in the developed countries (UNDP, 2007). This means that the period during which a person is likely to suffer from limited functioning is longer in Latin America and the Caribbean, in some cases up to half the life expectancy at age 60. Such is the case for Barbados, Colombia, El Salvador, Honduras, Paraguay, Peru, the Dominican Republic and Saint Lucia in the 2005-2010 period.

The increase in the life expectancy without good health is due in large measure to the fact that chronic-degenerative diseases have replaced communicable diseases as the principal causes of morbidity, disability and death in almost all of the countries (PAHO, 2007). This type of cause is closely linked to the age structure of the population, given that its weight increases as the average age of the population rises. Unlike communicable pathologies, the chronic nature of these diseases is one of the greatest limitations on the development of an autonomous life in old age, since it increases exponentially the incidence of dependency and worsens the general state of health (Puga, 2002).

One of the principal factors responsible for the higher incidence of chronic diseases and the consequent increase in dependency is leading an unhealthy life. Of the 16 countries in Latin America and the Caribbean for which information is available on tobacco use among adults 15 or older, in six of them it is possible to observe that more than 25% of the population of both sexes smokes. As for older persons, the results of the SABE Survey (the acronym stands for health, well-being and ageing) revealed that in six cities of the region, tobacco consumption was lower—especially among women—but this pattern will clearly undergo a substantial change in the coming decades (ECLAC/CELADE, 2003; WHO, 2009). Obesity among young people 15 and over, which affects females more than males, is also of concern. In the case of the elderly, the figures can be even more disturbing: an average of 66% of the population interviewed in seven Latin American cities were overweight in 2000 (ECLAC/CELADE, 2003). This indicator is likely to grow worse in the future, considering that in some countries like Chile, Mexico and Peru, one in four children aged four to 10 years is overweight, and it is expected that in 2015 the prevalence will continue to rise among both males and females (WHO, 2007).

B. SCENARIOS FOR THE DEMAND FOR CAREGIVERS IN LATIN AMERICA AND THE CARIBBEAN

1. Estimate of the need for care based on age

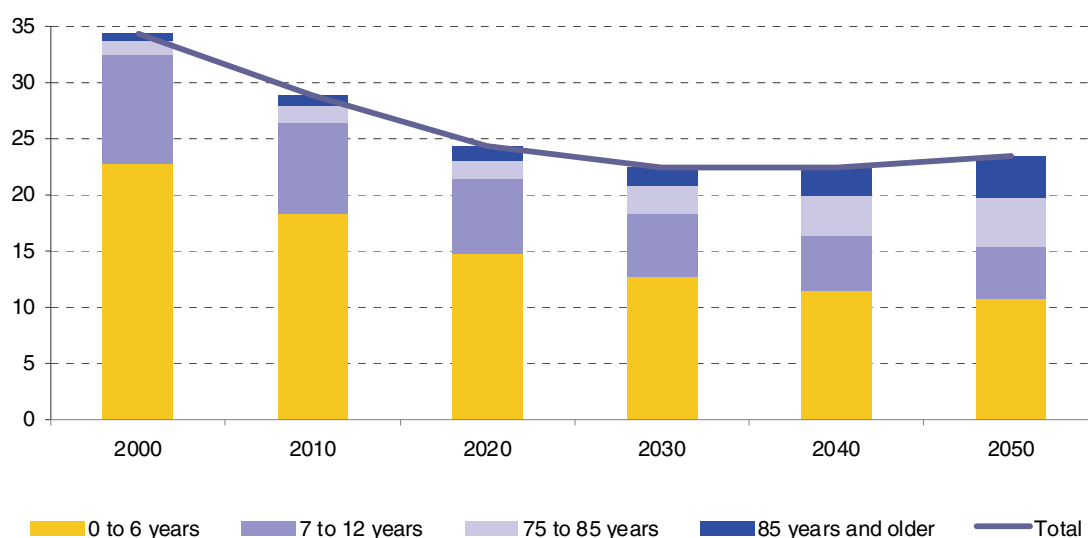
The demand for care is increasing in Latin America and the Caribbean for three fundamental reasons: the still important presence of children, the ageing of the population and the increase in the number of persons who are dependent to some degree due to their health conditions. Although today the region is

facing a demand for caregivers focused primarily on children, in the future it will be the older and dependent persons who make up the bulk of the demographic burden of assistance, although with wide variations from one country to another.

In fact, as can be seen in figure VI.2, at the beginning of the present decade there was a high care dependency ratio (see box VI.1), averaging 35 persons needing care to 100 potential caregivers—with a heavy concentration on those aged 0 to 6 years— although over the next few decades there will be a downward trend. However, beginning in 2040 there will be a turning point, marking the onset of a new phase of expanding demand as a consequence of the growth in the population aged 75 and older, which will triple in the 2000-2050 period.

This regional tendency varies considerably among countries, but two situations can be identified clearly. The first corresponds to the countries furthest behind in the demographic transition, which are beginning the period with a high burden of care for children and a low availability of potential caregivers to meet relevant demand. This is true of the Plurinational State of Bolivia, Guatemala, Honduras and Nicaragua, where the need for caregiving will diminish towards the end of the period and approach the regional average. Soon afterwards they will begin seeing increased demand for assistance due to ageing. At the opposite end of the spectrum are countries that have advanced far into the demographic transition, where the burden of care is already being shaped by the ageing of the population. In contrast, they have a higher availability of potential caregivers than the regional average (ECLAC, 2009b). This group, which includes Argentina, Chile, Cuba and Uruguay, in the medium term will see the availability of caregivers stagnate or decline as a result of ageing and will have to meet a demand for assistance focused on the elderly.

Figure VI.2
LATIN AMERICA: CARE DEPENDENCY RATIO, 2000-2050
(Number of dependent persons for every 100 potential caregivers)



Source: Latin American and Caribbean Demographic Centre (CELADE) - Population Division of ECLAC, population estimates and projections, 2008.

Box VI.1

DEMOGRAPHIC DEPENDENCY RATIO AND CARE DEPENDENCY RATIO

The total demographic dependency ratio —equivalent to the sum of populations aged less than 15 years and more than 60 years, divided by the number of persons aged 15 to 59 years— is a synthetic index of the population's age structure. It is usually defined as the relationship between the population that is at a potentially inactive age and that which is at an active age vis-à-vis the economy. A high dependency ratio represents a burden for the population aged 15 to 64 years, which must support others in addition to themselves. Since this indicator tends to have high values in both young and old populations, it is recommended that the index be broken down into two components: the child dependency ratio (also called the youth ratio), in which those under the age of 15 are considered potentially inactive, and the adult (or elderly) dependency ratio, in which the potentially inactive persons would be only those older than 60.

Unlike this traditional indicator, the care dependency ratio is designed to reflect the relative burden of support that weighs on potential caregivers in a given society. Calculating this ratio is useful for measuring approximately how many people need care, how much care they need and the demographic possibilities for providing assistance. It also enables us to compare the burden of care from country to country and over time. Like the traditional dependency ratio, this indicator is defined on the basis of age groups, although it focuses on people who have specific care needs: the group aged 0 to 6 years, and the group aged 85 years or more, precisely the two extremes of the life cycle. In practice, these two groups depend largely on third parties to meet their needs. Then there are the persons aged 7 to 12 years and those aged 75 to 84 years, who may need care but do not always need it with the intensity of the previous groups. In the middle – that is, the population aged 15 to 74 —are the potential caregivers. Methodologically, the indicator does not consider the population between the ages of 13 and 14, because they would not demand the intensive care that the groups mentioned above (0 to 12 years and 75 years or older), nor would they be in a position to provide care.

To calculate the burden of care, it is assumed that each person under 12 or over 75 years of age needs a given number of units of care: children aged 0 to 6 and persons 85 and older need one unit, and those aged 7 to 12 and those aged 75 to 84 need 0.5 units. This estimate is an approximation or proxy that should be used with caution, as it probably underestimates the number of persons needing care and overestimates those who can provide assistance. It does not take into account the fact that the persons in the age ranges qualifying as potential caregivers may suffer limitations, especially physical and health limitations, in performing the required tasks.

Source: Debbie Budlender, “The statistical evidence on care and non-care work across six countries”, *Gender and Development Programme Paper*, N° 4, United Nations Research Institute for Social Development (UNRISD), 2008; Latin American and Caribbean Demographic Centre (CELADE), “Manual sobre indicadores de calidad de vida en la vejez”, *Project documents*, No. 113 (LC/W.113), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), 2006.

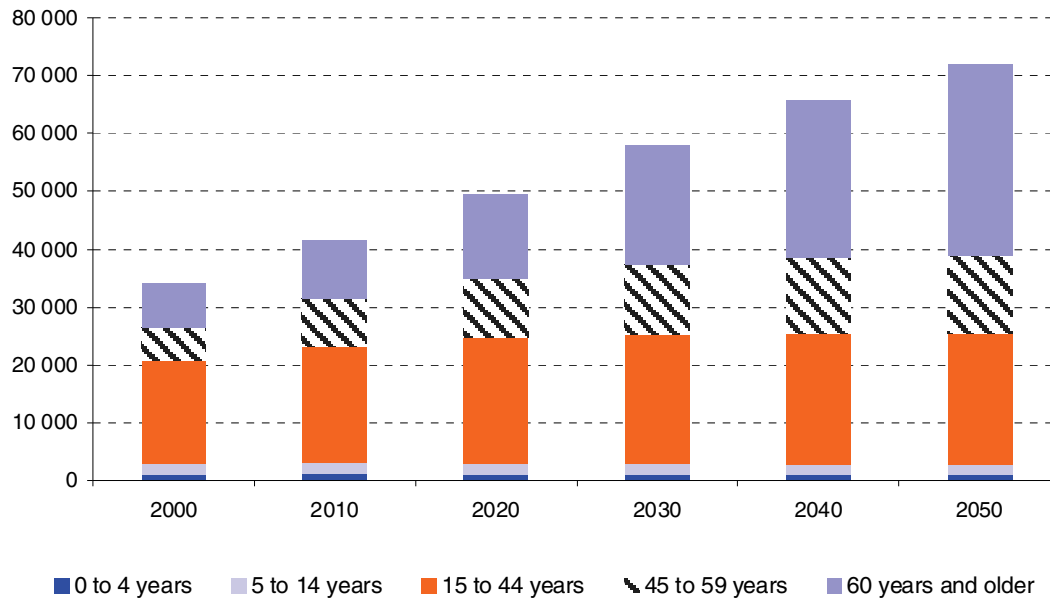
2. Estimate of the need for care based on health status

Simultaneously with the increase in the number of older persons, a significant increase is foreseen in the dependent population requiring care for health reasons. It is estimated that in the 2000-2050 period, the number of persons with moderate to severe dependency will double in Latin America and the Caribbean, growing from 23 million to 50 million (WHO, 2002a).²⁸ After sub-Saharan Africa, the Middle East and Asia, it will be one of the regions with the highest prevalence in the world (Harwood, Sayer and Hirschfeld, 2004).

