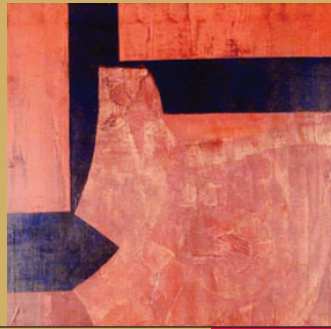


## VII. Improving Child Health



## VII. IMPROVING CHILD HEALTH<sup>1</sup>

### 1. GOAL AND INDICATORS

*Reducing child mortality*, the fourth goal of the Millennium Development Goals, will make an important contribution to the accumulation of human capital for conquering poverty. Its attainment will require continuous improvement in the health of children under five. Specifically, the target for this goal is to *reduce the mortality rate of children under five by two-thirds between 1990 and 2015*. The following three indicators, as defined below, have been established for monitoring progress toward reaching this goal:

1. *Child mortality*: annual deaths of children under five per thousand live births;
2. *Infant mortality*: annual deaths among children under one per thousand live births;
3. *Measles immunization*: percentage of children under one immunized against this disease.

Child health is closely linked to the level of development, poverty, inequality, and access to the health services of a community. Historically, economic and social development, improvements in nutrition, decreases in poverty, and reductions in inequality have been accompanied by improvements in child health and significant reductions in childhood mortality.

During the second half of the twentieth century infant survival has also been favorably influenced by more specific factors such as declines in fertility, the adoption of gender policies, and emigration to urban areas providing better social services, in particular, reproductive health services.

A favorable influence has also been exerted more recently by the large-scale introduction of low-cost health technologies that are easy to apply, such as immunizations, oral rehydration therapy, and broad-spectrum antibiotics. These interventions have had a strong effect in all areas of the world on child health and the indicators that measure it.

In this way, in two to three decades even countries at a relatively low level of development have been able to improve child survival to reach levels near those experienced a few decades earlier only by relatively more developed countries.

Through a broad range of projects and programs, especially in the area of the supply of potable water and sanitation, the IDB has given strong support to the efforts of the countries of Latin America and the Caribbean aimed at changing the determinants of child health.

Measurement of child health is generally made on the basis of its loss, that is, by registering episodes of illness or, in extreme cases, death. It is, however, appropriate to point out that, in the definition adopted by the international community on the occasion of the creation of the World Health Organization (WHO), health implies more than the mere absence of illness.

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1. This chapter was prepared by Alfredo Solari.

## VII. IMPROVING CHILD HEALTH

Health is a complete state of mental, physical, and social well-being allowing for the full development of a human being.

Accordingly, the child mortality indicators proposed for this goal are to be considered only as a *minimum* expression of infant health. These indicators are of value only if they simultaneously reflect improvements in other areas that affect child health, such as increases in height; neuropsychic development; learning ability; emotional growth and the ability to become integrated into the family and the community.

Consequently, improvement in child health is not necessarily guaranteed by reaching the proposed target and its three indicators. Rather, it requires an across-the-board improvement in the state of child health of which these indicators represent only the internationally adopted form of measuring this progress in a standardized and comparable form.

### 2. DIAGNOSIS

#### ***Quality of the Data***

The rates of infant and child mortality reported internationally are based on the vital statistics system of each country, with their varying degrees of coverage, as processed by different international organizations, chiefly by the United Nations Population Division. At the end of the 1990s underregistration in national death registries in Latin America and the Caribbean, ranged from 1 percent to 45 percent. Although the national data are subsequently adjusted in accordance with the underregistration rate, the resulting values represent only an estimate of the situation.

On the other hand, in various countries of the region, especially in those with less reliable vital statistics, estimates of mother-child health parameters have been made on the basis of population censuses and special surveys (like the National Demographic and Health Surveys). As a result, it has been possible to generate for the region data that are sufficiently consistent with respect to trends, even if the absolute figures do not have the same degree of reliability.

