



Charting a Future for Health in the Americas

Quadrennial Report of the Director



Assessing the Population's Health	12
Enhancing Health and Human Development	32
Preventing and Controlling Diseases	46
Promoting and Protecting Health	80
Protecting and Developing the Environment	102
Supporting Health Systems and Services Development	120
Partnering for Health	140
Administering Resources	158

The Pan American Health Organization

When the American republics founded the Pan American Health Organization in 1902, they reified a collective hemispheric vision that, together, they could improve health throughout the Region. Over the century—across an arc of time and space punctuated by world wars, economic crises, and political upheavals—a Pan American commitment to enhance the well-being of individuals, families, communities, and nations has sustained the Organization.

In celebrating its 100th anniversary, the Pan American Health Organization—already the oldest international public health entity in the world—joins a select group of institutions that have stood the test of time. With its centenarian counterparts, PAHO shares two strengths: a bedrock foundation and an uncommon ability to negotiate dramatic environmental changes. Those strengths, in turn, have enabled the Organization to pursue its primary purpose: service to the countries of the Americas to better the health of their peoples.

Charting a Future for Health in the Americas describes the work of the Pan American Health Organization in recent years. The report opens with a disquisition on the significance of its title—how PAHO has had, and will continue to need, to chart and steer a steady course, dealing with and even capitalizing on changes along the way, in order to reach its goal: health in the Americas. With pointillistic highlights of the Organization's century-long work in its major fields of responsibility, the report brings the accounting of its actions to the present. It describes the resources PAHO has employed and the impact its cooperation with member countries has had on assessing the regional health situation, enhancing health and human development, preventing and controlling diseases, promoting health, protecting the environment, and strengthening health systems and services. Moreover, because of the stature it has attained, the Organization has been able to strike alliances with other international agencies, nongovernmental organizations, and the private sector—and the story of their shared agenda is recounted here.

This, then, is the latest in a series of reports of progress in public health throughout the Americas and, at the same time, of the work of an organization built to last.



PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau, Regional Office of the
WORLD HEALTH ORGANIZATION

www.paho.org

The Pan American Health Organization

The Pan American Health Organization comprises its governing bodies—the **Pan American Sanitary Conference**, the **Directing Council**, and the **Executive Committee**—and the **Pan American Sanitary Bureau** and serves the countries of the Americas.

Member Governments

Antigua and Barbuda	Guyana
Argentina	Haiti
Bahamas	Honduras
Barbados	Jamaica
Belize	Mexico
Bolivia	Nicaragua
Brazil	Panama
Canada	Paraguay
Chile	Peru
Colombia	Saint Kitts and Nevis
Costa Rica	Saint Lucia
Cuba	Saint Vincent and the Grenadines
Dominica	Suriname
Dominican Republic	Trinidad and Tobago
Ecuador	United States of America
El Salvador	Uruguay
Grenada	Venezuela
Guatemala	

Associate Member

Puerto Rico

Participating Governments

France
The Kingdom of the Netherlands
The United Kingdom of Great Britain and Northern Ireland

Our Values

- EQUITY** Striving for fairness and justice by eliminating differences that are unnecessary and avoidable.
- EXCELLENCE** Achieving the highest quality in what we do.
- SOLIDARITY** Promoting shared interests and responsibilities and enabling collective efforts to achieve common goals.
- RESPECT** Embracing the dignity and diversity of individuals, groups, and countries.
- INTEGRITY** Assuring transparent, ethical, and accountable performance.

Our Vision

To be the major catalyst for ensuring that all the peoples of the Americas enjoy optimal health and contribute to the well-being of their families and communities.

Our Mission

To lead strategic collaborative efforts among member countries and other partners to promote equity in health, to combat disease, and to improve the quality of, and lengthen, the lives of the peoples of the Americas.

Our Responsibility

To present an accounting of the program of health activities authorized by the Organization and carried out by the Bureau. Therefore, in accordance with the Constitution of the Pan American Health Organization, the Director of the Pan American Sanitary Bureau/Pan American Health Organization presents the report in hand, which covers the four-year period from 1998 to 2001.

**Charting a Future for
Health in the Americas**

Official Document N°. 306
ISBN 92 75 17306 0
© Pan American Health
Organization, 2002

Also available in Spanish as:

**Nuevos rumbos para
la salud en las Américas**

Documento Oficial N°. 306
ISBN 92 75 37306 X
© Organización Panamericana
de la Salud, 2002

A full-text electronic version
of this publication
is available at www.paho.org

Writing and editorial production
PAHO Publications Program

Design and typographic
production
Ultra Designs

Cover map
**Library of Congress of the
United States of America,
Geography and Map Division**

Photography
C. Gaggero, 34, 38, 43, 44, 49,
56, 57, 58, 78, 86, 91, 97, 99,
102, 106, 108, 111, 112, 122,
126, 127, 130, 158
J. Jenkins, 83
A. Waak/PAHO, 1, 31, 60, 68,
73, 74, 82, 122
PAHO/WHO COUNTRY OFFICES
50, 70, 74, 83, 88, 89, 90, 92,
98, 99, 106, 108, 114, 115,
116, 117, 119, 139, 157
DIARIO EL COMERCIO (LIMA), 104

Charting a Future for Health in the Americas

*They that go down to the sea in ships, that do business in great waters:
these see the works of the Lord, and his wonders of the deep.*

—Psalm 107



Dr. George A.O. Alleyne,
Director, Pan American
Sanitary Bureau/
Pan American Health
Organization

I was born and grew up in the parish of St. Philip on the island of Barbados. Two of the country's 11 parishes, St. Thomas and St. George, do not have a coastline. As children, we rather pitied the people from those parishes for their lack of contact with the sea. The sea played an important part in our lives and inspired many of the images of our childhood. On our vacations we did not go to the beach, we went to the sea. Many of the poems we learned had to do with the sea—John Masefield's "Sea Fever" that begins "I must go down to the seas again, to the lonely sea and the sky" and Samuel Coleridge's "Rime of the Ancient Mariner" with its memorable verse:

*Water, water, every where
And all the boards did shrink;
Water, water, every where,
Ne any drop to drink.*

We had great respect for those who went down to the sea in ships—a respect heightened by the vivid memory of some who never returned. So now, as I write my last report as the Director of the Pan American Sanitary Bureau/Pan American Health Organization, allow me to envision the Bureau as the "Good Ship PAHO" and reflect on where we have voyaged in the past and what course we might chart for the future.

This is the year of our Centennial. Much has been written of this institutional odyssey of 100 years. The countries have chronicled experiences in health as they bear witness to, and celebrate, the history of the Organization. Indeed, our work together has borne rich fruit: sustained progress in health throughout the Americas. Major contributors to that progress have been an appreciation of the value of health at the highest political levels in all the member countries and the application of appropriate technologies to secure it. Above all, the dedication of countless hundreds of thousands, if not millions, of health workers in the countries has made the difference. I never tire of saluting them as heroes of health in the Americas.

* I wish to acknowledge Dr. Julio Frenk's review of this message and Dr. Judith Navarro's work in editing this message as well as the actual preparation of this Report.



This report will offer some measure of retrospection on the work of the Bureau in recent years. It will attempt to do so expressing neither the triumphalism derived of accomplishment nor defensiveness regarding things left undone. It will describe achievements that have resulted from the partnership between the Bureau and the countries of the Americas. It will attempt to project a representative picture of the many facets of an institution committed to responding to the various mandates and aspirations of those who have guided it over a century. And it will demonstrate the results of the emphasis I have given to information from the beginning of my administration.

In this introductory essay, however, I will pay more attention to forecasting the challenges that will face Good Ship PAHO, the shoals and the rocks she will encounter, and the winds that will buffet her. I will focus on the strong currents—the great “transitions”—that are occurring in our world and that are conditioning pursuit of the public’s health. These transitions have affected, and will continue to affect, both the charting and the steering of our course.



Much has been written of the “health transition”—a composite term to express changes in the pattern of disease that result mainly from demographic and epidemiological transitions as well as the ever-changing exposure to environmental risks (1, 2). Omran, in his seminal work (3), focused on the causes of mortality and described the epidemiological transition in terms of three major phases characterized, respectively, by pestilence and famine, receding pandemics, and man-made health problems resulting in chronic and degenerative diseases. Three decades later, he modified this concept—which he saw as too simple, too related to the history of industrialized countries—and introduced intermediate phases that depended on a country’s stage of development (4). Clearly, countries and populations do not move irrevocably and discretely from a stage in which they are concerned uniquely with great infectious disease epidemics to one in which such epidemics are replaced by concern with diseases associated with longer life spans and individual behavior.

In the Americas, all the countries are contending with an epidemiological mosaic comprised of a wide range of diseases and health problems. So it is not a question of one stage of the transition ending and another beginning. What matters are the nature of the change underway

and its pace. Infectious diseases have always been, and will always be, with us. The major contributor to the most fundamental demographic shift in the Americas has been the conquest of the main causes of early childhood mortality. Improvements in nutrition and public health successes in combating infectious diseases of the young have figured prominently in reducing child mortality, followed by a decline in female fertility. This decline in fertility, subsequent to a fall in child mortality with varying lag periods, is a universally observed phenomenon (5). I have always had difficulty, however, in accepting that the former is caused by the latter, as a host of intervening factors influences both trends, independently.

One aspect of the health transition that has not been given sufficient prominence is the change in the determinants or vectors of the various diseases or health problems and, consequently, the different approaches required to deal with them. Pasteur made it easy for us to understand the microbial cause of disease. Less discernible is the insidious nature of information when it is used inappropriately or, in its vulgar form, propaganda, as the vector or agent of modern diseases shaping the epidemiological picture. The three most egregious examples are modern epidemics related to changes in behavior (a term I prefer to “lifestyle,” since behavior can be modified)—namely smoking, alcoholism, and obesity. While the litigation and related large sums of money involved in the debate about tobacco use are giving the smoking epidemic tremendous prominence, the obesity epidemic has crept silently upon the world, attracting far less attention.

Its history shows that paho has always taken cognizance of the changes implied by the health transitions. The aim of much of our work over the past 100 years has been to reduce the threat of infectious diseases through attention to environmental factors, as well as through introduction of technologies to improve the health of children and reduce childhood mortality. It remains to be seen if we will be similarly effective in assisting countries to deal with newer transitions. Doubtless, new tools will be needed to cope with new epidemics, and new vectors will be found. There will be more emphasis on applying health promotion strategies—as I argued in my report of last year (6). Promulgation of the strategies of health promotion will not, however, suffice. Information must be granted its



proper role as a tool both for monitoring transitions and for effecting the changes that result in better health (7). When the problem lay predominantly in preventing the infections responsible for the great pandemics, information may have been a less essential public health tool. Today, however, the effective management of information is critical to stopping the spread of new pandemics, whether infectious or noninfectious in origin. There is now, for instance, no debate about the power of appropriate information in halting the spread of hiv/aids. In spite of our long history, PAHO and organizations like ours are still neophytes in understanding the application of modern concepts and technologies for using information appropriately to change behavior. I am not sure whether, in the nautical sense, I should cast information as our rudder or our sail.



We are fond of referring to ours as the “Information Age” and forget that every age has been one of information. The changes wrought by Gutenberg’s movable-type printing press in the spread and use of information may have been every bit as profound as the changes we are witnessing now. What is different today is not only the speed at which information is transmitted, but the reduced cost of its transmission. This cheap and rapid dissemination of information has had profound political repercussions in our time. Much of the political power, once centralized, is now decentralized. It has also rendered the borders between nations more porous and permeable to the spread of information—information that in many cases is injurious to health. The modern epidemics that I mentioned above—tobacco, alcohol, and obesity—are spread across borders by the facile dissemination of information in the form of advertisement, making it difficult for individual nations acting alone to deal with them.