²⁸ Moderate-severe dependency refers to persons who suffer from two of any of the most serious types of disability (active psychosis, dementia, quadriplegia, severe continuous migraine, blindness, paraplegia, severe depression) and two or three conditions of one of the three types of the most severe disability (which include Down syndrome, moderate mental retardation and recto-vaginal fistula) (Harwood, Sayer and Hirschfeld, 2004).

Although dependency applies to all age groups, an analysis by age reveals that whereas at present the greatest burden of care for this reason is concentrated in the age range of 15 to 59 years, the population in question will gradually age, and by 2050 persons aged 60 and older will represent nearly half the population depend on care for health reasons (see figure VI.3).

Figure VI.3
LATIN AMERICA AND THE CARIBBEAN: NUMBER OF PERSONS WITH MODERATE TO SEVERE DEPENDENCY REQUIRING DAILY CARE, BY AGE GROUP, 2000-2050



Source: Latin American and Caribbean Demographic Centre (CELADE) – Population Division of ECLAC, on the basis of World Health Organization (WHO), *Current and Future Long-Term Care Needs* (WHO/NMH/CCL/02.2), Geneva, 2002.

Indeed, dependency for reasons of health and ageing are closely linked. On the one hand, dependency may be a consequence of chronic diseases, and on the other hand, it tends to be a reflection of the overall loss of physiological functions attributable to the ageing process. In Nicaragua, for example, the prevalence of disability at the national level is 10.3% of the population, and it is not more than 5% in age groups under 30 years of age. However, the figure climbs to 30% for the 60-64 age group and reaches 85% for those older than 80 years of age (Nicaragua, Ministry of Health, 2004). If the measurement criterion is changed to that of limitations on the ability to perform daily activities and restrictions on the participation of the older adult population, the prevalence of disability rises to 71% in persons aged 65 and older (67% for men and 73% for women) (Huenchuan, 2009). Other countries in the region are in a similar situation: in Argentina, the prevalence of disability among children under the age of 15 years is 3%, and 28.3% among those over the age of 65 (INDEC, 2003); in Chile, the gap is wider, as the younger age group has a prevalence of 3.2% and the older group 43.4% (FONADIS/INE, 2004); and in Brazil the disparity is even greater, as 4.3% of children under 15 years of age have some sort of disability, whereas the figure leaps to 54% among those older than 65 (IBGE, 2000).

C. HEALTH AND AGEING: THE NEED TO ADDRESS DEPENDENCY AS A RISK WITHIN SOCIAL PROTECTION SYSTEMS

With notable exceptions, caregiving has not been a major issue on the public policy agenda of Latin American and Caribbean governments. The general and specific regulatory frameworks of the countries of the region, along with the array of social programmes that exist for the protection of children, the elderly and the dependent, all point to a growing concentration of the risks associated with care on families. This increases the vulnerability of persons needing care and of those who provide assistance, since their position is exclusively and directly determined by the unequal distribution of resources by family origin.

This is precisely one of the great challenges of the twenty-first century: moving towards recognition and inclusion of caregiving in public policies, within a framework of solidarity and equality. Social protection must be re-examined with a view to responding immediately to the consequences of the demographic transformations, as well as anticipating what will be needed to respond to the demands of a constantly changing population.

From this perspective, we must move towards defining dependency and caregiving as a matter of collective responsibility, supported by benefits and services that maximize the autonomy and well-being of families and individuals within the framework of social protection systems. The public responses to this set of problems must be conceived as a logical extension of the government's responsibilities, meaning that it has certain immediate obligations to those who need help and those who give help.

Chapter VII

**ILLUSTRATIVE PROJECTION OF HEALTH CARE SPENDING IN LATIN AMERICA
AND THE CARIBBEAN IN THE 2006-2040 PERIOD**

This chapter presents illustrative projections of future health care spending in Latin America and the Caribbean, based on the demographic and economic changes that are likely to take place in the coming decades. The driving force behind these projections is the demographic transition. Although the effects of this inexorable process will vary in timing and magnitude due to the different stage of the demographic transition in each country, the general pattern will be the same. Against a backdrop of declining mortality and fertility, all of the countries in the region will see a rise in incomes as the proportion of the working-aged population grows, but at the same time will face a significant rise in health costs due to the increase in the number of older persons as well as the more intensive use of health services by this age group. This chapter analyses the likely impact of these two trends on health spending as a percentage of GDP in 24 countries of Latin America and the Caribbean, from 2006 to 2040.

A. GROWING USE OF HEALTH SERVICES BY OLDER PERSONS

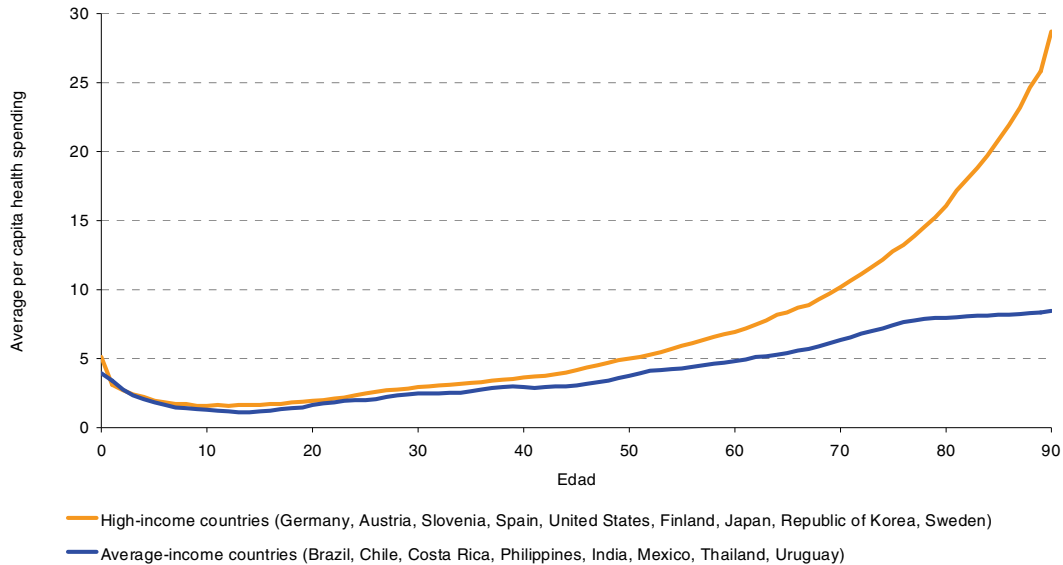
There are notable differences in health spending by age between high-income and medium-income countries. Figure VII.1 shows health spending as a percentage of GDP by working-age adults, based on data extracted from National Transfer Accounts.²⁹ It can be observed from analysing these data that in high- and medium-income countries, health spending by persons under the age of 40 is surprisingly similar. The cross-sectional data reveal that health spending in these age groups rises in proportion to income. Above 40 years of age, however, the pattern is very different: in high-income countries, health spending per person above 40 is much higher. In other words, as health spending rises faster than income at older ages.

The answer to the question of why societies take this path remains open. Some possibilities include the modification of medical protocols, according to which chronic diseases are treated more aggressively, and an age-biased technological shift, in which advances in medical treatment favour the type of illnesses from which older persons suffer. The political power factor should also be considered, since this is primarily a matter of public spending, and therefore it is possible that older persons acquire a growing influence as societies age—and also become wealthier. Another possibility would be the fact that older and wealthier countries can provide much of the long-term care required by the elderly on the market, whereas in poorer countries these services tend to be provided by families.

Regardless of the reasons for this pattern, the trend towards higher health spending at more advanced ages magnifies the effects of population ageing and can be expected to lead to a significant rise in health spending as a percentage of GDP.

²⁹ National Transfer Accounts are an accounting system for estimating economic activity by age, based on national accounts (see [on line] www.ntaccounts.org and www.cepal.org/celade/transferencias_intergeneraciones).

Figure VII.1
SELECTED HIGH- AND MEDIUM-INCOME COUNTRIES: HEALTH SPENDING
BY AGE, AROUND 2000
(Percentage of GDP per working-age adult)



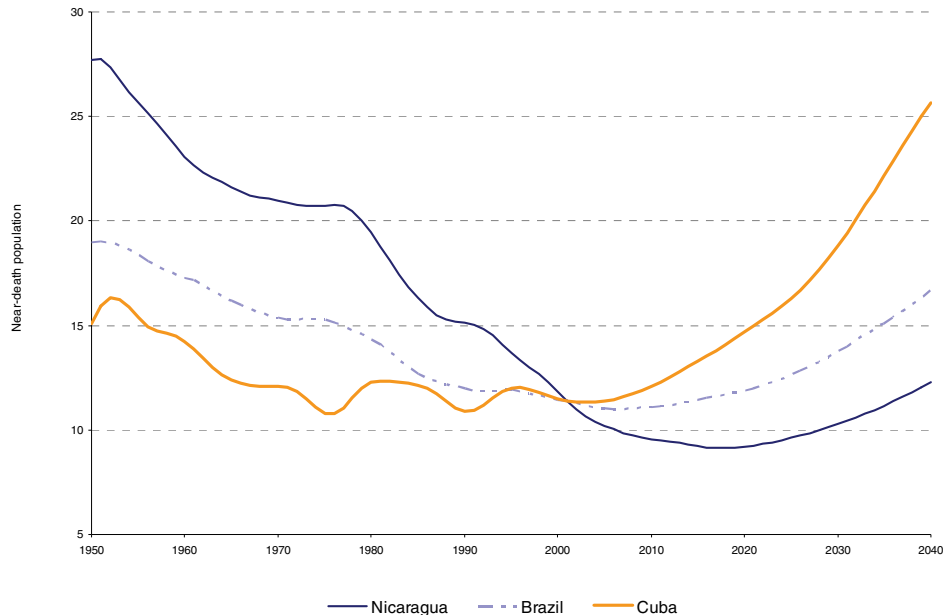
Source: Latin American and Caribbean Demographic Centre (CELADE) - Population Division of ECLAC, on the basis of data from National Transfer Accounts [on line] www.ntaccounts.org.

A second trend affecting health costs is the increase in the proportion of the population at older ages whose per capita spending is high. The dependency ratio in the health sector is defined here as the number of persons close to death divided by the working-aged population.³⁰ Several studies in countries of the Organization for Economic Cooperation and Development (OECD) have shown that the majority of health spending by individuals occurs in the final decade of life, especially the last year (Miller, 2001; Lubitz and others, 2003; McGrail and others, 2000; Zweifel, Felder and Meier, 1999). In other words, the majority of health systems use a significant percentage of their resources on providing curative and palliative services rather than preventive services.

