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EVALUATION OF THE STRATEGIES FOR HEALTH FOR ALL BY THE YEAR 2000

In adopting the Global Strategy for Health for All by the Year 2000, the WHO Member States agreed to monitor progress in the implementation of their national strategies and evaluate their effectiveness in improving the health status of the population at regular intervals. In 1986, the Thirty-ninth World Health Assembly (Resolution WHA39.7) decided to institute the presentation of monitoring reports every three years rather than every two, and maintained the evaluation of effectiveness on a six-year cycle, beginning in 1985.

To aid them in the preparation of national evaluation reports, the countries were given the document Evaluating the Strategies for Health for All by the Year 2000, Common Framework: Second Evaluation (CFE/2), prepared by WHO to facilitate collection and analysis of the necessary information. The present report is based on information contained in the national reports received at Headquarters as of 20 August 1991. The reporting countries represent almost 100% of the population in the Region of the Americas. All the national reports were sent to WHO.

The results obtained at the national and regional level will be analyzed by the WHO Executive Board and the World Health Assembly in 1992. The delegations to the XXXV Meeting of the PAHO Directing Council are invited to analyze the present report with a view to discussing the subject during the meeting and contributing to the worldwide evaluation that will be carried out during 1992.

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EVALUATION OF THE STRATEGIES FOR HEALTH FOR ALL BY THE YEAR 2000

1. INTRODUCTION

The Member States of WHO unanimously adopted the Global Strategy for Health for All by the Year 2000 (Resolution WHA30.43, 1977) and, subsequently, the Plan of Action for its implementation. They also agreed to monitor progress in the implementation of their national strategies and to evaluate their effectiveness in improving the health status of the population at regular intervals. The World Health Assembly proposed that the corresponding reports be analyzed every two years by the regional committees, the Executive Board, and the World Health Assembly, and that, every six years, an evaluation be performed to determine the effective- ness and impact of the Strategy on national, regional, and global plans. The process was initiated in 1983 with a first monitoring report, which was followed in 1985 by a first evaluation of the effectiveness of the implementation of national strategies and in 1988 by a second monitoring report. The 39th World Health Assembly (Resolution WHA39.7, 1986) decided to institute the presentation of monitoring reports on the implementation of the Strategy every six years, beginning in 1985.

To facilitate the presentation of systematic reports and the summary of information at the regional and world level, a common framework of reference was adopted. In 1982, a Common Framework and Format (CFF) was prepared by WHO to aid in the collection and analysis of the information needed in order to monitor progress in the implementation of the national strategies and report it to the regional committees, the Executive Board, and the World Health Assembly. Subsequently, an expanded CFF was prepared for reporting on the evaluation of the effectiveness of implementation of the strategies. The Common Framework: Second Evaluation (CFE/2), which was utilized in preparing the present evaluation, is the result of modifications to the CFF made as a result of observations and suggestions from the Member States and Regional Offices.

On the basis of the experience acquired during the evaluation carried out in this Region during 1984-1985 and during the monitoring process in 1988, the decision was made to send the CFE/2 to the countries to guide them in the preparation of their national reports. In addition, the PAHO/WHO Country Representatives were urged to provide all necessary support and collaboration to enable every country to measure its progress, discover any problems, locate the obstacles, and ultimately utilize the results of the analysis to improve their health plans.

A total of 28 countries and territories sent reports: Argentina, Bahamas, Belize, Bolivia, Brazil, Canada, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Guyana,

Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, United States, Uruguay, and Venezuela. Quantitative information was also received from Anguilla, Antigua, Barbados, British Virgen Islands, Cayman Islands, Dominica, Grenada, Montserrat, St. Kitts and Nevis, Saint Lucia, and St. Vincent and the Grenadines. These countries and territories represent almost 100% of the population in the Region of the Americas. The analysis of specific indicators took into account not only the national reports received, but also complementary sources (World Bank, IDB, UNESCO, UNICEF, UNDP, ECLAC, Office of Statistics of the United Nations, IMF) and information from PAHO technical areas and previous reports from the countries to PAHO.

The consolidated Regional report covers the following subjects: socioeconomic status, monitoring process and mechanisms, national health policies and strategies, development of health systems, international action, availability of primary health care, and health status and living conditions. In analyzing the evaluation of the strategies of HFA-2000, this Regional Report is based on the information sent in accordance with the Common Framework: Second Evaluation (CFE/2), therefore, it includes only the answers of the 28 countries which followed the CFE/2 format in their reports. On the other hand, the tables (see Annex) include all the countries and territories which submitted quantitative data.

2. SOCIOECONOMIC STATUS

In the economic realm, the countries of Latin America and the Caribbean ended the 1980s and began the next decade (1988, 1989, and 1990) immersed in a prolonged recession, with large external debt liabilities and a basic maladjustment in the structures of international demand and the composition of exports. These economic reverses, which had strong social repercussions, led some to call this the "lost decade," reflecting the magnitude of the crisis in the Region during the 1980s.

One of the global indicators--the per capita gross domestic product (GDP)--declined for the third consecutive year in 1990, decreasing by 2.6% (it had decreased 0.6% in 1989 and 1.2% in 1988), which signified a cumulative change of -9.6% for the period 1981-1990. There continue to be a number of difficulties: macroeconomic imbalances, obsolescence of the capital and physical plant infrastructure, a widening gap between worldwide technological changes and those that are occurring in the Region, misuse of the financial and managerial capacity of the governments, growing frustration on the part of those trying to enter the job market (especially in urban areas), growing inflation in an increasing number of countries, poor utilization of natural resources with the ensuing damage to the environment, etc.

During the decade, deterioration in the terms of trade, external debt service, and decreased foreign capital income reduced the net resources available for investment. The net investment ratio for the

Region fell from almost 23% in 1980 to 16.5% in 1988. This had far-reaching implications for central government expenditure as a percentage of GDP, since a large increase in the amount allocated for debt payment is accompanied by a reduction in capital outlay. According to ECLAC, the main features of the crisis of the 1980s in the countries of Latin America and the Caribbean were a loss of dynamism in national economies, intractable macroeconomic imbalances, the regressive nature of the adjustment and social deterioration, weakening of the public sector, and a marked decline in investments.

The net transfer of resources to other countries, which had already been negative over the three-year period from 1985 to 1987 (24 billion dollars annually) continues to drain Latin America and the Caribbean. It amounted to 25 billion annually over the three-year period 1988-1990. The balance of trade continues to be positive (basically due to the increase in exports), amounting to 27 billion annually during the period 1988-1990, and has been used to pay the debt, or rather the interest, since the total gross external debt has remained constant at 420 billion over the years 1987-1990. Given this stagnation in production and the characteristics of the Region, which is basically an exporter of raw materials, the foregoing figures imply a reduced availability of essential products for domestic consumption.

The impact of increased unemployment, lowered social expenditure by the government, and decreased availability of products for domestic consumption is evident when the extent of the poverty in Latin America in the 1980s is analyzed. By the end of 1980, 37% of families were considered poor and 17%, indigent. Estimates for 1989 indicate that there are some 183 million people living in poverty (44% of the total population). This figure is 71 million more than in 1970. Of the 1989 total, 88 million people were classified as indigent (21% of the total population), 28 million more than in 1970. This growing impoverishment has been particularly marked in urban areas.

During the late 1980s, supposedly sweeping reform programs were developed in most of the countries of Latin America and the Caribbean. Some were tentative and others superficial, some were successful and others were not. Despite their differences, all these programs shared one characteristic: acknowledgement of the importance of international trade and public financing in promoting growth and consumption, although the instability of international markets and the protectionist policies of many developed countries (in this regard the failure of the GATT round is very clear) have hindered the entry of the Region's products into international markets. Recent events point to an increase in trade between subregions; treaties have already been signed in North America (Canada, Mexico, USA), in South America (Argentina, Brazil, Paraguay, Uruguay), and others are under study (Central America, Andean countries).

The 1980s were marked by economic and social reverses; nevertheless, there were some notable advances in the political realm. By the mid-80s several democracies had already been strengthened, and the trend was further accentuated when democracy returned to Chile, Haiti, and

Paraguay during the period 1988-1990, although the events in Panama have perturbed this process. Hence, there was in the 1980s, especially in recent years, a concurrence of trends in the Region. Political interaction was strengthened, but at the same time public institutions were debilitated. Economic regression coexisted with structural reform programs that have yet to produce the desired results. Exports increased, but at the expense of investment and consumption. And the social costs were high: increases in unemployment and poverty and decreases in the quality of education and health services coincided with the development of social emergency programs for the neediest groups, the impact of which has been difficult to evaluate owing to a lack of focus and clarity with regard to their functions.

In its analysis, ECLAC indicates that Latin America and the Caribbean are presently at a crossroads and must find a way back to the road that leads to development, from which they seem to have strayed in the turbulence of the past decade. Overcoming the crisis implies an extraordinary accumulation of needs. Simply as an illustration, on the one hand, there is a need to strengthen democracy. On the other, economies must be adjusted, stabilized, and incorporated into the fast-paced process of worldwide technological change; public sectors must be modernized, savings increased, income distribution improved, more austere patterns of consumption implemented. And all of this must be done in the context of a sustained development.

Another consideration, although not one of the indicators, is the cholera epidemic, which in early 1991 reappeared for the first time this century in several Latin American countries with varying degrees of socioeconomic and sanitary development. This occurrence has revealed all too clearly the profound deficiencies that persist in the countries of the Region.

3. MONITORING AND EVALUATION PROCESS AND MECHANISMS

There has been a weakening of the efforts described in the 1988 monitoring report to promote, at various levels of the sector, the processes of monitoring and evaluation. No country in Latin America has reported the existence of (or attempts to create) a specialized unit for the monitoring and evaluation of HFA/2000 and PHC. Since 1988, the only country in the Region that has reported having defined its goals and objectives with regard to HFA/2000 is the United States of America, where in 1990, following an evaluation of the goals established in 1980 and through a broad participatory process (involving more than 800 organizations in two years), the regulatory document "Healthy People 2000" was prepared. Perhaps the most common element in the countries reporting from Latin America is the almost total absence of any attempt at evaluation of the previously proposed targets and goals, whether or not they were within the framework of HFA/2000 and PHC. Another important consideration is the failure to establish national (and regional) indicators with regard to specific problems in every country

from the outset of the process of development and commitment that began with the Declaration of Alma Ata. As is stated in the report of El Salvador: "There is no true process of identification and updating of the indicators necessary for planning, monitoring, and evaluation." And as long as there is no real evaluation, the process of collecting and using information will be intrinsically weak.

In regard to the availability of data for the various indicators the situation is variable. The registries from which information is obtained for the calculations of various indicators related to natality (specific rates, fertility, general fertility, gross rates) and mortality (specific rates, life tables, cause of death) hardly exist in two of the reporting countries--Bolivia and Haiti--and data from them cannot be used. There are a number of countries with varying degrees of under-registration, both between countries and within the same country, and data from them therefore may not be entirely reliable: Brazil, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Paraguay, Peru, Suriname, and Venezuela (the latter being on the borderline with the last group). Finally, there are countries whose system of registration are complete (or nearly complete) and the data from them can be used to calculate rates: Argentina, Bahamas, Belize, Canada, Chile, Costa Rica, Cuba, Jamaica, Panama, United States, and Uruguay. Moreover, in recent years some countries have mounted efforts aimed at preventing deterioration of their vital statistics systems and maintaining previous advances in this regard (in Argentina, for example). This has meant that in many countries the most important indicators come from estimates derived from censuses or special surveys.

Immunization continues to be the area for which the most timely information is available (both at the country and regional levels) in terms of coverage, with all the countries reporting on immunization in their national reports. Next is basic sanitation, although in many cases the data are not broken down into urban and rural components. In this area there is a definite need for continuous updating and perhaps a greater degree of precision, since many data are not comparable. The United States reports on drinking water and excreta disposal services in connected households and therefore its data are lower than those of other countries that report on population with "reasonable or easy access." There continue to be problems with respect to the data on maternal and child health services. Birthweight is reported in 19 countries, weight-for-height (or similar) indicators in 8 countries, proportion of pregnant women immunized against tetanus in 16, attended pregnancies in 19. Furthermore, many of these indicators do not come from ongoing registry systems that provide total coverage and break down the data in such a way as to make them useful for programming activities. The PHC coverage indicator continues to be difficult to estimate because not all the countries are capable of calculating it and some figures are inconsistent with other indicators. Thus, a country may show a high (94%) rate of PHC coverage, and yet the individual figures for the PHC component indicators are much lower. There has been little understanding of the new indicator of probability of dying before the age of 5 years.

Few countries have calculated it at all, and of those that have some have figured it as a rate and not as a probability. The maternal mortality indicator has shown the most improvement because comparatively more figures are presented (21) and it also corresponds to the years following the monitoring report.

Comparisons of the data on percentage of GNP spent on health are of doubtful reliability since some reports concern only the central government and others include smaller political and administrative units. Some take into account social security expenditure and others do not. Argentina reports data from surveys that also include private out-of-pocket expenditures. Furthermore, there is no uniformity with respect to the amounts allocated for PHC and most of the countries report that they are unable make these calculations. The area of financing and expenditure in Latin America and Central America is a great void. Data on literacy come basically from population censuses which are conducted every 10 years, usually at the beginning of every decade; date for the periods between censuses are estimated. Owing to problems associated with the lack of comparability (differences in year, currency, trends, constants, etc.), this report does not include data from the countries concerning GNP or GDP (global and/or per capita). These data have been taken from other sources.

Data regarding human resources were received from 19 countries, although some only report on those in the public sector. Thirteen countries reported total beds in the country, four reported only those corresponding to the public sector (MPH, SS, or both), and ten countries did not report.

With respect to mortality by cause, only five countries did not report; of these, information is available for two (Chile and Guatemala), and in the case of the third, Haiti, as has already been pointed out, there is no registry system. Some of the countries reported only the order of the main causes. With regard to morbidity, there are 12 countries that did not report at all; for the other 15, the data are not readily comparable, both because of underregistration and because they refer to different aspects of morbidity (discharges, outpatient consultation, required reporting). For both morbidity and mortality, each case must be studied individually in order to assess the usefulness of the data reported.

One very singular phenomenon should be pointed out: the national reports generally contain less information than exists and is available in the countries themselves. Sometimes data are received for a certain year and more current data actually exist; other times no data are sent, when they could be found if a true process of investigation were undertaken. This applies especially to the information on services, since the information sent tends to concern the public sector, overlooking not only the private sector but social security as well. In this regard, there have been noteworthy advances in Mexico, with the establishment of the National Health Information System (SNIS), which includes social security institutions, and in Costa Rica, with the legal establishment of the National Health System.

There are a number of obstacles and impediments that hamper monitoring and surveillance but they basically all stem from the low degree of priority that has been assigned to STP/2000 and PHC in recent years. Decision-making has been dominated by political and economic considerations (changes in political authorities, economic restrictions). This has led to limited utilization of the data generated (whether the amount was large or small), lack of coordination, and institutional breakup. It is not surprising that there continue to be problems derived from the scarcity of human resources (quantity, quality, distribution) and large gaps in data: underregistration, scattered sources, untimely delivery, insufficient use of local level resources, and lack of conceptual uniformity within the different levels and services.

The main steps that are being taken in the countries to strengthen the evaluation of HFA are indirect since they do not derive from a plan of priorities established specifically with that purpose in mind, but rather come out of attempts to rationalize the use of limited resources. Among the most noteworthy of these steps are decentralization and the introduction of computerized systems. But much work remains to be done in order to ensure the availability of complete, timely, and comparable information for evaluation and monitoring.

4. NATIONAL HEALTH POLICIES AND STRATEGIES

In recent years various plans, policies, and strategies have been formulated. All of them have components directly related to HFA/2000 and Primary Health Care (PHC) and are in accord with them. Notable among them because of the emphasis being placed on them in the countries--and consistent with the trend observed three years ago: decentralization, with different approaches, and the development of local health systems.

Efforts to strengthen national health systems are illustrated by the various plans:

Belize: The National Health Plan 1990, conceived on the basis of democratic, comprehensive, educational, and participatory principles, proposes as components: accessibility to services, health promotion, intersectoral coordination, and community involvement.

Bolivia: The National Plan of Survival: Child Development and Maternal Health (1989), was characterized by a policy of decentralization and community involvement.

Canada: Following the plan for Achieving Health for All in 1986, several important programs have been developed: Mental Health for Canadians, and Drug Strategy. The Health and Environment Action Plan is currently being developed.

Colombia: The process of decentralization begun in 1986 was formalized with the passage of Law 10 of 1990 (Restructuring of the National Health System). A product of this law was the development of the Quadrennial Plan 1991-1994: Health with Democracy--Healthy Families in a Healthy Environment.

Costa Rica: Previous policies, especially those related to coordination of the activities of public health and social security, led to the legal adoption of the National Regulations for the National Health System (Executive Decree of November 1989). National health policy and strategy priorities are: promotion, care for special groups, environmental health, local health systems, human resources, infrastructure, and development of the national health service.

Ecuador: The National Health Plan 1989-1992 has the following priorities: integral family and community health, food and nutrition, basic sanitation, drugs, and hospital care.

El Salvador: The National Health Plan 1991-1994 (framed within the Economic and Social Development Plan) emphasizes focused expenditure and food aid and modernization of the administration of services and food aid.

Honduras: On the basis of the documents on Leadership and Management of the Ministry of Public Health in 1990-1994, and Global Response of the Ministry of Public Health to the Effects of Structural Adjustment in the Honduran Economy, a Plan of Action was developed including: 1) effectiveness and efficiency in services, 2) immunization, 3) drugs, 4) environment, nutrition, and health, 5) monitoring of living conditions among deprived groups.

Mexico: As part of the National Development Plan 1989-1994, the National Health Plan 1990-1994 was formulated (January 1991), establishing the following political guidelines: 1) promotion of a culture of health, 2) universal access with equity and quality, 3) prevention and control of disease and accidents, 4) protection of the environment and basic sanitation, 5) regulation of population growth, and 6) promotion of social welfare.

Paraguay: The Plan for Immediate Actions in Health (1989) established the bases for the current Strategic Sectoral Health Plan. This is complemented by the National Plan for the Second Drinking Water Decade,

and the National Program for Human Development; addressed to the population living in conditions of dire poverty.

United States of America: The program Healthy People 2000: National Health Health Promotion and Disease Prevention Objectives (1990) encompasses three major goals: a) to increase the number of healthy years of life; b) to reduce inequities in health care; and c) to provide access to preventive services for the entire population. Twenty-two priority areas were defined with 300 quantified objectives.

In Chile, as a result of the major political changes that occurred in 1990, a review of policies and strategies is being conducted with a view to preparing new goals and objectives for the future. The same process is being carried out in Panama. In Argentina, under Law 23661 on the National Health Insurance System, passed in December 1988, efforts are being made to regulate, coordinate, and extend coverage to the indigent, and this is occurring within a process of state reform, decentralization, and privatization. In Brazil, the Constitution of 1988 gives formalizes the strategic principles of PHC, creating the Unified Health System, integrating public health and social security and, as a clear move toward decentralization, transferring health care units to the states and municipios. Cuba, with a high level system of services, has set the following priorities: 1) prevention and promotion through the family doctor; 2) development of a network of specialties; 3) training, specialization, and continuing education for human resources; and 4) scientific research on the pharmaceutical industry and production of medical equipment. In Haiti, a coordination unit for the Health Priority Program was created, and seven priorities were established: 1) diarrheal diseases and maternal nutrition, 2) immunization, 3) maternal health and family planning, 4) malnutrition, 5) major endemic diseases, 6) TB, and 7) AIDS. In Peru, the Integrated National and Regional Health System was created with great emphasis on decentralization, and this occurred in the context of an unfavorable political and economic climate (Decree 351, of the Organic Law of the Health Sector was rescinded and the National Health Council is not functioning). In Suriname, the Regional Health Services (RGD) have been moved out of the public sector and have become NGOs (nongovernmental organizations).

Obstacles to the implementation of national health policies and strategies are varied and, in many cases, predictable. They include personnel restrictions (quantity and quality); centralized and bureaucratic administration and management; political and partisan use of health policies; lack of education and awareness of health on the part of the population; and instability of leadership (both institutional and community). In some countries the situation is complicated by various types of social upheaval. The three years since the previous monitoring report on HFA/2000 and PHC have been witness to armed confrontations in Nicaragua, El Salvador, and Peru; serious violent incidents in Colombia

as a consequence of drug traffic; violence in Haiti in connection with the restoration of democratic order; major and far-reaching political changes in Argentina and Brazil; and transition to a democratic government in Chile.

The main obstacle--which up to now has not been predictable because of its long duration--is the economic crisis, and it does not appear that the situation will be resolved any time soon. Not only has the crisis led to increases in unemployment and poverty, but the ensuing reduction or stagnation of per capita GNP and the weight of external debt have influenced, through fiscal adjustment policies, the amount of resources available, both for social security and health care for deprived groups. In other words, there are fewer resources to meet greater potential demand.