Although the concept of global public goods has become popular recently, paho has managed information as a global public good from the moment of its founding. Stiglitz refers to knowledge as a “global public good” and claims that “the efficient production and equitable use of global knowledge require collective action” (8). I would prefer to use the term “information” in this context instead of “knowledge.” Today more than ever, health information fulfills the criteria of a global public good in that it is non-rivalrous (no additional cost incurred with more persons using it) and non-excludable (no one can be excluded from using it). The challenge for paho will be to continue to produce and use information as a global public

good, while demonstrating the value of a voluntary cooperative system that is the basis for our existence.

Another one of the great changes that has influenced us, and will continue to do so, is our form of interaction with the countries: a transition of relations. In the first quarter-century of the Bureau's existence, the main form of our cooperation was the collection of information on the health situation in the countries and its dissemination to the membership. On 2 December 1902, the president of the first meeting of the Bureau, Dr. Walter Wyman, Surgeon General of the United States, summarized this principal role:

We have come together to give one another interesting and necessary information about ourselves, to give encouragement by telling of the good work that is going on in each Republic, and at the same time, in a fraternal manner, to confess the shortcomings of each, with the confident assurance of that sympathy and aid which one member expects confidently of the other members of a family.

The purpose of sharing information was to enable countries to protect their borders. Knowledge of disease elsewhere was essential to preventing its entry into other countries. Thus, proceedings of the Bureau's early governing body meetings dealt largely with the efficacy of quarantine measures and maritime disinfection.

With the appointment of Dr. John D. Long in 1923 as the Bureau's first travelling representative, another transition began: the Bureau took on the role of assisting countries to improve their health status. Long traveled throughout the Americas advising mainly on the application of sanitary measures that could relieve the burden of disease. The institutional emphasis, however, was still very much on preventing disease within the borders of individual countries.

The second half of the century witnessed yet another change: a great shift towards multilateralism, as activities became largely inter- or multicountry. Given the prevailing spirit of Pan Americanism, an appreciation of the intercountry movement of vectors, and the increasing availability of technology, countries began to target the prevention and control of diseases in the Americas as a whole—as in the case of immunization programs as well as of initiatives such as the recent Regional



Commission on Food Safety. In addition to the increase in multicountry activities that are continental in scope, countries began to cooperate with one another, with the Organization acting as facilitator of that cooperation. I am firmly convinced that, today, there are useful experiences and pertinent expertise to be found in all the countries of the Americas, the sharing of which will be of universal benefit. This transition—from within country to multi- and intercountry—has challenged the Organization to adapt the form and focus of its technical cooperation. Henceforth, it will be necessary for PAHO to identify problems whose solutions can result from continental initiatives and to use its knowledge of and presence in the Region to ensure a symmetry of benefits that will encourage sustained collective endorsement of the hemispheric approach. All the while, we must remain sensitive to the precious sovereignty of nation states, so that our Organization will be perceived to be equally relevant and useful to Belize and Brazil.



A transition underway in the political world—one aggravated by the events of 11 September 2001—can also be expected to affect our work. The nation state as we know it, at least its European version, took definitive shape after the Thirty Years' War with the signing of the Treaty of Westphalia in 1648. This saw the end of the feudal system, the decline of the Holy Roman Empire, the end of religious wars, and the growth of the modern nation state that would assume responsibility for the social arrangements necessary to ensure order and protection of the basic rights of its citizenry. The unitary state was the dominant paradigm for some 300 years. It follows that, when the Bureau was founded in 1902 and when the Pan American Sanitary Code was created in 1924, the participants and the signatories were duly accredited representatives of the governments of the Americas. Even today, participation in our governing bodies is by persons who come duly accredited by their national governments. The multilateral system, with the United Nations as its epicenter, was an arrangement among sovereign states at a time when the state and the government were almost coterminous.

Over the past century, however, the pluralism that marked the Middle Ages has begun to reemerge—what Peter Drucker calls “a congeries of autonomous and semiautonomous institutions,” each concerned with its own cause, values, welfare, and aggrandizement (9). Actors outside of

government are growing in number, making their presence felt, and claiming a voice—often stridently—in decisions that affect the citizenry as a whole. The best recognized of these actors are what is called civil society and the more clearly defined private sector.

This political transition characterized by the growth of pluralism presents a number of challenges. First, there is the issue of governance in entities like ours that are intergovernmental in the sense that a collection of governments representing sovereign states constitutes the membership. Increasingly, nongovernmental actors are seeking to participate in the governance of all international agencies. The day will surely come when our Organization with its current governance structure will have to address the claims of these other actors—commercial enterprises as well as civil society organizations—for meaningful participation. Their claims will be buttressed in part by the argument that they are already “international” as they have allegiances and networks that cross national boundaries. The United Nations and the World Bank have experimented with approaches to consulting various institutions of civil society, taking into account all the caveats about their legitimacy.

The formation of the United Nations in 1945 represented the hope of the world for a multilateral system that would put the common interest and welfare of mankind to the fore. Over time, however, we have seen a slow erosion of interest in multilateralism and a steady growth in the unilateral approach to solving many of the world’s problems. The undisputed world dominance of the United States in so many fields led inevitably to the perception of a predilection for unilateral action. It is a matter of great satisfaction for us, however, that in the case of health and in the Americas, the United States has been a genuine partner in the Pan American approach to the health problems of our continent.

There is general agreement, however, that on the wider scene the terrorist attacks of September threw into sharp relief the need for there to be a re-examination and a re-appreciation of the absolute need for multilateralism in the approach to some of the problems that appear to be the most intractable. Joseph Nye, in his book *The Paradox of American Power—Why the World’s Only Superpower Can’t Go it Alone*, examines the role of the superpower in this new world (10). His analysis has profound relevance for us in a health organization. He traces the growth



and development of social, economic, and military globalization and the effect they have had in polarizing the distribution of power. He says, “power today is distributed among countries in a pattern that resembles a complex three dimensional chess game.” On the top board, military power is largely unipolar, with the United States undoubtedly dominant. In the middle there is economic power, which is multipolar but with the power concentrated in a few countries. “The bottom chessboard is the realm of transnational relations that cross borders outside of government control. On this bottom board, power is widely dispersed.” It is at this third level that influence is wielded through what he calls “soft power”—the power to co-opt rather than to coerce—the power that is derived from shared values and appreciation of genuinely public goods—the power that becomes ever more awesome in a world that is increasingly globalized through the speed and cheapness of the spread of information.

International order is one of those public goods that are of critical importance for all nations, and this is assured in large measure by the exercise of soft power. I have no doubt that international order will be facilitated by the provision of health internationally—the provision of a state of health to all the world’s people such that there is alleviation of the poverty and deprivation that breed dangerous tensions. As the Gallup Millennium International Survey has shown, health is valued above all else by the poor (11). Health organizations like ours must promote appreciation of the value of health as a good in its own right and also as a contributor to international public order. Indeed, in the chessboard taxonomy of Nye, the only power in our hands is soft power. It is our ability to facilitate exchange, provide the information that allows for identification of health patterns and health risks, and promote shared values and principles that are appropriate for an intergovernmental social entity.

The growth of pluralism within the nation states must not blind us to the fact that there are certain responsibilities that devolve on the state and cannot be avoided or delegated. Even though, as I have pointed out above, the borders of nation states are becoming more and more porous, enabling the international spread of propaganda that leads to certain health risks, the state still must discharge its responsibility for countering those risks. While collaborative health protection and promotion efforts within global and regional contexts will always be important, a basic responsibility still falls on

the state. The kind of global governance that arrogates from the state the basic responsibilities for promoting health and combating some health risks is a transition that we are unlikely ever to see.

The last of the great transitions that paho must negotiate is the social transition, which will come in many forms. One of the more important will be the ever-changing role of women. The trend for increasing participation of women in the work force has been adjudged to be one of the causes of disintegration of the traditional family structure with consequent social disruption and increased violence (12). The change has meant that there have to be other arrangements made for the care of children. It has been argued that those aspects of primary care that dealt with child development represented an undue burden for women and were likely to be neglected as more women entered the workforce. The data for the Americas do not seem to bear this out, however, as in all countries child health has continued to improve. Of more significance is the increased attention to the education of women, particularly young girls, with the well established effect of reducing fertility and improving child health (13). Recognition of imperfections in the attention to women in health care services must lead to a greater commitment to respond to the needs of women other than those related to their biology (14). This inappropriate care of women in the health services is but another manifestation of the gender inequity that is so pervasive and goes much beyond the domestic violence that is so common. The health of women apart from their reproductive roles will be one of the challenges for all the countries of the Americas. With increased entry into the workforce, there will be work-related health problems that are not considered at this time, and this is not a problem related to a country's level of economic development.

The changing role of women will have positive implications for our Bureau. We are pleased at the increased incorporation of women into our staff, where currently 45% of professionals are female. This increasing proportion will prompt consideration of different forms of work, so that accommodation can be made for other legitimate roles.

But the most significant of the social transitions taking place results from the apparently inexorable drift towards the liberal market economy—driven in part by economic globalization. Some would contend that the





magnitude of the change we are experiencing is unprecedented. The headlong rush is towards a global cosmopolitan society with hitherto unknown risks and dangers (15). Others will posit that globalization is not a new phenomenon. It was in full bloom at the beginning of the 20th century: in 1913 merchandise trade, as a percentage of global trade, reached a level that was not achieved again until the decade of the 1970s, and a similar phenomenon occurred with international capital flows (10). It is argued that that era of globalization came to a sorry end with the great social disruptions and wars of the mid-20th century, because of the social inequalities that resulted (16). The question is whether this new wave of economic globalization, which is unquestionably producing an increasing social inequality, will suffer the same dismal fate. The optimistic view is that the social safety nets put in place as a result of the first debacle will prevent a similar occurrence of massive social unrest. It is not clear, however, that such nets are the norm in most of the poor countries of the world. This aspect of the social transition will present a major challenge for paho. We will have to argue and prove that one of the ways to avoid unrest is to invest appropriately in health as a means of reducing poverty (17, 18). Such investment may also contribute to reducing the social inequality that is a marked phenomenon of our Region. Promoting social inclusion in terms of services will be particularly important in the Americas, where services for the population are so often segmented and so many work in the informal sector. In addition, paho should proceed with its path-breaking work on developing core health data and assisting countries in focusing on the distribution of health outcomes as well as their determinants.

I have outlined some of the major transitions that I regard as the currents that the Good Ship PAHO must note and log as it charts its course for the future. The Organization will not be able to avoid them and, indeed, must even take advantage of those that are favorable. Unfortunately, as is the nature of currents, they do not necessarily flow together or in the same direction nor with the same force. The transitions that are driven by technology and many of the aspects of globalization are evolving much more rapidly than the social transitions. Such is their nature. In addition, we often observe a “concertina effect” with many of these changes, as they are apt to be squeezed together and compressed because of other transitions acting upon them.

I have no doubt, however, that the ship will be steady and that those who come after me will do business in great waters, and the wonder they will see will be the ever-improving health of the people of the Americas.

Ave et vale—hail and farewell!