As countries advance in the demographic transition, the dependency ratio in the health sector follows a U curve. At first, the decline in mortality rates leads to a reduction in the proportion of the population that is near death. As is evident in the case of Nicaragua, shown in figure VII.2, this reduction may be steep and substantial. In 1950, the number of persons near death in that country amounted to approximately one third of the working-age population, but over five decades the proportion fell to about one tenth. Later on, as the country moves through the demographic transition, the age structure of the population changes substantially: the weight of older persons rises and the population near death begins to grow in relation to the working-age population. In nearly all countries of Latin America and the Caribbean, the population near death will expand faster than that of working-aged adults, which will tend to drain more financial resources from health services.

³⁰ To estimate the number of persons near death in the population, projections of the number of deaths in an original cohort over the next decade are used (ECLAC/CELADE, 2009).

Figure VII.2
**BRAZIL, CUBA AND NICARAGUA: ESTIMATES AND PROJECTIONS OF
 THE POPULATION NEAR DEATH (<10 YEARS), 1950-2050**
(Percentage of the working-age population)



Source: CELADE-Population Division of ECLAC, population estimates and projections, 2008 revision, updated as of September 2009.

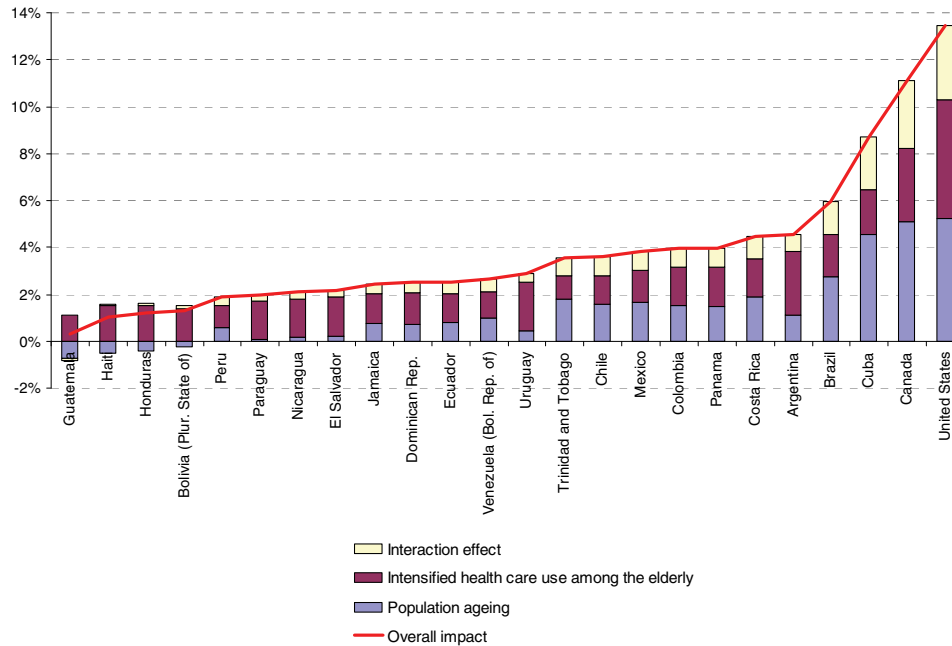
B. SIGNIFICANT INCREASE IN THE PROPORTION OF GDP ALLOCATED TO HEALTH

The percentage of countries' GDP allocated to health spending can be broken down into the sum over all ages of two multiplicative factors: the average health services consumed by each age group—in units of GDP per working-age adult—and the age structure of the population—that is, the number of people at a given age compared to the number of working-age adults. The illustrative forecast presented in this section is based on the projected trends in both factors.³¹

The changes in average health spending by age were projected on the assumption that they follow the cross-sectional pattern observed in National Transfer Accounts. As national incomes rise in the region, per capita health spending begins to resemble that of high-income countries, with very high levels of health spending per older person. The future national income of each country, meanwhile, was calculated on the basis of estimated GDP per worker, using the projections of the number of working-aged adults and the productivity growth rate, which is assumed to be constant for all economies (2.5%). For this reason, the projections should be considered illustrative examples that reflect the application of common assumptions to all countries.

³¹ $E(t)/GDP(t) = \sum_x \{b(x,t) * P(x,t)/P(20-64,t)\}$, where $b(x,t) = [E(x,t)/P(x,t)]/[GDP(t)/P(20-64,t)]$, $E(t)$ = health spending in the year t , $GDP(t)$ = gross domestic product in the year t ; $b(x,t)$ = average number of health benefits consumed by each age groups, in units of GDP per working-age adult, and $P(x,t)$ = population at age x in the year t . For the age structure of the population $P(x,t)$ the population projections of CELADE-Population Division of ECLAC were used (ECLAC/CELADE, 2009).

Figure VII.3
SELECTED COUNTRIES: PROJECTED INCREASE IN HEALTH SPENDING, DISAGGREGATED
ACCORDING TO THE EFFECTS OF POPULATION AGEING AND THE INTENSIFIED
USE OF HEALTH SERVICES BY OLDER PERSONS, 2006-2040
(Percentage points of GDP)



Source: CELADE-Population Division of ECLAC, Demographic model for fiscal prognoses.

Figure VII.3 shows the projected increase in health spending in selected countries from 2006 to 2040, in percentage points of GDP. The largest increases correspond to Canada and the United States, where spending is expected to climb by more than 10 percentage points of GDP, driven more by the ageing of the population than by the more intensive use of health services by older persons. In Latin America and the Caribbean, a significant increase in health spending—more than 3 percentage points of GDP—is seen in Trinidad and Tobago, Chile, Mexico, Colombia, Panama, Costa Rica, Argentina, Brazil and Cuba. In the latter two countries, it will grow by 6 and 8.7 GDP percentage points, respectively. In contrast, in Paraguay, Nicaragua, El Salvador, Jamaica, the Dominican Republic, Ecuador, the Bolivarian Republic of Venezuela and Uruguay, the rise will be more moderate, amounting to 2 to 4 percentage points of GDP. Finally, it is noted that the increase in health spending in Guatemala, Haiti, Honduras and the Plurinational State of Bolivia will be modest, less than 2 percentage points of GDP. In these countries, variations in the age structure tend to cause a less significant growth of health spending, since the major reduction in the proportion of children and infants (whose health costs are high) offsets the growth of the older population. This will translate into a smaller increase in total health spending, at least through 2040.

In most countries of the region, the more intensive use of health services by older persons will have a greater impact on projected spending than the ageing of the population. In other words, according to the projection shown here, treatment protocols for the elderly—who generally suffer from chronic diseases such as cancer, diabetes and heart diseases—will come to resemble those followed in high-income countries. It is this change in treatment that will lead the way to a significant rise in total health spending in the region and a shift in the services provided by health systems to focus more on the treatment of chronic diseases.

C. SOME CONCLUSIONS AND RECOMMENDED ACTIONS

One of the principal conclusions that can be drawn from the analysis carried out in this chapter is that health spending as a percentage of GDP will probably increase substantially in the region over the next three decades. Consequently, it is also possible that financing the health system will emerge as a critical problem in Latin America and the Caribbean, requiring urgent government attention.

There are two trends that will drive this major surge in health spending: one is demographic and the other is medical-economic. The first, which depends on the stage countries have reached in the demographic transition, takes the form of a larger share of elderly persons in the population. The medical-economic trend, on the other hand, is represented by the growing intensity in the use of health services by older persons. According to the projections analysed, the impact of this latter trend will be greater than that of the former.

Based on the above conclusions, it is possible to make some recommendations for more effectively addressing the future scenario projected by means of these calculations. First, the governments of the region should be urged to estimate medium- and long-term health spending. Demographic change is one of the most important forces shaping the outcome of social policy, but it cannot be observed in the short-run. However, their impact is evident in the health spending projections presented in this chapter, which are particularly important for governments. A previous study on fiscal spending in the areas of health, pensions and education found that for many governments in the region, financing the health sector will probably pose a greater challenge than funding pensions (Miller, Mason and Holz, 2009).

It is also important to conduct interdisciplinary studies focusing on chronic diseases, preventive health strategies and their possible future repercussions on morbidity, mortality and health spending in the region. A key course of action will likely be raising awareness of the need to adopt broad-based preventive health strategies aimed at expanding access to healthful foods, encourage physical activity and eliminate tobacco consumption in order to prevent or reduce the social and economic costs of the chronic diseases that underlie these projections of health spending.

Chapter VIII

THE CURRENT CRISIS AND HEALTH

The main objective of this chapter is to explore the developments and mechanisms whereby the current crisis could undermine the health situation in Latin America and the Caribbean in the medium and long terms, and the possible policy responses that could address this situation.

As a consequence of the crisis, employment—one of the variables with the greatest impact on health—suffered a major impact in the region. The crisis has aggravated unemployment, and that, together with increased informal economic activity and employers' evasion or delayed compliance with their obligations, has probably had an impact on social security coverage. In this regard, Mesa-Lago (2009) reported data on pension fund activity at the peak of the crisis, showing that social security funds were already in a downturn due to the economic recession.

Therefore, it is expected that the financial crisis will have some very adverse sequelae for health conditions in the region, similar to those seen in the aftermath of previous crises.³² The magnitude of the impact will depend on various factors, however, most notably the protective effect of public programmes and social spending, which can cushion or defer the effects of the crisis. In fact, public spending in Latin America, and particularly social spending, have undergone a significant upturn in recent years as transfer programmes and policies have been targeted towards the most vulnerable sectors. As a result, the possible damage to the health sector may be palliated to some degree.

Another moderating influence on the impact of the crisis is the demographic situation in the region, given that its low levels of fertility and limited dependency favour the reduction in poverty (ECLAC, 2009b). On the other hand, it is more difficult to predict the consequences of the epidemiological transition, because Latin America and the Caribbean continue to have high rates of communicable, perinatal and nutritional diseases, which could be directly affected by the current economic crisis. At the same time, accidental and violent causes of death are on the rise, though there is great variability among and within countries (Di Cesare, 2007). All of these factors behave differently in different countries, so the repercussions of the crisis will be varied throughout the region.

A. GENERAL ASPECTS (THEORETICAL RELATIONSHIPS)

The fall in private income caused by unemployment or low wages may lead to an increase in morbidity, malnutrition, accidents and mental disorders, among other effects. It may also lead to greater demand for medical services, although that does not always translate into real access, thereby worsening the population's state of health to the extent that the demand is not met.

³² Analysing the health effects of the crises of the 1970s and 1990s, Musgrove (1987) found that relevant spending fell steeply and health services shrank. This situation led to a deterioration in the population's state of health, as infant mortality rose and the morbidity and mortality structure changed in the epidemiological profile of children.

Musgrove (1987) points out, however, that “the relationship between income and health does not depend on the current economic flow but on national capital, including medical capital and the supply of potable water and sanitation, accumulated on the basis of previous income”. Therefore, the effects of falling income will be felt gradually, though more immediately among the poorest, who will be the first to see health indicators worsen, even if the average decline nationally is slight.