In light of the foregoing, the countries' approach to the development of national health policies and strategies has been to work toward the achievement of greater efficiency in the use of their resources through decentralization and restructuring of health systems, including administrative reforms; logistical and managerial systems; mobilization of resources, especially at the local level; and coordination with sectoral or extrasectoral institutions or orientation of the activities of nongovernmental organizations. Hence the emphasis that is being placed on community involvement, which can be a valuable instrument for better utilization of resources at the local level.

The integration of national health policies and strategies with general development policies, which is crucial, appears to be at a critical point. Several of the reporting countries said nothing in this respect, which is indicative of a possible lack of integration. The other countries report that national health policies and strategies are included in development plans and that various mechanisms (plans, cabinet, committees, etc) have been established to coordinate global policies.

The integration of health care services and other social areas has been give special impetus in recent years, in addition to the momentum that had already been generated through the development of local health systems. This impetus has been manifested in the creation of social emergency and social investment funds. Their purpose is to focus social activities on the most deprived groups, who are assumed to be the most adversely affected by the crisis and economic adjustment. These are specific funds, which are usually financed from external sources and for which special administrative structures have generally been created, outside the normal administrative structures of the public ministries. They are used to finance activities related to maternal and child health, food supplements, family farms, development of small companies, employment, basic sanitation, essential drugs, etc. As yet, there has been no evaluation of their impact. Several countries have developed a variety of projects utilizing such funds (Bolivia, Honduras, Ecuador, Jamaica, Venezuela, etc.) and several more are planning to do so.

With certain exceptions (Canada, the United States,, Cuba, and to a lesser degree Costa Rica, the Bahamas, Mexico, and Venezuela) the countries report a lack of medium-and long-term plans, since they have not been able to establish long-term strategies and political consensus for the development of health care and socioeconomic status as a whole. Without true integration and coordination it will be difficult to maintain the rate of improvement in health that has been achieved over the last 30 years. Increasing urban poverty, lack of accessibility in rural areas, lowered domestic availability of food products, lack of progress in basic sanitation services, deterioration of public hospitals, social security problems due to losses or cuts in funding, increasing urban violence, etc., are phenomena that exist in almost all the countries and that stand in the way of achievement of the goal of Health for All by the Year 2000.

5. DEVELOPMENT OF HEALTH SYSTEMS

A. Organization of the Health System Based on Primary Health Care

All the countries continue to affirm their commitment to and adoption of PHC strategy as the fundamental axis for development of their health systems. In reality, those that affirm this commitment are the Ministers or Secretaries of Public Health. In most cases, however, they do not represent the entire system of services, given that in recent decades social security has become increasingly important as a provider of services, primarily medical care. There are no laws that empower the Ministries to coordinate all the services and resources provided to the population. The information reported by the countries therefore basically covers those services that are organized under the Ministry of Public Health. In many countries this means that only part of the population, not the majority, benefits from the measures that have been implemented to provide services based on primary health care strategy.

Improvement of the coordination between institutions in the sector is a goal common to almost all the countries. However, with a few exceptions the process is reported to be still incipient, particularly with regard to coordination of the services provided by social security institutions and those provided by Ministries of Health. Bolivia, Brazil, Costa Rica, Mexico, Panama, and Venezuela report significant advances since 1985, ranging from the formulation of a legal framework for the coordination/integration of services to the development of common technical and administrative standards among the institutions and the implementation of integrated models of multi-institutional services in pilot regions. The countries mention the following factors as obstacles to intersectoral coordination: resistance and inertia on the part of institutional bureaucracies, normative and managerial discrepancies among the institutions, differences in administrative and financial management, lack of legal standards for administrative and financial management, lack of adequate legal standards, and the large number of institutions involved. The case of Peru, where the law of 1985--which provided for integration of services--was repealed is indicative of the magnitude of

the obstacles. Cuba and Canada are the two countries that have been most successful in organizing their health services on the basis of PHC using different schemes to provide coverage for the entire population: Canada has a law providing for federal and provincial health insurance and Cuba has a single system that is administered and financed by the State.

The acceptance and inclusion of PHC strategy within the various levels and institutions that comprise the health sector has been achieved only partially in most of the reporting countries. Among the most frequently cited obstacles to full acceptance are:

- the predominantly curative orientation of the health services and of many professional groups;
- insufficiency of physical and financial resources for health promotion and protection activities and the formation of basic health teams at the primary care level;
- resistance from professional groups and institutions within the sector to full adoption of PHC strategy and lack of interest, knowledge, motivation, and commitment on the part of health care personnel with regard to the development of such strategies;
- the trend toward a narrow interpretation of PHC as a single program or a set of vertical programs whose components are developed separately and unequally;
- the large number of institutions involved in the health sector in many countries, which makes it difficult to achieve intersectoral coordination and establish a uniform conceptual and operational definition of PHC strategy;
- the insufficient development of community involvement as a component of PHC strategy in the majority of countries.

The countries report that various measures have been adopted to strengthen health systems utilizing PHC strategy as a basis. In most countries, this process has been oriented toward strengthening services at the local level and introducing local programming schemes and intra- and inter-sectoral mechanisms of coordination at the local and regional levels. There is a trend in many countries toward administrative schemes based on decentralization and deconcentration of management mechanisms and the regionalization of health services. In several countries, models of attention have been formulated with emphasis on coordination and the most rational use of existing institutional resources at the local and regional levels. Efforts have been made to educate and train human resources to work at the primary care level and to introduce the concept of PHC in education programs for health professionals.

In many countries social and geographical operational criteria have been established to identify the least-served and highest-risk population groups with a view to channeling available resources to them

selectively and thus achieving greater equity in the delivery of services. However, the number and exact location of these deprived groups has generally not been determined, nor have any records been kept that would make it possible to effectively evaluate the delivery of services.

In addition to the above-mentioned obstacles, there are new challenges to be overcome in the organization of health care systems based on PHC. These include the increasingly important role of NGOs (in some areas of Haiti and Bolivia these are the only entities providing services to the population) and the creation of the Social Emergency or Social Investment Funds. The NGOs are non-public multisectoral institutions, and the Funds are multisectoral although they can be under the aegis of a public institution, usually the Ministry of Planning, or attached to the presidency. They are new actors that necessitate flexibility and adaptation on the part of health authorities in order to provide responses with a clear social impact.

The countries report that their systems of referral and back-referral of patients are not functioning smoothly and effectively in the majority of cases. This is due in part to the fact that response capacity has not been adapted at the different levels of referral. Some countries, such as Chile, Mexico, and Venezuela have succeeded in establishing mechanisms for referral of patients with specific problems (high-risk mothers and children, AIDS, auxiliary services, diagnoses, emergencies). Guyana reports a straight-forward reference system which operates at five levels, with well-defined functions. In most of the countries, the incipient schemes of decentralization and development of local health systems have included patient referral as a basic point to be promoted in the near future.

B. Intersectoral Collaboration

The reporting countries coincide in mentioning that practically all the national sectors involved in the process of overall development directly or indirectly affect the health status of the population. Among the most directly related sectors are: agriculture; education; social welfare; protection and improvement of the environment, including water supply and basic sanitation and control of environmental pollution; housing and human settlements; employment; and population and family planning programs. In some countries, the armed forces and public safety sectors have participated by providing logistical support for national campaigns and mobilizations related to health. They have also begun to collaborate with the judicial system on problems associated with drug addiction, smoking, accidents, etc.

A sector whose basic function is to regulate the quantity of resources available for public health and other basic services is that of the institutions that oversee public spending and national finances--the Treasury Ministries and the central banks. During this reporting period, most Latin American and Caribbean countries, faced with the economic crisis, established economic adjustment or reactivation policies characterized by a marked reduction in public spending on activities that are

considered non-productive, such as health and education. These policies have led to a reduction, (Colombia reports a 50% reduction in the public health share of the national budget over the last 10 years) or at best a stagnation in the amount of resources available for the development and operation of health services. They have also adversely affected most of the population, limiting their access to the elements necessary to meet their most basic needs (food, employment, housing, etc.). There have been instances of discontinuation of programs with a clear social and multisectoral emphasis, as was the case with the National Food Program (PAN) in Argentina and the food program for pensioners and retirees in Uruguay.

The impact on health of these policies of cost- containment and reduction in the quality of life for large sectors of the Region have not yet been examined comprehensively, but available information reveals that they have already had an effect on the health of the most vulnerable groups and will continue to do so for some time to come. It should be pointed out that the impact of reductions in multisectoral social expenditure will not necessarily be reflected in the traditional health indicators, such as mortality (infant and maternal mortality, life expectancy, etc.). The deterioration or stagnation in living conditions --especially with regard to the quality, quantity, and timely availability of food, adequate sanitation, and access to health services, etc.--of large population groups are not necessarily accompanied by a greater number of deaths.

The countries have established various institutional mechanisms so that the goals and activities of the various development sectors are coherent and mutually supportive among themselves and vis-à-vis the general development policy. In some, the ministers in the social area have formed a social development cabinet or council in order to formulate, enact, and evaluate coordinated policies and programs. These bodies include the Social Front in Ecuador, the Social Committee in El Salvador, the Social Investment Funds in Guatemala and Bolivia, and the National Solidarity Program (PRONASOL) in Mexico. In other countries it is the Secretariat or Ministry of Planning that is responsible for coordinating intersectoral action (Ministry of Planning and International Cooperation in Chile). The coordination mechanisms that are most often utilized are those that are established in response to concrete problems, such as occupational health programs (work-related accidents) or educational programs (both within schools of medicine for the training of human resources and at schools in immunization or health education programs for parents and children), etc.

Some countries have implemented intersectoral coordination mechanisms at the local and regional levels. In Guatemala, urban and rural development councils have been established, with multi-institutional and community involvement. Similar agencies at the municipal, cantonal, or district level have been instituted in Bolivia, Costa Rica, and Mexico. Other countries have had success with ad hoc mechanisms of interinstitutional coordination based on concrete activities or projects, such as vaccination campaigns, child survival, water and sanitation, etc.

In recent years, as a result of the policy of decentralization there have been various coordination agreements between public health authorities at the central level and political authorities in smaller administrative subdivisions (state, province, department). Chile has decentralized the primary level to the municipios, Brazil has transferred assistance units to the municipal states, Colombia has restructured its national health system, Uruguay has established agreements between public health authorities and the municipal governments for the PHC services.

There are very few countries (United States, Canada, and, to a lesser extent, Cuba), that have procedures for systematic analysis and evaluation of the repercussions of major development projects on health. However, many countries are concerned about the matter, and the environmental impact assessments required by all international and some bilateral financing agencies include evaluations of the impact of such projects on health. Already existing environmental pollution has elicited growing concern and a subsequent search for solutions, particularly in places such as Mexico City and Santiago, Chile, where the problem is of such magnitude that it has had noticeable repercussions on the population's health. But it is the impact of development in the Amazon region in Brazil that has perhaps inspired the greatest concern at both the national and international levels, not only for health reasons but because of the ecological disruption it could bring in its wake.

Noteworthy for their level of advancement are the multisectoral projects on smoking, drugs, the environment, and cities that are being carried out in Canada in keeping with the priority that country places on promotion and prevention. They will have their greatest expression in Canada's Green Plan (in preparation).

The difficulties and obstacles to achieving an optimum level of intersectoral collaboration in health development are:

- an insufficient degree of consensus in regard to priorities and even with respect to the political and ideological framework of the various institutions and sectors in the countries, owing in part to the fact that national development plans tend not to be very specific in regard to sectoral goals and activities;

- a scarcity of financial resources for joint intersectoral actions;

- weakness or nonexistence of technical and administrative mechanisms for the local, multisectoral, and participatory programming of activities at the local level;

- persistence of managerial and administrative models characterized by centralization and concentration of the decision-making process, which limits local autonomy to undertake multisectoral actions;

- the low priority assigned to the health sector and its limited powers of mobilization and negotiation vis-à-vis other sectors in the country;

- a scarcity of trained human resources with intersectoral work experience, especially at the middle management level; and

- lack of political will at the highest decision-making levels to establish effective mechanisms of intersectoral coordination.

In several countries, as part of efforts to develop local health systems under a decentralized scheme, efforts are being made to foster and facilitate the creation of operational mechanisms for joint programming and coordination between sectors at the local level. This is the case in Costa Rica with the joint annual operational preparation at the local health systems level between the MPH and CCSS and the mechanism that is planned in Mexico, based on the modification (under study) of the General Health Law.

C. Community Participation

The diversity of sociopolitical models in the developing countries of the Region of the Americas is manifested in the variety in degree and form of community participation in health actions and in the development process. The period since the First Evaluation of HFA/2000 in 1985 has been characterized by consolidation and extension of the process of democratization in the Region. Since 1988, new constitutional regimes have been established in Chile, Haiti, and Paraguay. Changes of government have come about through constitutional means in the other countries of Latin America and the Caribbean. The level and nature of community participation in health must be analyzed in the context of these general political processes, especially in countries that have recently emerged from situations in which democratic participation in national political life was clearly restricted or limited.

All the reporting countries indicate that their stated policies acknowledge the need to support and promote community participation as an essential component in PHC strategy. In practice, the implementation of these policies is usually limited to community participation in isolated aspects of the execution of certain activities at the local level, especially through the mechanism of health collaborators or volunteers or through the contribution of labor and funds for the construction of small local infrastructure projects, particularly in the area of basic sanitation. In some countries, such as Bolivia, mechanisms have been established to allow the participation of organizations representing the communities of the country in the formulation, execution, and evaluation of policies and programs at the national level, the strategy of social management being one of the priorities of the current government. In others, such as Canada, Costa Rica, Honduras, Nicaragua, and Peru, the Ministries of Health have created programs, offices, or departments that are responsible for promoting, coordinating, and regulating community involvement in health programs. In Colombia the Committees of Community

Participation were established by presidential decree, and in Venezuela community hospital boards have been established to permit community participation in hospital establishments.

In the Bahamas, Belize, and Suriname, community involvement has taken place mainly through the NGOs. In Cuba, it occurs through social and grass-roots organizations. In Canada it is estimated that the contribution of volunteer agencies to health and social services activities in 1990 amounted to more than one billion Canadian dollars. In Montevideo, Uruguay, area committees have been created to provide for extensive participation by the residents of the various areas. In the United States of America, in addition to work in the counties and the participation of various organizations, community involvement has occurred in the context of the Healthy People 2000 plan and the corresponding Consortium involving more than 300 organizations, which was created to monitor the plan. In Nicaragua, community participation was strenthened by focusing on the Campaign for the Defense of the Lives of Children (Campaña por la Defensa de la Vida del Niño).

All the countries report the existence of some type of community volunteers, especially in rural areas and lately also in certain deprived urban areas. They may perform such functions as collaborating in specific programs--for example, those for vector control or control of diarrheal diseases--or may be traditional or formally trained midwives. In other countries there are community agents, trained and regularly supervised by the health service, who carry out more extensive health promotion and basic health care activities (Bolivia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Peru). In some countries mass campaigns have been organized, especially in relation to immunization activities, with community groups (boards of trustees, community groups, churches, etc.) participating in programming and execution at the local level. In the case of Bolivia, this participation has been extended to the national level through the creation of the Popular Health Council.

In all the countries, the contribution of nongovernmental organizations (NGOs) to the development of the PHC is recognized and promoted. In some countries, the role of the NGOs is basically to support health education and health promotion activities, while in others they act as suppliers of primary level services to a large sector of the population, especially isolated groups who are not covered by any type of official service.

In Bolivia, Guatemala, Haiti, and Honduras agreements have been made between the Government and the main NGOs that provide health care services to improve coordination in the programming and execution of activities.

Among the principal obstacles to community involvement in the strategy of PHC identified by the reporting countries are:

- lack of appropriate attitude, behavior, and knowledge on the part of health care personnel with regard to promoting, supervising, and accepting community involvement in programs, and lack of human resources trained for community promotion;

- frequent movement of community representatives and volunteers, which makes if difficult to achieve stable development and ongoing training of community resources;

- frustration generated by the limited capacity of health services to provide an appropriate and timely response to the demands of the community;

- the limited knowledge of health and low educational level of the people, as well as apathy--stemming from the inability to satisfy their basic needs--which limits their interest and capacity to participate in the programming and evaluation of actions;

- difficulties in establishing communication between the communities and the health service due to geographical inaccessibility, lack of communications media, cultural and linguistic differences, etc.;

- the situation of internal armed conflict that prevails in some countries of the Region;

- the existence of a paternalistic perspective, both in the field and among high-level authorities, that does not distinguish between community involvement and community manipulation, together with a trend toward the partisan politization of the mechanisms of community involvement;

- scarcity of the material resources necessary to effectively promote community involvement (vehicles, educational materials, etc.); and

- bureaucratic rigidity and the persistence of centralized forms of management and administration of the health services, making them less flexible and less able to provide a timely response to the demands of the participatory process.

The countries have conceived several specific short- or medium-term measures to overcome these shortfalls. In several, use of the mass media will be strengthened in order to disseminate basic knowledge of health and promote an awareness of each person's responsibility to protect his own health and that of his family members. In addition, there will efforts in almost all the countries to strengthen programs for health education and training of leaders at the community level. Several countries will take steps to increase awareness and improve the aptitude of health personnel with respect to the promotion of community involvement. In countries that have plans to promote the development of local

health systems and administrative decentralization, mechanisms will be implemented with a view to achieving community involvement in the process of local programming and other aspects of service management.

Authorities in Peru indicate that unless the above- mentioned obstacles are overcome relatively quickly in many of the countries of Latin America and unless some success is achieved in actions involving community participation, the progress made thus far could be reversed, which would lead to a decrease in interest on the part of the population.

D. Managerial Process and Mechanisms

In the last five years the health services management process has been marked by certain common features in most of the countries, which have had to introduce sweeping measures of fiscal austerity and rationalization of expenditure. There have also been administrative reforms aimed at increasing efficiency in the public sector. Some countries have gone so far as to experiment with schemes for the partial or total transfer of certain services traditionally handled by the State to the private sector, as was the case in Chile with the partial privatization of social security. Even in the countries that have succeeded in avoiding the privatization of health services considerable pressure is being exerted on the health sector to exercise greater control and obtain greater results from the limited resources available.

As a result, revision and reformulation of the administrative and managerial processes in the health services was a fundamental priority during this period.

The phenomenon of democratization in national political life, common to many countries of Latin America, is also typified by a trend toward deconcentration and decentralization of the administrative functions of the State. In several countries, attempts are being made to strengthen regional, state, departmental, and municipal systems in order to increase the aptitude and capacity of the state apparatus to respond to the demands of the population.

The health sector is not immune to this process. The majority of the countries have undertaken the task of creating, strengthening, and reinforcing local health systems as the main instrument for the achievement of the goal of HFA/2000. In relation to this process of developing local health systems, the countries propose to establish the following mechanisms to increase the efficiency and operating capacity of their services:

- effective coordination and even integration of the services provided by different institutions in and outside the sector at the local and regional levels;

- implementation of integrated and participatory processes in the local programming of health activities with a view to facilitating an equitable, efficient, and effective utilization of the resources available to respond to the most urgent health priorities and problems in the community;

- development of the technical and administrative capacity of middle level management at the regional and local levels as a necessary prerequisite for the gradual decentralization of service management; and

- design and establishment of information, surveillance, and evaluation systems aimed at supporting effective leadership and management in the health systems.

Several countries have reviewed and modified the institutional and organic-functional framework of the sector in order to clear the way for new management schemes. Attempts have been made to strengthen the normative, regulatory, and supervisory role of the central levels of Ministries or Secretariats of Health in exchange for an increase in the executive functions and responsibilities of the peripheral agencies of these institutions or others involved in the delivery of services: social security, municipalities, provincial governments, NGOs, etc. (Brazil, Mexico, Bahamas, Belize, and Suriname). In others, the responsibilities and sphere of action of the various institutions comprising the sector have been more precisely delimited as a prelude to greater intrasectoral coordination and possibly integration (Costa Rica, Panama, Venezuela).

In some countries, legal instruments and standards have been formulated and implemented as a step toward decentralized management not only of the health sector but of other public services (Colombia, Guatemala, Mexico, Peru). Moreover, many Ministries of Health in the Region have modified their technical, policy-making, and administrative structures in keeping with the objective of decentralizing and facilitating the administrative and managerial processes in the priority programs, although this has sometimes been done pursuant to decisions made at the central level of the Government: state reform in Argentina, administrative financial reforms of the state in Bolivia. In order to facilitate management, various bodies have been created, including the National Advisory Council and the National Private Health Council in Chile, the National Health Council in Paraguay, the National Regionalized and Integrated Health System in Peru, the Canadian Health Committee in Canada, and the Healthy People Consortium in the United States. In Venezuela attention has been focused on management through a major effort aimed at maintenance and managerial training. Cuba has implemented new managerial processes based on research and technology in the areas of biotechnology, drugs, equipment, and tourism and health.