George A.O. Alleyne
Director

References

1. Caldwell JC. Health transitions: The cultural, social and behavioral determinants of health in the third world. *Social Science and Medicine* 36:125-135, 1993.
2. Frenk J, Bobadilla JL, Stern C, Frejk A, and Lozano R. Element for a theory of the health transition. *Health Transition Review* 1:21-38, 1991.
3. Omran AR. The epidemiologic transition: A theory of the epidemiology of population change. *Milbank Memorial Fund Quarterly* 49:509-538, 1971.
4. Omran AR. The epidemiologic transition theory revisited thirty years later. *World Health Statistics Quarterly* 51:99-119, 1998.
5. National Research Council. Commission on Behavior and Social Sciences and Education, Committee on Population. *From Birth to Death: Mortality Decline and Reproductive Change*. Eds. Montgomery, MR and Cohen, B. Washington, D.C., National Academy Press, 1997.
6. Alleyne GAO. *Advancing the People's Health*. Annual Report of the Director 2000. Washington, D.C., Pan American Health Organization, 2000.
7. Alleyne GAO. Los desafíos en la salud para *Homo informaticus*. Address on the 35th Anniversary of the Latin American and Caribbean Center of Health Sciences Information (BIREME), São Paulo, Brazil, 2002.
8. Stiglitz JE. Knowledge as a global public good. In *Global Public Goods: International Cooperation in the 21st Century*. Eds. Kaul I, Grunberg I, and Stern MA. Published for United Nations Development Program. London, Oxford University Press, 1999.
9. Drucker PF. The new pluralism. *Leader to Leader*, No. 14, Fall 1999. <http://www.pfdf.org/leaderbooks/12/fall99/new-pluralism.html>
10. Nye JS, Jr. *The Paradox of American Power: Why the World's Only Superpower Can't Go It Alone*. London, Oxford University Press, 2002.
11. Spogård R, James M. Governance and democracy—The people's view. *The Gallup Millennium International Survey*, 1998. <http://www.gallup-international.com/survey18.htm>
12. Fukuyama F. *The Great Disruption: Human Nature and the Reconstitution of Social Order*. New York, Free Press, 1999.
13. Caldwell JC and Caldwell P. Education and literacy as factors in health. In *Good Health at Low Cost*. Proceedings of the Bellagio Conference. Eds. Halstead SB, Walsh JA, and Warren KS. The Rockefeller Foundation, 1989.
14. Pittman PM. Gendered experiences of health care. *International Journal for Quality in Health Care* 11:397-405, 1999.
15. Lindsay B. The decline and fall of the first global economy: How nationalism, protectionism and collectivism spawned a century of dictatorship and war. *Reason* 12:43-51, 2002.
16. Giddens A. *Runaway World: How Globalization is Reshaping Our Lives*. London, Profile Books, 1999.
17. World Health Organization. *Macroeconomics and Health: Investing in Health for Development*. Report of the Commission on Macroeconomics and Health. Chair: Jeffrey D. Sachs. Geneva, 2001.
18. World Health Organization. *Health, Economic Growth, and Poverty Reduction*. Report of Working Group 1 of the Commission on Macroeconomics and Health. Co-Chairs: George A.O. Alleyne and Daniel Cohen. Geneva, 2002.



Assessing the Population's Health



When the first international sanitary conference of the American republics meets in Washington, D.C. in 1902, its principal remit is to receive reports on health conditions in the ports and territories of countries throughout the hemisphere. Two decades later, the Pan American Sanitary Code, drafted in Havana in 1924, firmly establishes the quintessential role of the Pan American Sanitary Bureau as clearinghouse for regional health information.

By mid-century, the Bureau's director, Dr. Fred Soper, claims that: "Considerable progress has been made in the quality of the data reported [in *Health Conditions in the Americas, 1953-1956*], especially in the field of vital statistics and communicable diseases." His successor, Dr. Abraham Horwitz, expresses the hope that: "As data are further improved—and the extensive statistical program of the Organization is contributing to this goal—it will become possible to formulate programs, allocate resources, and invest funds on a more rational basis, in short to accelerate progress." (*Health Conditions in the Americas, 1961-1964*)

Still, the collection of health statistics leaves much to be desired, as Dr. Héctor Acuña notes in the mid-1970s: "Renewed efforts should be made to improve civil registration and the coverage, quality, and timeliness of the vital statistical data, particularly for rural areas. This is especially crucial given the number of sectors that are involved in improving the quality of life of the rural and disadvantaged populations." (*Health Conditions in the Americas, 1973-1976*)

As the problem persists, in 1986 PAHO, under the administration of Dr. Carlyle Guerra de Macedo, sets up a new program—health situation and trend assessment—that promotes the use of epidemiology as an instrument in the planning and technical and administrative management of services and as an essential element for understanding the factors that influence changes in the health profiles of populations.

Today, the Secretariat—through its core health data initiative and its geographic information system in health, among other pioneering epidemiological contributions to the practice of public health—is providing evidence that will advance the quest for equity in health throughout the Americas.

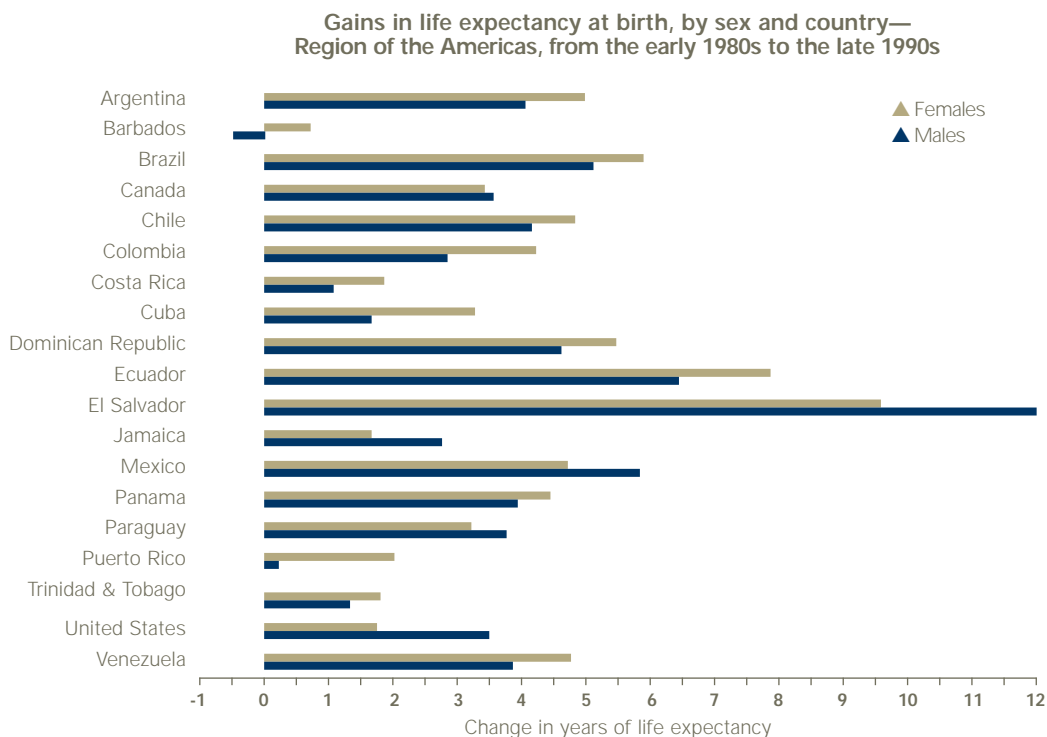


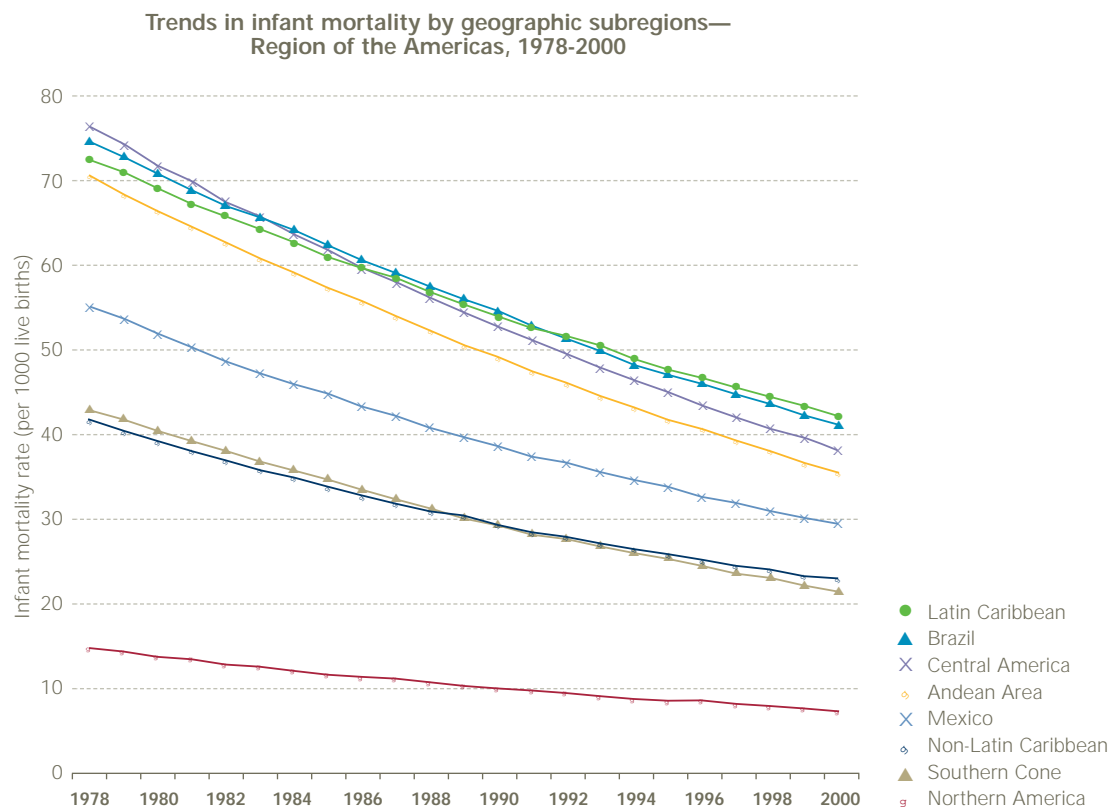


Getting to the Core of Health Disparities with Data

At the beginning of the 21st century, the health and living conditions of the peoples of the Americas have improved significantly. In a context of political and economic reforms and increasing decentralization of health services, most countries have met the main goals proposed in the historic conference on primary health care, held in 1978 in Alma Ata, that targeted “health for all by the year 2000.” They have made steady gains in life expectancy, access to safe water supply, and immunization coverage, coupled with major reductions in child mortality. Nonetheless, strikingly unjust and avoidable inequalities in health—by definition, “health inequities”—persist among populations in the Region and pose the greatest challenge to those who would right that wrong.

Over the last four years, the Pan American Health Organization has redoubled its efforts to place the issue of equity at the center of its technical cooperation. In the pursuit of equal opportunities for individual and collective development, equity gaps in health must be identified, measured, analyzed, reduced and, ultimately, eliminated. The Secretariat has thus assumed an active role in promoting and conducting epidemiological analyses of the health situation and trends in the Americas. Those analyses aim to document the presence of inequalities in both living conditions and opportunities to access and use health services, and accumulate health gains, as a first step toward crafting public policies on equity in health.





To tackle that challenge, a Special Program reporting to the Director was created in 1999. Its main goals are to strengthen national and institutional capacities to develop vital statistics systems and health information databases, advance the use of epidemiology for analyzing data on health and its determinants, and provide platforms

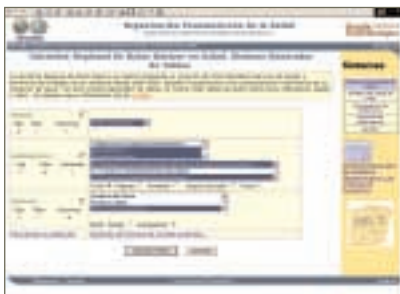
to enable the exchange of data among a myriad of systems. The use of data to determine gaps in health status and living conditions has a two-fold purpose: to inform countries' decisions regarding their health policies and practices and to direct the course of paho's technical cooperation with countries to redress health inequities.