Measles immunization coverage, in turn, is based on information from the national immunization programs. The high level of coverage and the degree of effectiveness reached by these programs, since 1975, under the leadership of the Regional Program on Immunizations of the Pan American Health Organization (PAHO/WHO), have imparted greater reliability to the data on measles, in terms both of absolute values and of trends.

#### ***Comparison with Other Regions***

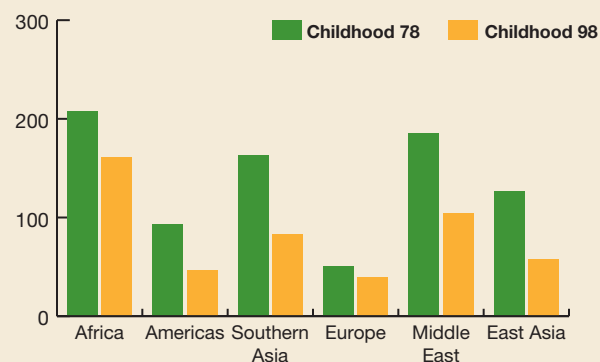
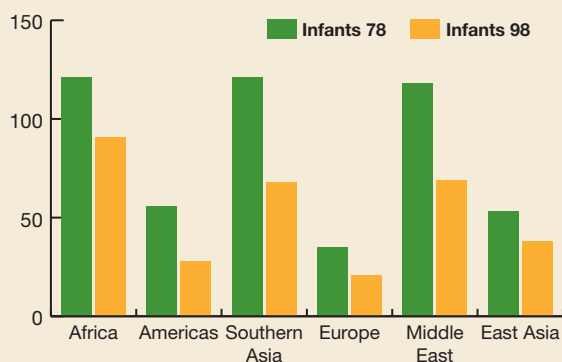
Global child mortality, both in the first year of life and in the following four years, decreased by 33 percent between 1978 and 1998, a figure that represents a very significant public health achievement.

Table 1 shows infant mortality in 1978 and 1998 (first two columns) in the six regions of the world into which the World Health Organization has been organized. It also presents, for the same years, the probability of death before reaching the fifth birthday (fourth and fifth columns),

**TABLE 1.**  
**TRENDS IN INFANT MORTALITY AND PROBABILITY OF DEATH BEFORE THE AGE OF FIVE**  
**(PER 1,000 LIVE BIRTHS, BY WHO REGIONS AND SUBREGIONS, 1978-98)**

Region/Year	Infant 78	Infant 98	%Change	Child 78	Child 98	%Change
<b>Africa</b>	121	91	-24.8	208	161	-22.6
<b>The Americas</b>	56	28	-50.0			
High Income				18	8	-55.5
Medium/Low Income				93	46	-50.5
<b>Southeast Asia</b>	121	68	-43.8			
India				---	89	---
Other Medium/Low Income				163	83	-49.0
<b>Europe</b>	35	21	-40.0			
High Income				18	8	-55.5
Medium/Low Income				51	39	-23.5
<b>Eastern Mediterranean</b>	118	69	-41.5	185	104	-43.8
<b>Western Pacific</b>	53	38	-28.3			
High Income				22	9	-59.0
China				---	48	---
Other medium/low Income				127	58	-54.3
<b>Total</b>	87	57	-34.5	124	83	-33.0

Source: The World Health Report 1999, WHO, Statistical Appendices, Tables 1 and 5



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for each of these six regions, as well as for sets of countries grouped by income level. The third and sixth columns reflect the percentage decline experienced in each of the indicators, by region or subregions over these 20 years.

Although significant improvements have been experienced by all regions, they actually vary from region to region. In fact, the greatest improvement in infant mortality was recorded in the Americas (North, Central, South America, and the Caribbean), with a reduction of 50 percent, while Africa experienced an improvement of only 25 percent. The probability of death before reaching the age of five shows a similar pattern: some countries experienced improvements of up to 59 percent, while others improved only 22 percent. These different results are not associated with the income level of the countries; similar declines were experienced by groups of high-income countries and by low- to medium-income ones. Specifically, in Latin America and the Caribbean, the probability of death during childhood has decreased by 50.5 percent over the last two decades of the twentieth century. Latin America and the Caribbean also experienced a decrease of similar magnitude in infant mortality (not shown in table 1).