Malnutrition is one of the first manifestations of lower family income or of a widespread economic crisis, and it, in turn, causes numerous diseases. Another source of morbidity that increases immediately during critical times is accidents, whose rates rise due to stress. The latter, a factor associated with crises, can also lead to higher consumption of psychoactive substances such as alcohol and stimulate violence (homicides, assaults, suicides). Moreover, the rapid impoverishment of some population centres could drive up the incidence of intestinal, parasitic and respiratory infectious diseases, thus undermining the progress made on mortality.

It can be argued that the crisis has had other direct results, aggravated by the poor state of health services, including the increase in pregnancy-related diseases and the higher maternal mortality rate, as well as neonatal mortality in some cases. It is well known and documented in the public health field that this type of problem is the most sensitive to deficiencies and shortfalls in health care.

Furthermore, the crisis has an indirect effect on health by eroding public revenues, health institutions and social protection mechanisms. When incomes shrink, there are fewer private funds available for purchasing medical services the demand for public programmes increases, while the capacity of these programmes to meet that demand may also have been reduced. Thus, for the well-being of households, it is essential to maintain and reinforce the assurance of good health through mechanisms oriented towards timely prevention and treatment, financing for long-term illnesses and an income-replacement scheme when sickness occurs. If these mechanisms fail during a crisis, the uncovered population will be even more exposed to risk (ECLAC, 2009b).

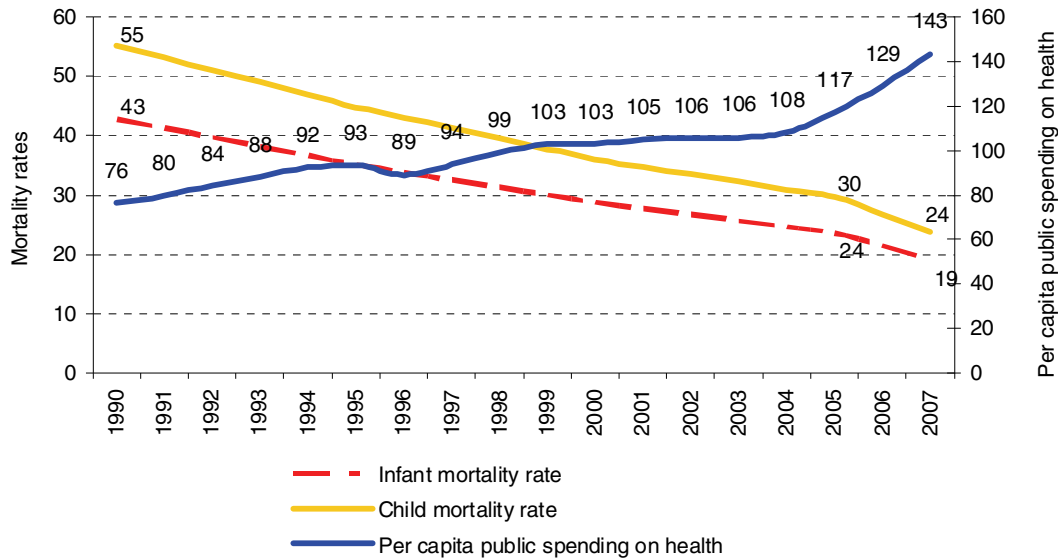
B. SPECIFIC ASPECTS (SOME EMPIRICAL EVIDENCE)

Apart from the health effects of economic development, illustrated earlier through various indicators and in different contexts,³³ some studies have demonstrated that factors such as unemployment have an accelerated impact on generating morbidity and mortality (Jin, Shah and Svoboda, 1995). The inverse relationship between per capita public spending on health and infant and child mortality indicators has also been documented, as shown in figure VIII.1 with respect to Latin American countries during the 17 years prior to the current financial crisis. Although the steady decline in mortality cannot be attributed entirely to this spending, it is important to point out that it has a great deal of influence.

In the case of undernutrition, although there have not been many aggregate studies of all countries, there is partial research that can serve as a reference (some of them are mentioned in box III.1 of this document). Thus, a study on chronic child undernutrition in eight Latin American and Caribbean countries (Paraje, 2009) revealed that “household wealth” and the education level of mothers are determinants in the distribution of this undernutrition. In addition, a study of 53 countries showed that 56% of deaths of children under age five are caused by undernutrition.

³³ See, for example, Wilkinson (1992); Franco, Gil and Álvarez-Dardet (2005); Franco, Palma and Álvarez-Dardet (2006).

Figure VIII.1
**LATIN AMERICA (19 COUNTRIES): TRENDS IN PER CAPITA PUBLIC SPENDING
 ON HEALTH AND INFANT AND CHILD MORTALITY RATES, 1990-2007**
(Rates per 1,000 live births, in 2000 dollars)



Source: M. Hopenhayn, “Gasto social y crisis: una perspectiva de impacto, equidad y derechos”, document presented at the international seminar Social Spending During the Crisis: How to improve the analysis of social spending in the face of the current challenges in Latin America and the Caribbean, Santiago, ECLAC, 16 and 17 June 2009.

This scourge, undernutrition, is not just a consequence, but also a cause of economic inequality, because it increases poverty and is invariably related to poverty (it is more frequent in the poorest quintile of the population). This means that a sustainable impact on undernutrition will only be achieved if its socio-economic causes are removed. This situation is also aggravated by the fact that child undernutrition has long-term sequelae, since adults who suffered from undernutrition during childhood do not become properly integrated into the production sector. This perpetuates the cycle of poverty and undernutrition in future generations.

The relationship between economic crises and infant mortality has been documented by Romeo and Warcwald (2000), who drew on information from nine Latin American Countries in the 1980s and 1990s and concluded, on the basis of socio-economic indicators and variations in the infant mortality rate, that the latter depends on short-term economic changes. They also found a significant inverse correlation between the rate of decline of infant mortality and the increase in poverty, and they established country-by-country differences according to economic income.

Furthermore, an analysis of the effects of the structural adjustments made during the 1980s on the health situation in Latin America between 1980 and 2000 has shown that the reduction in the size of the State (measured as a function of total public spending) had a significant impact on health conditions, and in particular on infant mortality and life expectancy (Franco, Palma and Álvarez-Dardet, 2006).

Lastly, the relationship between the current world crisis and the principal challenges in the area of health has already been described in several studies mentioned by Barry and Sidel (2009): undernutrition and the rise in the number of homeless persons, children in “street situations” —that is, under deteriorated living conditions— and unemployment; drug addiction and other mental health problems such as alcoholism and depression; the increase in mortality and the deterioration of children’s health as a consequence of poverty; and domestic and community violence caused by unemployment, underemployment, frustration and despair.

C. PUBLIC POLICY ALTERNATIVES

Grappling with the effects of the current crisis on the region’s health situation is a complex task, because they are felt first in the quantity and quality of employment available to the most vulnerable groups and in the possible reduction of funds allocated to transfer programmes and social protection systems.

Policies must focus on protecting the social achievements made prior to the crisis, specifically in terms of quality employment, increased public spending and social spending, and the expansion of coverage of transfer programmes and of the support components of social security systems. The solutions will have to reinforce the focus on health and social security as rights, and they must target major efforts at eliminating differences in access to health services based on gender, ethnicity, culture and age.

As summed up in table VIII.1, the array of policies developed and implemented by the countries in order to deal with the crisis is broad and auspicious, but their sustainability in the face of deteriorating public finances is at a high risk. To prevent any reversal of achievements, there must be renewed political will.

In short, the economic and social situation is closely linked to the state of health both within and among countries, so it is possible to establish a tie between economic crises and the deterioration of demographic and health indicators. It has also been observed that the health effects of the current economic crisis will be rapid, and that persons living close to the poverty line will bear the brunt. Unemployment is the most determinant indicator of the direct effects of the health crisis.

The economic and social measures adopted in the context of the crisis should be aimed at protecting the achievements made before this critical juncture, specifically, quality employment; at preserving some of the cushioning factors, such as public spending on health; and at fulfilling a redistribution function, emphasizing the focus on health and social security as rights and making significant efforts to eliminate differences in access to health services among countries and among different population groups.

Table VIII.1
**LATIN AMERICA AND THE CARIBBEAN: SOCIAL POLICIES IMPLEMENTED
 TO FACE THE CRISIS, AS OF AUGUST 2009**

Country	Policy
Argentina	Stimulation (through incentives) of the incorporation of workers into the formal sector. Increase of 15.5% in national public employees' wages 8% in June 2009 and 7% in August of the same year.
Bolivia (Plurinational State of)	Payment of the Juana Azurduy Mother-and-Child Bonus, which began in May 2009. Recipients of this bonus are pregnant women and boys and girls under the age of two.
Brazil	Maintenance of spending levels in the Bolsa Familia programme and the projects of the Growth Acceleration Programme (PAC).
Chile	A bonus of US\$ 70 per family dependent paid to the most vulnerable families in March 2009.
Costa Rica	Subsidies for food, transportation and gasoline. Higher social spending on education and housing. Increase of 15% in the pensions of the non-contributory regime of the Costa Rican Social Security Fund. Project to offer meals on weekends (in the childcare centres of the least-developed 37 cantons) Avancemos programme: increase in the number of scholarships.
El Salvador	Strengthening of the Solidarity Network Programme to combat extreme poverty by doubling (from US\$ 150 to US\$ 300) the amount of aid for each family with children in primary school. Strengthening the standard of living of middle-income families through the Alliance for the Family Programme: discounted tuition, expanded health coverage, pension increases, payment of 100% of the salary of working mothers registered with the Salvadorian Social Security Institute (ISSS) on maternity leave. Urban community solidarity scheme aimed at raising the living standards in urban settlements through basic public services, housing construction, school vouchers for children and young people, and citizen security. Improvement of the Solidarity Network programme (rural community solidarity).
Haiti	Budget allocation for consolidating the Mi Familia Progresas scheme, as well as other social programmes, to reach a total of 458,000 families. Execution of rural development programmes. Subsidies for food and transportation expenses.
Honduras	Increase in budget for programmes such as school lunch, free tuition in rural schools, basic package of health services, reforestation, school vouchers, fuel and electricity subsidies. Support for low-income housing, agricultural SMEs and certain social sectors.
Mexico	Food support programme in priority areas: improved food and nutrition in households in the remotest regions of the country. Expansion of the Opportunities social programme: World Bank loan.
Nicaragua	Allocation of food support and subsidies. Allocation of subsidies for the purchase of fuels.
Panama	Programmes to enhance the basic consumption basket, subsidies for staple grains producers and health programmes for the uninsured. Discounted rate for customers whose monthly energy consumption does not exceed a certain level.
Paraguay	Expansion of the conditional transfers programme to benefit families living in extreme poverty. Benefits for 600,000 inhabitants, that is, half of the persons living in extreme poverty.
Peru	Investment in additional resources for maintaining and equipping education and health institutions. Expansion of budgets of social programmes (the equality fund and the food supplement programme).
Dominican Republic	Targeting of the liquefied petroleum gas (LPG) subsidy to benefit the poorest groups in the population. Creation of two programmes: i) targeted LPG subsidy for public transportation, benefiting 24,000 drivers in the sector, and ii) targeted LPG subsidy for households, with an estimated coverage of 800,000 households. Solidarity Programme, for social assistance: subsidies for food purchases, school attendance and elder care. Expanded coverage of family health insurance in the contributory regime.