“Our approach has to be first and foremost towards demonstrating the unequal distribution of health before we posit any unfairness. We will intensify efforts to have countries know the true state of health of their populations and promote the kind of disaggregation that shows where inequalities lie. But we will also focus our program efforts towards correcting some of that inequality that is vulnerable to the interventions that we have at our disposal. We will therefore have all of our technical cooperation programs begin the analysis of what they intend to do by first trying to establish the gaps that exist in the specific area of population health.”

—Dr. George Alleyne

Attaining equity implies that inequalities in living conditions and health status must be targeted and removed. If equity gaps are to be identified, however, information must be available and comparisons feasible. The use, heretofore common, of national averages to express a country's health situation in fact served not only to hide its heterogeneity but to delay a much-needed focus on its inequalities. To move beyond national averages and gain a greater understanding of health in the Americas, PAHO launched the core health data (chd) initiative. That initiative centers on the distribution of 109 basic indicators disaggregated into 405 core data compiled annually since 1990 for each of the 48 countries and territories of the Americas.

The core health data initiative for the Americas



■ PAHO'S database-driven website enables users to access the many dimensions and layers of regional health information available through the core health data initiative.

Organización Panamericana de la Salud
Organismo de Salud de las Américas de las Naciones Unidas

Sistema de Datos Básicos. Sistema Generador de Tablas

La Iniciativa Regional de Datos Básicos en Salud comprende un conjunto de 109 indicadores para los 48 países y territorios de la Región de las Américas desde 1990-2000, dirigidos a proporcionar una caracterización cuantitativa de su situación de salud. Con este sistema generador de tablas web, podrá crear tablas de datos sobre estos indicadores, países y años. El requerir mayor información consulte: [SITIO WEB](#)

Tabla para el Año: (Opciones disponibles)

(Opciones disponibles)

Indicador	Brasil	Chile	Col	Costa Rica	ECU	Guatemala	Honduras	Nicaragua	Paraguay	Venezuela
6.10.0.0. Tasa de mortalidad	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1
6.11.0.0. Tasa bruta de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.12.0.0. Tasa bruta de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.13.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.14.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.15.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.16.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.17.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.18.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.19.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.20.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.21.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.22.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.23.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.24.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.25.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.26.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.27.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.28.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.29.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.30.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.31.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.32.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.33.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.34.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.35.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.36.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.37.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.38.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.39.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.40.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.41.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.42.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.43.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.44.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.45.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.46.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.47.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.48.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.49.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.50.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.51.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.52.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.53.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.54.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.55.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.56.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.57.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.58.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.59.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.60.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.61.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.62.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.63.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.64.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.65.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.66.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.67.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.68.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.69.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.70.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.71.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.72.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.73.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.74.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.75.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.76.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.77.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.78.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.79.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.80.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.81.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.82.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.83.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.84.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.85.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.86.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.87.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.88.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.89.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.90.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.91.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.92.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.93.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.94.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.95.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.96.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.97.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.98.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.99.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
6.100.0.0. Tasa de mortalidad	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9

© Organización Panamericana de la Salud. Programa regional de Datos de Salud. Todos los derechos reservados.
Esta iniciativa es propiedad de la Organización Panamericana de la Salud. Prohibida la reproducción sin el consentimiento escrito de la Organización Panamericana de la Salud. Washington, DC, 2001.</

Basic indicator brochures produced by the Secretariat as well as by the countries of the Americas as part of the core health data initiative



Experiences within countries in implementing the core health data initiative have demonstrated the importance of various sectors coordinating to guarantee data quality and analytical use of information. The most successful example in this regard is Brazil's interagency network of information for health, which coordinates national entities responsible for health data production and analysis. Through the work of subcommittees, the network is responsible for core data quality, coverage, validation, uniformity, as well as information dissemination (including maintenance of the unified health system website, *datusus*) and managerial use of situation analyses

(including health situation rooms and network sustainability).

The chd initiative has strengthened information systems and networks for health communication. Today in most of the countries of the Region, information based on core health data provides the foundation for effecting the first of the essential public health functions: health situation analysis, surveillance, and monitoring. The initiative is making it possible for countries in the Americas to generate evidence of health inequalities, to create epidemiological intelligence for public health management, and to formulate more efficient and equitable health policies.

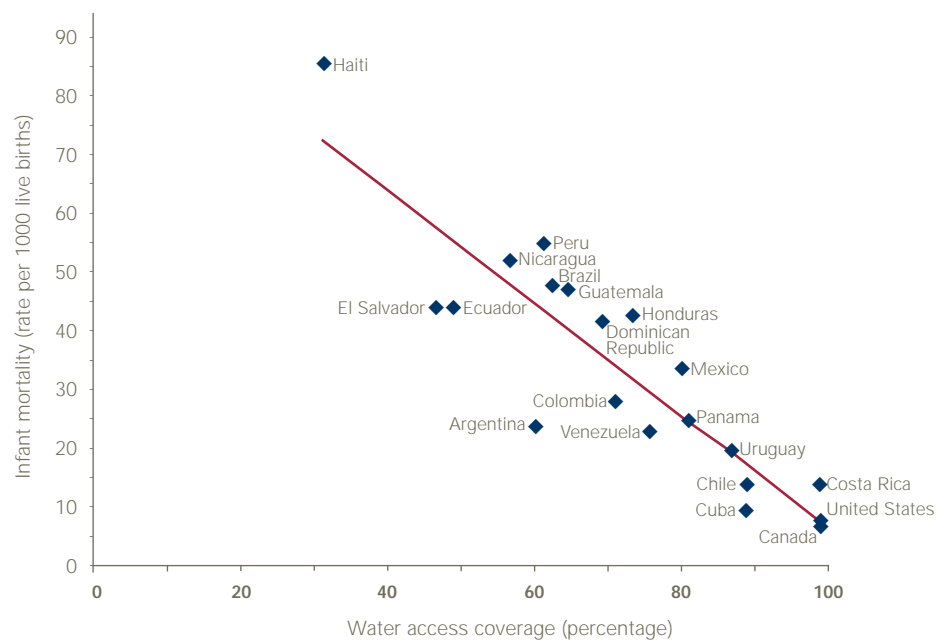
Measuring Inequalities to Inform Health Actions

■ Core health data have provided evidence in many countries of an inverse relationship between access to potable water/excreta disposal services and infant mortality. In fact, the data suggest that a 10% increase in potable water supply coverage might avoid up to 11 infant deaths per 1000 live births.

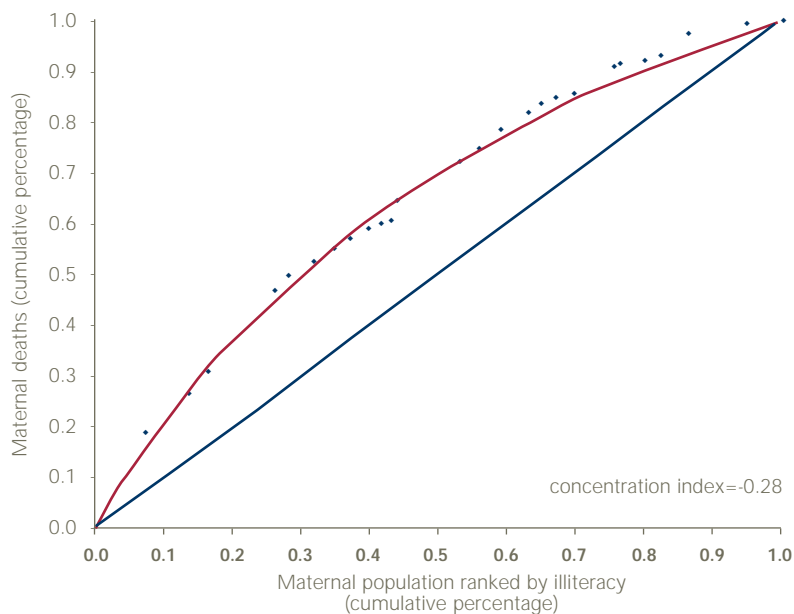
Advancing the quest for health equity in the Region requires, first and foremost, identification of its neediest groups. This objective is being intensely pursued by epidemiologists and policymakers everywhere in the Americas, encouraged by the growing availability of disaggregated core health data and basic indicators. The resultant health analyses have revealed unequal rates in basic health indicators at subregional, national, and subnational levels as well as the extent of health equity gaps between and within countries and populations.

Core health data indicate a very strong association between certain socioeconomic determinants of health, such as female literacy and maternal mortality. In Guatemala, for example, the distribution of maternal risk of dying is strongly inequitable: at least 40% of maternal deaths are concentrated in the least literate quintile of the female population. In such a scenario, an investment directed to the education of this one-fifth of the female population might reduce maternal mortality by almost one-half, at the same time yielding enormous, long-term gains for society as a whole.

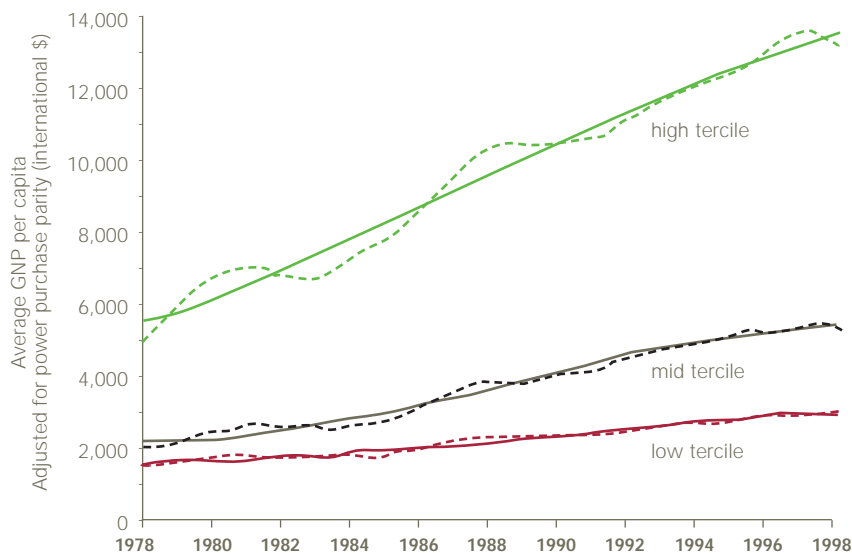
Relationship between access to drinking water and infant mortality—
Region of the Americas, 2000



Inequalities in health: distribution of maternal deaths according to female illiteracy—Guatemala, 2000