**Infant and Child Mortality Targets for Latin America and the Caribbean**

Based on data from the Pan American Health Organization (PAHO), table 2 presents in absolute and relative terms, the decline of infant and child mortality in Latin America and the Caribbean from 1990 to 2000. The table also presents the targets to be reached in both indicators by the year 2015 as part of the Millennium Development Goals. The targets result from decreasing by two thirds the values observed in 1990.

**TABLE 2.**  
**INFANT AND CHILD MORTALITY IN LATIN AMERICA AND THE CARIBBEAN**  
**(PER 1000 LIVE BIRTHS)**

	<b>1990-91</b>	<b>2000-01</b>	<b>Target for 2015</b>	<b>Reduction 90-00 Decade</b>
Child Mortality	54.1	42.4	18	21.6%
Infant Mortality	42.4	33.3	14	21.5%

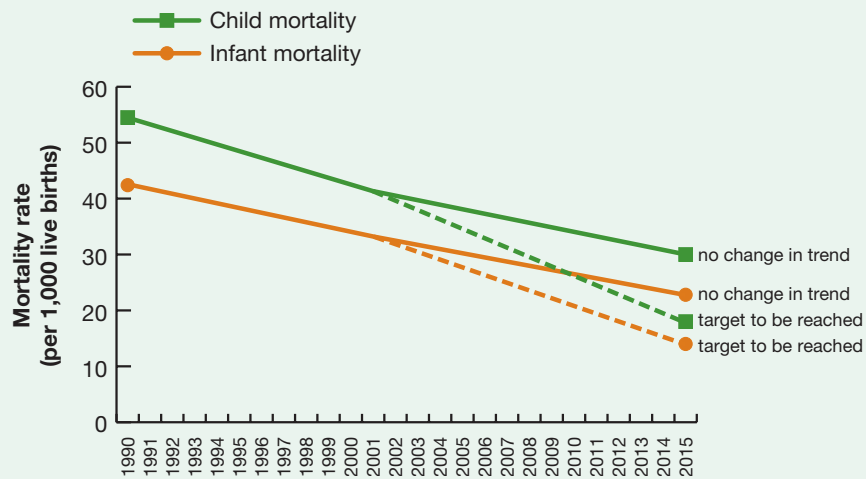
Source: "Health in the Millennium Development Goals", Internal Draft for Discussion, Area of Governance and Policy, PAHO/WHO, 2003.

This table reflects some interesting elements. First, following the trend of previous decades child health continued to improve steadily over the last decade of the twentieth century. Second, the targets to be reached by 2015 are very ambitious because of their low absolute values (14 and 18 deaths per thousand live births). Lastly, the rate of progress displayed by the region over the last ten years according to this estimate, while significant, will not be enough to reach the child survival targets. In fact, if this trend were to continue, by 2015 there would be a reduction of the order of 54 percent (21.5 percent x 2.5) in both indicators, a value obviously lower than the two-thirds established for the child health goal in the Millennium Declaration.

It should be pointed out however, that these PAHO figures differ from those of the United Nations Development Program (UNDP). In fact, in its *Report on Human Development 2003*, this other UN agency states that the child mortality rate in Latin American and the Caribbean decreased from 56 (rather than the 54 estimated by PAHO) per thousand live births in 1990 to 35 (rather than 42.4) per thousand live births in 2001. This would imply a decrease of 37.5 percent (rather than 21.6 percent) in ten years so that, if this trend continues, according to the UNDP, this target will be largely exceeded toward the year 2015.

We believe it is preferable to proceed in accordance with the scenario presented by PAHO because the data are not reliable and because PAHO, as a regional organization specializing in health, has a comparative advantage over the UNDP in this area. Accordingly, figure 1 expresses the increase needed to reach this MDG.

**FIGURE 1. TREND REQUIRED IN LATIN AMERICA AND THE CARIBBEAN IN ORDER TO REACH THE CHILD AND INFANT MORTALITY TARGETS, 1990-2015**



Source: "Health in the Millennium Development Objectives," Internal Draft for Discussion, Area of Governance and Policy, PAHO/WHO, 2003.