There are many obstacles to the adoption of such managerial measures, among them:

- insufficiency of the economic resources available for promoting administrative decentralization, for example, in regard to wage standardization;

- scarcity of sufficiently trained managers at the peripheral level;

- multiplicity and lack of coordination and effective control of projects that are financed by external sources, which leads to a division of the efforts of technical and administrative managers at the central and peripheral levels;

- lack of coherence between the policies, strategies and operational plans of the various institutions of the sector, as well as the introduction of political and partisan criteria in the distribution of resources to the institutions and peripheral levels;

- lack of a sufficient and reliable information base for monitoring, evaluating, and supporting the administrative and managerial processes in the sector; and

- lack of cost systems that would facilitate a more equitable and effective distribution of available resources.

For the public sector, especially public hospitals, the situation is aggravated by the lack of a real program (with equipment and specialized human resources) for maintenance and repair. There are numerous cases of inability to provide service to the public for lack of basic inputs and/or deterioration of equipment. Moreover, as a result of economic adjustment there are several new hospitals (or facilities under construction) that will be unable to operate due to lack of resources. The management of material infrastructure is a serious stumbling block at the present time. If one adds to this the fact that the traditional structure of resources (human and physical) in the public sector is out of sync with the new epidemiological profile of the population and its demands (in Argentina, Chile, Uruguay as a whole and in many urban areas in other countries), it is clear that there are too many difficulties to be overcome for the managerial measures to produce, in the short term, any qualitative and quantitative improvement in services to the population.

Furthermore, the traditional resistance in the public sector to reassignment of human resources (aggravated by the increase in unemployment) will undermine any managerial measure aimed at changing the profile of health personnel.

E. Human Resources for Health

This is the area where the difficulties that hamper progress toward the goal of HFA/2000 and implementation of PHC strategy can best be appreciated. While in 1988 there were 12 countries that reported having (or indicated they were in the process of preparing) a plan for human resources in health in order to meet the needs of PHC strategy, there are now only two that currently have a plan (Cuba and Mexico, which already had plans in 1988) and the Bahamas, where one is being developed. Some countries are carrying out evaluations, particularly in order to establish some permanent registration system for health personnel (Bolivia, Honduras) or to assess the quality of the service provided by

professional personnel (for example, the National Practitioner Data Bank in the United States). But the general tenor of the responses is: there is no national policy with regard to the training of human resources to meet the needs of HFA and PHC, although there are training programs for existing resources, especially non-professionals working at the local level.

The importance of the health sector as an employer is growing (of the economically active population: 8% in Canada and Cuba, 7% in the United States, 4% in Argentina, and 3% in Brazil). There is great variation between countries, but in all of them it accounts for an ever-increasing proportion of the total work force. Basically, physicians constitute the bulk of health personnel in the countries of Latin America. With the exception of Cuba, there are many more doctors than nurses in all the Latin American countries. The situation is reversed in the United States, Canada, and the non-Latin Caribbean, where there are more than three nurses for every doctor. At the same time, in Latin America, excepting Cuba, there are an increasing number of nursing auxiliaries and aids. All of the above means that there is a singular situation in regard to supply and demand of employment in the sector, with the consequences that this implies for the motivation and participation of personnel in PHC strategy.

The training of human resources has followed the trend described above. Between 1960 and 1988, the number of schools of medicine increased from 97 to 217 in Latin America and from 98 to 144 in North America.

The employment situation of physicians is very different from country to country, which implies differences in the implementation of HFA and PHC. On the one hand, there are countries such as Bolivia, Guatemala, Honduras, and Peru where the principal employer is the public sector (Ministry of Health), and on the other hand, there are countries such as Brazil, Costa Rica, and Mexico where the principal employer is (directly or indirectly) social security, an agency of the state. Then there is a third type of country where the principal sources of income for physicians are corporate-controlled (Argentina) or private (Uruguay) insurance firms.

Haiti continues to be the country with the lowest availability of health personnel to serve the population-- some 900 physicians for a population of nearly six million; Bolivia, Honduras, and Guatemala follow. At the other extreme are Argentina, Cuba, and Uruguay with about three doctors per 1,000 population, more than the United States and Canada.

Several trends appear to be developing, such as possible controls on enrollment in Argentina, Uruguay, and Mexico. In Cuba, in addition to a strict training plan for family physicians based on comprehensive general medicine, the decision has been made to train nursing personnel only at the university level. Canada has begun to limit enrollment and residencies in medicine because of the excessive number of doctors

already available. In Chile, which reports no personnel problems in relation to PHC requirements, there is a need to cover 12,000 currently vacant positions in the National Health System. In the United States, control may be exercised through monitoring of professional performance. In Haiti, as a result of economic crisis and institutional instability, the training of auxiliary personnel has been suspended.

There has been no analysis nor is there any methodology for studying progress toward a more equitable distribution of human resources. The information available indicates that there is a greater concentration of personnel in urban centers than in rural areas. Haiti reports that the distribution worsened after 1988. It is reported that the principal reasons for this situation are the economic crisis, limited financial resources, and the reluctance of health personnel to move to the least developed areas.

Several countries have instituted or strengthened programs for the training of professional and mid-level health personnel utilizing a combined teaching-service approach in order to expose medical and nursing students and middle-level technicians from the beginning of their training to the concepts and practice of PHC in the primary level services in an extramural, community context. Many countries report having recently carried out curriculum revisions in their professional training programs in order to incorporate more elements of public health and PHC strategy, as well as establishing programs or schools to train specialists in public health and health services administration. Some have placed particular emphasis on the training of teaching personnel. All the countries have some program to provide continuing education for health personnel in specific aspects of PHC strategy. Several have created interinstitutional commissions of human resources for health care in order to improve coordination and planning in this area.

Most of the countries report that the main obstacles to improving the availability of human resources for PHC stem from the current economic-financial crisis. Salaries in the majority of the countries are insufficient to overcome the reluctance of professionals to move to rural or relatively inaccessible areas. Lack of supplies, infrastructure, and basic equipment in underserved areas are sources of frustration and lead to abandonment of the services by health care workers. The fact that there are no clear national policies nor plans for training health personnel, with the consequent lack of coordination and efficiency in the use of the resources available for this purpose, has contributed to a deterioration of the situation in several countries.

F. Research and Technology

Very few of the reporting countries indicate that they have any national policy on health research and technology (even if only stated or in the early stages of application).

The development and maintenance of scientific and technical infrastructure is an area in which, generally speaking, the gap between the Latin American and Caribbean countries and the rest of the developed

world has widened. Most of the countries in the Region have not even come close to the goal of devoting 1% of GDP to spending on research and development, as advocated by the United Nations; indeed, they seem to have moved in the opposite direction in recent years, with the exception of Cuba, which is implementing an ambitious program with special emphasis on biotechnology, drugs, and equipment. The most notable example of the decline in research and technology is Argentina, where there has been a new wave of emigration among investigators. This "brain drain" toward developed countries, especially the United States, has been particularly marked in the Region.

Most of countries, because of the size of their populations and their level of economic-productive development, have not been able to achieve the critical mass that would enable them to initiate and sustain research and development programs. Moreover, the lack of political vision on the part of government authorities during the last few decades and failure to invest in this type of activity has not helped the situation.

Emphasis at this time is being placed more on study and rationalization of the technology currently available than on research and/or the creation of local technology. As a reflection of this focus, several countries have established a basic institutional capacity for action in this area through the creation of vice ministries, departments, institutions, centers, nuclei, and programs for health technology (Argentina, Brazil, Colombia, Costa Rica, Cuba, Chile, Ecuador, Mexico, Uruguay, Venezuela). These entities generally produce reviews and inventories of the technology existing in the country which are used to prepare priority lists of needed technologies to serve as markers so that the regulatory institutions in every sector can establish specific guidelines. Coordination of the selection and use of health technology is, in general, poorly developed in most of the countries. In some, this function is assigned to commissions, academies, national ministries of science and technology, or specific interinstitutional groups, but almost all the reporting countries indicate deficiencies in this area, and certain initiatives, such INDES in Peru, have been discontinued. With regard to the United States, however, many of the goals and objectives of HP2000 have emanated from NIH, the foremost health research center in that country. And in Mexico, the INS is making important contributions to the new health policy.

In regard to the identification and development of research proposals that concentrate on priority health problems, eight countries have explicit guidelines in this regard and five are in the process of formulating them. The approaches utilized correspond to priorities derived from the epidemiological profile and level of development of the health services: basic applied clinical and epidemiological research on the most prevalent infectious and contagious and parasitic diseases, food and nutrition problems, human reproduction, alcoholism and drug addiction, traffic accidents, chronic and prevalent diseases, and AIDS. Several countries have instituted guidelines for establishing priorities

in health services research and associated technologies--for example, drug production, natural medicine, and epidemiology applied to the planning, administration, and training of human resources.

Coordination, promotion, and dissemination of the results of health research are the responsibility of national health institutes or interinstitutional national research commissions in nine countries. In the others, there is a lack of formal mechanisms for this purpose. The countries mention several factors that have impeded the effective development and application of policies in health research and technology. These include the perennial problem of insufficient financial resources for investment in research on priority concerns, lack of sufficient trained investigators and infrastructure, weak mechanisms of interinstitutional coordination for the rational utilization of resources for research, and lack of political will to promote research as an instrument of development.

In order to offset these difficulties the countries plan to establish or strengthen the leading agencies in health science and technology so they can coordinate, promote, and disseminate the efforts that are being carried out in this area and to make specific allocations for research in the budgets of the institutions in the sector. Several countries intend to mount efforts to sensitize the political authorities and the public to the need to view the development of science and technology as an essential component in general and sectoral development.

G. Resource Utilization and Mobilization

Of the reporting countries only four indicate they have a basic plan for the mobilization and use of material and financial resources in support of the national strategy of HFA/2000 (Cuba, Mexico, Canada, and the United States).

In most of the countries there has been some reassignment of resources toward deprived areas and groups, especially through the emergency funds mentioned above and various special programs related to the local health systems and national policies of decentralization and deconcentration of services. Bolivia reports the existence of 94 districts organized as local health systems. Chile has prepared, with international support, an investment plan for 1990-1991 to address major financing and maintenance problems in the hospital network, and it is also carrying out a program to strengthen PHC in 24 urban and 104 rural high-risk areas.

According to IDB and World Bank data, the domestic economic resources mobilized at the central government level for health care during the period 1980-1989 either remained the same or increased in the United States, Cuba, Canada, Belize, Chile, Ecuador, Honduras, and Venezuela. In the other 16 countries they decreased. Colombia reports that the central government share diminished 50%. It would be necessary to undertake a specific country-by-country study in order to fully analyze this phenomenon since, as a result of decentralization and state

reforms, income that previously corresponded to the central government is now collected at the departmental level (in Bolivia for example). This has affected the manner in which resources are distributed among the sectors by authorities of the central government. The reduction in central government spending began in the late 1980s; however, the studies that have been carried out would appear to indicate that priority programs have been maintained (EPI, Maternal and Child Health, etc.) and that the principal impact has been a decline in the quality of hospital care (lack of maintenance and repair and scarcity of inputs) concurrent with a drop in the real wages of health care workers.

There is a lack of organization, standards, and information on the source, utilization, amount, and status of the various resources (human, physical), especially with regard to the economic aspects of service delivery, and this continues to be one of the major obstacles to monitoring and evaluation of health programs.

In several countries steps have been taken to increase efficiency in the utilization and productivity of available resources through the establishment of expenditure, production, and cost systems; streamlined administrative procedures; information systems with a managerial approach; and other measures. Attempts have also been made to mobilize more resources from state, municipal, or provincial entities in support of the process of decentralization and strengthening of local health systems.

The most prevalent obstacles to the mobilization of resources are: the fiscal crisis, excessive external indebtedness, domestic inflation, higher prices for basic inputs in the international market, wage loss, increased unemployment, etc.

There has been improvement in the reporting of the countries in relation to their expenditures on health, with nineteen countries including this element in their reports, although the data are not comparable since they are calculated on different bases. Argentina, Costa Rica, the United States, Uruguay, Brazil, Suriname, Peru, Chile, and Belize reported on total expenditure as a percentage of GNP, while the Bahamas, Bolivia, El Salvador, Guyana, Honduras, Jamaica, Nicaragua and Paraguay indicated public sector expenditure. Mexico includes social security, and Cuba's data are based on its own GNP accounting. A further complication is that it is not known whether reported government expenditure corresponds only to the central government or to the government in general. The proportion of national expenditures allocated to primary health care is even more difficult to determine because some countries report only on expenditure for specific programs of coverage extension without including, for example, outpatient care, health education, and environmental improvement services. Most of the countries report that they are unable to calculate what they spend on PHC. This situation reflects a lack or deficiency of information in the countries on the production, costs and expenditures of the services by level of care, without which it is practically impossible to objectively monitor the efficiency and equity of resource distribution and allocation.

6. INTERNATIONAL ACTION

A. International Movement of Resources

Few countries have carried out systematic analyses of the needs for international cooperation in relation to national HFA/2000 strategy and those that have did so a number of years ago. The best efforts in this area have been those carried out with the support of PAHO/WHO in the countries of Central America, Panama, and the Dominican Republic. Since 1984 these countries have been participants in the Plan for Priority Health Needs in Central America (PPS/CAP) and have jointly systematized their requirements for external financial cooperation in six priority areas through the development of a common portfolio of national and subregional projects. Since 1985, under this initiative the Central American countries have succeeded in mobilizing a total of US$ 390,000,000 from external sources for health development in the Subregion. The second part of this plan was presented at an international meeting in May 1991.

The diversity of agencies, governments, international agencies, NGOs, foundations, religious associations, etc., that carry out actions or provide funds for activities directly or indirectly related to health is very large and is increasing. Except to the extent that there are mechanisms of control and coordination for these entities, no information exists on the true magnitude of international action. The reports of the countries basically cover the projects that are under the responsibility of the Ministries of Health or other ministries and there is very little information on the economic volume of these projects.

In general, what exists is a list of priorities which include all the components of PHC strategy (water and basic sanitation, immunization and infant survival, maternal health and family planning, control of communicable diseases, food and nutrition, essential drugs and development of the pharmaceutical industry, control of chronic diseases), as well as projects aimed at increasing the operating capacity of the health services by enhancing the capacity of the physical installations and infrastructure, maintenance of installations and equipment, training of human resources, development of biotechnology, and strengthening of the managerial system.

B. Inter-country Cooperation

Almost all the reporting countries have established cooperation agreements to promote joint health actions in border areas, especially with regard to vector-borne disease control, immunization activities, and epidemiological surveillance. There are also bilateral or multilateral agreements involving several countries for the purpose of exchanging knowledge and experiences and carrying out joint research and manpower training in specific areas of common interest such as biotechnology, drug production and quality control, nutrition education, and prevention of drug addiction and rehabilitation of addicts.

The most important mechanism of TCDC in recent years has been the Plan for Priority Health Needs in Central America and Panama (PPS/CAP), which has served as a vehicle not only for the mobilization of external resources but as a means of achieving closer technical cooperation between the countries of the Subregion in areas of mutual interest and priority such as malaria control, food and nutrition, training of human resources, infant survival, essential drugs, and others. This process of cooperation and collaboration between the Central American countries has developed rapidly despite the situation of conflict and instability that has prevailed in the Subregion during this period, which makes it all the more remarkable. Several annual meetings (REMSCAP) of subregional health authorities have already been held. The countries that participate in this Plan are Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, and the Dominican Republic. As an offshoot of this experience, the same countries have developed another subregional project --the Social Investment Program for the Development of the Central American Isthmus. In South America, the Andean Cooperation in Health has been further strengthened through the Hipólito Unanue Agreement.

Canada and the United States have had agreements to cooperate on bilateral activities for many years. Cuba has recently signed such accords with Belize, Bolivia, Guyana, Peru, and the Dominican Republic and has pending agreements with Argentina, Brazil, Ecuador, and Venezuela. These agreements concern cooperation in human resources, maintenance, technology, and rehabilitation.

As a result of Mercosur agreement (Argentina, Brazil, Paraguay, and Uruguay), Brazil and Argentina have signed various cooperation agreements on drugs and medications.

C. International Technical Cooperation

The cooperation that PAHO/WHO provides to the countries of the Region is considered useful for the development of the various components of the PHC strategy, since, in all, support has been received in the form of national and international technical advisory services, manpower training within and outside the country, dissemination of scientific and technical information, the strengthening of national capacity to coordinate international cooperation in health and mobilize additional external resources, the promotion of research applied to the priority problems of the country, and the contribution of financial resources for specific activities of importance.

Several countries indicated that the subregional cooperation initiatives also contributed to improving the utilization of PAHO/WHO's technical cooperation resources. In terms of obstacles to the optimum utilization of available resources, the countries point to difficulties experienced by national programs in clearly defining their requirements for technical cooperation, as well as the frequent turnover in technical personnel in management positions, which results in changing priorities for cooperation and in an inadequate understanding of the Organization's

role as an entity of technical, rather than financial, cooperation. On the other hand, several countries pointed out that coordination between the international agencies providing cooperation in health is inadequate in many cases.

The reporting countries receive technical cooperation from other agencies within the United Nations system such as UNICEF, UNDP, UNFPA, WFP, FAO, and others. At the bilateral level there is collaboration with USAID (U.S.), JICA (Japan), GTZ (Germany), Italy, France, Spain, the European Economic Community (EEC) and others. The Inter-American Development Bank (IDB) and the World Bank are assuming a leadership role not only in financial terms but also by developing important technical assistance projects in the social sectors.

In a majority of the countries the coordination of overall international cooperation is the responsibility of the Secretariat or Ministry of Planning; few countries report having established offices or units in the Ministry of Health to effectively coordinate all international cooperation in the health field.

7. AVAILABILITY OF PRIMARY HEALTH CARE

The quantification of PHC coverage is considered to be conceptually and methodologically complex, and for the most part the countries have responded qualitatively, reporting an improvement in the availability and accessibility of services, but without being able to express it in quantitative terms for a specific period. Few countries have provided numerical values, and in some instances the numbers they have reported--as in the case of Mexico with 94% of the population covered by PHC--are much higher than the figures for the individual PHC components (basic sanitation; prenatal care, deliveries, and care of nursing infants; immunization; drugs; use of contraceptives; etc.).

The essential elements of PHC continue to show a positive trend on the whole, although in some cases progress is very slow--for example, sanitation.

At the start of the International Drinking Water Supply and Sanitation Decade, the countries of Latin America and the Caribbean were enjoying relatively good drinking water supply and sanitation services compared with other regions of the world. During the decade of the eighties, public services in the urban sector in general were well organized, especially in terms of services for citizens in the middle- and upper-income brackets. The rural and periurban populations, however, were increasingly neglected. In addition, the situation of the poor has worsened in the course of the Decade.

In view of the increase in the urban population, drinking water supply and sanitation services are, in relative terms, declining. The public utility companies, many of which are economically weak, do not have the necessary incentive to extend their services to low-income and

marginal areas of the cities, where the potential for recovering their costs is low. As a result, most of the poor urban population purchase their drinking water from vendors, who charge up to 35% more than the urban water supply systems.

In 1988, 55% of the rural population in Latin America had easy access, whereas 56 million people living in these areas still lacked drinking water. In the Caribbean the situation is better, but even so, 1.7 million rural inhabitants have no easy access to this vital element.

In 1988, 12% of the urban population of Latin America, or around 34 million people, did not have easy access to drinking water.

The urban population that had the benefit of water supply services increased from 186 million (84%) in 1980 to 257.8 million (88%) in 1988, and coverage by sewerage services increased from 100 million (44%) in 1980 to 142 million (49%) in 1988. Water supply in the rural sector expanded from 49 million (40%) to 68 million (55%), and coverage by rural sanitation services reached 32% in 1988.

There are significant differences within the countries in terms of both the services and the progress achieved. The urban sector enjoys better water and sanitation services, with better coverage for water than for sanitation. In 1987, four countries reported that overall coverage was under 50%, and 10 of them reported that coverage was under 50% in the rural population.

An evaluation carried out in 1985 indicated that, of the 24 countries that set water supply goals for the rural sector, 12 appeared to be close to achieving them or to have good possibilities of doing so, and 12 needed to expand their efforts significantly in order to reach their goals.

The progress achieved in expanding coverage during the first eight years of the 1980s was not as notable as had been expected, and it will not be possible to reach the target established for urban water supply (91%) in 1990. Nor will it be possible to attain the target set for urban sanitation with sewerage connections (71%). The increase in water supply coverage in the rural sector, in turn, would have to be 1% greater in order to meet the target.