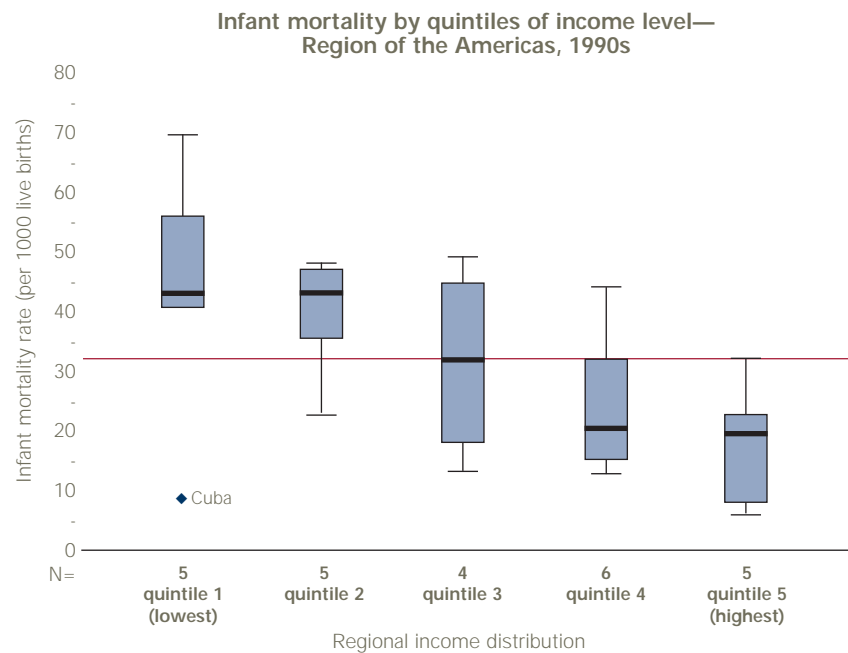
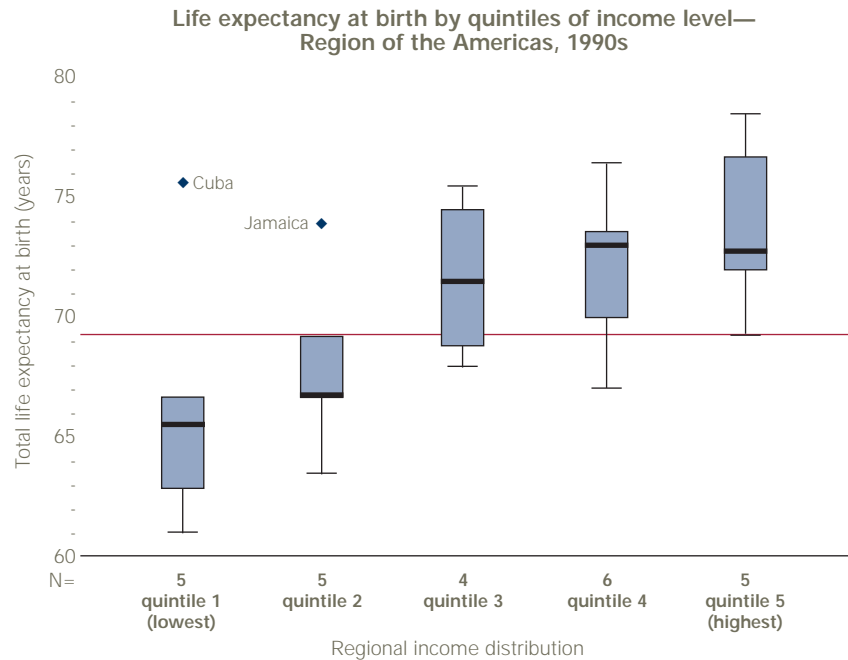


Trends in income level—Region of the Americas, 1978-1998



Societies that are more socioeconomically developed exhibit better health status, and this favorable situation contributes, in turn, to human development. Income level—one of several dimensions of socioeconomic status—is thus considered a major macrodeterminant of population health. Over the past several years,

the Organization has been documenting both the effect and the impact of income level on the presence of health inequalities in the Americas. Paho's work has shown the great variability in income level among countries and over time. Although the regional median income per capita doubled from 1978 to 1998 (from 2,349 to 4,925



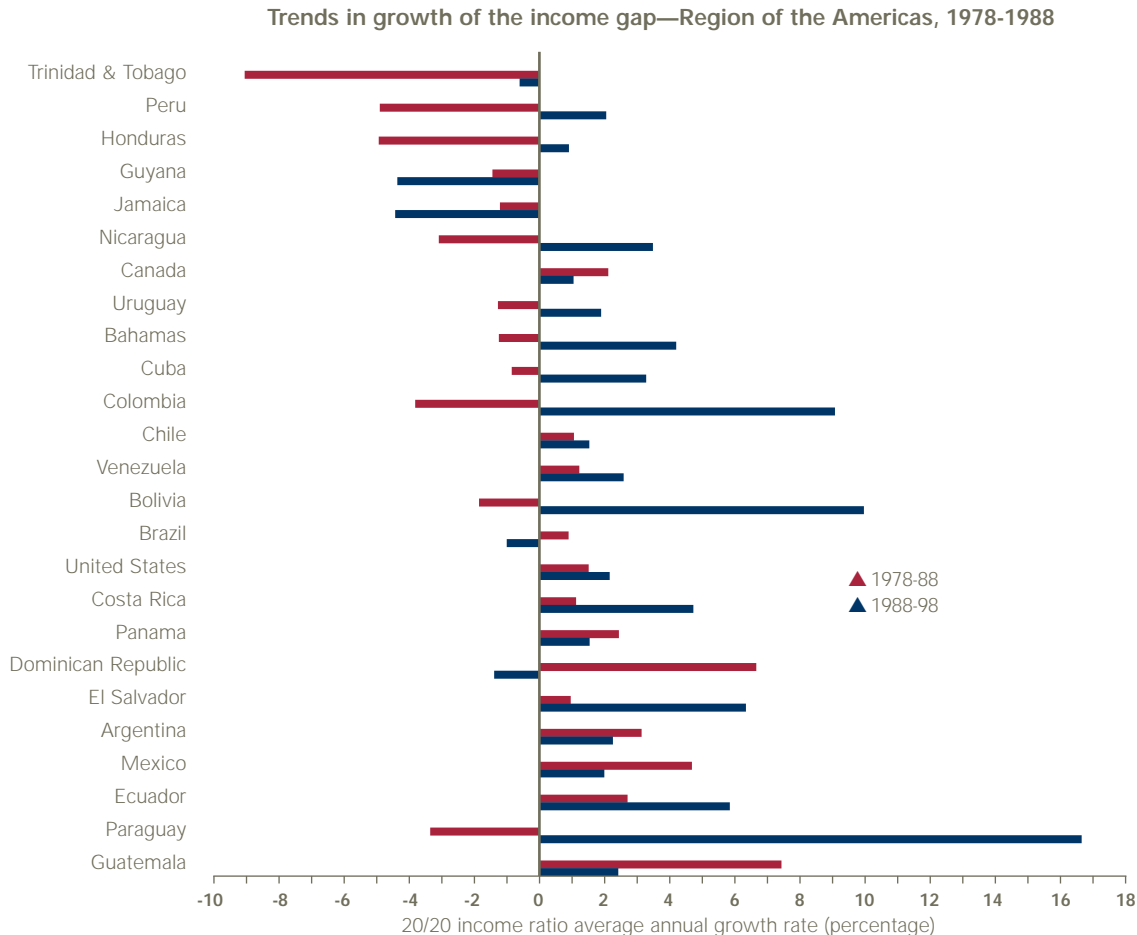
international dollars, i\$), the absolute gap between the richest and the poorest terciles of the regional population tripled in that period (from i\$3.551 to i\$10.361). The fact is, the otherwise welcomed growth in income did not reach the poorest one-third of the regional population.

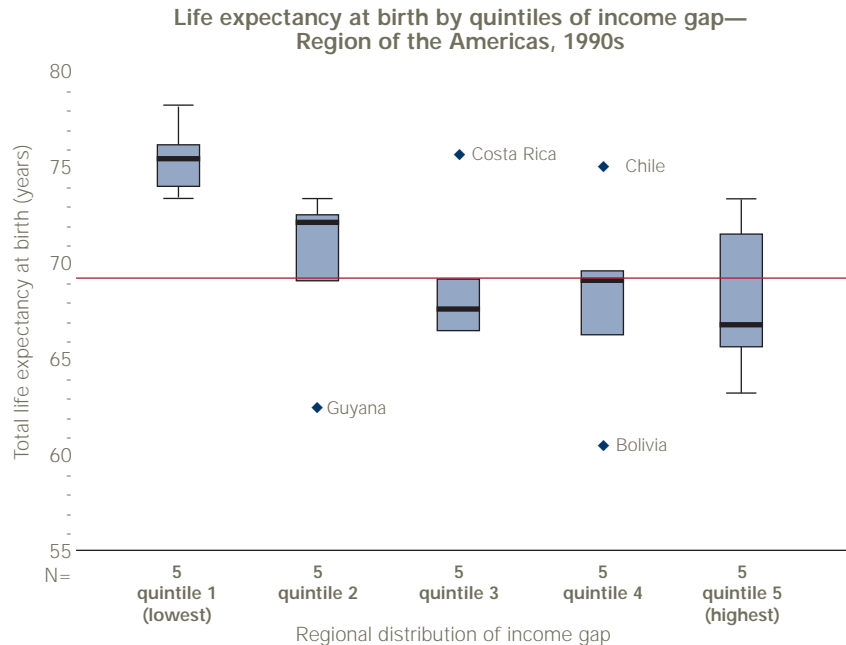
A consistent gradient of differentials in the degree of health achievement has been shown for a variety of core indicators among countries and subnational units when grouped into socioeconomic-status clusters according to their income level per capita. As shown in the graphs above, when one looks at the socioeconomic-status hierarchy formed by distribution of the regional population into quintiles according to income level, life expectancy at birth

in the late 1990s was seven years longer in the richest quintile than in the poorest quintile (72.5 and 65.8 years, respectively); conversely, in the richest quintile the risk of dying before reaching the first year of life was less than half that of the poorest quintile (19.6 and 42.9 per 1000 live births, respectively).

In addition to gross income level, PAHO deemed it important that the analysis of inequalities in health consider the degree to which the more or less available income is equally redistributed among the population. This indicator of income distribution, or income gap, is typically measured by the Gini coefficient or the ratio of the richest quintile to the poorest quintile (the 20/20 ratio). In this regard, the Region of the Americas displays the most inequitable income distribution in the world—a feature accentuated in the last decade of the 20th century. Again, a consistent gradient of even more pronounced differentials in health accomplishment was evidenced among population quintiles of income gap. As the graphs on pages 22 and 23 show, in the late 1990s, in the most equitable quintile in terms of income distribution, life expectancy at birth (75.6 years) was nine years longer and the risk of dying before reaching the first year of life almost five times lower (8.5 per 1000 live births) than the corresponding figures for the least equitable quintile (66.7 years and 40.4 per 1000 live births, respectively).

An important fact to be gleaned from income level-income gap analysis is that both are independent attributes of the regional



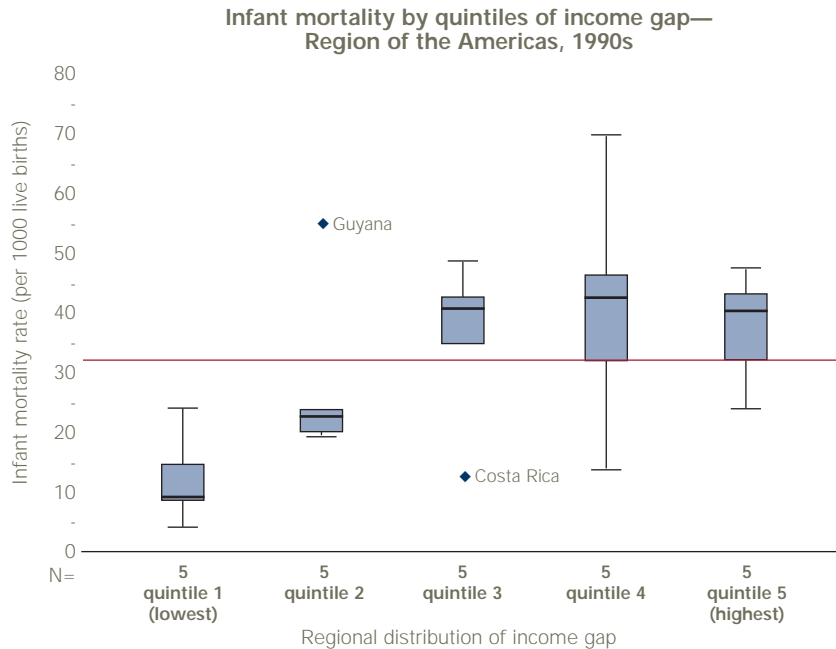


socioeconomic dimension. In other words, poorer countries (that is, countries with lower income level) are not necessarily less equitable countries (that is, those with higher income gap). Conversely, richer countries are not necessarily more equitable. Even of greater relevance for public health action is the fact that the interaction between these two attributes of socioeconomic status is what is giving shape to health inequalities in the Americas. Given the same level of income, the differences in its distribution may explain a significant amount of the health inequalities observed among and within countries. On the other hand, given the same income gap, the differences in the amount of gross income available per capita may account for those inequalities in health.