Over the last ten years the region experienced great progress in the third indicator of child health, i.e., protection against measles. In 1994 the countries of the Americas agreed to bring indigenous transmission to a halt by the year 2000. This target was reached. Under the direction of PAHO's Regional

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Immunization Program, the countries implemented the following strategy: (i) intensifying inoculation by means of national inoculation days and house-to-house campaigns, and (ii) maintaining high inoculation coverage among children under five. As a result, routine inoculation coverage against measles increased over the period, rising from 80 percent in 1994 to 94 percent in 2000. The incidence of measles for the region decreased markedly, from 150,000 cases per year at the beginning of the decade, to a total of 500 cases ten years later. The region has reached this goal. However, because of the risk of imported cases from other regions, the challenge from now onwards is to maintain this low level of incidence.

### ***Differences Among Countries***

Child health, as measured by the risk of dying during the first year of life or before reaching the age of five, varies markedly among the countries of the region. As will be seen in the following section, it also varies among different population groups inside the countries. Due to the low quality of the data available, the relative ranking of the countries might vary. There is no doubt however, that the almost tenfold difference between the two ends of the distribution denotes very different situations of infant and child survival. Table 3 presents the following information: i) the infant mortality rate; ii) the corresponding year; iii) the under five mortality rate; iv) the under five mortality rate for males, with a range of confidence, and v) the proportion of under five mortality contributed by deaths occurring in the first year of life.

The risk of dying during childhood decreases with increasing age. Thus, the risk decreases from the first day to the first week, from this to the first month, from this to the first year, and so on. Consequently, it has been observed elsewhere that, as child mortality decreases over time, the proportion due to deaths occurring during infancy tends to increase. This pattern does not appear in table 3. There may be several reasons for this. It is feasible that the observed variations reflect poor data quality. The quality limitations are reflected in the spread around male child mortality. The countries of the region have more experience in measuring infant mortality than under five mortality. Thus, it might be that infant mortality data are more reliable than child mortality particularly in the upper segments of the table, distorting the relationship between the two.

This table reflects a continuous gradient of infant mortality across countries. Thus, it is very difficult to distinguish separate "clusters" of countries. However, Haiti, Bolivia, and Guyana exhibit the worst situation, while Cuba, Costa Rica, and Chile show the best levels of infant health. The majority of births in the region occur in the countries in the middle of the table, including Brazil, Mexico, Peru, and Colombia, with child mortality rates ranging between 30 to 50 deaths per thousand live births.

Considering their high level of public debt and the low probability of reaching the health related MDGs, PAHO has recently identified five countries where improvements in child health would require a special political, technical, and financial effort: Bolivia, Haiti, Guyana, Nicaragua, and Ecuador.

**TABLE 3.**  
**INFANT MORTALITY AND CHILD MORTALITY PER THOUSAND LIVE BIRTHS IN**  
**THE COUNTRIES OF LATIN AMERICA AND THE CARIBBEAN**

Country	Infant	Year	Child	Male Child (uncertainty)	Infant/Child %
Haiti	80.3	95-0	111.5	120 (110-135)	72.0
Bolivia	66.0	02	72.2	91 (81-101)	91.4
Guyana	54.0	00	70.3	75 (66-84)	76.8
Peru	33.4	00-5	52.2	52 (48-56)	63.9
Ecuador	24.9	01	54.6	40 (36-44)	45.6
Guatemala	39.0	97-1	54.3	58 (53-63)	71.8
Dominican Rep.	31.0	02	53.3	52 (48-58)	58.2
Honduras	34.0	96-0	48.0	42 (38-46)	70.8
Nicaragua	35.0	01	45.2	50 (46-54)	77.4
Paraguay	19.8	01	45.2	37 (33-42)	43.8
Brazil	28.3	00	45.5	47 (38-57)	62.2
Belize	21.2	00	42.2	30 (26-35)	50.2
El Salvador	35.0	93-8	---	42 (38-46)	---
Mexico	22.4	01	34.4	26 (19-36)	65.1
Colombia	20.4	00	32.8	31 (28-34)	40.5
Suriname	13.7	01	29.1	34 (30-39)	47.0
Jamaica	19.9	98	24.7	29 (25-32)	80.6
Panama	14.4	02	26.9	35 (30-40)	53.5
Argentina	16.3	01	23.2	23 (20-27)	70.2
Bahamas	12.7	01	24.5	24 (20-28)	51.8
Venezuela	17.7	01	22.3	22 (21-24)	79.4
Uruguay	13.5	02	15.3	20 (18-23)	88.2
Chile	8.9	00	13.7	11 (9-13)	64.9
Costa Rica	11.2	02	12.2	13 (9-17)	91.8
Cuba	6.5	02	9.6	10 (9-11)	67.7
Total	25.6		39.3		65.1