Source: CELADE-Population Division of ECLAC, on the basis of Economic Commission for Latin America and the Caribbean (ECLAC), The reactions of the Governments of the Americas to the international crisis: an overview of policy measures up to 31 August 2009 (LC/L.3025), Santiago, Chile, April 2009.

CONCLUSIONS

From the non-binding frameworks taken as a reference —the Alma-Ata Declaration, the Cairo Conference Programme of Action, the MDGs and the guidelines provided by the WHO Commission on Social Determinants of Health— as well as the human rights treaties ratified by the countries of the region, some key considerations can be taken to guide health policy and interventions in Latin America and the Caribbean. In the first place, there is a salient need to strengthen primary health care and establish universal coverage, which also implies taking an approach oriented towards prevention and promotion, as opposed to the emphasis on treatment and cures, with their attendant biases, such as excessive specialization and the fragmentation of services.

In the second place, there is a clear and pressing need to reduce and try to eliminate inequities in access to comprehensive health services and sexual and reproductive health services. These inequities are a manifestation of impediments to the exercise of rights by excluded segments of the population, resulting from deficiencies in the design and implementation of public health policies and programmes and arrangements for private or mixed management that arose out of the reforms of the health systems. In some cases, they have exacerbated the inequities by using strictly economic criteria to screen access to health care.

In the third place, it is imperative to adopt a human rights approach, gradually but effectively, in legislation, institutions and general health policies and programmes as well as sexual and reproductive health policies and programmes. This means guaranteeing, without any discrimination, the availability, secure accessibility (both economic and physical), acceptability and quality of establishments, public health goods and services and health-care centres, as well as the presence of fully functional programmes, the availability of essential medications, the existence of clean water and adequate health facilities. Given their obligation to guarantee the right to health and the inequities in access to these services, the States of the region must actively promote the structural and infrastructural improvements that are needed to expand the availability and improve the timeliness and quality of services, including the relevant education, communication and promotional activities. In addition, because of the obvious gaps in the implementation of rights among different geographic areas and population groups, emphasis must be placed on adopting redistributive schemes from the economic, social and spatial standpoint in order to guarantee access to health for remote populations that are marginalized or discriminated against —especially persons with disabilities, indigenous peoples, Afro-descendent persons, the elderly, women, adolescents and others. Measures must also be taken to promote the participation and empowerment of communities and individuals so that they can exercise the greatest possible control over the factors that determine their health.

As a result of the evaluation of achievements with respect to the agreements, objectives and goals adopted at international conferences and summits that have been taken as a reference, particularly the ICPD Programme of Action and the MDGs, it must be acknowledged that the region has made significant progress on various aspects related to health. From this perspective, the report provides additional evidence of the substantial increase in life expectancy at birth in the region as a whole, due primarily to the reduction in infant mortality. The latter, in turn, is a result of maternal-infant health programmes and sustained socio-economic and demographic changes such as the increased coverage of potable water and sanitation services, urban development, higher levels of education in the population and declining fertility. There has also been a major reduction in child mortality: in 16 of the 35 countries of the region for which pertinent information is available, this figure was cut by more than 50% between 1990 and 2009. Even so, according to current projections, only five countries will reach the target set in the MDGs for 2015.

However, an evaluation of the accomplishments of the ICPD Programme of Action and the MDGs, and the updating of indicators carried out in this study, both lead to the conclusion that in other areas, progress can be considered modest. This assertion can be made either based on consideration of the proposed goals or by comparing what could have been expected given the region's relative level of development or favourable situations such as the demographic dividend and the positive economic circumstances of the five-year period leading up to the crisis that hit in the last quarter of 2008. This is the case with maternal mortality, adolescent fertility and youth mortality caused by accidents and violence.

Maternal mortality is the indicator that has shown the least progress with respect to the targets established in the MDGs, but besides that, its absolute total of 15,000 deaths of women at the peak of their reproductive years alone is unacceptable, since those deaths could be prevented by applying known protocols of prevention, prenatal care, quality care during childbirth, emergency obstetrical care and family planning. In fact, an indicator of the level of prenatal care (the proportion of pregnant women who have had at least four prenatal visits) suggests that access to this service, which is part of reproductive health, is quite limited in the region. Comprehensive treatment of maternal health also means addressing gender inequity, responding to unsafe abortions and violence against women and overcoming deficiencies in recording maternal morbidity and mortality.

The persistence of a high and socially very unequal adolescent fertility rate is disturbing because of the adversities it implies. The lack of alternatives to early fertility in the form of future opportunities, affecting poor boys and girls alike, is a key factor in this persistence. For this reason, the expansion of educational, training, employment and cultural opportunities for teenage boys and girls should translate into a steady downturn in fertility. There are other key factors that explain the persistently high and unequal rate of early maternity. They are the socio-cultural and institutional barriers to access to sexual and reproductive health services, the inability of the health system to meet the specific care needs of teenage boys and girls, and inadequate training in the area of comprehensive sex education. The immediate adoption of active public policies aimed at facilitating access to appropriate sexual and reproductive health services and providing effective comprehensive sex education is, therefore, crucial for quickly reducing adolescent fertility. The above measure should be adopted while taking into account the specific psychosocial characteristics of teenage boys and girls as well as the cultural context in which they live. Merely offering sexual and reproductive health services is not enough: it is also necessary to enable the demand through counseling, information and awareness activities. Empowered adolescents will be in a better position to satisfy their demands, adopt preventive behaviours, resist pressure and avoid sexual abuse and exploitation.

Latin America and the Caribbean have advanced in the recognition of reproductive rights as an integral part of human rights, and the countries have taken notice of the vital importance of the goal of universal access to sexual and reproductive health. As a result, the region has made significant accomplishments in terms of laws, policies, programmes and public institutions established to address issues related to health and sexual and reproductive health. This is reflected in the high indices of contraceptive use and the reduction in the degree of unmet need for family planning in the vast majority of countries. Despite the advances, if current trends continue, only three countries will reach the target set by the Latin American and Caribbean Regional Plan of Action on Population and Development, to halve the unmet need for family planning methods. Consequently, additional efforts are required to remove barriers to access, especially for adolescents and young people, as noted earlier. In addition, this target must be clearly incorporated into social protection systems and health, education and poverty reduction policies. Regarding the response to HIV/AIDS, the situation looks promising, above all in light of the coverage of anti-retroviral treatment. The progress could make Latin America the first region in the world to fulfill the commitments of the ICPD and the MDGs in this regard. However, some shortcomings persist

in terms of preventive actions, and there are also profound inequities in the achievements made by countries, regions and population groups.

The most important challenge facing the region is still the reduction of inequities. The unequal distribution of income and of the benefits of development is a feature of Latin America and the Caribbean that has deep structural roots, but that does not make it acceptable. This document reveals worrisome gaps when indicators such as infant mortality, children's access to medical treatment for acute respiratory disease or acute diarrhoeal disease, mothers' access to professional care during childbirth, contraceptive use and unwanted fertility, are compared by area of residence (urban or rural), education level, wealth quintiles or ethnic group. The importance of stressing these inequities stems from the recognition that factors associated with high levels of morbidity and mortality primarily affect the poorest and most vulnerable population, which perpetuates conditions of poverty and seriously limits the possibilities of moving towards the established targets.

Future epidemiological and demographic trends and the possible medium- and long-term effects of the economic crisis and natural disasters in the region may become major obstacles for reaching the targets, and above all for overcoming the inequities in access to health and sexual and reproductive health. The expanding share of older persons in the population and the growing intensity of the user of the most complex and expensive health services bring with them a greater risk that the least advantaged population will be excluded from access to such services. They also mean that, given the absence of public policies designed to meet the need for care, households and some persons within them (usually women) will have to assume an increasing burden and cost of caring for the dependent population, which exacerbates the vulnerability of families, persons needing care and those who care for them. Therefore, governments must move towards recognition and inclusion of caregiving in public policies as a matter of collective responsibility, supported by benefits and services that maximize the autonomy and well-being of families and individuals within the framework of social protection systems.

In addition, consideration of the tendencies mentioned above leads to the conclusion that there will be a substantial increase in health spending as a percentage of GDP in countries of the region over the next three decades, and therefore, financing the health system will probably emerge as a major public concern in Latin America and the Caribbean. In this regard, regional governments must be urged to develop spending projections for the medium term and especially the long term, since demographic change is one of the most important factors in determining the results of social policy, but its effects cannot be discerned in the short term. These projections are particularly important, because it is likely that for many governments in the region, financing the health sector will pose a greater fiscal challenge than paying for pensions. Nevertheless, the trends towards increased health spending that have been seen in the region must be maintained and reinforced. Lastly, there is a clear need to study and adopt broad-based preventive health strategies aimed at expanding access to healthful foods, encourage physical activity and eliminate tobacco consumption in order to prevent or reduce the social and economic costs of the chronic diseases that lie beneath the projections of health spending contained in the report.

Another demographic trend that must be taken into consideration is the rise in migratory flows associated with globalization, which in some countries of the region may result in a net loss of professional personnel in the health sector. If this emigration trend continues, many countries will not have enough specialized personnel to respond to the growing demand for increasingly specialized and complex medical care and treatment. Given that these migratory processes are driven by the existence of better opportunities in other countries, they are difficult to reverse. Regardless of whether policies are implemented to provide employment incentives for physicians who remain in their countries of origin, it

would be advisable to establish exchange systems and transnational agreements that would maximize the utilization of human resources in this sector.

The risks of stagnation or regression in equal access to health and sexual and reproductive health benefits are growing worse in the context of the crisis and natural disasters that the region faces today. There is a risk that this situation will result in a worsening of health indicators, and in that case persons living close to the poverty line will be the first to suffer and the hardest hit. The possible impoverishment of some population centres could translate into an increase in undernutrition and in the incidence of some intestinal, parasitic and respiratory infectious diseases, thereby undermining the progress made on mortality. Furthermore, the crisis may have an indirect effect on health by eroding public revenues, health institutions and social protection mechanisms. The social and economic policies that are put in place to deal with the repercussions of the crisis in the health sector must focus on protecting the social achievements made prior to this critical juncture, specifically quality employment, preserving and increasing existing levels of public spending on health, expanding the coverage of transfer programmes, eliminating regressive elements and reinforcing the supportive components of social security systems. These solutions will have to emphasize the approach to health and social security as rights, focusing major efforts on eliminating differences in access to health and sexual and reproductive health services among countries and different population groups.