Based on these developments, paho innovated an analytical approach to further explore health inequalities among countries taking into account their income level and gap. According to their position above or below the regional 1978-1998 median values for income level (gnpppp: i\$3745) and income gap (20/20 ratio: 13.8), countries were placed in one of four clusters:

- low income with low gap,
- low income with high gap,
- high income with low gap, and
- high income with high gap.

A strikingly consistent pattern emerged: healthier societies are not necessarily the wealthier ones but the most equitable in the distribution of their income—whatever its amount. Given the same level of income, life expectancy is longer in those countries with lower income gap. The only countries that actually have attained a median life expectancy higher than the regional median are those with low income gap—regardless of their income level. Moreover, poorer but more equitable countries (that is, those with low income and gap) have attained a median life expectancy (70.8 years) that is higher than that of richer, less equitable countries (69.7 years).

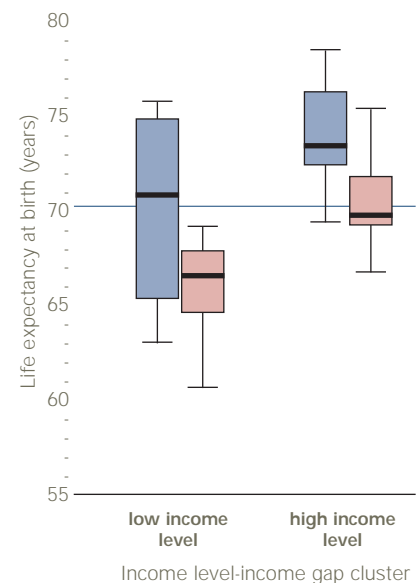


Inequalities in the risk of dying seem to be more related to disparities in the income distribution (gap) than in its magnitude (level). The most distinctive mortality profiles in the Region are not those that contrast the most between richer and poorer countries, but between more equitable and less equitable ones. Analysis of violent deaths in the Americas clearly makes this distinction (graph on page 24) and shows:

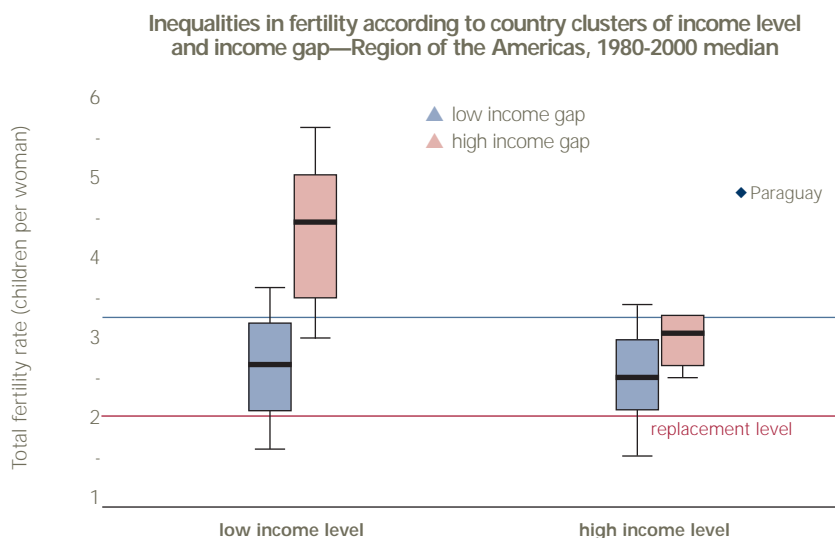
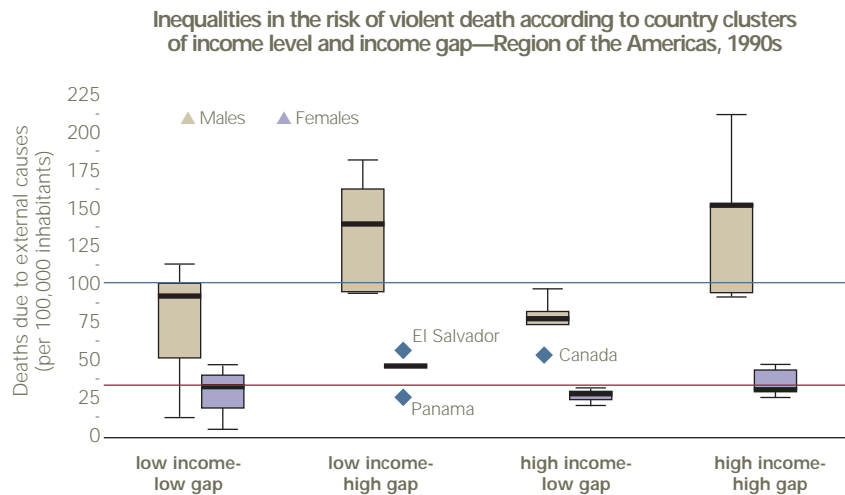
1. The risk of dying due to an external cause is, on average, 1.5 to 2.0 times higher in countries with higher income gap, for both males and females;
2. Given the same income gap, that risk is not modified significantly by differences in income level, that is, income level disparities do not account for inequalities in mortality rates due to external causes;
3. Gender inequality is conspicuous at the regional level—males have on average 3.3 times the risk of dying due to an external cause than females (102.9 and 31.2 per 100,000 inhabitants, respectively); and
4. This gender inequality is more prominent among countries with high income gap, particularly among those that have, in addition, high income level (150.4 and 28.6 per 100,000 inhabitants; rate ratio = 5.3).

To some extent, inequalities in health do reflect major social and economic inequalities of a structural nature that are prevalent in the Americas. Health and socioeconomic inequalities are closely intertwined, as they are to demographic, environmental, and other determinants. The 1980-2000 median total fertility rate, for instance, is notably lower among country clusters with lower income gap (2.7 and 2.6 children per woman in countries with low- and high-income levels, respectively) than the rate of country clusters with higher income gap (4.3 and 3.1 children per woman in countries with low- and high-income levels, respectively). In fact, countries with median fertility rates closest to the

**Inequalities in life expectancy at birth according to country clusters of income level and income gap—
Region of the Americas, 1990s**



▲ low income gap
▲ high income gap



replacement level—and, by extension, in a more advanced stage of demographic transition—were not the richest, but those with the most equitable income distribution.

Thus, PAHO and the countries of the Americas have produced evidence in support of the position that the complex display of health inequalities manifested throughout the Region does not appear to be determined solely or mainly by the wealth that has accumulated or is available in the population. Rather, it relates chiefly to the degree of equitable distribution of wealth among the population. This realization is forging a new regional commitment: that sound information showing an inequitable situation in specific health aspects should translate into action—policy decisions and practical interventions—aimed at diminishing, and ultimately eliminating, health inequities in the Americas.



Mapping Health Conditions

Once health inequalities have been identified and measured and the most vulnerable or high-risk population groups and critical areas identified, it is essential to locate them spatially, define their distribution patterns, and relate them to potential socioeconomic and environmental determinants occurring simultaneously in the same geographic locations—at either a macro- or micro-level. Where large numbers of locations, themes, and variables are involved, this spatial multivariate analytical process of health status and its determinants is more efficiently achieved by using geographic information systems (gis). A computerized gis with spatially referenced data and problem-solving functions provides support for decision-making and enables health situation analyses at various aggregation levels, public health surveillance and monitoring, planning and programming of health activities, and evaluation of health interventions.

The use of GIS in health (also referred to as sig-epi, after the acronym in Spanish) is now considered an essential practice to strengthen the capacity to integrate, analyze, and display geographically referenced health data. It is being increasingly applied in health situation analyses in the countries of the Americas.

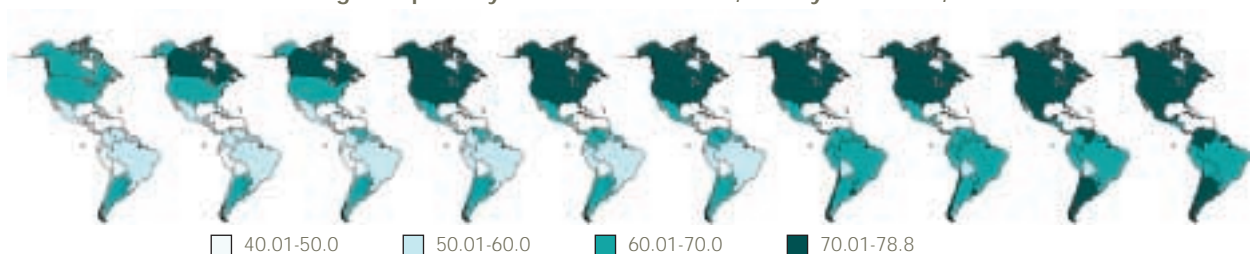
Given the needs of health managers in countries of the Region and in PAHO's Secretariat to build their analytical capacity through the availability of an efficient tool, a project to strengthen the development and use of sig-epi is underway. The project involves five areas of work:

1. Providing direct technical support for development of specific applications and definition of requirements for setting a sig-epi;
2. Coordinating the collection of geographic and health data to facilitate analyses of health problems or areas and populations of interest;
3. Organizing workshops and academic training activities;
4. Elaborating training materials and examples; and,
5. Developing appropriate, simplified health-specific software to allow a more effective transfer of GIS technology to the health sector in the countries of the Region.

PAHO has already developed a proprietary software, sig-epi, tailored to meet most of the day-to-day requirements of health managers and decisionmakers. With the collaboration of the Brazilian National Center for Epidemiology, sig-epi has been produced in Portuguese and the multilingual version was launched in 2002 at the second regional meeting of national directors of epidemiology.

■ A geographic information system in health has been used to assess changes in life expectancy at birth in the Americas over the past half-century.