Source: "Health Situation in the Americas, 2003; Basic Health Indicators," PAHO/WHO and "The World Health Report, 2000," WHO (Male Child Mortality Estimate).

**Differences Within Countries**

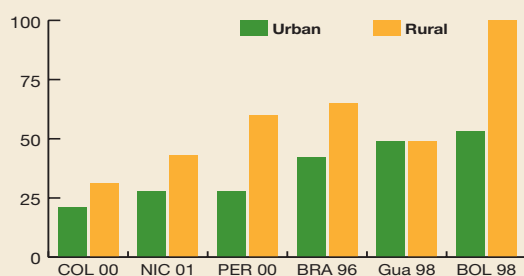
Up to now only regional and national averages of child health status have been presented without paying attention to the differences among population groups within countries, particularly along the determinants of child health. While the approach thus far permits the identification of priority countries for international cooperation, the national averages conceal highly diverse situations, which also require very special attention, both from the viewpoint of international cooperation and of national authorities. Table 4 presents data to this effect for six countries of the region and for specific groups within countries.

**TABLE 4.**  
**INFANT MORTALITY DURING THE TEN YEARS PRECEDING THE DEMOGRAPHIC AND HEALTH SURVEY,**  
**ESTIMATES ACCORDING TO SELECTED CHARACTERISTICS**

		<b>Colombia (2000)</b>	<b>Nicaragua (2000)</b>	<b>Peru (2000)</b>	<b>Brazil (2000)</b>	<b>Guatemala (2000)</b>	<b>Bolivia (2000)</b>
<b>Zone</b>	Urban	21	28	28	42	49	53
	Rural	31	43	60	65	49	100
<b>Age of Mother</b>	Younger than 20	31	42	52	57	71	97
	20-29	21	29	40	44	41	67
	30-39	26	42	41	51	43	72
<b>Education</b>	None	42	54	73	93	56	113
	Primary	28	35	54	49	47	88
	Secondary	21	23	30	28	41	77
	Higher	14	16	20	(9)	---	30
<b>Care</b>	None	(44)	66	---	(207)	63	118
	Prenatal or during delivery	30	50	---	63	36	62
	Prenatal and during delivery	15	16	---	20	36	38
<b>Ethnicity</b>	Indigenous					56	
	<i>Ladino</i>					44	
	<b>Total</b>	24	35	43	48	49	73

Note: Figures in parentheses are based on fewer than 500 observations.

Source: Demographic and Health Surveys conducted by the countries in the years indicated.

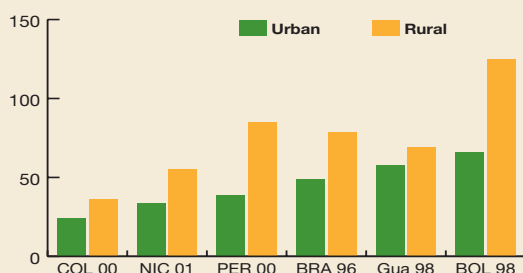


**TABLE 5.**  
**CHILD (UNDER FIVE) MORTALITY DURING THE TEN YEARS PRIOR TO THE SURVEY; ESTIMATES**  
**ACCORDING TO SELECTED CHARACTERISTICS**