Bibliography

- Anderson, R. N. and others (2001), "Comparability of cause of death between ICD-9 and ICD-10: Preliminary estimates", *National Vital Statistics Reports*, vol. 49, No. 2.
- Bang, A., M. H. Reddy and M. D. Deshmukh (2002), "Child mortality in Maharashtra", *Economic Political Weekly*, No. 37.
- Baochang, Gu (2009), "The arrival of low fertility in China", *Ultra-Low Fertility in Pacific Asia. Trends, Causes and Policy Issues*, G. Jones, P. Straughan and P. Chan (orgs.), Routledge Research on Public and Social Policy in Asia, National University of Singapore.
- Barrett, Ronald and others (1998), "Emerging and re-emerging infectious diseases: the third epidemiologic transition", *Annual Review of Anthropology*, vol. 27.
- Barros, F. and others (2005), "The challenge of reducing neonatal mortality in middle-income countries: findings from three Brazilian birth cohorts in 1982, 1993 and 2004", *Lancet*, No. 365.
- Barry, L. and V. W. Sidel (2009), "Crisis económica y salud pública", *Medicina social*, vol. 4, No. 2.
- Bartley, M. (2004), *Health Inequality. An Introduction to Theories, Concepts and Methods*, Cambridge, Polity Press.
- Bay, Guiomar and Hernán Orellana (2007), *La calidad de las estadísticas vitales en la América Latina* (LC/R.2141), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), December.
- Behm, Hugo (1992), *Las desigualdades sociales ante la muerte en América Latina*, Series B, No. 96 (LC/DEM/R.182), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC).
- Ben Shlomo, Y., I. White and M. Marmot (1996), "Does the variation in the socioeconomic characteristics of an area affect mortality?", *British Medical Journal*, No. 312.
- Bergsj, P. (2001), "What is the evidence for the role of antenatal care strategies in the reduction of maternal mortality and morbidity? Safe motherhood strategies: a review of the evidence", *Studies in Health Services Organization and Policy*, No. 17, V. De Brouwere and E. Van Lerberghe (eds).
- Black, R. E., S. S. Morris and J. Bryce (2003), "Where and why are 10 million children dying every year?", *Lancet*, No. 361.
- Bolaños, M. V. (2000), "Revisión crítica a la teoría de la transición epidemiológica", *Papeles de población*, No. 25, Toluca, Centro de Investigación y Estudios Avanzados de la Población, July-September.
- Bongaarts, J. (2001) "Fertility in post-transitional societies", *Population and Development Review*, Supplement 24, No. 2.
- Brena, Ingrid (2006), "El derecho a la salud en Latinoamérica", document presented at the eighth World Congress on Bioethics, Beijing, 6-9 August.
- Brenner, H. A. (2005), "Commentary: Economic growth is the basis of mortality rate decline in the 20th century experience of the United States 1901-2000", *International Journal of Epidemiology*, No. 34.
- Bronfman, Mario, René Leyva F. and Mirka Negroni (2004), *Movilidad poblacional y VIH/SIDA: contextos de vulnerabilidad en México y Centroamérica*, Mexico City, National Institute of Public Health.
- Canales, Alejandro I. and others (2009), "Migración y salud en zonas fronterizas: informe comparativo sobre cinco fronteras seleccionadas", Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC)/United Nations Population Fund (UNFPA), unpublished.
- Canales, Alejandro, Patricia Vargas and Israel Montiel (2009a), "Migración y salud en zonas fronterizas: Guatemala y México", *Población y desarrollo series*, No. 91, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), forthcoming.
- _____ (2009b), "Migración y salud en zonas fronterizas: Haití y República Dominicana", *Población y desarrollo series*, No. 90, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), forthcoming.

- Caselli, Graziella (1991), "Health transition and cause-specific mortality", *The Decline of Mortality in Europe*, R. Schofield, D. Reher and D. Bideau (eds.), Oxford, Clarendon.
- Chackiel, J. (2004), "La dinámica demográfica en América Latina", *Población y desarrollo series*, No. 52 (LC/L.2127-P), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC). United Nations publication, Sales No. S.04.II.G.55.
- (1999), "Mortality in Latin America", *Health and Mortality Issues of Global Concern* (ST/ESA/SER. R/152), New York, United Nations.
- Committee on Economic, Social and Cultural Rights (2000), The right to the highest attainable standard of health, General Comment No. 14 (E/C.12/2000/4), New York, Economic and Social Council.
- Courtis, Corina, Gabriela Liguori and Marcela Cerrutti (2009), "Migración y salud en zonas fronterizas: el Estado Plurinacional de Bolivia y la Argentina", *Población y desarrollo series*, No. 93, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC), forthcoming.
- CSDH (Commission on Social Determinants of Health) (2008), *Subsanar las desigualdades en una generación. Alcanzar la equidad sanitaria actuando sobre los determinantes sociales de la salud* (WHO/IER/CSDH/08.1), Geneva, World Health Organization (WHO).
- _____ (2007), *A Conceptual Framework for Action on the Social Determinants of Health*, Discussion Paper, Geneva, World Health Organization (WHO).
- Deaton, A. (2001), "Health, inequality, and economic development", *CMH Working Paper Series*, No. WG1:3, Geneva [online] http://www.cmhealth.org/docs/wg1_paper3.pdf [date of reference: 20 April 2004].
- Del Popolo, Fabiana and Ana María Oyarce (2005), "Población indígena de América Latina: perfil sociodemográfico en el marco de la Conferencia Internacional sobre la Población y el Desarrollo y de las metas del Milenio", *Notas de población*, No. 79 (LC/G.2284-P/E), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC).
- Delwarde, A., M. Denuit and P. Eilers (2007), "Smoothing the Lee-Carter and Poisson log-bilinear models for mortality forecasting: A penalized log-likelihood approach", *Statistical Modelling*, No. 7.
- Di Cesare, Mariachiara (2007), "Interacciones entre transición demográfica y epidemiológica en Nicaragua: implicancias para las políticas públicas en salud", *Población y desarrollo series*, No. 79 (LC/L.2822-P), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC). United Nations publication, Sales No.S.07.II.G.147.
- ECLAC (Economic Commission for Latin America and the Caribbean) (2010), *Statistical Yearbook for Latin America and the Caribbean, 2009* (LC/G.2430-P/B), Santiago, Chile. United Nations publication, Sales No.E/S.10.II.G.1.
- _____ (2009a), The reactions of the Governments of the Americas to the international crisis: an overview of policy measures up to 31 August 2009 (LC/L.3025), Santiago, Chile.
- _____ (2009b), *Social Panorama of Latin America, 2009* (LC/G.2423-P), Santiago, Chile. United Nations publication, Sales No. E.09.II.G.135.
- _____ (2008), *Social Panorama of Latin America, 2008* (LC/G.2402-P), Santiago, Chile. United Nations publication, Sales No.E.08.II.G.89.
- _____ (2007), *Social Panorama of Latin America, 2007* (LC/G.2351-P), Santiago, Chile. United Nations publication, Sales No.E.07.II.G.124.
- _____ (2006a), *Shaping the Future of Social Protection: Access, Financing and Solidarity* (LC/G.2294(SES.31/3)), Santiago, Chile.
- _____ (2006b), *Social Panorama of Latin America, 2006* (LC/G.2326-P), Santiago, Chile. United Nations publication, Sales No.E.06.II.G.133.
- _____ (2005), *Social Panorama of Latin America, 2005* (LC/G.2288-P), Santiago, Chile. United Nations publication, Sales No.E.05.II.G.161.
- _____ (1998), Population, reproductive health and poverty (LC/G.2015(SES.27/20)), Santiago, Chile.

- _____ (1996), *Latin American and Caribbean Regional Plan of Action on Population and Development* (LC/G.1920), Santiago, Chile.
- ECLAC/CELADE (Economic Commission for Latin America and the Caribbean/Latin American and Caribbean Demographic Centre-Population Division of ECLAC) (2009), “Estimaciones y proyecciones de población actualizadas a septiembre de 2009 a partir de la revisión de 2008 [online] http://www.cepal.org/celade/proyecciones/basedatos_BD.htm.
- _____ (2008a), “Mortality”, *Demographic Observatory*, No. 4 (LC/G.2350-P), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC). United Nations publication, Sales No.E/S.07.II.G.173.
- _____ (2008b), Demographic change and its influence on development in Latin America and the Caribbean (LC/G.2378(SES.32/14)), Santiago, Chile.
- _____ (2005), “Dinámica demográfica y desarrollo en América Latina”, *Población y desarrollo series*, No. 58 (LC/L.2235-P), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC). United Nations publication, Sales No. S.04.II.G.155.
- _____ (2003), “La situación de las personas mayores”, document presented at the Regional Intergovernmental Conference on Ageing, Santiago, 19-21 November.
- _____ (1993), *Population, Social Equity and Changing Production Patterns* (LC/DEM/G.131/Rev.1-P), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC). United Nations publication, Sales No. E.93.II.G.8.
- ECLAC/CELADE/UNFPA (Economic Commission for Latin America and the Caribbean/Latin American and Caribbean Demographic Centre-Population Division of ECLAC/United Nations Population Fund) (2009a), “Grado de avance de las metas de la Conferencia Internacional sobre la Población y el Desarrollo relacionadas a la salud en América Latina y el Caribe”, Santiago, Chile, unpublished.
- _____ (2009b), “Informe de América Latina sobre los progresos y las perspectivas de la implementación del Programa de Acción de la Conferencia Internacional sobre la Población y el Desarrollo 1994-2009”, preliminary version presented at the regional seminar Key advances and actions for the implementation of the Cairo Programme of Action, 15 years after its adoption, Santiago, 7-8 October.
- _____ (2009c), “Conclusiones y recomendaciones del proceso de evaluación de la implementación del PA de la CIPD en América Latina”, preliminary version presented at the regional seminar Key advances and actions for the implementation of the Cairo Programme of Action, 15 years after its adoption, Santiago, 7-8 October.
- ECLAC/OIJ (Economic Commission for Latin America and the Caribbean/Ibero-American Youth Organization) (2008), *Juventud y cohesión social en Iberoamérica. Un modelo para armar* (LC/G.2391), Santiago, Chile.
- ECLAC/UNICEF (Economic Commission for Latin America and the Caribbean/United Nations Children’s Fund) (2006), “Child malnutrition in Latin America and the Caribbean”, *Challenges. Newsletter on progress towards the Millennium Development Goals from a child rights perspective*, No. 2, Santiago, Chile, April.
- ECLAC/WFP (Economic Commission for Latin America and the Caribbean/World Food Programme) (2007), “Análisis del impacto social y económico de la desnutrición infantil en América Latina. Resultados del estudio en Centroamérica y República Dominicana. Panorama general”, Santiago, Chile.
- Editor’s Choice (1996), “The big idea”, *British Medical Journal*, No. 312.
- Famer, P. (2001), “Desigualdades sociales y enfermedades infecciosas emergentes”, *Revista Facultad Nacional de Salud Pública*, No. 19.
- Faust, M. M. and A. B. Dolman (1964), “Comparability ratios based on mortality statistics for the fifth and sixth revisions: United States, 1950”, *Vital Statistics – Special Reports*, vol. 51, No. 3.