Monitoring life expectancy at birth in the Americas, in five-year intervals, 1950-2000*

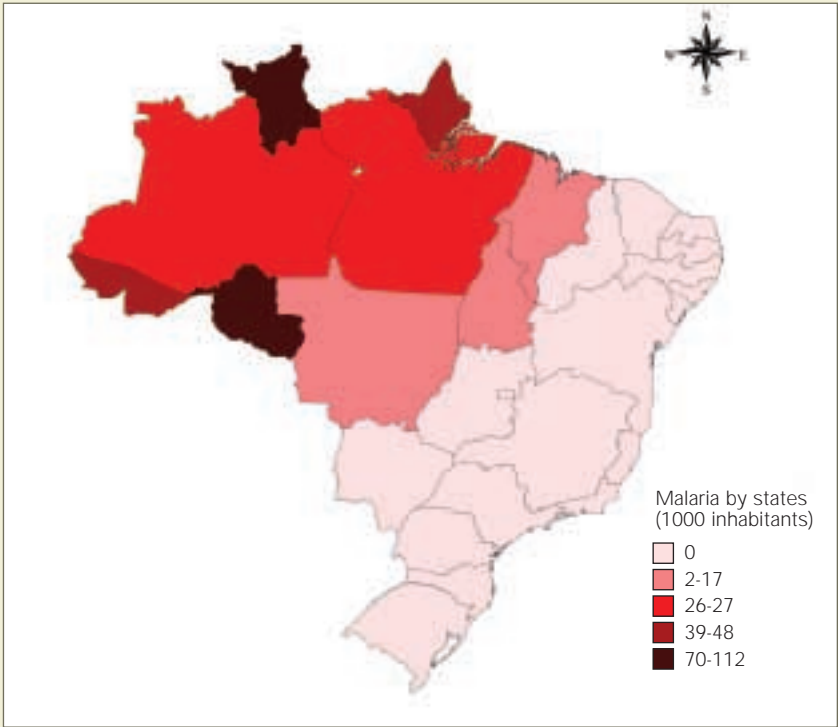


*Data are mid-point estimates in the five-year periods.

Uses of geographic information systems for health situation analyses in the Americas

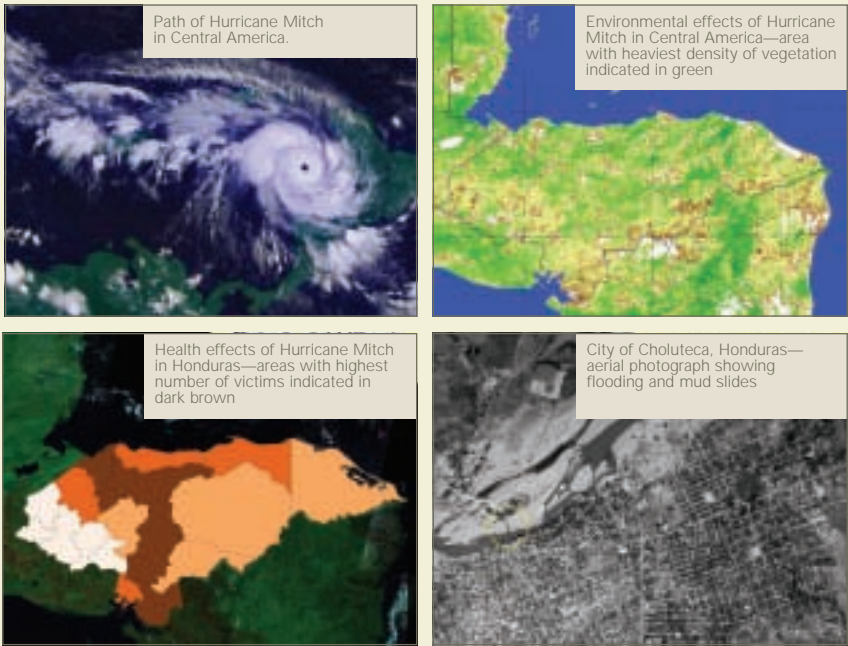
■ In Brazil, the geographic information system enabled more effective malaria surveillance, making it possible to target control in the most needed places and saving millions of dollars.

Surveillance of malaria in Brazil, 2001



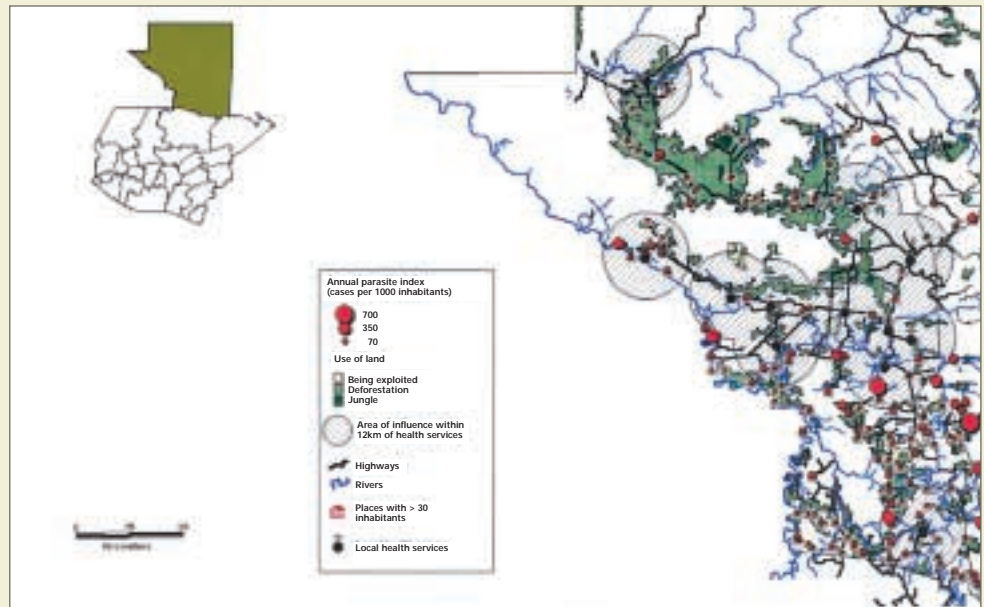
Impact of Hurricane Mitch in Central America, 1998

■ When Hurricane Mitch hit Central America, the geographic information system in health was critically important in evaluating the health and environmental impact of the hurricane and identifying the magnitude of high-risk populations, so that resources could be allocated to those areas.



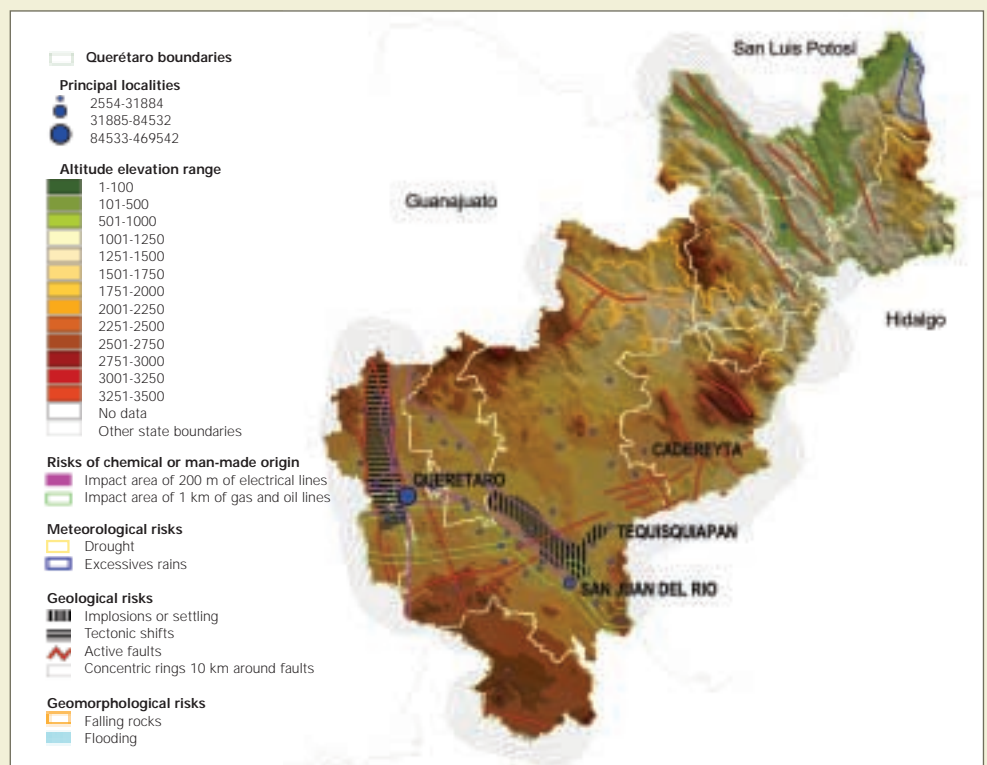
Evaluation of health services and malaria risk in Petén, Guatemala

■ In Petén, Guatemala, SIG-Epi was used to facilitate assessment of health service needs in relation to the distribution and magnitude of risk of malaria caused by *Plasmodium falciparum*.



Environmental vulnerability of villages in Querétaro, Mexico

■ In Querétaro, Mexico, SIG-Epi was used to evaluate environmental risks and socioeconomic vulnerability of villages.





Networking Health Information and Communication

Several countries in the Americas are shifting from epidemiological surveillance to public health surveillance—a core public health function—expanding its classic disease-centered scope to one that encompasses the determinants of health. This trend is generating a change of focus in the use of surveillance information from disease control to health policy formulation and planning. paho has convened a working group in support of countries' public health surveillance efforts. Rooted in the public health surveillance approach is a fundamental requirement:

the integration and sharing of information from different health-related systems and sources. Consequently, the development of communication platforms for health information is becoming a priority in the Region. Toward that end, paho has been working with Central American countries to develop technologies and methods required for establishing a standard framework for a web-based health information platform. This platform applies a user-centric approach and includes four components:

1. Integration of disparate health information systems through metadata definitions and interfaces;
2. Collaborative software tools to develop virtual working groups and decisionmaking groups among users;
3. Portals that can be customized by user type to access platform services and resources; and
4. Administration of groups and users within the platform.

In addition, in order to facilitate efforts toward collaborative work, a chat service has been implemented and is operating as part of the platform.

Development of this platform for Central American countries has proved instrumental in strengthening their subregional information and communication initiative, InfoCom. The countries have taken advantage of the platform to hold virtual meetings for technical group discussion. The subregion's health ministers used its chat tool to help prepare and coordinate their health sector meeting (resscad).

paho has taken steps toward establishing an integrated platform for regional health information and communication, starting with an in-depth assessment of all health information and surveillance systems in place at the Secretariat's headquarters. An ongoing technology project—.sh@ (pronounced dot-sha)—aims to develop a basic set of methods, technologies, standards, and protocols needed to establish a core framework for powering and supporting platforms like InfoCom and paho's core health data initiative. This project targets providing managers and experts with the integrated information and analytical tools required for virtual collaborative work, as well as increasing both data consistency and access to health information. A key component of the strategic use of information in the near future, this new model will maximize health information sharing and allow the creation and operation of virtual health situation rooms.

Central America's health communication and information platform—InfoCom



Spreading the Practice of Epidemiology through In-service Training

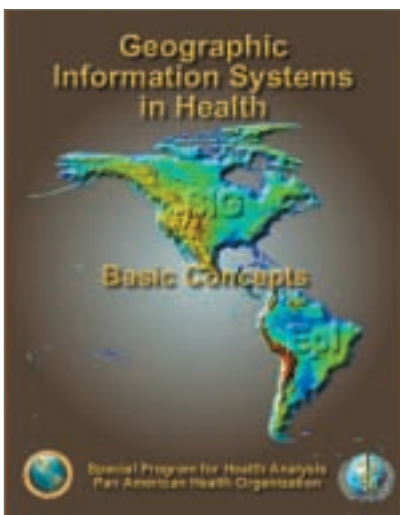
To carry out epidemiological analyses effectively, professional and technical staff need the appropriate knowledge and tools. The transfer of technology and knowledge to health workers requires different approaches, including the organization of training activities and the preparation of learning materials. PAHO has produced training materials in epidemiology and biostatistics and successful examples of health analysis applications. Products range from basic materials such as *Modules on Principles of Epidemiology for Disease Control* (second edition) to specialized books such as *Geographic Information Systems in Health: Basic Concepts* and *Epidemiology of Health Inequalities in Brazil*.