		Colombia (2000)	Nicaragua (2000)	Peru (2000)	Brazil (2000)	Guatemala (2000)	Bolivia (2000)
<b>Zone</b>	Urban	24	34	39	49	58	66
	Rural	36	55	85	79	69	125
<b>Age of Mother</b>	Younger than 20	33	54	68	66	90	109
	20-29	24	38	56	51	54	83
	30-39	31	49	60	62	57	94
<b>Education</b>	None	44	72	106	119	79	132
	Primary	33	43	76	58	60	120
	Secondary	24	26	40	32	42	93
	Higher	15	19	24	(9)	---	33
<b>Care</b>	None	---	95	---	---	---	160
	Prenatal or during delivery	---	58	---	---	---	87
	Prenatal and during delivery	---	21	---	---	---	47
<b>Ethnicity</b>	Indigenous					79	
	<i>Ladino</i>					56	
	<b>Total</b>	28	45	60	57	65	92

Note: The figures in parentheses are based on fewer than 500 observations.

Source: Demographic and Health Surveys conducted by the countries in the years indicated.



First, the national averages included in table 4 were obtained from the Demographic and Health Surveys (DHS). These values are consistently higher than those computed for the same countries, based on vital statistics, as presented in table 3. In part this is due to the period of time covered by both estimates. In the DHS, in order to obtain large enough samples, the mortality is estimated upon events that have occurred during the previous ten years. Consequently, to the extent that child mortality has decreased over time, as it has

done in all these countries, the mortality estimated by the survey will be higher than that experienced during the last year. Second, the estimates of the Demographic and Health Surveys are based on recollection, which introduces a certain margin of error. Nonetheless, its accuracy would be higher than the vital registrations of the countries concerned. Consequently, data in tables 4 and 5 are quite reliable.

These tables show that, with the sole exception of Guatemala, the infant mortality rate for children born of mothers living in rural areas is much higher than that of those from urban areas. The most significant differences are observed in Bolivia and Peru, where the risk of dying before the age of one is virtually twice as high in rural areas. Similarly, the age of the mother, her educational level, membership in an indigenous ethnic group, and failure to receive prenatal care and/or care during labor and delivery are associated with higher infant mortality rates. Important links exist for these variables among themselves, so the estimated rates for each sub-group partially includes the effect of the other variable upon infant mortality.

Thus, in order to improve child health to the level committed in the Millennium Development Goals, all the countries of the region should give priority to the groups at higher risk: i) geographic (to the rural population in particular); ii) ethnicity, and iii) socioeconomic condition. By way of example, from the geographic viewpoint, special consideration should be given to Northeastern Brazil, the Pacific Coast of Colombia, and the Atlantic Coast of Honduras. From the ethnic viewpoint, priority consideration should be given to the indigenous populations in the Central American and Andean countries and the populations of African descent in Brazil and the Caribbean Basin. From the socioeconomic viewpoint, priority should be assigned to populations that are socially excluded, marginalized and living in extreme poverty. Overall, a major effort in rural areas, where many of the disadvantaged and at risk groups reside, is required.

### 3. CHALLENGES

The unequal health situation of Latin American and Caribbean children, both from country to country and inside each country, reflects the inequality of distribution of incomes, goods and services. Generally, to higher poverty corresponds a lower level of child health.

Toward the end of the 1990s, the risk of dying before reaching the first birthday of a newborn in the lowest income quintile was almost three times larger than that in the highest quintile (42.0 and 14.5 per thousand live births, respectively). In order to reach the goal of reducing child mortality by two-thirds by 2015 it is necessary to concentrate efforts on the poorest households in all countries of the region. Focusing social programs, a strategy widely used in the IDB, constitutes an essential strategy to achieve the desired outcomes.

#### ***Principal Determinants and Interventions***

The types of interventions required to lower infant mortality vary as it declines from around 100 to 20 per thousand live births. This evolution constitutes a continuum and there is no clear cut-off point that marks the end of one and the beginning of another dominant scenario. The different strategies required apply both at the level of entire countries as well as for

different population groups within countries. Thus, the response needs to be adapted to the specific epidemiological profile of each country and, within a country, to each target population.