In most of the systems, operation and maintenance activities do not receive the attention needed. The institutions responsible for managing water and sanitation operate basically as construction companies and, accordingly, they emphasize construction and repairs. Resources allocated for the maintenance of infrastructure are devoted to corrective measures and only rarely to preventive maintenance. The dependence on imported equipment and parts aggravates maintenance problems in this era of scarce foreign exchange in most of the countries, causing frequent interruptions in service.

During 1990, immunization coverage using the program's vaccines reached the highest levels ever achieved in the Americas: no vaccine had coverage lower than 70%, and several of the subregions, such as the countries of the English-speaking Caribbean and those of the Southern Cone, achieved 80% or higher.

This enormous progress is due, in great measure, to the political and social commitment that has caused high priority to be given to immunization programs in all the countries of the Americas, within PAHO itself, and in collaborating agencies, both national and international. Also contributing to this achievement are the vaccination sweeps, vaccination days, and the vaccination activities carried out in the health services. The high level of coordination achieved between the governments and the agencies supporting immunization activities in the Western Hemisphere (USAID, UNICEF, Rotary, IDB, CPHA, and PAHO) has enabled programs to be carried out efficiently and creatively, and with optimum utilization of available resources.

One notes with satisfaction the improvements obtained in all the performance indicators, such as the increased number of health units included in the weekly surveillance system--almost 20,000 at present--and the increased proportion of cases to which a final diagnosis is assigned (now 95%). There is also an increase in the number of municipios with coverage above 80%--almost 60% of the 7,408 municipios for which information is available.

Nonetheless, problems remain. Of greatest importance is the quality of monitoring of wild poliovirus being carried out based on the analysis of fecal samples from patients with acute flaccid paralysis and their contacts. The apparent progress of this activity is deceptive: in 48% of the cases reported during 1990, only two adequate and timely samples were taken and sent to the laboratory.

Highest priority is assigned to the elimination of what appear to be the last foci of infection of wild poliovirus. The Andean Region is of particular concern and requires urgent attention. Also, there is no doubt that several foci exist on the Pacific and Atlantic coasts of Colombia. The neighboring areas of Venezuela and Ecuador are at special risk. Intensive measures are recommended, especially in Colombia, where apparently vaccination campaigns have not been as comprehensive as they should have been, both from the standpoint of intensity and scope.

There are also foci in areas of northern Peru bordering on Ecuador, and it is possible that some exist in other parts of the country as well. It is recognized that Peru is suffering serious problems at present, including social and political disturbances and the cholera epidemic. There appears to be a need for a global program in this area, like the one carried out recently in Central America, which would cover Colombia, Peru, Ecuador, and neighboring areas of Venezuela.

The efforts to eliminate measles in Cuba and the English-speaking Caribbean are paving the way for the implementation of effective strategies for controlling and eliminating this disease. The low levels of coverage among priority population groups continue to be the principal obstacle to the control of measles, and efforts to increase coverage among children under 2 should be intensified.

As of December 1988 the estimated rate of access to ORS in the region of Latin America and the Caribbean was 65%, the rate of use of ORT was 41%, and that of ORS, 25%. This represented a considerable increase compared with the rates estimated for 1985-- 44%, 10%, and 10% respectively. By 1988, 11 countries reported a rate of access to ORS of more than 80%, and 13 countries reported a rate of 50%, representing the regional target that had been set for 1989 (PAHO/who Plan for Diarrheal Disease Control for 32 countries). Currently, 18 countries are producing ORS. Local production meets national needs in 8 countries, and in 13 countries private manufacturers supply ORS to the national programs. Thanks to production in the countries, packets of ORS are beginning to be available in pharmacies, and physicians are beginning to be encouraged to prescribe them. The regular and ongoing implementation of measures to ensure effective quality control and the availability and adequate distribution of ORS is a very important factor.

With regard to the immunization of pregnant women with tetanus toxoid, it is not possible to draw an overall comparison for this period due to the recent introduction of the indicator and the scarcity of information. Among the reporting countries, 16 have supplied information in some form during the last three-year period. When these figures are compared with the values reported in the 1988 monitoring, the countries that provided information in both exercises do not show any significant progress: those in which coverage was low remain in the same situation.

In terms of basic maternal and child health activities, most of the countries are still far behind in having permanent records that can be used for regular monitoring and evaluation of progress and/or problems. Several countries report only the activities carried out in the public sector and mainly in public hospitals. Several countries do not report prenatal care, medical care at delivery, or care for nursing infants. The figures reported correspond to the years 1988, 1989, and 1990, and they represent progress by comparison with the 1988 report, which reported values from as far back as 1983. Despite reservations as to the quality and comparability of the data, as noted above, it can be said that, with few exceptions, the picture is rather discouraging with regard to progress in the coverage of pregnancy and deliveries. Some of the countries say as much in their reports (Haiti and Jamaica). Brazil, Colombia, Ecuador, Jamaica, Mexico, and Suriname report less prenatal coverage than three years ago, and only Bolivia shows definite progress (from 17% to 38%). With regard to delivery coverage,Argentina, Costa Rica, Ecuador, Guatemala, Haiti, Honduras, and Mexico report lower figures, and only Bolivia and Venezuela report definite increases.

In the area of drugs and biologicals, there were advances in the 1980s despite some problems of continuity. Of particular note are the Latin American Network of Drug Quality Laboratories, the ABRAMEX agreement (Argentina, Brazil, Mexico, Spain), the Revolving Drug Fund (1986, for Central America and Panama). At the country level, steps were taken to rationalize the use and prescription of drugs. A fundamental achievement was the recent creation of uniform basic tables for use by the public sector at the national level in more than 50% of the countries of Latin America and the Caribbean. Twelve new national drug information centers have been established and developed. On the other hand, most of the countries still lack systematic programs for drug monitoring. The programs have not been sufficient to meet the needs, nor has accessibility to low-income sectors improved, a problem due especially to rising prices.

National production of biologicals differs from one country to another. Canada, the United States, and Mexico have the capacity to produce all the EPI vaccines needed, and the first two are self-sufficient. On the other hand, Central America and the Caribbean, with the exception of Cuba, do not have facilities for vaccine production, and in South America some of the countries have the capacity but are only meeting 50% of their needs. In 1989 only two countries produced vaccines for the EPI in Latin America: Brazil and Mexico.

It is estimated that in 1990 Latin America and the Caribbean will have approximately 15 million live newborns and 18 million pregnant women. The estimated needs and the nominal and real capacity to produce EPI vaccines for Latin America and the Caribbean are as follows (in million of doses):

	Needs	Nominal capacity	Real capacity
Polio	53	30	14
Measles	24	18	14
DPT	70	33	14
TT	50	26	14
BCG	30	30	26

Except in the case of BCG, the Latin American/Caribbean region has a long way to go, not only to make efficient use of its installed capacity but also to achieve autonomy in meeting its needs.

8. HEALTH STATUS AND LIVING CONDITIONS

A. Population

The population of the Americas was approximately 331 million in 1950; it was already 729 million in 1990; and it is expected to reach slightly more than 835 million by the year 2000. The Americas have approximately 13.7% of the world's population, with a mildly downward

trend. Within the Hemisphere, Latin America contributes the largest percentage, accounting for 57.4% of the total in 1980. It is expected that, despite the declining birth rate noted in some of the countries, the proportion will stand at 63.2% by the year 2000. North America's shareewill decline from 41% to 35.3%, and that of the Caribbean from 1.6% to 1.5%.

In Latin America, Brazil stands out with a total population of just over 147 million inhabitants in 1989, followed by Mexico with almost 87 million, Argentina and Colombia with 32 million, Peru with 22 million, and Venezuela with something over 19 million. Of the 20 countries in the Region, six account for 339 million of the total population of 429 million and the remaining 90 million are distributed among the other 14 countries.

B. Demographic Transition

Based on the combined formulation of mortality and birth rates that serves to define natural population increase, the countries of the Region can be grouped according to their stage of the demographic transition, as follows:

Group 1. Countries that combine a high birth rate with a high death rate: Bolivia and Haiti. These countries are in the early stage of demographic transition, in which mortality has begun to decline and major changes in fertility are not yet observed. The latest data from Bolivia's National Population and Health Survey, however, show that this country is making clear progress in the transition, with general fertility at 4.9 for the five-year period 1984-1989 and infant mortality at 96 for 1979-1989.

Group 2. Countries that combine a high birth rate with a moderate death rate: El Salvador, Guatemala, Honduras, Nicaragua, Paraguay, and Peru. In this stage there is a slightly greater decline in mortality with few variations in the birth rate, which produces a relatively high growth rate.

Group 3. Countries that combine a moderate birth rate with a low death rate: Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Mexico, Panama, Venezuela, Guyana, the Windward Islands, and other Caribbean territories, Jamaica, Suriname, and Trinidad and Tobago. Most of the Region's countries are in this phase of transition, representing 45% of the population of the Americas and three-fourths of Latin America.

Group 4. Countries that combine a low birth rate with a moderate death rate: Argentina, Barbados, Canada, Cuba, Guadeloupe, Martinique, Puerto Rico, United States of America, and Uruguay. This group includes the countries of Latin America and the Caribbean that have come furthest in the transition process plus the two most developed countries in the Hemisphere. These countries have average crude death rates that are higher than those of Group 3, or even similar to those of Group 2, which

are at earlier stages of transition. This effect is due to the particular age distribution of the population, which is characterized by a larger proportion of elderly due to the decline in fertility and the lengthening lifespan.

The historical evolution of birth and death rates in the demographic transition process also implies changes over time in the age distribution of the population. For each given combination of changes in the birth and death rates there is a different relative distribution of the age groups in the population.

As might be expected, the general trend as countries move to a more advanced stage of the transition, is for the percentage of children and young people to decline and the proportion of elderly to increase. One exception may be the fact that the proportion of children and young people increases slightly as a country goes from Group 1 to Group 2. This is due to reductions in infant mortality, which compensate for what is probably a moderate decline in the birth rate.

As of 1990, it has been estimated that in the countries at the beginning stages of transition 15% of the population is under 5 years of age and just over 3% is 65 or older, whereas in the more "aged" countries 7% of the population is in the 0-4 year group and 13% is elderly.

The effects of the current transition process on the age distribution of the population will be seen many years from now. For example, by the year 2025 Brazil may have doubled the current percentage of elderly persons in its population, but even so this proportion will be lower than present levels in the countries of Group 4.

The relative age distribution of the population shows little sensitivity in the short and medium term. The impact of demographic changes is seen more notably in the absolute numbers of the population and in the growth rates of the various age groups. The most significant changes occur in countries in the second and third stages of transition. Brazil, for example, will see an increase in the next decade of about half a million in the 0-4 age group, but in the same period the population 65 and older will increase by more than 2.5 million--that is, 2.4% for the first age group compared with 39% for the second. The group of children under 5 will grow at an average annual rate of 0.2%, while the rate for those 65 and older will be 3.2%.

C. Fertility

In the Americas Region as a whole, there has been a major decline in fertility that began in 1960-1965. General fertility went from values as high or higher than 6 children per woman to 3.6 in 1985-1990. This trend suggests that the rate may fall to 3.1 by the end of the century.

Of the countries with high fertility in 1960-1965 only four still show this characteristic (Bolivia, Guatemala, Honduras, and Nicaragua). Another four (El Salvador, Haiti, Paraguay, and Peru) now have moderately

high fertility, and the remaining eight countries that belonged to this group (Brazil, Colombia, Costa Rica, Dominican Republic, Ecuador, Mexico, Panama, and Venezuela) now have levels that are moderately low. The remaining countries that currently have low fertility had a more heterogenous pattern of fertility in the past. Those that previously had high and moderately high fertility included Chile and countries of the Caribbean; those that had low and moderately low rates included Argentina, Canada, United Staes of America, and Uruguay.

The foregoing picture indicates that most of the countries of the Region show unmistakable signs of having entered the transition phase with respect to fertility.

As can be expected, in all cases the greatest contribution to total fertility comes from persons in the middle age groups, between 20 and 34. This contribution ranged between 69% and 78% for the five-year period 1985-1990. However, a relatively high proportion of births still occur in women who are regarded as high-risk and those under 20 or over 34 years of age. The proportion of births contributed by these women has begun to fall, but in most of the countries it is still between 25% and 30%.

The group of high-risk women is made up of two very different sectors. In the past the contribution of women aged 35 years and older was, in most cases, higher than that of younger women. The opposite was true, however, in 1985-1990; the contribution of the latter relative to total fertility has clearly declined along with the decline in fertility, irrespective of the current level of fertility in the countries.

Fertility in women under 20 years of age, or adolescent fertility, is of special interest because of its social consequences and because of the negative impact on the health of young mothers and their children. It is taking place within a context of changing sexual attitudes and behaviors, greater exposure to sexually transmitted diseases, and a rise in the age at first marriage, all of which, in turn, can lead to the increasingly frequent use of abortion to terminate unwanted pregnancies.

In all the countries a reduction in fertility has paralleled increased urbanization. On the other hand, the accumulated empirical evidence invariably reveals an inverse relationship between fertility and education which is at least as significant as the relationship observed between fertility and place of residence.

Among the more educated women, fertility may be as low as one-third or one-fourth the rate in uneducated women. It appears, however, that the decline in fertility has taken place mainly in the less educated groups and that this decline becomes less as years of schooling increase.

It is believed that abortion continues to be the principal mechanism of fertility control in the world, although the lack of information hinders efforts to quantify the phenomenon. In the Americas abortion is

legal only in Canada, Cuba, and the United States of America. In these countries there are no legal obstacles to abortion, although there may be obstacles of another sort--social, economic, administrative, or even questions of interpretation related to laws and administrative practices, such as the recent U.S. Supreme Court decision that bars physicians working in institutions that receive federal funds not only from performing any type of abortion procedure but even from discussing the subject at the patient's request. In countries such as Argentina and Peru, abortion is permitted only in specific medical and social circumstances; in others, such as Costa Rica, it is only permitted in order to safeguard the health of the mother, and it is only allowed in life-threatening situations in Brazil, Chile, Colombia, and Mexico. But in the great majority of the countries the illegal status of abortion, which turns a safe surgical procedure into a dangerous one, is more theoretical than practical. In Latin America, for example, abortion has always been widely practiced, although unfortunately in a rather unsanitary manner. According to an estimate by the International Planned Parenthood Federation, Latin America and the Caribbean had one of the highest rates in the world in the 1970s: one in every four pregnancies was terminated by induced abortion. To the extent that restrictive legislation remains on the books and an obscurantist attitude prevails toward abortion and contraception, without any genuine public discussion or dissemination of information, is not surprising that, due to this combined with other factors, several countries have seen an increase in fertility and abortion among women aged 15-19.

Thanks to the pressure of forces such as urbanization, expanded educational opportunities, changes in the situation of women, and the work of family planning programs, information on contraceptives has been disseminated in the countries of the Americas. According to studies carried out in various countries, more than 75%, and in many cases more than 90%, of ever-married women of reproductive age were familiar with some contraceptive method. Over the past 10 years it appears that most countries for which there is information available have seen an increase in the use of contraceptives.

D. Mortality

In Latin America, life expectancy at birth increased from approximately 50 years after World War II to 67 years in 1990. In this subregion the risk of death among children is several times less than it was 50 years ago, and in some countries (and areas within other countries) it is only one-tenth as high as before. Adult mortality has also decreased.

The generalized and substantial reduction in mortality in the Americas over the last 40 years has had very different starting points in the subregions. The group of Latin American countries has gained 15 years in life expectancy at birth, starting from 51.8 years in 1950-1955. An average increase of approximately two years per five-year period has taken this figure to its current level of 66.6 years. The non-Latin Caribbean has made similar advances, with the difference that

in 1950-1955 it already held an advantage of approximately 5 years of life, which continues to be the case up to the present, with life expectancy currently standing at 72.4 years. In North America, average life expectancy at birth was already 69.1 years four decades ago. The subsequent advances have been smaller, as might be expected at this lower level of mortality, but in any case, life expectancy at birth reached 76.1 years in 1985-1990.

The different trends described have produced a substantial reduction in the mortality gap between the American subregions, which have differing levels of development. For Latin America the difference with respect to North America declined from 17.3 to 9.5 years between 1950-1955 and 1985-1990, and for the non-Latin Caribbean, from 12.7 to only 3.7 years.

These advances should not cause us to lose sight of the need to further the reduction of mortality in Latin America, where the current level corresponds to that which existed in the United States of America approximately 40 years ago (1945-1950). On the other hand, despite all the technological progress in the health field, the reduction in mortality over the last 35 years in Latin America is similar in magnitude to that which took place in the United States between 1910-1915 and 1945-1950--that is, in an equivalent time period and starting with the same life expectancy at birth, but before the availability of most modern advances in the prevention and treatment of many diseases. In terms of the many other factors that bear on health--health infrastructure; the quantity, quality, density, and distribution of health personnel; the general infrastructure (transportation, water, sanitation, communications, etc.); the degree and stability of political organization and in particular the relative authority of the State (for example as regards legislation on public hygiene); the amount and distribution of income; educational levels; the physical accessibility of services; housing; diet; etc.--Latin America in 1990 still has levels that are lower, on average, than those that prevailed in the United States 40 years ago. In other words, progress in reducing mortality has been relatively greater than progress in improving other aspects of living conditions. Reduced mortality, and thus increased life expectancy at birth, has occurred in all the countries of the Region despite the heterogeneity of their initial levels.

These values are based on each nation's total population. Within the different countries, of course, there are marked differences in survival among the various social groups. This does not necessarily mean that the gains have been concentrated exclusively in the privileged socioeconomic groups of the society, leaving behind the majority of the population. On the contrary: wherever there has been a substantial gain in life expectancy at birth at the national level, the greatest advances have occurred precisely in those social groups that have lower standards of living, which make up most of the population.

The evolution of life expectancy at birth discussed above is closely associated with the changes taking place in mortality among infants under 1 year of age. Since high mortality goes hand in hand with

high fertility, the exposed populations are numerically important, and mortality in the first year of life becomes a significant component in the total number of deaths. In higher-mortality countries the deaths among children under 1 year may exceed 30% of all mortality. The relative importance that mortality can have in our societies becomes apparent from an analysis of the life tables, which shows, for different ages, the relationship between years actually lived and the additional years that a person might have lived if there had been no mortality (percentage of potential life lived): thus, the years left to live in Bolivia for those in the first year of life is similar to the figure in Canada at the age of 75.

An analysis of past trends indicates that there have been considerable advances in the second half of the present century, although the subregions are at different phases in their transition to greater survival after infancy. Latin America has reduced infant mortality rate from 127 per 1,000 to its current level of 55 per 1,000, with average drops of 10 points per five-year period until recently, when the decline has begun to taper off. The non-Latin Caribbean already held the advantage in 1950-1955, with a rate of 83 per 1,000, which by 1970-1975 had fallen to half and now stands at 21 per 1,000. So far, very few countries in Latin America have reached this level. North America is at a very different stage in the process, and the figures for that subregion primarily reflect trends in infant mortality in the United States of America. The level in 1950-1955 was 29 per 1,000 and declined in small increments (1 or 2 points every five years) during the 1950s, a trend which accelerated in the 1960s and 1970s. The five-year rate in 1985-1990 is estimated at 10 per 1,000, exceeding that of some countries in other regions of the world.

The gap in infant mortality that existed between Latin America and North America has declined substantially in the last 40 years, from almost 100 to only 45 points. This is a notable achievement considering the periods of economic and social crisis which have occurred during this time. However, there the gap that remains to be overcome is sizable. If current trends are maintained in the future, the infant mortality rate that Latin America is expected to achieve in the five-year period 2020-2025--that is, almost 35 years from now--is the rate that the United States of America had 30 years ago, in 1955-1960, representing a time lag of more than half a century. Thus it appears that the less developed countries in the Americas face the pressing task of speeding up their advances in infant survival--a task that is linked not only to the effectiveness of specific interventions but even more to the improvement in various aspects of economic and social development, where the time lag also is also very large. Past experience suggests that even in those countries where the decline of infant mortality has been acceptable, the deterioration or stagnation of socioeconomic development can interrupt these advances in the medium or long term.

In order to facilitate the analysis of how change occurs in the age distribution of mortality in the countries, a model has been prepared

based on the historical experience of two Latin American countries in which life expectancy at birth has reached a high level (Costa Rica and Cuba).

The model was constructed by estimating the rates for different ages in each of these countries when they achieved life expectancies at birth of 50, 55, 60, 65, 70, and 75 years. These rates were averaged, and it was verified that this accurately represents the age distribution of mortality observed in the countries of Latin America.