- FONADIS/INE (National Fund for Disability/National Statistical Institute) (2004), *Primer Estudio nacional de la discapacidad en Chile*, Santiago, Chile.
- Franco, A., D. Gil and C. Álvarez-Dardet (2005), “State size as measured in terms of public spending and world health, 1990-2000”, *Gaceta sanitaria*, vol. 19, No. 3.
- Franco, A., M. Palma and C. Álvarez-Dardet (2006), “The effect of structural adjustment on health conditions in Latin America and the Caribbean, 1980-2000”, *Pan American Journal of Public Health*, vol. 19, No. 5.
- Franco-Giraldo, A. (2009), “Enfoque para el análisis de la crisis económica global y la salud”, *Revista Facultad Nacional de Salud Pública*, December, forthcoming.
- Frenk, J. and others (1991), “La transición epidemiológica en América Latina”, *Boletín de la Oficina Sanitaria Panamericana*, vol. 111, No. 6, Washington, D.C.
- Guerra, Carlyle (2001), “La extensión de la protección social en salud en el nuevo Estado latinoamericano”, *Reforma y democracia*, No. 19, Caracas, Latin American Centre for Development Administration (CLAD).
- Hagewen, K. S. and M. Morgan (2005), “Intended and ideal family size in the United States, 1970–2002”, *Population and Development Review*, vol. 31, No. 3, September.
- Haggerty, J. L., N. Yavich and E. P. Báscolo (2009), “Grupo de Consenso sobre un Marco de Evaluación de la Atención Primaria en América Latina. Un marco de evaluación de la atención primaria de salud en América Latina”, *Revista panamericana de salud pública*, vol. 26, No. 5.
- Halbert, L. D. and W. Sbackley (1944), “Comparison of cause of death assignments by the 1929 and 1938 revisions of the International list deaths in the United States, 1940”, *Vital Statistics – Special Reports*, vol. 19, No. 14.
- Ham Chande, Roberto (2003), *El envejecimiento en México: el siguiente reto de la transición demográfica*, Mexico City, El Colegio de la Frontera Norte.
- Harwood, Rowan H., Avan Aihie Sayer and Miriam Hirschfeld (2004), “Current and future worldwide prevalence of dependency, its relationship to total population, and dependency ratios”, *Bulletin of the World Health Organization*, vol. 82, No. 4, Geneva.
- Huenchuan, Sandra (ed.) (2009), “Ageing, Human Rights and Public Policies”, *Libros de la CEPAL*, No. 100 (LC/G.2389-P), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC). United Nations publication, Sales No. E.08.II.G.94.
- Hunt, Paul (2006), Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health (Paul Hunt) (A/HRC/7/11), Human Rights Council.
- _____ (2004), Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health (Mr. Paul Hunt) (E/CN.4/2006/48), Commission on Human Rights, New York.
- _____ (2003), The right of everyone to the enjoyment of the highest attainable standard of physical and mental health. Report of the Special Rapporteur, Paul Hunt, submitted in accordance with Commission resolution 2002/31 (E/CN.4/2003/58), Commission on Human Rights, New York.
- IBGE (Brazilian Geographical and Statistical Institute) (2000), “Censo demográfico 2000”, cited in A. Bercovich, “Armonización de estadísticas de discapacidad”, presentation at the third meeting on disability statistics in the Southern Cone, Buenos Aires, 10-11 May 2005.
- ILO (International Labour Organization) (2009), The financial and economic crisis: a decent work response (GB.304/ESP/2), Geneva.
- ILO/PAHO (International Labour Organization/Pan American Health Organization) (1999), “El gasto de bolsillo en salud en América Latina y el Caribe: razones de eficiencia para la extensión de la protección social en salud”, document presented at the regional tripartite meeting “Extensión de la protección social en salud a los grupos excluidos en América Latina y el Caribe”, Mexico City, 29 November-1 December.

- INDEC (National Institute of Statistics and Censuses of Argentina) (2003), “Primera Encuesta Nacional de Personas con Discapacidad 2002-2003. Complementaria del Censo Nacional de Población, Hogares y Viviendas 2001” [online] www.indec.gov.ar.
- Janssen, F. and A. E. Kunst (2004), “ICD coding changes and discontinuities in trends in cause-specific mortality in six European countries, 1950–99”, *Bulletin of the World Health Organization*, vol. 82, No. 12.
- Jiménez, Maren Andrea and Jorge Rodríguez Vignoli (2009), “Evaluating the Millennium Development Goal target on universal access to reproductive health: a view from Latin America and the Caribbean”, document presented at the annual meeting of the Population Association of America, Detroit, 30 April-2 May.
- Jin, R. L., C. P. Shah and T. J. Svoboda (1995), “The impact of unemployment on health: a review of the evidence”, *Canadian Medical Association Journal*, vol. 153, No. 5.
- Jones G., P. Straughan and A. Chan (2009), “Very low fertility in Pacific Asian countries. Causes and policy responses”, *Ultra-Low Fertility in Pacific Asia. Trends, Causes and Policy Issues*, G. Jones, P. Straughan and P. Chan (orgs.), Routledge Research on Public and Social Policy in Asia, National University of Singapore.
- Juárez, F. and others (2009), “Estimaciones del aborto inducido en México: ¿qué ha cambiado entre 1990 y 2006?”, *Perspectivas internacionales en salud sexual y reproductiva - Special Number – 2009*.
- Kennedy, B., I. Kawachi and D. Prothrow-Smith (1996), “Income distribution and mortality: cross-sectional ecological study of the Robin Hood”, *British Medical Journal*, No. 312.
- Kent, M. M. and S. Yin (2006), “Controlling infectious diseases”, *Population Bulletin*, vol. 61, No. 2.
- Khasnis, Atul A. and Mary D. Nettleman (2005), “Global warming and infectious disease”, *Archives of Medical Research*, No. 36.
- Klebba, A. J. (1975), “Comparability of mortality statistics for the seventh and eighth revisions of the international classification of diseases, United States”, *Data Evaluation and Methods Research*, vol. 2, No. 66.
- Klebba, A. J. and J. H. Scott (1980), “Estimates of selected comparability ratio based on dual coding of 1976 death certificates by the eighth and ninth revisions of the International Classification of Diseases”, *Monthly Vital Statistics Report*, vol. 28, No. 11.
- Larrea, Carlos and Ichiro Kawachi (2005), “Does economic inequality affect child malnutrition? The case of Ecuador”, *Social Science & Medicine*, vol. 60, No. 1, January.
- Lawn, J., S. Cousens and J. Zupan (2005), “4 million neonatal deaths: When? Where? Why?”, *Lancet*, No. 365.
- Leibenstein, Harvey (1957), *Economic Backwardness and Economic Growth*, New York, Wiley Co.
- Lubitz, James and others (2003), “Health, life expectancy, and health care spending among the elderly”, *New England Journal of Medicine*, vol. 349, No. 11, September.
- Lynch, J. W., G. Davey-Smith, G. A. Kaplan and J. S. House (2000), “Income inequality and mortality: importance of individual income, psychosocial environment or material pathways in health”, *British Medical Journal*, No. 320.
- Mackenbach, J. P. (1994), “The epidemiologic transition theory”, *Journal of Epidemiology and Community Health*, No. 48.
- Mackenbach, J. P. and others (1995), “Competing causes of death: an analysis using multiple-cause-of-death data from the Netherlands”, *American Journal of Epidemiology*, vol. 141, No. 5.
- Macro International Inc. (2009), “Demographic and Health Surveys, MEASURE DHS STATcompiler” [online] <http://www.measuredhs.com> [date of reference: 5 December 2009].
- Marston, C. and J. Cleland (2003), “Relationships between contraception and abortion: a review of the evidence”, *International Family Planning Perspectives*, vol. 29, No. 1.

- Martínez, R. and A. Fernández (2009), “El costo del hambre: impacto social y económico de la desnutrición infantil en el Estado Plurinacional de Bolivia, Ecuador, Paraguay y Perú”, *Project documents*, No. 260 (LC/W.260), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC).
- McGrail, Kimberlyn and others (2000), “Age, costs of acute and long-term care and proximity to death: evidence for 1987–88 and 1994–95 in British Columbia”, *Age and Ageing*, vol. 29, No.3.
- Mendoza, D. V. (2009), “Demanda insatisfecha de métodos anticonceptivos: logros y retos de las políticas de población”, *Memorias del Foro Nacional “Las políticas de población en México. Debates y propuestas para el Programa Nacional de Población 2008-2012”* [online] <http://www.conapo.gob.mx/publicaciones/foronacional/menta11.pdf> [date of reference: 14 September 2009].
- Mesa-Lago, C. (2009), “Efectos de la crisis global sobre la seguridad social de salud y pensiones en América Latina y el Caribe y recomendaciones de política”, *Políticas sociales series*, No. 150 (LC/L.3104-P/E), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC). United Nations publication, Sales No. S.09.II.G.85.
- Meslé, F. and J. Vallin (1996), “Reconstructing long-term series of cause of death – the case of France”, *Historical Methods*, No. 29.
- Messias, E. (2003), “Income inequality, illiteracy rate, and life expectancy in Brazil”, *American Journal of Public Health*, vol. 93, No. 8.
- Miller, Tim (2001), “Increasing longevity and medicare expenditures”, *Demography*, vol. 38, No. 2.
- Miller, Tim, Carl Mason and Mauricio Holz (2009), “The fiscal impact of demographic change in ten Latin American countries: projecting public expenditures in education, health, and pensions”, document presented at the workshop Demographic Change and Social Policy, Washington, D.C., World Bank, 14-15 July.
- Miró, C. A. (2003), “Transición demográfica y envejecimiento demográfico”, *Papeles de población*, No. 35, January-March.
- Montenegro, Raúl and Carolyn Stephens (2006), “Indigenous health in Latin America and the Caribbean”, *Lancet*, vol. 367.
- Murray, Christopher J. L. and A. D. López (1996), *The Global Burden of Disease: a comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020*, Geneva, World Health Organization (WHO).
- _____ (1990), *Global Burden of Disease. A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020*, London, Harvard University Press.
- Musgrove, Ph. (1987), “The economic crisis and its impact on health and health care in Latin America and the Caribbean”, *International Journal of Health Services*, vol. 17, No. 3.
- NCHS (National Center for Health Statistics) (2009), “Comparability across revisions for selected causes” [online] <http://www.cdc.gov/nchs/data/dvs/comp2.pdf> [date of reference: 7 April 2009].
- Nervi, L. (2008), “Alma Ata y la renovación de la atención primaria de la salud”, Memoria del encuentro regional Retos para la revitalización de la APS en las Américas, El Salvador.
- Nicaragua, Ministry of Health (2004), *La discapacidad en Nicaragua: situación actual y perspectivas*, Managua.
- Notestein, F. W. (1945), “Population: the long view”, *Food for the World*, Theodore Schultz (ed.), Chicago, The University of Chicago Press.
- OECD (Organisation for Economic Co-operation and Development) (2009), *Health at a Glance 2009. OECD Indicators*, Paris.
- _____ (2005), *Health at a Glance: OECD Indicators 2005*, Paris.
- Olshansky, Jay and Brian Ault (1986), “The fourth stage of the epidemiological transition: the age of delayed degenerative diseases”, *The Milbank Memorial Fund Quarterly*, vol. 64, No. 3.
- Olshansky, J., B. A. Cranes and C. Cassel (1990), “In search of Methuselah: estimating the upper limits to human longevity”, *Science*, No. 250.