At the higher end, infectious and parasitic diseases over a background of malnutrition are the major cause of mortality and morbidity. These interventions, applied to segments of the population at high risk, have proved to be highly efficient and cost effective. Accordingly, they have been found to be useful in counteracting the predominant factors behind high child mortality rates (over 30 deaths per thousand live births):

- Provision of drinking water and sanitation services;
- Nutrition, including breastfeeding exclusively for the first six months and the provision of micronutrients;
- Birth spacing, by the provision of sexual and reproductive health services;
- Timely immunizations against immune-preventable diseases;
- Control diarrhea by means of home and food hygiene and the administration of oral rehydration therapy;
- Prevent and manage acute respiratory infections by reducing environmental pollution and by using broad-spectrum antibiotics.

The Integrated Management of Childhood Illnesses (IMCI) strategy, within the framework of primary health care services proposed by UNICEF and WHO, and promoted in the region by PAHO, has proved to be an effective intervention in order to address these challenges.

At the other end of the mortality spectrum (fewer than 20 deaths per thousand live births), the risk of dying is higher during the first four weeks and most of these deaths are due to congenital and perinatal factors. Consequently, the countries of the region, especially those that exhibit low child mortality, have been adapting their responses to face these predominant causes of mortality and morbidity.

Chile, for example, succeeded in reducing the under-five mortality rate from 21.7 to 14.0 per thousand live births, between 1988 and 1999. To this end, Chilean health authorities expanded some existing programs and launched some new ones. The major programs were:

- Expansion of perinatal care to include neonatal intensive care units;
- Development of respiratory disease management programs, including physiotherapy, steroids, brief confinement, bronchodilators, and a reasonable use of antibiotics;
- Expansion of installed capacity for surgical management of congenital heart diseases;
- Expansion of the national immunization program to include type B *Hemophilus Influenza*.

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The observed reduction in infant mortality from 16.0 in 1988 to 8.9 per thousand live births in 1999 is attributed to these interventions. The specific case fatality rates related to these diseases decreased steadily over the ten-year period analyzed. The yearly average operating cost of these four programs amounted to US\$58 per newborn per year, a reasonable amount for countries at a medium level of development, like Chile.

As their epidemiological profile evolves over the next thirteen years, the majority of the countries of the region must progressively incorporate interventions aimed at reducing perinatal and neonatal mortality as Chile did on the 1990s. This will present major institutional, economic, and technological challenges for which the countries of the region will need support from the international community.

### 4. THE IDB STRATEGY

The IDB strategy in the area of child health includes many types of interventions, particularly water and sanitation and primary health care projects.

#### ***Health and Sanitation***

Since its creation, the IDB has supported the countries in their efforts to improve maternal and child health and reduce infant mortality, particularly among the poor. In this context, special mention should be made of the Bank's contribution in improving access to potable water and sanitation services.

#### ***Health Projects***

Fifty-seven health loans, for a total of US\$2.4 billion, have been approved by the IDB between 1973 and 2002. The greatest impetus, in terms both of amount and number of loans, occurred during the 1992-2001 period.

The Bank is contributing to improvements in child health by various types of projects, including public health, nutrition, primary health care, and projects for providing maternal and child health services.

As an example, public health projects supported by the Bank include Guyana's Basic Nutrition Program for US\$6.4 million, whose purpose is to improve the nutritional status of the most deprived segments of the population. The program contains two components. An infant nutrition component includes, among other interventions, the conditional transfer of financial resources to mothers for the purchase of food. This transfer is contingent upon complying with a schedule of medical controls of the child. And a reduction of anemia component, which includes the supply of nutritional supplements for pregnant women, mothers, and children at risk, along with health education activities.

An example of primary health care projects is the Primary Health Care Reform of Paraguay for US\$39 million. Its aim is to implement a National Mother-Child Health Promotion and Disease Prevention Plan by extending coverage and improving the quality of services at the primary care level for the impoverished population, including immunizations, health education, and other interventions.