The model shows the changes in age-specific death rates that accompany increases in life expectancy at birth. This distribution reveals a general pattern characterized by greater mortality in infancy, a minimum rate in the 5-14 year age group, and finally a progressive increase, reaching its peak in the group aged 65 and over. When life expectancy is low, all the death rates are high, especially among the youngest and oldest. As life expectancy increases, all ages experience a reduction in mortality, but the greatest gains are observed in children under 5. In this age group, when life expectancy rises from 50 to 75 years, the risk of dying is reduced from 40.8 to only 3.9 per 1,000. This represents a substantial reduction--namely, 90%. In other words, of 10 children who died before their fifth birthday when life expectancy at birth was 50 years, only one dies when life expectancy reaches 75. The under-5 age group is where the greatest absolute and relative reduction take place, but all the remaining age groups also show sizable reductions, with different implications depending on their level of mortality. Thus the 5-14 year group also experiences a reduction of approximately 90%; the 15-39 year group, 80%; the 40-64 year group, 64%; and the elderly (65 and older), 34%. It is notable that this last age group is the one which, after the first (children under 5), shows the greatest absolute reduction, since the rate declines from 91 to 60 per 1,000 (Table 1 and Figure 1).

The reduction of mortality in the elderly population implies that survival at 65 years increases from 11 to 17 years, or a total of six years. On the other hand, a reduction in mortality before 65 years (between the models based on 50 and 75 years of life expectancy at birth) means that almost twice as many persons as before will live to the age of 65. This aging of the population is a critical factor in all the countries of the Region. It varies in relative importance, but it must be reckoned with as an irreversible trend. It means that plans have to be made to provide health care to older age groups while at the same time not neglecting the rest of the population. In the United States of America the estimated populations under 18 and over 65 represented 25.8% and 12.7%, respectively, of the total population in 1990. By the year 2030 those percentages will be practically equal: 21.7% and 20.7%. In Uruguay it is predicted that by 2025 the percentages of females under 15 and over 65 will be 20% and 16%, respectively.

The rapidity of demographic change in Latin America becomes evident when one compares the values for proportional mortality by age with the different values for life expectancy. This is especially marked

TABLE 1

Mortality rates by age, according to life expectancy at birth, Cuba-Costa Rica model.

Life expectancy at birth	Mortality rates by age (per 1,000)				
	0–4	5–14	15–39	40–64	65 and over
50	40.8	2.8	5.5	16.9	91.0
55	33.5	2.2	4.3	14.2	84.0
60	26.2	1.6	3.2	11.5	77.1
65	18.5	1.0	2.2	9.2	72.1
70	10.6	0.6	1.6	7.6	66.3
75	3.9	0.3	1.1	6.1	59.7

Source: CELADE, 1989.

Figure 1. Mortality from broad groups of causes in children under five years of age, according to life expectancy at birth

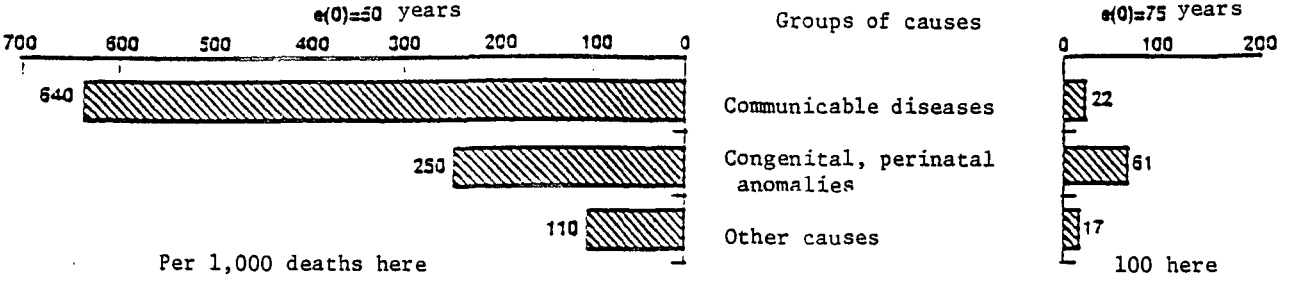
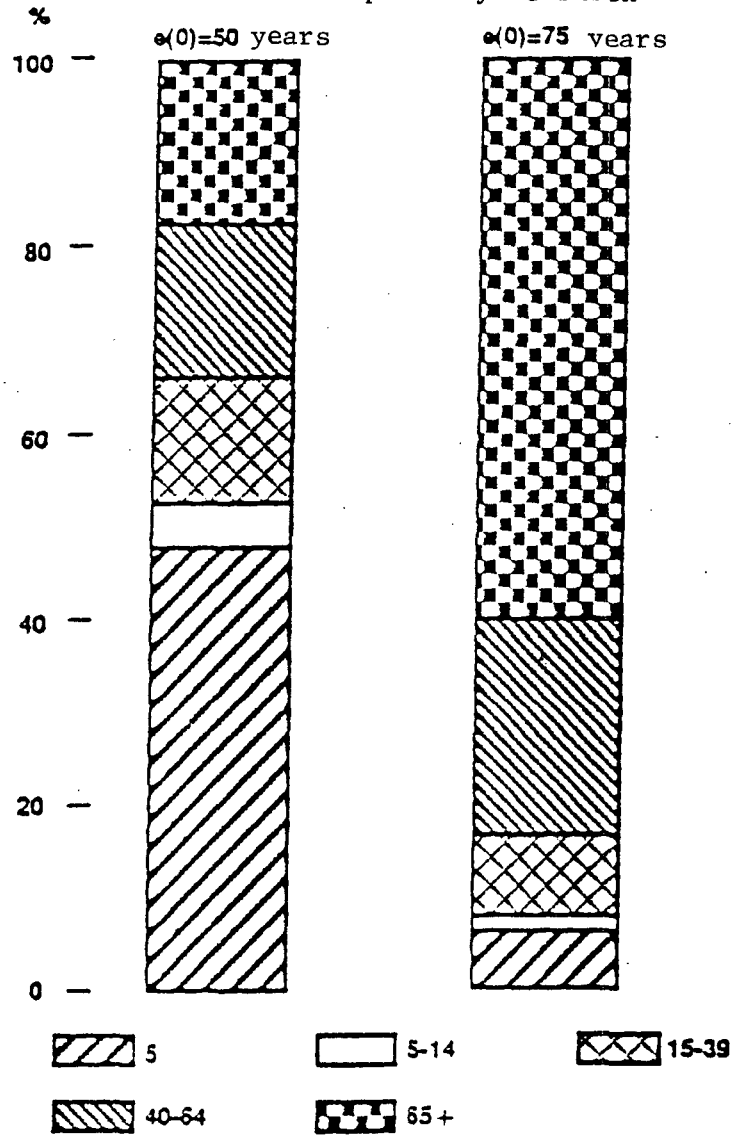


Figure 2. Proportional mortality according to life expectancy at birth



in children under 5, despite the fact that in this group proportional mortality continues to be much higher than the levels in the developed countries, with a life expectancy at birth of 75 years due to the age distribution of the population. Thus Costa Rica, whose infant mortality is one of the lowest rates in the Region but where 15% of total deaths occur before the fifth birthday, stands in contrast to Canada, where deaths in this age group do not reach 2%. An analogous but inverse situation occurs with proportional mortality in the group aged 65 and over.

The factors that are most involved in accounting for the increase in life expectancy at birth have to do with the communicable diseases, especially the reduction in deaths from infectious intestinal and respiratory diseases. It is estimated that between 1965 and 1990 there were more than 6 million deaths in Latin America and the Caribbean caused by intestinal infections (diarrhea), of which 80% occurred in children under 5. This cause alone accounted for 9% of total mortality. It can be estimated that the annual average of deaths due to diarrhea was more than 130,000 in the five-year period 1985-1990, a figure which underscores the persistent severity of the problem.

For children under 5 we have seen that the reduction in mortality was 90%, so that if 1,000 died previously, now 100 die. The distribution of these deaths by major groups of causes is shown in Figure 1. The changes in the distribution of causes are also given for the other age groups; the overall changes can be evaluated based on an analysis of proportional mortality by ages. Previously, almost half of all deaths occurred before 5 years of age and now almost 60% occur after age 65 (Figure 2).

Analogous to the changes observed in the profile of mortality by age are the changes in terms of causes: for those whose life expectancy at birth was 50 years, almost two-thirds of the deaths were caused by communicable diseases and conditions originating in the perinatal period, whereas for those with a 75-year life expectancy a similar percentage is accounted for by malignant neoplasms, diseases of the circulatory system, and injury and poisoning.

There is cause for concern in the trend toward increasing death rates due to malignant neoplasms, especially in view of the fact that effective preventive measures now exist for several of these tumors. Death rates due to lung cancer are on the increase in almost all the countries. They are much higher in Argentina, Canada, Cuba, United States, and Uruguay than in the remaining countries, and they are higher among males. Death rates in both sexes for malignant stomach tumors are unusually high in Barbados, Chile, Costa Rica, Ecuador and Venezuela. The highest mortality rates for cervical tumors are concentrated in some of the countries of the English-speaking Caribbean, and the increase is most marked at younger ages, beginning at age 35. The highest mortality rates for malignant tumors of the breast are recorded in Argentina, Barbados, Canada, United States, and Uruguay, and the rates rise with increasing age, being most marked after age 35.

Diseases of the circulatory system have come to constitute the most important cause of death in the countries with an older age distribution, where they account for more than one-third and in some of the cases more than two-fifths of the total deaths from defined causes. This is true despite the fact that the value of the rates is tending to decline--though not before mortality from ischemic heart disease took on epidemic proportions, predominantly among males and especially in the 45-54 age group.

In the countries that have succeeded in reducing their death rates, especially those that have already achieved a life expectancy at birth of 70 years or more, accidents and acts of violence are the principal causes of death among schoolchildren and young adults, with a definite male predominance in the latter case. Prevention of this group of causes is another great challenge for public health.

The increase in proportional mortality from a specific cause in a specific age group does not necessarily imply that in that age group the specific death rate from that cause has increased; the rate may have decreased, while the reduction in the rates for other causes in that age group may have been even greater. Up to 40 years of age, there was a real reduction in the rates from all causes; between ages 40 and 64 the reduction was also sizable, with one important exception: malignant neoplasms present a deteriorating rate that continues up to the end of life. As has been shown, another important group of causes, diseases of the circulatory system, is increasingly the most important cause of death despite the fact that there have been improvements in the rates, especially in the groups aged 40 and older.

There are some specific peculiarities linked to the physical environment. Thus, for a 50-year life expectancy at birth, in those countries with more temperate climates, deaths due to respiratory diseases are greater than those from intestinal infections, whereas in countries with a tropical climate the reverse is true. On the other hand, of the 185,000 deaths registered in Canada (1987), 1,100 were due to infectious and parasitic diseases (0.6% of the total) and only 38 were due to infectious intestinal diseases, none of which occurred in infants under 1 year. By contrast, of the 811,000 deaths registered in Brazil (1986), 51,500 were due to infectious and parasitic diseases (6.4% of the total), or 10 times more, but there were also 24,200 deaths from infectious intestinal diseases, 18,000 of which occurred in infants under 1 year. Death rates due to pneumonia are only slightly higher in Mexico than in Canada (1987), but while in the latter country only 25 of the 5,800 deaths from that cause occurred in the first year of life (0.4%), in Mexico the proportion was 8,700 out of 20,500 (42.4%). Thus there is a contrast that is not reflected in the rate: in Canada, pneumonia is a cause of death at older ages and in Mexico at younger ages.

In terms of trends, the figures show, in general, a decline in the rates of maternal mortality. Complications of pregnancy, delivery, and the puerperium play an important role as a cause of death for women in

all or some of the subgroups within the 15-44 age range. The figures should be interpreted with caution, however, given the varying degrees of underestimation due to underregistration or assignment to other causes, which happens much more often in those countries where the problem is most serious. For maternal mortality, underregistrations have been estimated to exceed 50%. The available data for recent years in countries of the Region reveal significant variations: high values of around 25 maternal deaths per 10,000 live births for Bolivia, Haiti, Honduras, and Peru, compared with a low of 0.6 for Canada.

E. Migration

In addition to fertility and mortality, international migration is the other demographic component that affects the growth and distribution of the population by sex and age. It is highly dependent on the combination of socioeconomic and political factors prevailing at a given time. Although in some cases migration significantly affects the age distribution of the population, especially in small countries, it does not become a fundamental factor in the aging process over the long term.

This is the most difficult demographic variable to measure, since records of population movements across national borders are usually deficient or nonexistent. To this is added so-called illegal migration, a trend apparently accentuated in the last decades; logically, its inherent nature limits efforts to measure the phenomenon.

An analysis of the 1970 and 1980 censuses shows, in general, an overall increase in mobility throughout the Hemisphere, as well as a substantial presence of Latin Americans and Caribbean nationals in the United States of America and Canada. Preliminary data from the United States CENSUS estimates an increase of 8 million in the number of Latin Americans between 1980 and 1990, representing growth on the order of 60%. In addition, there is a steady decline in European migration to the Latin American countries.

Particularly notable in Central America are the movements linked to political conflicts and wars, which produce internal population displacements along with a significant number of refugees. To these are added persons who have been returned and repatriated under the provisions of the peace plan signed at Esquipulas.

A persistent characteristic of the demographic situation in the English-speaking Caribbean countries is the high incidence of international migration. Although there are certain variations among the countries, there is unquestionably a sustained migratory flow directed largely toward North America and Western Europe.

Special attention is given to health problems in the receiving countries, which face an increased demand for care due to the addition of new contingents of population, often in precarious socioeconomic conditions. The cases that present the greatest problems are those involving

short-distance cross-border migrations, often linked to harvesting, and those involving populations seeking refuge from the conflicts in the Central American subregion.

The short-distance movements across borders present certain problems that the health sector must deal with: the need to provide health care to a population that usually works in an illegal situation and in very precarious and disadvantaged social conditions, as well as the problem of disease transmission across borders. Moreover, evidence points to a likely increase in this type of movement in the coming years as a result of efforts by the countries to create areas of increased economic integration.

In recent years one of the significant problems for the health sector has been the populations migrating to other countries as refugees for political reasons and as a result of violence. Figures from several sources suggest that between 7% and 10% of the Central American population has had to emigrate, in the great majority of cases as undocumented migrants to foreign countries or as persons displaced to another region within their own country, with a smaller proportion as recognized refugees or repatriated persons. This implies a total of around 2 million people who have been abruptly expelled from their countries and who require immediate assistance in order to meet all types of social needs. The problem is rendered more serious by the fact that only a minority are accorded the benefits of the United Nations High Commission for Refugees (UNHCR).

F. Urbanization and the Environment

Both fertility and mortality are usually lowest in urban areas as a whole, and in most of the developing countries the health systems offer greater coverage in these areas, given the scarcity of resources and the more or less generalized development model that favors the concentration of resources in those areas where economic investment and productive, commercial, cultural, and political activities are concentrated as well.

The urbanization process also has produced inequities between the urban and rural areas in terms of economic, labor, and social affairs in general, and in the health sector in particular, creating large differentials in mortality, fertility, and morbidity between the urban and rural populations. This situation prevails in most of the countries in the Region of the Americas.

Differences occur not only between urban and rural areas but also in terms of heterogeneity between the urban nuclei themselves, with goods and services tending to be concentrated in a few centers to the detriment of the rest, so that the situation of the latter is sometimes very similar to that of the rural areas. Finally, although the provision of goods and services--including those related to health--is greater in the large urban centers, the entire population does not necessarily have equal access to them, with large discrepancies between the socioeconomic strata that make up the population.

As a result of the marked difference in the dynamism of the urban and rural populations, the Region of the Americas as a whole had ceased to have a predominantly rural population by the beginning of the 1950s. However, Latin America did not lose its rural predominance until the 1960s, and the Caribbean area, until the 1970s.

Thus in 1990, 28% of the population of the Americas were living in so-called rural areas, with estimates that this segment will fall to one-fourth of the total population by the year 2000.

It is already common knowledge that the Region's rural population shows a low growth rate, going from 0.8% average annual growth in the 1950s to 0.5% in the five-year period 1985-1990, with the decline expected to continue.

The lower growth rate for the rural population that is observed in the great majority of the countries of the Americas is more a reflection of migration to the urban areas than of a decline in natural growth rate. The causes of these migrations in the developing countries are principally linked to the search for better opportunities for employment, education and health, and ultimately the search for a better life.

On the other hand, it is estimated that in 1990, 73% of the population of the Americas was living in urban areas, with predictions that by the year 2000, 76 of every 100 persons will live in these areas. Although North America exceeds Latin America in degree of urbanization, by the year 2000 the two subregions will show similar proportions. The Caribbean, for its part, has a lower level of urbanization (60% in 1990 and an expected 66% by the year 2000), but even so, the area has ceased to have a rural predominance. From 475 million in 1985, the urban population in the Region of the Americas increased by 54 million in the five-year period 1985-1990--in contrast with the rural population, which increased by 5 million--and it is predicted to reach 626 million by the year 2000.

It should be noted, however, that due to the different rate of growth of this population in the subregions, in North America the urban population by the year 2000 will be 8% more than in 1990, whereas in Latin America and the Caribbean it will be 28% more, posing a serious challenge to meet basic needs in urban areas.

The process of urban concentration that has been analyzed above has led rising prices for urban land along with land speculation, which has prevented a great many people from being able to secure decent housing in a healthy environment. Moreover, policies for housing construction are based on lending systems that leave out those sectors of the population that are below the poverty line. The social housing policies that have been implemented in many of the Latin American countries have tended to apply to small-scale projects. These factors have impelled and, at times, forced the poorer sectors to move to peripheral neighborhoods or to crowd into shantytowns in the city core.

In inner-city districts the population density is such that sometimes entire families occupy single rooms of what used to be large residential houses that are now rented by rooms, without any increase in the number of bathrooms.

The poor condition of their surroundings is compounded by the inferior quality of the dwellings, which are typically constructed of flimsy or salvaged materials--clay, cardboard, straw--and in most cases are but one small room with almost no ventilation.

This type of settlement, together with the displacement of the more economically comfortable sectors to suburban areas, has resulted in ecological deterioration in many cities of Latin America. Taking lands out of cultivation and eroding the urban perimeter (by felling trees and paving streets in high-altitude zones) impedes normal absorption of the rains, resulting in periodic floods.

The situation of the water, air, and wastes is indicative of the level of deterioration and pollution. The rate of water pollution is far worse in Latin America than in other regions of the world. It is estimated that less than 10% of the municipios in Latin America and the Caribbean treat wastewater adequately before discharging it into natural water bodies. In several of the countries, discharges from sewerage systems have contaminated rivers and other waterways--a situation that becomes even more serious when these waters are used to irrigate fields and vegetable gardens. The cases of cholera that recently appeared in the central valley of Chile are of this origin.

Urban air pollution is the result of industrial activity, automotive vehicles, electric power generation, and service industries. In the countries of Latin America and the Caribbean where tetraethyl lead is added to gasoline, the air is also contaminated with fine particles of lead. Almost all the large cities in Latin America have problems with air quality --in particular, Caracas, Mexico City, Lima, Rio de Janeiro, Santiago, and Sao Paulo. The Region is increasing its participation in the worldwide problem of air pollution. According to data published by the World Resources Institute, of the total carbon monoxide produced by human activities, Latin America contributed 1% in 1950, 3% in 1965, and 4.7% in 1983. This problem is perpetuated by the growth in population, especially in urban areas, which results in greater consumption of energy, a greater number of mechanized vehicles, and the growth of industries. The rapid increase in mechanized vehicles not only produces congestion and high rates of traffic accidents, but in many cases, because of inadequate vehicle maintenance and the geographical location of cities in valleys surrounded by mountains, it also produces high levels of "smog." In 1984 the gasolines used in the Region contained the highest levels of lead of the world, ranging from 0.64 to 0.84 g/l, in comparison with, for example, Europe, where the range was from 0.15 to 0.40 g/l for the same year.

With the growth of the cities there has been a considerable increase in industrial and household waste, and in many cities the urban collection systems can no longer cope. In marginal communities this

service is often limited, sporadic, or nonexistent, exacerbating the unhealthful conditions. Uncovered refuse dumps are located in open fields near marginal human settlements, attracting and favoring the breeding of animals that transmit diseases and release methane gas in large quantities. In many cities of Latin America, scavenging from refuse is a source of income for the very poorest population.

The coverage with refuse services reaches 81.7% of the population in Latin America. It is estimated that the quantity of solid wastes generated in 1988 by 300 million urban inhabitants of Latin America reached 225,000 tons per day. This refuse, which used to be predominantly organic and easily biodegradable, now includes heterogeneous material with more inorganic substances and even toxic contaminants.

Factories and industries that were originally on the outskirts of the cities are now inside the urban perimeter. Some of them discharge highly toxic residues and wastes such as mercury, lead, magnesium, chromium, and even radioactive materials, which are destroying the organic components of the environment. In addition, there are other installations such as electric power plants, oil refineries, and hospitals that generate large amounts of toxic waste.