- Omran, A. R. (1998), "The epidemiological transition theory revisited thirty years later", *World Health Statistics Quarterly*, No. 51.
- _____ (1971), "The epidemiological transition: a theory of the epidemiology of population change", *The Milbank Memorial Fund Quarterly*, vol. 49, No. 4.
- PAHO (Pan American Health Organization) (2009a), "Progress in primary health care in the Americas. Annual Report of the Director 2009" [online] http://www.paho.org/Director/AR_2009/english/message.htm.
- _____ (2009b), Plan of Action on the Health of Older Persons, Including Active and Healthy Ageing (CE144/9), 144th session of the Executive Committee.
- _____ (2008), *Personas con discapacidad, derechos humanos y salud*, Washington, D.C.
- _____ (2007), *Health in the Americas*, Washington, D.C.
- _____ (2006), "Health Statistics from the Americas 2006", Washington, D.C. [online] http://www.paho.org/English/DD/AIS/HSA2006_Chapt1.pdf.
- Paraje, G. (2009), "Desnutrición crónica infantil y desigualdad socioeconómica en América Latina y el Caribe", *Revista CEPAL*, No. 99 (LC/G.2418-P/E), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC).
- Perpétuo I. H. O. and L. L. R. Wong (2009), "Desigualdade socioeconômica na utilização de métodos anticoncepcionais no Brasil: uma análise comparativa com base nas PNDS's 1996 e 2006", *Pesquisa Nacional de Demografia e Saúde da Mulher*, Brasília, Ministry of Health of Brazil/Brazilian Centre for Analysis and Planning (CEBRAP).
- Puga, María Dolores (2002), *Dependencia y necesidades asistenciales de los mayores en España: una previsión a 2010*, Madrid, Fundación Pfizer.
- Regidor, E. (2002), "Determinantes socioeconómicos de la salud", *Desigualdades sociales en salud: situación en España en los últimos años del siglo XX*, Alicante Cocentaina, Universidad de Alicante.
- Rodríguez, Jorge (2009), *Reproducción adolescente y desigualdades en América Latina y el Caribe: un llamado a la reflexión y a la acción*, Santiago, Chile, Latin American and Caribbean Demographic Centre (CELADE)-Population Division of ECLAC/Ibero-American Youth Organization (OIJ).
- Rodríguez-Piñero, Luis (2010), *Los desafíos de la protección internacional de los derechos de las personas de edad*, Santiago, Chile, forthcoming.
- Rogers, R. G. and R. Hackenberg (1987), "Extending epidemiologic transition theory", *Social Biology*, No. 34.
- Romeo, S. Z. and C. L. Warcwald (2000), "Crisis económica y mortalidad infantil en Latinoamérica desde los años ochenta", *Cadernos de saúde pública*, vol. 16, No. 3.
- Rubinstein, A. (2007), "Años de vida ajustados a discapacidad y carga global de enfermedad (Disability adjusted life years and global burden disease)", *EVIDENCIA. Actualización en la Práctica Ambulatoria*, vol. 10, No. 3, Buenos Aires, May-June.
- Sanders, John W. and others (2008), "The epidemiological transition: the current status of infectious diseases in the developed world 'versus' the developing world", *Science Progress*, vol. 91, No. 1.
- Steele, C. and S. Chiarotti (2004), "With everything exposed: cruelty in post-abortion care in Rosario, Argentina", *Reproductive Health Matters*, vol. 12, No. 24.
- Stupp, P., A. Daniel and D. W. Daniels (2009), *Comparación de tendencias en el uso de anticonceptivos en El Salvador, Guatemala, Honduras y Nicaragua*, Atlanta, Centers for Disease Control and Prevention.
- Subramanian, Kondo N. and others (2008), "Economic recession and health inequalities in Japan: analysis with a national sample, 1986-2001", *Journal of Epidemiology and Community Health*, No. 62.
- Subramanian, S. V. and others (2003), "Income inequality and health: Multilevel analysis of Chilean communities", *Journal of Epidemiology and Community Health*, vol. 57, No. 11.

- Szwarcwald, C. L., C. L. Andrade and F. I. Bastos (2002), "Income inequality, residential poverty clustering and infant mortality: a study in Rio de Janeiro, Brazil", *Social Science & Medicine*, vol. 55, No. 12.
- Szwarcwald, C. L. and others (1999), "Income inequality and homicide rates in Rio de Janeiro, Brazil", *American Journal of Public Health*, vol. 89, No. 6.
- UNDP (United Nations Development Programme) (2007), *Human Development Report 2006. Beyond Scarcity: Power, Poverty and the Global Water Crisis*, New York.
- UNESCO (United Nations Educational, Scientific and Cultural Organization) (1981), *Dimensión cuantitativa de la situación del analfabetismo en América Latina y el Caribe*, Santiago, Chile.
- UNFPA (United Nations Population Fund) (2007), *Análisis de situación de población. América Latina y el Caribe: diversidad y desigualdades*, Regional Office for Latin America and the Caribbean.
- _____ (2004), *Programme of Action of the International Conference on Population and Development*, Cairo, 5-13 September 1994.
- UNIFEM (United Nations Development Fund for Women) (2007), *Transformando la respuesta nacional al VIH/SIDA: incorporando la igualdad de género y los derechos humanos de las mujeres en los "Tres Unos"*.
- United Nations (2009a), *The Millennium Development Goals Report 2009*, New York.
- _____ (2009b), *Millennium Development Goals: 2009 Progress Chart*, New York.
- _____ (2009c), "Preventable maternal mortality and morbidity and human rights", Human Rights Council resolution 11/8, twenty-seventh session, June.
- _____ (2008a), *The Millennium Development Goals Report 2008*, New York.
- _____ (2008b), *Millennium Development Goals. Progress towards the Right to Health in Latin America and the Caribbean* (LC/G.2364), Santiago, Chile.
- _____ (2008c), "World Populations Prospects. The 2008 Revision. Population Database" [online] <http://esa.un.org/UNPP/index.asp?panel=2>.
- _____ (2007a), Convention on the Rights of Persons with Disabilities (A/RES/61/106), New York, January.
- _____ (2007b), *World Economic and Social Survey 2007. Development in an Ageing World* (ST/ESA/314), New York, Department of Economic and Social Affairs.
- _____ (2007c), *The Millennium Development Goals Report 2007*, New York.
- _____ (2005a), *The Millennium Development Goals: a Latin American and Caribbean Perspective* (LC/G.2331), J.L. Machinea, A. Bárcena and A. León (coords.), Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC). United Nations publication, Sales No.E.05.II.G.107.
- _____ (2005b), *Report on the World Social Situation* (A/60/117), New York, July.
- _____ (1995), *Population and Development: Programme of Action adopted at the International Conference on Population and Development, Cairo, 5-13 September 1994*, vol. 1 (ST/ESA/SER.A/149), New York. United Nations publication, Sales No. E.95.XIII.7.
- Vigoya, M. V. (1997), "El aborto en Colombia: debate público y dimensiones socioculturales", *Proceedings of the 1997 Conference of the Latin American Studies Association*, Guadalajara, 17-19 April [online] <http://colombia.indymedia.org/uploads/2006/01/abortocolombia.pdf>.
- WHO (World Health Organization) (2009), *World Health Statistics 2009*, Geneva.
- _____ (2008), *World Health Report 2008. Primary Health Care Now more than Ever*, Geneva.
- _____ (2007a), *Achieving Health Equity: from root causes to fair outcomes. Interim statement*, Geneva, Commission on Social Determinants of Health [online] http://whqlibdoc.who.int/publications/2007/interim_statement_eng.pdf.
- _____ (2007b), "Everybody's business: strengthening health systems to improve outcomes. WHO's Framework for Action", Geneva.
- _____ (2007c), *Unsafe Abortion: Global and Regional Estimates of Incidence of Unsafe Abortion and Associated Mortality in 2003*, Geneva, fifth revision.

- _____ (2007d), *Mortalidad materna en 2005. Estimaciones elaboradas por la OMS, el UNICEF, el UNFPA y el Banco Mundial*, Geneva [online] http://whqlibdoc.who.int/publications/2008/9789243596211_spa.pdf.
- _____ (2004a), *Beyond the Numbers: Reviewing Maternal Deaths and Complications to Make Pregnancy Safer*, Geneva.
- _____ (2004b), *Unsafe Abortion: Global and Regional Estimates of Incidence of Unsafe Abortion and Associated Mortality in 2000*, Geneva, fourth revision.
- _____ (2002a), *Current and Future Long-Term Care Needs* (WHO/NMH/CCL/02.2), Geneva.
- _____ (2002b), *Broadening the Horizon: Balancing Protection and Risk for Adolescents*, Geneva.
- _____ (1992), *The Prevention and Management of Unsafe Abortion. Report of a Technical Working Group* (WHO/MSM/92.5), Geneva.
- Wilkinson, R. (1992), "Income distribution and life expectancy", *British Medical Journal*, vol. 304, No. 6820.
- Wilkinson, R. G. and K. E. Pickett (2009), *The Spirit Level. Why More Equal Societies almost always do Better*, Allen Lane, Penguin Book.
- _____ (2006), "Income inequality and population health: a review and explanation of the evidence", *Social Science and Medicine*, vol. 62, No. 7.
- Williamson, J. (2003), "From reform agenda to damaged brand name", *Finance and Development*, Washington, D.C., September.
- Wolleswinkel-van de Bosch, J. H.; F. W. van Poppel and J. P. Mackenbach (1996), "Reclassifying causes of death to study the epidemiological transition in Netherlands, 1875-1992", *European Journal of Population*, No. 12.
- Zweifel, Peter, Stefan Felder and Markus Meiers (1999), "Ageing of population and health care expenditures: a red herring?", *Health Economics*, vol. 8, No. 6.