*Maternal-Child Services.* The project “Development of the Mother-Child Health/Insurance Sector” in Peru, approved in 1999 for US\$125 million, provides incentives for the use of maternal-child health services while trying to improve the quantity and quality of services supplied (prenatal, obstetric, and postnatal care, along with full care for early childhood diseases following the IMCI strategy). To make these efforts sustainable, the project seeks to intensify the processes of decentralization, institutional modernization, and improvement in management of the various health institutions.

*Early Child Development.* In Nicaragua the Bank is financing the program “Children’s Comprehensive Care II,” for US\$27.8 million. Its aim is to provide the full spectrum of care for children under six years of age in poor municipalities. The interventions include (i) training pregnant and nursing women to care for the child; (ii) referral of women to prenatal care services; (iii) actions for early child development; (iv) monitoring growth and development; (v) counseling fathers regarding child care, nutrition, hygiene, prevention of violence, and reproductive health; and (vi) provision of food supplements for children and pregnant women at risk.

### ***Other Health Projects That Impact Children’s Health***

In a broader sense, health reform projects supported by the Bank also contribute toward the goal of improving the health of children. They do so by identifying priority actions, focusing public health spending on the poorest segments of the population, and providing technical assistance for the institutional strengthening of the ministries of health in performing essential public health functions.

Through its emergency social loans the Bank supports the countries of the region by protecting priority social spending for lower income groups at times of crisis. Loans of this type in Bolivia and Brazil approved in 2001 for US\$50 million and US\$2.2 billion respectively, have made it possible to continue providing primary care services, basic (mother-child) services packages, and immunization and nutritional programs. Similarly, the loans for social investment funds, through which financing is provided for small infrastructure construction projects and projects for the provision of basic social services for health, education, water, and sanitation, have played an important role in the provision of basic mother-child health services, including training of midwives, immunization and nutrition for the poorest groups. Projects of this type have been carried out in almost all the countries of the region, among them, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Haiti, Nicaragua, and Venezuela (the total contribution of the Bank to the social investment funds in these countries between 1994 and 1999 amounted to US\$355.7 million).

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In response to poverty and inequality the Bank supports investment in human capital, such as the *Programa Oportunidades* (previously PROGRESA) in Mexico, for which the IDB approved a loan of US\$1 billion. This program tries to break the cycle of poverty by providing opportunities for education, health, and nutrition for families living in extreme poverty. In the area of health, mothers receive a transfer of money in exchange for taking their children to health centers for regular check-ups, during which they are provided with a basic services package (which includes monitoring of growth and immunizations) and for attending training sessions relating to health, nutrition, and hygiene (for example, on child rearing and breastfeeding exclusively from age 0 to 6 months). Additionally, pregnant or nursing mothers and children under two receive food supplements. An evaluation of the impact of PROGRESA made after 18 months revealed that the program significantly increased the use of preventive services at government health centers and, at the same time, reduced the number of visits for treatment services. The number of hospitalizations of children between the ages of 0 and 2 years decreased by 58 percent. In addition, the health interventions had a significant impact on the growth of children between the ages of 12 and 36 months, as well as on reducing the probability of severe malnutrition.

### 5. CONCLUSION

The IDB is an active partner of the countries of the region in their progress toward the goal of improving child health.

To date, the IDB has made an effort to contribute toward solving health problems, in particular toward reducing infant and child mortality, on several different fronts: financing direct interventions for improving the health of mothers and their children; promoting structural changes in the health services systems, to enable reaching the segments of the population most in need; and contributing toward reducing poverty and inequality, through investments in human capital.

In order to reach the MDGs related to child mortality, the IDB can actively collaborate with the countries by making its financial and technical assistance available for improving the effectiveness of health interventions; for reaching those in the greatest need (especially groups that have been excluded because of their socioeconomic level, race or ethnicity, and geographic location); for strengthening the institutional capacity of the ministries of health; and for supporting more efficient management systems.