In the Americas there are few installations for recycling or properly disposing of hazardous waste. The current practice of "dumping" hazardous and non-hazardous waste should be reviewed and the necessary measures taken to deal with the situation at both the national and international levels.

G. Employment

In the mid-1970s the major labor problem in the countries of Latin America and the Caribbean was not unemployment but rather underemployment. Studies of the decade estimated that only one-fifth of the underutilization of labor in Latin America was due to open unemployment. In the urban areas the rate of open unemployment in Latin America and the Caribbean for 13 of the countries averaged 7%. In 1980, open unemployment reached an average of 8% in a group of 20 countries. In general, it was in the more urbanized countries that the rate of open unemployment fell, while it increased in the predominantly rural countries in the process of urbanization. As urbanization advanced in the more rural countries, it appeared to trigger increases in open unemployment. However, this is not the only factor that appears as a cause of this trend, since eminently urban countries also saw increase--for example, Chile and Peru. When the crisis of the 1980s began, the rate of urban open unemployment in Latin America and the Caribbean increased considerably, reaching an average of 11% in 1985.

To the increase in unemployment and underemployment is added the decline in real wages in several of the Latin American countries and the increase in poverty and indigence within their cities. One of the population's chief ways of dealing with this decline in real wages has been to put more members of the family to work, with women and teenagers

engaging in marginal occupations. Thus they have to work longer hours to maintain their standard of living, or simply in order to meet minimum needs. Another type of response has been to share their living quaraters.

H. Morbidity

It is estimated that in the Region of the Americas the population at risk of contracting malaria increased from 143.6 million (30% of the total) in 1960 to 280.7 million in 1988 (39% of the total). Malaria transmission is concentrated in areas where the human population comes into close contact with the population of anopheline vectors for various reasons--sociopolitical, economic, and cultural.

Generally speaking, the problem of malaria is found mainly in the territories in the area of the Great Amazon basin--in Brazil, Bolivia, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, and Venezuela --which have similar geographic and ecological characteristics. There are also shared risk factors linked to the development of the countries' social and economic infrastructure such as migration and land settlement related to expansion of the agricultural border, the building of roads, and projects involving agriculture, livestock, mining, and urban development.

The number of malaria cases reported by the countries increased steadily during the period 1985-1988. From a figure of 910,917 cases in 1985, the number climbed to over a million in the next three years--1,018,864 in 1987 and 1,100,330 in 1988. The reporting of these cases corresponds to the number diagnosed by microscopic examinations carried out by the malaria control programs, based on an average of 9.8 million blood samples taken annually between 1985 and 1988. In the last four years the percentage of blood samples with plasmodia increased from 9.6% in 1985 to 11.4% in 1988. Morbidity per 100,000 population in the malarious areas increased from 350.9 in 1965 to 391.9 in 1988.

Jungle yellow fever continues to affect the Americas, especially in four countries: Bolivia, Brazil, Colombia, and Peru. Cases of the disease also occasionally reported in Ecuador, Trinidad and Tobago, and Venezuela. There have been no registered cases of urban yellow fever in the South American continent since 1942, and the last outbreak of yellow fever in a large city occurred in Rio de Janeiro in 1928 and 1929.

The risk of urbanization of the disease constitutes a real threat, given the increase and spread of Aedes aegypti populations in urban centers, some of which are located near enzootic areas of yellow fever. This situation may be potentially aggravated by the recent introduction into Brazil of Aedes albopictus, a vector which, because of its particular characteristics, could potentially serve as bridge between the jungle and urban cycles of the disease.

During the period 1985-1988, 754 cases were reported in five countries of the Region. This number represents an increase of 238 cases (46.1%) with respect to the previous four-year period. Approximately 85%

of the cases were fatal. The official figures probably underestimate the magnitude of the problem, since it is mostly the fatal cases that are registered.

Circulation of the dengue virus in the Americas during the decade took the form of major epidemics. To date only serotypes 1, 2, and 4 have been isolated from the autochthonous cases occurring in the Americas during the 1980s. One of the major events of the decade was the epidemic of hemorrhagic dengue caused by dengue 2 which occurred in Cuba in 1981. Dengue 4 has become endemic in the Region, after causing a series of outbreaks in the Caribbean, Central America, Mexico, and northern South America, especially during 1981-1983. The disease associated with dengue 4 has been generally mild and self-limiting. After 1981, every year (except 1983) saw reports of confirmed or suspected cases of hemorrhagic dengue fever in both children and adults.

Transmission of the wild poliovirus appears on the verge of being interrupted in the Western Hemisphere. Despite the analysis of thousands of fecal samples, only 17 isolations of wild poliovirus were recovered in 1990, and four during the first six months of 1991. More than four years have elapsed since wild poliovirus was last isolated in the Southern Cone, and more than eight years since one was found in the English-speaking Caribbean. It is more than three years since an autochthonous wild poliovirus was isolated in Central America, two years since one was isolated in Brazil, and five months since one was found in Mexico. The 17 wild viruses isolated in 1990 represent a reduction with respect to the 24 found in 1989.

Despite the general increase in vaccination coverage, outbreaks of measles continue to occur in several countries of Region. This reflects the fact that, with the exception of Cuba, even the countries with high immunization coverage did not achieve the levels necessary to ensure the interruption of transmission.

The registration of information on diarrheal diseases in children is more deficient for morbidity than for mortality. Given that in a high percentage of cases no medical care is sought, there is no certainty about the real magnitude of the problem in any of the countries. However, it is possible to have an idea of the total number of diarrheal episodes in children under 5 based on the countries estimates of annual incidence. For 1988 it may be estimated that there were an average of four diarrheal episodes per year in children under 5. This figure varies: values of five or more were estimated for the Dominican Republic, Guatemala, Haiti, Mexico, Peru, and Venezuela; values of between three and five, for Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Honduras, and Panama; and values of under three, for Belize, Chile, Jamaica, Suriname, and Uruguay.

In 1990, studies were done on neonatal tetanus in 16 endemic countries of Latin America. The data indicate that 1,276, or 57%, of the known cases occurred in 5% (606) of the municipios, where 10 million

(11%) of the women of reproductive age live in those countries. In total regional figures, the cases affect 21% of the municipios.

The chronic noncommunicable diseases, for the most part, are preceded by risk factors, sometimes common ones, which can be measured in the general population. In 1986 a Study on Individual and Population Risk Factors utilized a common methodology in limited areas of Latin American cities--Caracas (Venezuela), Ciudad Acuña and Piedras Negras (Mexico), Havana (Cuba), Porto Alegre (Brazil), and Santiago (Chile)--and found that the percentage of adults (15 years or older) exposed to hypertension, smoking, a sedentary lifestyle, and daily alcohol intake is high in comparison with the figures reported in the literature, although there are large differences between the values in the areas studied. There is a greater prevalence of smoking and daily alcohol consumption among males, but a higher prevalence of hypertension and sedentary lifestyle among females.

AIDS may well be the best example of the health impact of habits and customs, including sexual behavior and drug addiction.

All 46 countries and territories of the Americas have reported cases of AIDS. The virus has been introduced in different countries at different times. However, once transmission is firmly established, the course of the epidemic has been similar in every country.

In the Region as a whole, it is estimated that approximately 2.5 million people are infected with HIV. Of these individuals, between 1 and 1.5 million live in North America, and approximately 750,000 to 1 million are located in Latin America and the Caribbean. The cumulative number of cases and deaths as of 31 October 1990 was 183,121 and 107,828, respectively. Eighty-three percent of the cases and 87% of the deaths have been in the United States.

I. Food and Nutrition

In recent decades the food supply has increased considerably and nutritional status has improved. The world now feeds twice as many people as it did in 1950, and Latin America almost tripled its feeding capacity in the same period: from 160 million to 440 million. Indications of this quantitative improvement are the substantial reduction in infant mortality and the reduction in nutritional deficiencies as reflected in the size and weight of newborn infants. Supplies of food are greater, and there have been improvements in the methods of transportation, conservation, and distribution.

Despite these advances, hunger and malnutrition continue to be a problem at the Regional level: in some countries of Latin America, per capita caloric intake has been lower in the last few years than it was at the beginning of the 1980s, and in 1983-1985 the food supply (apparent consumption) was 10% below minimum needs in several of the countries. In 1990, per capita grain production fell 16% with respect to 1981, with the annual level currently estimated at 210 kg per capita. This figure is

worrisomely near the minimum of 180, below which long-term survival is not possible. The annual level in North America was 1,324 kg per capita in 1990.

UNICEF estimates that there were 8 million undernourished children under 5 (more than two standard deviations below the desired level of weight-for-age) in Latin America and the Caribbean in 1990, representing 14% of the total population in that age group.

In several countries there is a major deficiency of vitamin A. Apparent consumption at mid-decade in Latin America and the Caribbean was 665 mcg, a value less than that for Africa and half the value in the developed countries. With respect to iron and iodine the situation is similar, although not quite as severe. In several of the countries programs have been developed to provide supplementary feeding and improve the nutritional situation through iodization of salt, injections of iodized oil, education regarding food storage and consumption, distribution of ferrous sulfate, school and community vegetable gardens, and monitoring for the early detection of nutritional problems in pregnant women, women who have just given birth, and children.

The growth rate of food production decreased from 3.4% in the period 1970-1979 to 2.4% per year in the period 1980-1987. The high growth rates of 1985 and 1987 compensated for slower growth in the period 1980-1984. On the other hand, the importance of food exports in several of the countries led to less internal availability and therefore lower consumption. Not only did prices increase, but often food subsidy programs for the population were eliminated.

J. Education

There have been major advances in education in recent decades. Illiteracy fell from 42% in 1950 to 15% in 1990 in Latin America and the Caribbean, with values about the same for both sexes, although in several of the countries illiteracy continues to be higher among women. The last few years have seen increased enrollments particularly at the middle and upper levels. In 1990 there were no sex differences in primary, secondary, and highschool enrollments, although at the latter level female attrition is greater and the career tracks favors males in those fields that lead to better jobs, especially jobs at decision-making levels.

The continuing trend toward greater professionalization of women may imply changes in the social structure in the medium and long term. This is especially true for careers related to health, where in several countries female enrollment already exceeds that of males. As a result of this trend, despite attrition, in some years there have been more women graduating as physicians than men. This means that the educational trends among women have dual repercussions for the health of the population as a whole: on the one hand, a positive impact due to women's key role in determining family attitudes toward health, and on the other, steadily increasing labor participation by women as health workers

(nurses, aides, and health professionals). In fact it may be the case--although there have been no empirical studies in the Region to confirm it--that the latter phenomenon will also have a positive effect on health, not in terms of demand (a more highly educated female population) but in terms of supply: more women working and making decisions in the health sector.

K. United Nations Index of Human Development

This index measures human development on a scale from 0 to 1 taking the aggregate of three indicators: longevity, knowledge, and control of the resources necessary for a decent life. Longevity is based on life expectancy at birth; knowledge is based on literacy rates, since reading is the key to acquiring and comprehending information; and control of resources is based on per capita gross national product adjusted for purchasing power. The index uses national averages and therefore inequalities within countries are not directly taken into account.

According to the index, the countries of the world fall into three categories:

a) High index of human development: 0.80 or higher.

b) Average index of human development: 0.50 to 0.79.

c) Low index of human development: under 0.50.

On this basis, the countries of the Region of the Americas would be classified as follows (in descending order of index values) in the 1991 report:

a) Canada, U.S., Barbados, Bahamas, Uruguay, Chile, Trinidad and Tobago, Costa Rica, Argentina, Venezuela, Mexico, Antigua-Barbuda, Dominica.

b) Panama, Suriname, Jamaica, Brazil, Colombia, Cuba, Grenada, St. Kitts, Belize, St. Lucia, Paraguay, Ecuador, Peru, Dominican Republic, Nicaragua, Guyana, El Salvador.

c) Honduras, Guatemala, Bolivia, Haiti.

9. CONCLUSIONS

The countries of Latin America and the Caribbean have been affected over the past decade by the most severe economic crisis since the 1930s. As a result, there has been an alarming increase in the rates of unemployment and internal inflation, along with a gradual deterioration in the supply of goods and services, especially in the public sector. The greatest obstacle to development continues to be the crisis of Latin American indebtedness: today, Latin America and the Caribbean

are net exporters of capital to the industrialized countries. In the last five years (1986-1990) the Latin American countries have sent US$130,000 million abroad in the form of payments on accumulated external debt.

As a consequence, the countries have had to adopt economic policies of adjustment or reactivation that are characterized by a marked reduction in public spending for so-called "non-productive activities" such as health and education. Application of these measures has led to a reduction or stagnation in the amount of resources available for developing and operating the health services. This can be seen in the limitations on capital investment for basic sanitation and for the replacement, maintenance, and conservation of equipment and the physical plant. In addition, the situation affects the capacity to maintain an adequate level of recurrent expenditures, which has impeded normal program operations for dealing with prevalent problems and has restricted administrative development and personnel training in the sector. Given this situation, what stands out for the countries of Latin America and the Caribbean, especially those of greater relative development--both because of the importance of health as an expenditure and because of the large share that health-related employment represents in the total work force--is the lack of regularly supplied information and permanent organization in the Ministries to meet the demands for data on economy, financing, and costs in the sector. This is an area which has received no consideration up to now.

At the same time, the economic crisis has adversely affected the well-being of vast sectors of the population. At present nearly a third of the population is below the absolute poverty level. This poverty is distributed unequally within the individual countries, contributing to the increased disparities observed in the Region. In terms of coverage, of the 423 million inhabitants of Latin America and the Caribbean, some 130 million do not currently have permanent access to basic health services. Moreover, estimates of population growth indicate that during the period 1990-2000 there will be an additional 110 million inhabitants for whom adequate health care must be ensured. This represents the most important challenge for the health systems of in the countries of the Region. It means that the services --which for the most part have so far been unable to serve the entire population with equity, effectiveness, and efficiency--will have to be reorganized and reoriented, not only in order to maintain their operations but also to close the current gap and respond to the health care needs of the new population.

In most of the reporting countries a deterioration can be seen in the efforts to implement a process for the surveillance and evaluation of the strategy of PHC and HFA/2000. No program, structure, or stable standards have been established for these activities. The data needed for monitoring and evaluation are obtained haphazardly, with serious problems of acquisition and without the involvement of the principal authorities in the sector's institutions. Except for Canada, Cuba, and the United States, which have clearly evaluated their targets and progress and have proposed new objectives, the remaining reports are more

responses to a formal commitment to PAHO/WHO than an analysis and reflection of what is happening. Among them are reports from a number of countries that have made substantial efforts: Haiti, Bolivia, the Bahamas, Belize, Honduras, Costa Rica, and Mexico. In the overall picture, however, the prospects are not encouraging with respect to the future possibilities for monitoring and evaluating PHC and HFA/2000.

The information on vaccination coverage is up to date in almost all the countries, reflecting the effort to eradicate wild poliomyelitis. In addition, data on coverage of the population with basic water supply and sanitation services is available in most of the countries, although there continue to be problems of consistency, continuity, and accuracy. On the other hand, reliable information on nutritional status, low birthweight, coverage with basic health care and maternal and child health services, family planning, and expenditures on health and local care is available in only a few countries. The data on referrals and back-referrals, mental and physical disabilities, oral health, and morbidity are practically nonexistent in most of the countries.

Once resources for neglected groups have been identified and obtained, the lack of focus and the transparency of the projects has been a critical factor, since it will present a major obstacle to studying their impact.

The obstacles to setting up a monitoring and evaluation process in the countries may be grouped under three main headings:

- those attributable to the lack of human resources and infrastructure needed in order to collect and analyze the information adequately;

- the inferior quality of the data available due to underregistration, dispersion of sources, lack of timely delivery, and shortcomings in data processing; and

- limited contact within the health system between the management process and the information system for decision-making.

The national health policies and strategies in all the countries and of the Region are coherent and verbally consistent with the strategy of PHC and HFA/2000. The adaptation of these policies and strategies has been curtailed by the limits on financial, material and human resources, and in some countries by political and social instability. Health development in the Region is directed toward achieving greater efficiency in the use of available resources through restructuring the health systems--a process that includes decentralization, strengthening of local health systems, administrative reform, mobilization of local resources, and interinstitutional and intersectoral coordination. However, in many countries of Latin America and the Caribbean, long-term comprehensive strategies for the development of health and the socioeconomic situation as a whole are seen to be weak or entirely lacking, which makes it difficult to maintain the rate of improvement observed in the last 30 years.

Improved coordination between the institutions that make up the health sector in the countries of the Region is a goal shared by almost all. However, with few exceptions, this is reported to still be an incipient process, particularly with regard to coordination of the services provided by social security institutions and the Ministries of Health.

The reporting countries concur in stating that practically all the national sectors that participate in the overall development process have a direct or indirect impact on the state of the population. Diverse institutional mechanisms have been established to ensure that the goals and activities of the different development sectors are coherent and mutually supportive, both in relation to overall development policy and between themselves. In several countries of the Region one of the goals in the effort to develop local health systems under a decentralized management scheme has been to encourage and facilitate the creation of operational mechanisms for joint programming and coordination among sectors at the local level. Other measures undertaken to improve this aspect of the PHC strategy range from the formulation of constitutional mandates for coordination among sectors to the formal participation of health sector authorities in the administration of other institutions linked to health.

All the countries of the Region have manifested, as their declared policy, the need to support and promote community participation as an essential component of the PHC strategy. In most cases the community is involved in specific aspects of carrying out activities at the local level, especially through the mechanism of health collaborators or volunteers or by providing labor and funds for small local infrastructure projects. In some of the countries mechanisms have been established for the participation of community organizations in the formulation, execution, and evaluation of policies and programs at the national level. In others, the Ministries of Health have created programs, offices, or departments responsible for promoting, coordinating, and standardizing community participation in health programs.

Since 1985, several countries have reviewed and modified the sector's institutional, organic, and functional framework with a view to opening the way for new management designs. The normative, regulatory, and controlling role of central levels in the Ministries or Secretariats of Health has been strengthened, and the executive functions and responsibilities of the peripheral arms of these institutions, or others involved in the delivery of services, have been increased. In others, there has been some success in defining the responsibilities and scope of the different institutions that make up the sector as a step preceding greater coordination and eventual intrasectoral integration. But these attempts at reforms have produced little result so far.

In some of the countries steps have been taken to formulate and implement instruments and legal standards for the decentralized management of the health sector and of other public services. On the other hand, many Ministries of Health in the Region have modified their

technical and policy-making and administrative structures in accordance with the goal of decentralizing and facilitating the process of conducting and managing priority programs.

Of the reporting countries, few have a health manpower plan for meeting needs under the PHC strategy, and few believe they have made progress since 1985 in improving equity in the distribution of human resources, while in fact some report a deterioration in equity. The principal reasons cited to account for this situation are the economic crisis, the restriction of financial resources, and the resistance of health personnel to being located in less developed areas. Several countries have instituted or strengthened programs for the training of professional and middle-level health personnel using an approach that integrates teaching and service. Many countries report having carried out recent curriculum revisions in professional training programs in order to incorporate more elements of public health and the PHC strategy. In all the countries there are broad programs of continuing education for health personnel in specific aspects of the PHC strategy. Several have created interinstitutional commissions on health manpower with the goal of improving coordination and planning in this field.

Few countries report the existence, even on paper or in incipient application, of a national policy for selecting and using health technology. In general, coordination of the selection and use of health technology is only weakly developed in most of the countries. With regard to the identification and formulation of national policies on health research, few countries have explicit guidelines in this area.

The orientations that have been defined correspond to priorities derived from the epidemiological profile and the level of development of the health services. The countries mention several factors that are impeding the effective preparation and application of policy on research and technology in the health field: the scarcity of financial resources, the lack of sufficient research personnel and of infrastructure, the weakness of mechanisms of interinstitutional coordination, and the limited political will for promoting research as a development tool. The gap that is emerging between the region of Latin America and the Caribbean, on the one hand, and the rest of the world (with the exception of Africa), on the other, with respect to the importance assigned and the resources being allocated for research and technology development is a critical negative element as far as the outlook for the future is concerned.

In terms of the trends observed in the Region in relation to coverage of the population by components of the PHC strategy and to the overall health situation, the following stand out:

- Water and sanitation: moderate increase in coverage. There are major problems of access and quality, especially at the urban level, creating situations of serious risk, as witnessed by the cholera epidemic;

- Diseases covered by the EPI: coverage with vaccines against polio, DPT, and measles has increased, reaching levels above 90% in many of the countries;

- Care provided for pregnant women, deliveries, and nursing infants: the information does not permit any firm conclusions, since only isolated and partial figures are available in most of the countries, although it is clear that in a majority of them the coverage is far from satisfactory, and for some countries the most recent data show a reduction in coverage;

- Coverage with PHC: for this indicator the information is again insufficient to determine any trend for the Region;

- Mortality, birth rate, life expectancy: these indicators show improvements, although to a lesser extent than in previous periods;

- Nutritional status and low birthweight: although only a very few countries have regular systems of nutritional surveillance, isolated data from surveys and special studies in most of the countries reveal the persistence of high levels of undernutrition in children, as well as low birthweight, in the Region.

In summary, there must be concerted efforts over the next few years to establish and strengthen not only the mechanisms for monitoring and follow-up of the PHC and HFA/2000 strategy in the Region of the Americas but also the availability, coverage, and quality of the information. The current emphasis on the development of managerial and administrative schemes that are conducive to greater equity and efficiency in the utilization of resources should, in turn, stimulate consideration of the need to formulate and operationalize an information database for this purpose. Although some progress have been made, much remains to be done in the Region in this area, although the real degree of commitment that has been seen since the 1988 report does not leave much room for optimism in this regard.

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STATISTICAL TABLES

TABLE 1

Estimated and projected population and annual geometric growth rates, by subregion and country, 1985, 1990, 1995, and 2000.

Subregion and country	Population (thousands)				Annual growth rates (percent)		
	1985	1990	1995	2000	1985-1990	1990-1995	1995-2000
REGIONAL TOTAL	668,369	723,923	779,639	834,468	1.60	1.48	1.36
LATIN AMERICA	396,681	440,631	485,817	531,194	2.10	1.95	1.79
Andean Area	81,477	91,983	103,010	114,329	2.43	2.26	2.09
Bolivia	6,371	7,314	8,421	9,724	2.76	2.82	2.88
Colombia	28,713	31,819	34,939	37,998	2.05	1.87	1.68
Ecuador	9,378	10,782	12,314	13,939	2.79	2.66	2.48
Peru	19,698	22,332	25,123	27,952	2.51	2.36	2.13
Venezuela	17,317	19,736	22,213	24,716	2.61	2.37	2.14
Southern Cone	49,159	52,902	56,642	60,414	1.47	1.37	1.29
Argentina	30,331	32,322	34,264	36,238	1.27	1.17	1.12
Chile	12,121	13,173	14,237	15,272	1.66	1.55	1.40
Falkland Islands	2	2	2	2	0.0	0.0	0.0
Paraguay	3,693	4,277	4,893	5,538	2.93	2.69	2.48
Uruguay	3,012	3,128	3,246	3,364	0.76	0.74	0.71
Brazil	135,564	150,368	165,083	179,487	2.07	1.87	1.67
Central American Isthmus	25,370	29,073	33,306	37,892	2.72	2.72	2.58
Belize	163	182	201	221	2.19	2.02	1.85
Costa Rica	2,642	3,015	3,374	3,711	2.64	2.25	1.90
El Salvador	4,767	5,252	5,943	6,739	1.93	2.47	2.51
Guatemala	7,963	9,197	10,621	12,221	2.88	2.88	2.81
Honduras	4,383	5,138	5,968	6,846	3.18	3.00	2.74
Nicaragua	3,272	3,871	4,540	5,261	3.36	3.19	2.95
Panama	2,180	2,418	2,659	2,893	2.07	1.90	1.69
Mexico	79,376	88,598	97,967	107,233	2.20	2.01	1.81
Latin Caribbean	25,735	27,707	29,809	31,839	1.48	1.46	1.32
Cuba	9,946	10,324	10,788	11,189	0.75	0.88	0.73
Haiti	5,922	6,504	7,148	7,837	1.88	1.89	1.84
Puerto Rico	3,451	3,709	3,958	4,192	1.44	1.30	1.15
Dominican Republic	6,416	7,170	7,915	8,621	2.22	1.98	1.71
CARIBBEAN	6,964	7,468	7,985	8,504	1.40	1.34	1.26
Anguila	7	7	8	8	1.42	1.32	1.24
Antigua and Barbuda	81	86	93	99	1.39	1.37	1.32
Bahamas	242	260	278	297	1.41	1.34	1.33
Barbados	253	261	272	285	0.62	0.82	0.96
Cayman Islands	20	21	23	24	1.45	1.27	1.36
Dominica	76	81	87	93	1.32	1.33	1.38
French Guiana	82	92	102	112	2.25	2.06	1.87
Grenada	96	103	110	117	1.33	1.33	1.38
Guadeloupe	334	340	346	354	0.34	0.37	0.45
Guyana	953	1,040	1,119	1,197	1.74	1.46	1.34
Jamaica	2,336	2,521	2,706	2,886	1.52	1.41	1.29
Martinique	328	331	338	352	0.18	0.43	0.82
Netherlands Antilles	180	193	207	221	1.41	1.35	1.32
Turks and Caicos Islands	8	9	9	10	1.46	1.36	1.28
Virgin Islands (US)	105	113	121	129	1.40	1.36	1.32
Virgin Islands (UK)	13	14	15	16	1.36	1.41	1.32
Montserrat	12	13	14	15	1.47	1.22	1.43
St. Kitts and Nevis	46	50	53	57	1.41	1.32	1.34
St. Vincent and the Grenadines	104	111	118	127	1.33	1.34	1.36
Saint Lucia	128	136	146	156	1.32	1.34	1.37
Suriname	375	403	435	469	1.46	1.52	1.49
Trinidad and Tobago	1,185	1,283	1,385	1,480	1.59	1.53	1.32
NORTH AMERICA	264,724	275,824	285,837	294,770	0.82	0.71	0.62
Bermuda	56	58	60	62	0.70	0.70	0.70
Canada	25,379	26,525	27,567	28,508	0.88	0.77	0.67
United States	239,283	249,235	258,204	266,194	0.81	0.71	0.61
ST. Pierre and Miquelon	6	6	6	6	0.0	0.0	0.0

Source: United Nations. World Population Prospect: 1988. New York, 1989.

TABLE 2

Life expectancy at birth, by subregions and countries, 1950–2000.

Subregions, groups, and countries	Life expectancy at birth			Quinquennial increase		Life expectancy at birth	Population in 1990	
	1950–1955	1970–1975	1985–1990	1950–1955 to 1970–1975	1970–1975 to 1985–1990	Year 2000	Millions	Percentage
Latin America	51.8	61.2	66.6	2.4	1.8	69.7	438.0	100.0
1. Bolivia	40.4	46.7	53.1	1.6	2.1	60.5	7.3	
Haiti	37.6	48.5	54.7	2.7	2.1	59.4	6.5	
Total							13.8	3.2
2. Peru	43.9	55.5	61.4	2.9	2.0	67.9	22.3	
Guatemala	42.1	54.0	62.0	3.0	2.7	68.1	9.2	
El Salvador	45.3	58.8	62.2	3.4	1.1	68.8	5.3	
Nicaragua	42.3	54.7	63.3	3.1	2.9	69.3	3.9	
Honduras	42.3	54.0	64.0	2.9	3.3	68.2	5.1	
Total							45.8	10.5
3. Brazil	51.0	59.8	64.9	2.2	1.7	68.0	150.4	
Ecuador	48.4	58.9	65.4	2.6	2.2	68.2	10.6	
Dominican Republic	46.0	59.9	65.9	3.5	2.0	69.7	7.2	
Paraguay	62.6	65.6	66.9	0.7	0.4	67.9	4.3	
Colombia	50.6	61.6	68.2	2.8	2.2	70.7	33.0	
Mexico	50.8	62.6	68.9	3.0	2.1	72.1	88.6	
Venezuela	55.2	66.2	69.7	2.8	1.1	71.3	19.7	
Total							313.8	71.6
4. Argentina	62.7	67.3	70.6	1.1	1.1	72.3	32.3	
Chile	53.8	63.6	71.5	2.5	2.6	72.7	13.2	
Uruguay	66.3	68.8	72.0	0.6	1.1	73.0	3.1	
Panama	55.3	66.3	72.1	2.8	1.9	73.5	2.4	
Total							51.0	11.6
5. Costa Rica	57.3	68.1	74.7	2.7	2.2	75.8	3.0	
Cuba	59.5	71.0	75.2	2.9	1.4	76.3	10.6	
Total							13.6	3.1
Non-Latin Caribbean	56.4	67.1	72.4	2.7	1.8	74.7	6.2	100.0
1. Suriname	56.0	64.9	69.5	2.2	1.5	72.6	0.4	
Guyana	55.2	64.1	69.7	2.2	1.9	72.8	1.0	
Trinidad and Tobago	57.9	66.5	70.2	2.2	1.2	73.1	1.3	
Total							2.7	44.1
2. Guadeloupe	56.5	67.8	73.3	2.8	1.8	75.7	0.3	
Barbados	57.2	69.4	73.9	3.1	1.5	76.2	0.3	
Jamaica	57.2	67.8	74.0	2.6	2.1	76.2	2.5	
Martinique	56.5	68.8	74.2	3.1	1.8	76.4	0.3	
Total							3.5	55.9
North America	69.1	72.2	76.1	0.8	1.3	78.1	275.7	100.0
United States of America	69.0	71.3	75.4	0.6	1.4	77.6	249.2	
Canada	69.1	73.1	76.7	1.0	1.2	78.5	26.5	

Source: CELADE, 1990, and United Nations, 1989.

TABLE 3

Infant mortality rates in 1950–1955, 1970–1975, 1985–1990, and projections for the year 2000, and births in 1985–1990, by subregions and countries listed according to mortality level.

Countries	Mortality rate (per 1,000)			Five-yearly decrease		Rate year 2000	Births 1985–1990 (1,000s)
	1950–1955	1970–1975	1985–1990	1950–1970	1970–1985		
Latin America	127	82	55	11.2	8.9	41	12,077
Bolivia	176	151	110	6.1	13.8	69	293
Haiti	220	135	97	21.2	12.8	72	213
Peru	159	110	88	12.1	7.4	63	721
Total							1,227
Honduras	196	101	68	23.8	10.7	49	189
Nicaragua	167	100	67	16.8	11.0	42	149
Dominican Republic	149	94	65	14.0	9.5	46	213
Total							551
Brazil	135	91	63	11.1	9.1	48	4,086
Ecuador	140	95	63	11.1	10.5	49	328
El Salvador	151	99	60	13.0	13.0	36	182
Guatemala	140	95	59	11.4	12.1	37	350
Total							4,946
Paraguay	73	55	49	4.7	2.0	44	139
Mexico	114	71	43	10.7	9.4	28	2,438
Colombia	123	73	40	12.5	11.1	33	861
Venezuela	106	49	36	14.4	4.2	30	569
Total							4,007
Uruguay	57	46	24	2.8	7.3	16	54
Panama	93	43	23	12.6	6.7	19	61
Argentina	66	49	22	4.2	9.0	17	669
Chile	126	70	18	14.1	17.3	15	301
Costa Rica	94	52	17	10.3	12.5	11	80
Cuba	81	38	13	10.5	7.7	10	181
Total							1,346
Non-Latin Caribbean	83	40	21	10.8	6.3	15	146
Guyana	93	56	30	9.2	8.7	21	25
Suriname	89	49	30	10.0	6.3	21	10
Total							35
Trinidad and Tobago	79	30	20	12.2	3.3	14	30
Jamaica	85	36	18	12.2	6.0	14	63
Martinique	65	35	13	7.5	7.3	10	6
Guadeloupe	68	42	12	6.5	10.0	8	7
Barbados	61[a]	27	11	—	−7.3	8	5
Total							111
North America	29	18	10	2.8	2.7	7	4,052
United States of America	28	18	10	2.5	2.7	7	3,687
Canada	36	16	7	5.0	2.3	7	365

[a]1955–1960.

Sources: CELADE, 1989, and United Nations, 1989.

TABLE 4

Total fertility rate, by country.

Country	1950–1955	1980–1985	1985–1990	1990–1995	1995–2000
Latin America	5.9	4.0	3.6	3.3	3.1
Argentina	3.2	3.2	3.0	2.8	2.7
Bolivia	6.8	6.3	6.1	5.8	5.5
Brazil	6.2	3.8	3.5	3.2	2.9
Chile	5.1	2.8	2.7	2.7	2.6
Colombia	6.8	3.5	3.1	2.9	2.8
Costa Rica	6.7	3.5	3.3	3.0	2.8
Cuba	4.1	1.9	1.8	1.9	2.0
Dominican Republic	7.4	4.2	3.8	3.3	3.0
Ecuador	6.9	4.8	4.3	3.9	3.5
El Salvador	6.5	5.2	4.9	4.5	4.2
Guatemala	7.1	6.1	5.8	5.4	4.9
Haiti	6.2	5.1	4.7	4.4	4.1
Honduras	7.1	6.2	5.6	4.9	4.3
Mexico	6.8	4.2	3.6	3.1	2.8
Nicaragua	7.3	5.9	5.5	5.0	4.5
Panama	5.7	3.5	3.1	2.9	2.7
Paraguay	6.8	4.8	4.6	4.3	4.1
Peru	6.9	5.0	4.5	4.0	3.5
Uruguay	2.7	2.6	2.4	2.3	2.3
Venezuela	6.5	4.1	3.8	3.5	3.2
Caribbean[a]	5.2	3.1	2.9	2.8	2.6
Barbados	4.7	1.9	2.0	2.0	2.1
Guadeloupe	5.6	2.6	2.2	2.1	2.1
Jamaica	4.2	3.4	2.9	2.5	2.2
Martinique	5.7	2.1	2.1	2.1	2.1
Puerto Rico	5.0	2.6	2.4	2.3	2.2
Trinidad and Tobago	5.3	2.9	2.7	2.5	2.3
North America[b]	3.5	1.8	1.8	1.8	1.9
Canada	3.7	1.7	1.7	1.7	1.7
United States of America	3.5	1.8	1.8	1.9	1.9

[a]Includes Anguilla, Antigua and Barbuda, Bahamas, Cayman Islands, Dominica, Grenada, Montserrat, Netherlands Antilles, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Turks and Caicos Islands, Virgin Islands (UK), and Virgin Islands (USA).

[b]Includes Bermuda, Greenland, and San Pedro and Miguelón.

Source: CELADE, 1990, and United Nations, 1989.

TABLE 5

Coverage of drinking water supply and sanitation in 25 countries of the Americas, up to December 1988. (Population in thousands.)

				Drinking water supply							
				Total population served				Urban population served			
Country	Total population	Urban population	Rural population	With connection	With easy access	Total	% of country's population	With connection	With easy access	Total	% of urban population
Argentina	31,074	26,219	4,855	18,208	1,763	19,971	64.27	18,208	944	19,152	73.05
Bahamas	241	136	105	126	114	240	99.59	126	9	135	99.26
Barbados	253	89	164	87	165	252	99.60	87	2	89	100.00
Belize	175	90	85	70	65	135	77.14	70	5	75	83.33
Bolivia	6,928	3,471	3,457	2,311	898	3,209	46.32	2,311	374	2,685	77.36
Brazil	144,426	106,587	37,839	96,577	42,252	138,829	96.12	96,577	9,832	106,409	99.83
Chile	12,748	10,497	2,251	10,287	672	10,959	85.97	10,287	210	10,497	100.00
Colombia	31,200	22,100	9,100	14,500	12,800	27,300	87.50	14,500	4,900	19,400	87.78
Costa Rica	2,866	1,719	1,147	1,685	997	2,682	93.58	1,685	34	1,719	100.00
Dominican Republic	6,866	4,038	2,828	1,913	1,624	3,537	51.51	1,913	820	2,733	67.68
Ecuador	10,203	5,529	4,674	3,963	1,918	5,881	57.64	3,963	190	4,153	75.11
El Salvador	5,032	2,349	2,683	1,672	379	2,051	40.76	1,672	110	1,782	75.86
Guatemala	8,681	3,287	5,394	2,393	2,830	5,223	60.17	2,393	608	3,001	91.30
Guyana	756	246	510	196	413	609	80.56	196	34	230	93.50
Haiti	5,562	1,581	3,981	474	1,851	2,325	41.80	474	403	877	55.47
Honduras	4,625	1,947	2,678	1,600	1,747	3,347	72.37	1,600	140	1,740	89.37
Mexico	89,500	63,500	26,000	47,000	14,498	61,498	68.71	47,000	3,928	50,928	80.20
Nicaragua	3,622	2,109	1,513	1,436	492	1,928	53.23	1,436	206	1,642	77.86
Panama	2,282	1,111	1,171	1,063	823	1,886	82.65	1,063	48	1,111	100.00
Paraguay	3,900	1,733	2,167	866	420	1,286	32.97	866	260	1,126	64.97
Peru	21,256	13,890	7,366	8,679	3,743	12,422	58.44	8,679	2,100	10,779	77.60
Suriname	395	296	99	2	282	284	71.90	2	229	231	78.04
Trinidad and Tobago	1,230	840	390	730	450	1,180	95.93	730	110	840	100.00
Uruguay	2,990	2,607	384	2,387	152	2,539	84.92	2,387	132	2,519	96.62
Venezuela	18,757	15,604	3,153	12,142	4,614	16,756	89.33	12,142	1,814	13,956	89.44
Total	415,568	291,575	123,994	230,367	95,962	326,329	78.53	230,367	27,442	257,809	88.42

[a]Insufficient data.

TABLE 5 (cont.)

Coverage of drinking water supply and sanitation in 25 countries of the Americas, up to December 1988. (Population in thousands.)

Sewerage and excreta disposal											
Rural population served		Total population served				Urban population served				Rural population served	
Total	% of rural population	With connection	Other	Total	% of country's population	With connection	Other	Total	% of urban population	Total	% of rural population
819	16.87	10,261	17,379	27,640	88.95	10,261	15,958	26,219	100.00	1,421	29.27
105	100.00	22[a]	114[a]	136[a]	56.43[a]	22	114	136	100.00	0[a]	0.00[a]
163	99.39	18[a]	24[a]	42[a]	16.60[a]	18	24	42	47.19	0[a]	0.00[a]
60	70.59	20	107	127	72.57	20	55	75	83.33	52	61.18
524	15.16	1,394	960	2,354	33.98	1,394	520	1,914	55.14	440	12.73
32,420	85.68	45,000	68,155	113,155	78.35	45,000	49,896	94,896	89.03	18,259	48.25
462	20.52	8,654	1,983	10,637	83.44	8,654	1,843	10,497	100.00	140	6.22
7,900	86.81	12,000	8,300	20,300	65.06	12,000	6,700	18,700	84.62	1,600	17.58
963	83.96	722	2,063	2,785	97.17	722	997	1,719	100.00	1,066	92.94
804	28.43	882	3,220	4,102	59.74	882	2,209	3,091	76.55	1,011	35.75
1,728	36.97	3,441	2,317	5,758	56.43	3,441	719	4,160	75.24	1,598	34.19
269	10.03	1,339	1,706	3,045	60.51	1,339	671	2,010	85.57	1,035	38.58
2,222	41.19	1,617	3,325	4,942	56.93	1,617	741	2,358	71.74	2,584	47.91
379	74.31	70	577	647	85.58	70	138	208	84.55	439	86.08
1,448	36.37	0	1,228	1,228	22.08	0	650	650	41.11	578	14.52
1,607	60.01	1,178	1,709	2,887	62.42	1,178	539	1,717	88.19	1,170	43.69
10,570	40.65	33,518	6,917	40,435	45.18	33,518	4,689	38,207	60.17	2,228	8.57
286	18.90	685[a]	0[a]	685[a]	18.91[a]	685	...	685[a]	32.48[a]	0[a]	0.00[a]
775	66.18	805	1,104	1,909	83.65	805	305	1,110	99.91	799	68.23
160	7.38	437	1,810	2,247	57.62	437	510	947	54.65	1,300	59.99
1,643	22.31	7,640	1,223[a]	8,863[a]	41.70[a]	7,640	...	7,640[a]	55.00[a]	1,223	16.60
53	53.54	9	212	221	55.95	9	178	187	63.18	34	34.34
340	87.18	250	970	1,220	99.19	250	590	840	100.00	380	97.44
20	5.21	1,436	370	1,806	60.40	1,436	119	1,555	59.65	251	65.36
2,800	88.80	10,611	6,719	17,330	92.39	10,611	4,509	15,120	96.90	2,210	70.09
68,520	55.26	142,009	132,492	274,501	66.05	142,009	92,674	234,683	80.49	39,818	32.11

TABLE 6

1. VACCINE COVERAGE IN THE REGION OF THE AMERICAS, 1989-1990

REGION & COUNTRY	POPULATION (less than 1 year)		OPV3 %		DPT3 %		MEASLES %		BCG %	
	89	90	89	90	89	90	89	90	89	90
ANDEAN REGION	**2,456,562**	**2,363,278**	**69**	**76**	**60**	**71**	**55**	**67**	**72**	**79**
Bolivia	261,582	221,956	49	50	39	41	47	53	28	48
Colombia	669,809	685,108	90	93	78	87	64	82	94	95
Ecuador	316,622	320,852	64	67	55	68	57	61	91	88
Peru	670,000	600,904	60	73	58	72	52	64	62	83
Venezuela	538,549	534,458	67	72	55	63	50	62	68	63
BRAZIL*	**4,307,582**	**3,610,961**	**97**	**93**	**54**	**81**	**58**	**78**	**70**	**78**
CENTRAL AMERICA	**989,404**	**1,016,513**	**71**	**80**	**65**	**74**	**69**	**78**	**59**	**70**
Belize	6,701	7,200	71	80	71	84	68	81	87	80
Costa Rica	82,451	82,500	87	95	87	95	78	90	90	92
El Salvador	182,173	186,267	64	76	64	76	73	75	63	60
Guatemala	339,385	349,847	58	74	50	66	54	68	21	62
Honduras	174,262	180,721	86	87	85	84	94	90	80	71
Nicaragua	143,200	148,085	85	86	66	65	63	82	92	81
Panama	61,232	61,893	72	86	70	86	73	99	87	97
SOUTHERN CONE	**1,144,876**	**1,090,660**	**83**	**90**	**82**	**88**	**85**	**92**	**88**	**98**
Argentina	677,398	602,288	86	89	80	85	89	95	92	99
Chile	279,150	293,556	95	99	95	99	91	98	95	97
Paraguay *	134,928	138,802	41	76	61	78	53	69	53	90
Uruguay	53,400	56,014	88	88	88	88	82	82	99	99
LATIN CARIBBEAN	**606,619**	**616,560**	**71**	**74**	**61**	**67**	**56**	**73**	**57**	**79**
Cuba *	187,529	186,658	95	94	95	92	97	94	97	98
Haiti	201,707	207,637	50	40	50	41	31	31	40	72
Dominican Rep.*	217,383	222,265	70	90	43	69	43	96	38	68
MEXICO	**2,579,200**	**1,970,515**	**96**	**96**	**65**	**66**	**85**	**78**	**80**	**70**
LATIN AMERICA	**12,084,243**	**10,668,487**	**86**	**87**	**62**	**75**	**66**	**77**	**73**	**78**
ENGLISH CARIBBEAN	**131,672**	**134,637**	**82**	**86**	**82**	**86**	**72**	**75**	**61**	**62**
Anguilla	157	200	99	99	99	99	92	99	99	99
Antigua	1,088	1,114	99	99	99	99	95	89	-	-
Bahamas	5,641	6,013	82	82	86	86	87	87	-	-
Barbados	4,032	4,040	80	90	78	91	85	87	-	-
Cayman Islands	378	434	93	99	93	99	89	89	81	81
Dominica	1,715	1,745	94	94	92	94	88	88	99	99
Grenada	2,613	2,650	86	69	87	80	89	85	-	-
Guyana	17,658	18,500	79	79	77	83	69	73	76	85
Jamaica	57,487	59,104	84	87	85	86	71	74	99	98
Montserrat	199	154	93	99	93	99	89	99	60	99
St. Kitts & Nevis	924	980	99	99	99	99	90	99	...	...
St. Lucia	3,530	4,380	93	90	92	89	91	82	99	94
St. Vincent	2,482	2,505	97	92	98	98	99	96	99	99
Suriname	10,000	9,000	71	81	72	83	73	65	-	-
Trinidad & Tobago	23,280	23,280	77	87	77	82	59	70	-	-
Turks & Caicos Isl.	250	300	89	98	89	97	76	81	99	99
British Virgin Isl.	238	238	97	99	99	99	87	99	99	99
NORTH AMERICA	**3,998,895**	**4,009,883**	--	--	--	--	--	--	--	--
Bermuda	895	883	76	62	74	62	67	63	-	-
Canada	358,000	362,000	...	...	...	...	...	...	...	...
USA	3,640,000	3,647,000	...	...	...	...	...	...	...	...
TOTAL**	16,214,810	14,813,007	86	87	62	76	66	77	73	78

\- Vaccine not in use
... No data available
Source: PAHO (Provisional data)

* Coverage calculated with two doses of OPV
** TOTAL coverage does not include North America

TABLE 7. SOME PHC INDICATORS REPORTED

	Infant Mortality Rate		Life Expectancy at Birth			Maternal Mortality Rate (Per 10.000 Live Births)		% Newborns with Weight Less than 2.500 g	
	Year	Value	Year	M	F	Year	Value	Year	Value
ANGUILLA	1988	38	88	71,0	74,0		w/i	1988	6,9
ANTIGUA	1990	20	90	--72,0--			w/i	1990	5,2
ARGENTINA	1989	23	85-90	70,6	74,0	1987	4,9		w/i
BAHAMAS	1988	21	w/i	w/i	w/i	88-9	3,7	1989	7,8
BARBADOS	1988	19	88	70,2	75,2		w/i	1988	16,0
BELIZE	1989	19	90	69,9	71,8	1989	3,6	1989	2,7
BOLIVIA	79-89	96		w/i	w/i	1988	24,7	1988	9,3
BRAZIL	1987	51		w/i	w/i		w/i	1989	11,5
BR. VIRGIN ISL.	1990	9	90	67,2	75,6	1990	0	1990	8,0
CANADA	1988	7	85-87	73,0	79,7	1988	0,5	1988	6,0
CAYMAN ISL.	1990	7	90	--74,5--		1990	0,8	1990	8,7
CHILE	1989	17	85-90	--71,5--		w/i	4,1	1989	7,1
COLOMBIA	1989	38	89	65,9	71,7	1989	4,0	1988	12,8
COSTA RICA	1989	14	85-90	--74,7--		1989	3,0	w/i	6,2
CUBA	1990	11	85-90	73,5	77,1	1989	2,9	1989	7,3
DOMINICA	1988	18	90	--76,0--		1990	0,0	1988	10,0
DOMINICAN REP.	1990	65	85-90	63,9	68,1	1990	9,0	1989	13,7
ECUADOR	1988	45	85-90	63,4	67,61	1988	15,6		w/i
EL SALVADOR	1986	58	85-90	58,0	66,0	1989	12,7	w/i	
GUATEMALA		w/i		w/i	w/i		w/i		w/i
GRENADA	1988	24	90	--71,5--			w/i	1988	9,2
GUYANA	1986	49	w/i	65,8	70,8		w/i	1986	12,0
HAITI	1988	103	w/i	54,9	58,4	1989	23,0	w/i	10
HONDURAS	1988	56		w/i	w/i	1990	22,1	1988	8,7
JAMAICA		w/i	89	--70,8--			w/i	1988	11,1
MEXICO	1987	31	90	66,3	72,7	1987	5,6	1989	5,0
MONTSERRAT	1988	24	88	63,5	69,8		w/i	1988	9,2
NICARAGUA	1990	72	85-90	--63,3--		w/i	w/i	1986	12,0
PANAMA	1988	23	w/i	70,4	74,5	w/i	6,0	w/i	8,1
PARAGUAY	1990	47	90	65,2	69,5	1990	27,0	1990	5,2
PERU	1989	88	89	--62,7--		1989	24,0	w/i	7,5
ST. CRISTOPHER		w/i	88	--67,0--			w/i	1988	11,3
ST. LUCIA	1988	15	88	67,9	73,7	1988	0	1988	9,0
ST. VINCENT AND THE GRENADINES	1990	22	90	66,9	72,2	1990	0,6	1988	1,0
SURINAME	1988	25		w/i	w/i	1987	3,1		w/i
TRINIDAD & TOBAGO	1989	15	90	--71,6--		1987	5,4		w/i
UNITED STATES	1988	10		w/i	w/i	1989	0,7		w/i
URUGUAY	1989	21	85-90	67,8	74,4	1989	2,5	1986	7,6
VENEZUELA	1988	23	88	70,0	75,4	1988	6,0		w/i

TABLE 8. DEMOGRAPHIC INDICATORS REPORTED

	Population			Crude Death Rate		Crude Birth Rate		Total Fertility Rate		% Women Using Contraceptives	
	Year	Number in Thousands	% Rural	Year	Value	Year	Value	Year	Value	Year	Value
ANGUILLA	1988	7	w/i		w/i		w/i		w/i		w/i
ANTIGUA	1988	79	w/i								
ARGENTINA	1990	w/i	14	85-90	8,6	85-90	21,4		w/i		w/i
BAHAMAS	1990	254	w/i	1988	5,4	1988	20,2		w/i		w/i
BARBADOS	1991	257	10		w/i		w/i	1985-90	1,8	1990	w/i
BELIZE	1990	184	13		w/i		w/i	1989	5,2	1989	10
BOLIVIA	1988	6.400	49		w/i		w/i	1989	5,0	1990	12
BRAZIL	1988	144.400	26		w/i		w/i		w/i	1986	43
BR. VIRGIN ISL.	1991	12	72		w/i		w/i		w/i		w/i
CANADA	1990	26.600	w/i		w/i		w/i		w/i		w/i
CAYMAN ISL.	1991	27	w/i		w/i		w/i	1985-90	3,4		w/i
CHILE	1990	13.200	18	1989	5,8	1989	23,4		w/i	w/i	w/i
COLOMBIA	1989	32.300	35	85-90	6,1	89-90	27,4	1990	3,1	1990	40
COSTA RICA	1990	3.015	54	1989	3,8	1989	28,5		w/i	w/i	w/i
CUBA	1989	10,500	27	1989	6,4	1989	17,6		w/i	1987	78
DOMINICA	1991	81	67		w/i		w/i		w/i	1988	54
DOMINICAN REP.		w/i	w/i	85-90	6,8	85-90	31,3	85-90	3,6	w/i	w/i
ECUADOR	1988	10.200	w/i		w/i		w/i		w/i	1988	32
EL SALVADOR	1991	5.400	57		w/i	1990	36,3	1990	4,5	w/i	w/i
GUATEMALA		w/i	w/i		w/i		w/i		w/i		w/i
GRENADA	1988	108	w/i		w/i		w/i	1985-90	3,5	1990	54
GUYANA		w/i	w/i		w/i		w/i		w/i		w/i
HAITI	1989	5.750	85	1989	13	1989	36	1989	5,7	1988	11
HONDURAS	1989	4.950	w/i		w/i	1987	38,0		w/i	1989	2
JAMAICA		w/i	w/i		w/i		w/i		w/i		w/i
MEXICO	1990	81.150	33	1987	5,0	1987	34	1986	3,8	w/i	w/i
MONTSERRAT	1991	12	w/i		w/i		w/i	1985-90	2,3	1985	50
NICARAGUA	1990	3.871	43	85-90	7,9	85-90	42		w/i		w/i
PANAMA	1990	2.400	47		w/i		w/i		w/i	1990	58
PARAGUAY	1991	4.397	58		w/i		w/i		w/i	1990	44
PERU	1989	21.500	w/i	1989	9,4	1990	32,9		w/i	85-90	8
ST. CRISTOPHER	1991	44	w/i		w/i		w/i	1985-90	3,0	1988	41
ST. LUCIA	1991	148	w/i		w/i		w/i	1985-90	3,6	1985	43
ST. VINCENT & THE GRENADINES	1991	114	51		w/i		w/i	1985-90	3,8	1990	61
SURINAME	w/i	400	10		w/i		w/i		w/i	1990	55
TRINIDAD & TOBAGO	1990	1.300	30		6.1		w/i	1990	2,8	1987	53
UNITED STATES		w/i	w/i		w/i	1988	15,9		w/i	1988	60
URUGUAY	1989	3.050	w/i		w/i	1989	18,1		w/i	w/i	w/i
VENEZUELA	1989	19.250	16	1988	4,4	1989	27,5	1989	3,3	1989	14

TABLE 9. COVERAGE AND RESOURCES (REPORTED DATA)

	Pregnant Women Attended %													
	With tet-tox		During Pregnancy		During Delivery		Infant Attended %		Physicians		Nursing Personnel		Hospital Beds	
	Year	Value	Year	Value	Year	Value	Year	Value	Year	Number	Year	Number	Year	Number
ANGUILA		w/i	90	100	90	100	90	100		w/i		w/i		w/i
ANTIGUA		w/i	90	100	90	100	90	100		w/i		w/i		w/i
ARGENTINA		w/i	88	96	87	95		w/i	85	90.000	88	64.000	85	147.000
BAHAMAS	89	62	89	99	89	99	w/i	90		330	90	630X	90	1.100
BARBADOS		w/i	90	100	90	100	90	100		w/i		w/i		w/i
BELICE	89	39	89	92	89	83	89	95	90	120	90	300	90	390
BOLIVIA	90	60	89	38	89	29	89	29	89	3.700	89	4.000X	91	9.500
BRAZIL	90	63	90	65		w/i		w/i	88	170.000	88	161.000	87	500.000
BRITISH VIRGIN ISLANDS		w/i	90	100	90	100	90	100		w/i		w/i	w/i	w/i
CANADA		w/i	90	100	90	100	90	100	88	57.400	88	269.000	89	183.000
CAYMAN ISLANDS	90	95	88	89	88	100	88	100		w/i		w/i		w/i
CHILE		w/i		w/i	89	99	89	81	90	14.200		w/i	89	40.900
COLOMBIA	89	27	89	59	89	59	89	100	89	29.700		w/i	89	42.900
COSTA RICA	90	7	89	91	89	94	86	91	91	3.100	91	8.400		w/i
CUBA	89	95	89	100	89	100	89	100	90	39.000	90	65.000	90	57.600
DOMINICAN REPUBLIC		w/i	100	90	90	100	90	100		w/i		w/i		w/i
ECUADOR		w/i	88	47	88	26	88	65	88	10.900	88	15.300		w/i
EL SALVADOR	90	40		w/i		w/i		w/i		w/i		w/i		w/i
GUATEMALA	w/i	12	w/i	34	w/i	23		w/i		w/i		w/i	89	7.500(x)
HAITI	89	75	88	43	88	20	w/i	89		943	89	2.00		w/i
GRENADA		w/i	90	100	90	100	90	100		w/i		w/i		w/i
GUYANA	w/i	47	w/i	95	w/i	98	w/i	98		w/i		w/i		w/i
HONDURAS	89	20	89	77	89	63		w/i		w/i		w/i	90	4.000(x)
JAMAICA		w/i	90	67	89	79	90	70		w/i		w/i	89	5.700(x)
MEXICO	89	39	89	50	89	45	89	68	90	85.000(x)	90	29.000(x)	90	49.000(x)
NICARAGUA		w/i	90	87	90	42	89	97		w/i		w/i		w/i
MONTSERRAT		w/i	90	100	90	100	90	100		w/i		w/i		w/i
PANAMA		w/i	90	82	90	85	90	80	89	2.800	89	5.900		w/i
PARAGUAY	90	69	90	60	90	60	90	64	90	3.000	90	3.000	89	5.400
PERU	90	3		w/i		w/i		w/i	90	23.000	90	18.000	90	32.400
DOMINICAN REP.		w/i	90	43	90	44	90	w/i	w/i	w/i	w/i	w/i	w/i	w/i
ST. CHRISTOPHER		S/I	90	100	90	100	90	100	w/i	w/i	w/i	w/i	w/i	w/i
SAINT LUCIA		w/i	90	100	90	100	90	100		w/i	w/i	w/i	w/i	w/i
SAN VINCENT AND THE GRENADINES		w/i	90	100	90	100	90	100	w/i	w/i	w/i	w/i	w/i	w/i
SURINAME		w/i	89	91	89	90		w/i	89	320	89	1.340	90	1.900
TRINIDAD AND TOBAGO	w/i	w/i	88	98	98	w/i	w/i			w/i		w/i	w/i	w/i
UNITED STATES OF AMERICA	89	85	88	98	88	99	88	100	89	600.000	89	1.600.000		w/i
URUGUAY		w/i		w/i	89	100		w/i		si		w/i	w/i	w/i
VENEZUELA		w/i		w/i	89	82		w/i	88	30.500	88	54.400	90	51.600

(x) Only public sector.

TABLE 10. SELECTED SOCIECONOMIC INDICATORS

	GNP Per Capita 1990	GDP Per Capita Growth 1988-90	External Debt as % of GNP 1989	Cons. Price Index 1990	Illiteracy 15 years and + 1990 T	M	F	% Central Gvmt. Expend. on Health 1989	Human Development Index 1990	Aver. Annual Growth Rate Gross Domestic Investment (%) 1980-1989
ANGUILA	w/i	w/i	w/i	w/i		w/i		w/i	w/i	w/i
ANTIGUA	3,690	w/i	w/i					w/i	0.832	w/i
ARGENTINA	2,260	-9.1	94	1,853	4.7	4.5	4.9	2.0	0.854	-7.8
BAHAMAS	11,370(1)	+9.8	n/a	6(1)	4.8	5.2	4.4	w/i	w/i	w/i
BARBADOS	6,370(1)	7.5	w/i	w/i	2	2	2	w/i	0.945	w/i
BELICE	1,720(1)	24.2(2)	42	w/i	5	w/i	w/i	w/i	0.700	w/i
BOLIVIA	620(1)	8.4	99	18	22.5	15.3	29.5	6.6	0.416	-11.6
BRAZIL	2,340(1)	0.0	39	2,360	22.2	20.9	23.4	6.1	0.759	0.7
CANADA	19,020(1)	25.0(2)	n/a	5(1)	w/i	w/i	w/i	5.5	0.983	5.6
CHILE	1,890	20.0	79	29	6.6	6.5	6.8	5.9	0.878	2.7
COLOMBIA	1,200	11.0	44	31	13.3	12.5	14.1	w/i	0.757	0.3
COSTA RICA	1,940	12.8	92	22	7.2	7.4	6.9	27.2	0.876	4.9
CUBA		w/i	w/i	w/i	6.0	5.0	7.0	w/i	0.754	w/i
DOMINICAN REPUBLIC	1,680		w/i	w/i	6	6	6	w/i	0.800	w/i
ECUADOR	1,010	16.8	107	48	14.2	12.2	16.2	9.8	0.655	-3.2
EL SALVADOR	1,090	5.7	34	20	27.0	23.8	30.0	7.4	0.524	2.7
GUATEMALA	910	11.2	32	50	44.9	36.9	52.9	w/i	0.488	-2.4
HAITI	360(1)	-1.7	35	13	47.0	40.9	52.6	w/i	0.296	-3.8
GRENADA	1,900(1)	72.0(2)	w/i	w/i	4	2	6	w/i	0.751	w/i
GUYANA	340	-9.4	63	w/i	3.6	2.5	4.6	w/i	0.589	w/i
HONDURAS	900(1)	-6.2	75	25	26.9	24.5	29.4	w/i	0.492	-0.5
JAMAICA	1,260(1)	9.6	143	17(1)	1.6	1.8	1.4	w/i	0.761	3.7
CAYMAN ISLAND			w/i	w/i	2.0	w/i	w/i	w/i	w/i	w/i
BRITISH VIRGIN ISLAND	w/i	w/i	w/i			w/i	w/i	w/i	w/i	w/i
MEXICO	w/i	6.9	60	30	12.7	10.5	14.9	1.7	0.838	-5.0
NICARAGUA	w/i	-22.3	w/i	8,500	20	w/i	w/i	w/i	0.612	w/i
MONTSERRAT	w/i	w/i	w/i			w/i	w/i	w/i	w/i	w/i
PANAMA	1,830	-15.8	139	1	11.9	11.9	11.8	19.8	0.796	-15.6
PARAGUAY	1,150	6.7	58	43	10	8	12	w/i	0.667	w*i
PERU	1,090	-22.1	93	8,300	14.9	8.5	21.3	5.5	0.644	-4.5
DOMINICAN REP.	790(1)	5.3(2)	74	45	20.0	18.0	21.4	w/i	0.622	5.4
ST. CHRISTOPHER		w/i	w/i	w/i	10	10	10	w/i	w/i	w/i
SAINT LUCIA	1,810(1)	w/w	w/i	w/i	18	18	18	w/i	0.699	w/i
SAN VINCENT AND THE GRENADINES	1,360(1)	w/i	w/i	w/i				w/i	0.636	w/i
SURINAME	3,020(1)	w/i	n/a	w/i	5.1	4.9	5.3	w/i	0.792	w/i
TRINIDAD AND TOBAGO	3,230(1)	-7.0	49	11	5.1	3.5	6.6	w/i	0.876	7.7
UNITED STATES OF AMERICA	21,000(1)	13.1(2)	n/a	5(1)	0.5	w/i	w/i	12.9	0.976	4.7
URUGUAY	2,620(1)	2.0	47	130	3.8	3.4	4.1	4.5	0.905	-7.9
VENEZUELA	2,420	3.0	70	32	11.9	13.3	10.4	w/i	0.848	-3.8

1 1989
2 1988/89
N/a: Not aplicable
w/i: Without information

Sources:
a) GNP, external debt, gross domestic investment: ECLAC, World Bank
b) GDP per capita growth, CPJ: ECLAC, World Bank
c) Illiteracy: UNESCO
d) Human Development Index: UNDP
e) Central Government Exp. on Health: IMF