PAHO has offered basic and intermediate training in epidemiology. Basic training has entailed workshops on health

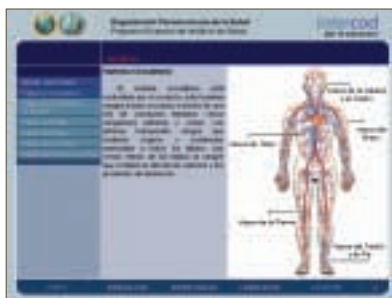
situation analysis, geographic information systems in health, and implementation of the International Classification of Diseases, 10th revision (ICD-10). Recognizing that not all interested professionals have time or access to in-person training, PAHO has developed alternatives for basic and high-level distance learning. In collaboration with the Open University of Catalonia, Spain, a Spanish-language, Internet-based certificate program on foundations of epidemiology and biostatistics started in 2000, with students from 13 countries in the Region and tutors from five. Likewise, targeting an audience of decisionmakers and high-level managers, a joint PAHO/Johns Hopkins University certificate program on epidemiology for health management was initiated in 2002, including participants from various countries in the Americas.



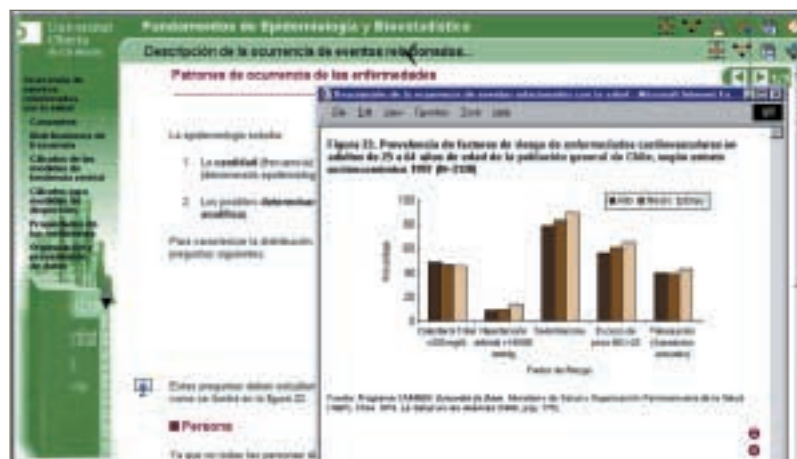
■ Intermediate-level training has included the PAHO/University of South Florida summer session, currently in its 12th year, that has trained more than 350 professionals from the Region and Spain; and the Johns Hopkins University graduate courses on epidemiological methods for planning and evaluating health services and epidemiological applications of GIS.



■ Recent PAHO training materials and books for health situation analysis



■ PAHO has issued products as an intermediate alternative to training. InterCod, developed in collaboration with the University of Guadalajara and the Mexican Center for the Classification of Diseases, is a computer-assisted, self-training system for learning the ICD-10. BioStadistica, a self-instruction computer package for concepts of biostatistics, has been developed with the auspices of the Ministry of Health and Consumption of Spain and the Spanish Cooperation Agency. PAHO has also collaborated with the Health and Social Services Council of the Junta of Galicia, Spain, to develop epidat, analytical software for tabulating epidemiological data, and Moucho, software for disease surveillance data analysis that adjusts for delays in reporting.



■ Distance learning on epidemiology and biostatistics — a PAHO basic level course developed in collaboration with the Open University of Catalonia, Spain

■ Internet-based distance learning on epidemiology for high-level managers and decisionmakers—a PAHO course developed in collaboration with the Johns Hopkins University



Using Epidemiology Strategically via Health Situation Rooms

The use of epidemiology in governmental health policymaking institutions is growing, as ministries of public health in the Region redefine the structure, functions, and roles of epidemiology units in national health systems. Supporting this trend requires a considerable investment in building national capacities so that epidemiological concepts, public health practice, and population-based policies are fully implemented. Consolidating the steering role of ministries of health requires new tools, skills, and areas of public health work, such as reliable core health databases at local and regional levels and their integration into public health information networks. It also requires targeting better communication in public health, strengthening national capacities for health situation analysis that monitors and assesses inequalities, and using epidemiology proactively in health planning, management, and evaluation.

In response to increasing demands of health managers at all levels that practical steps be taken to incorporate epidemiological evidence in health policymaking, paho has become actively involved in establishing and maintaining health situation rooms. These physical or virtual, temporary or permanent, strategically placed spaces of highly relevant analytical information and technical evidence for health policy- and decision-making have proved instrumental in successfully managing health scenarios in the Americas. Health

situation rooms are generating the epidemiological intelligence needed to introduce health equity into public health policies, developing early warning and epidemic response capacities, advancing use of the epidemiological approach to perform core public health functions, and anticipating improved health scenarios. Examples include Hurricane Mitch in Central America, flooding in Venezuela, sexually transmitted infections in Guayaquil, Ecuador, and health situation surveillance at the local level in Argentina, Bolivia, Brazil, Colombia, Cuba, Haiti, Nicaragua, Peru, and Venezuela, among others. Health situation rooms installed within several paho country offices have helped manage technical cooperation as well.



■ The need for a greater understanding of the relationships between socioeconomic determinants and health outcomes, and of the source of health inequalities, is incontestable. The application of epidemiological approaches in public health practice and the evidence they yield will be critical means of empowering policy- and decision-makers' quest for equity in health throughout the Americas.



Enhancing Health and Human Development



From the outset, the American governments and their health authorities realize the importance of health to social development. In the 19th century, infectious disease epidemics had ravaged Europe and the Americas—not only claiming countless lives but braking socioeconomic progress. Thus, at the dawn of the 20th century, a main motivation for establishing the Pan American Sanitary Bureau is the furtherance of trade. Increasingly, economic well-being comes to be seen as bound to health.

At the historic meeting at Punta del Este, Uruguay in 1961, American leaders recognize that States are responsible for promoting health as part of development. The Alliance for Progress of the Organization of American States that grew out of that accord launches a major cooperative effort by the governments aimed at accelerating progress and improving living conditions in the Region. In their Ten-Year Health Plan for the 1970s, Ministers of Health of the Americas declare health a universal right, recognize the importance of social participation in decisionmaking, and recommend that health policies and strategies be incorporated into economic and social development. The 30th World Health Assembly (1977) resolves that the governments' and WHO's main social target should be "attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life." The 1977-1980 edition of *Health Conditions in the Americas* claims to enable "a full picture of social and economic development within the Region."

In penning the quadrennial report of the Director in 1981, Dr. Héctor Acuña notes that "new currents are apparent in the thinking of health leaders in the Americas. Foremost among them is a new willingness to accept that Health for All must be PAHO's overriding objective. From that general premise, they can then deduce those broad policies that would fulfill it."

By the 1990s, under the leadership of Dr. Carlyle Guerra de Macedo, the concept of health as a component of development becomes firmly rooted. Throughout the ensuing decade's deepening economic crisis, the Organization mobilizes resources for priority programs and encourages sub-regional initiatives so that countries can pool assets to address common problems. PAHO advocates a more influential role for the health sector in the crafting of political agendas that decide the distribution of countries' resources.

Today, PAHO conducts research that shows that health is a necessary condition for securing human development that facilitates economic growth, advances education, preserves the environment, and secures the freedom essential for human dignity.





Advocating Health as a Means

Health itself is a goal, and the value of public health interventions in saving lives speaks for itself. At the same time, health is necessary to spur economic development, alleviate poverty, and ensure political and social stability—of as much interest to the developed as the developing world. The Organization thus strongly advocates the placement of health at the center of the development agenda and has spearheaded efforts to explain the relationship between health and human development. Toward that end, PAHO initiated three projects that were later joined by the Inter-American Development Bank, the Economic Commission for Latin America and the Caribbean, the World Bank, and the United Nations Development Program. The projects explored the extent to which improvements in a population's health could boost a country's economy, examined the effect of health improvements on household productivity, and addressed issues of equity and poverty reduction.

■ The relationship of economic growth to health is clear. But the inverse is also true. PAHO conducted studies on the importance of investing in health, the findings of which were published and used to inform the work of WHO's Commission on Macroeconomics and Health, one of whose working groups the Director of PAHO co-chaired.

PAHO studies show that, across countries, improvement in health boosts income growth by fostering education, productivity, and economic participation—especially for women. Over time, better health materializes as significant increments in the income per capita of the population—an impact that is both cumulative and permanent. In short, health *causes* economic growth. A related conclusion comes from Robert Fogel, recipient of the Nobel Prize in Economics in 1993, that shows that dietary energy increases human efficiency and, ultimately, productivity. The report estimates that half of the economic growth of the United Kingdom over the past 180 years derives from improvements in health and nutrition.

A special initiative to develop national health accounts has produced a database with expenditures on health—per capita and as a percentage of GDP. The database, with coverage since the early 1980s, makes it possible for countries to track where health resources come from (taxes, out of pocket, private) and where they go; enables them to make good decisions



“paho’s studies on investment in health reaffirm that good health allows nations to accelerate their economic performance and, conversely, that disease is an obstacle to development. ”

—Dr. George Alleyne

about resource management and allocation; and strengthens their regulatory capacity. In the initiative’s first phase, paho and usaid worked with stakeholders—ministries of health, social security agencies, the private sector—in eight countries to help them establish systems of health expenditure accounting. National health accounts empower countries to manage their own systems, as is already happening in Nicaragua and Bolivia. The second and third phases of the initiative will incorporate the remaining countries in the Region.

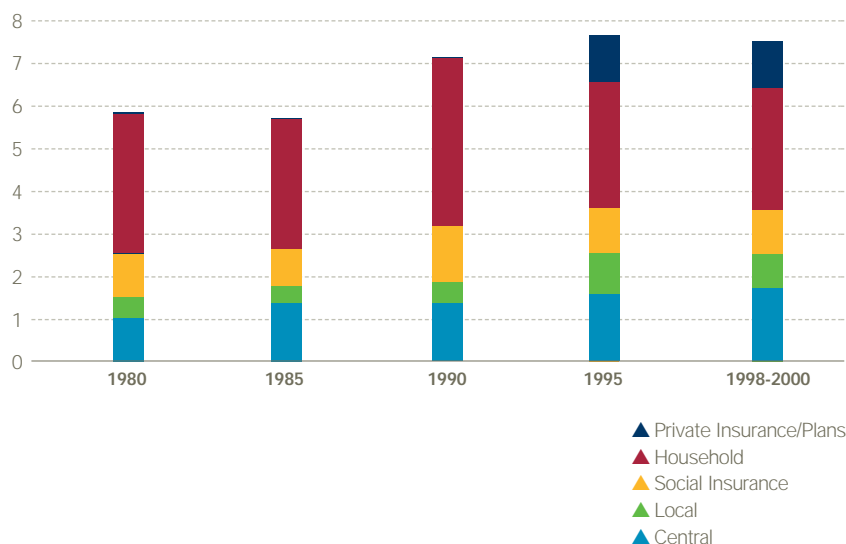
Another initiative, launched by the Group of 7 countries, involves 41 of the most heavily indebted poor countries in the world, four of which are in the Americas—Nicaragua, Honduras, Guyana, and Bolivia. The G7 countries will forgive the external debt of indebted countries, provided they assign to social services the resources that they would have used to pay the debt. As a precondition for assistance funding, countries are expected to prepare a poverty reduction strategy paper indicating what they intend to do to reduce poverty. Bolivia, for instance, has committed to improve food, housing, water supply, environmental sanitation, and control of endemic diseases such as Chagas’ and malaria.

paho has helped ministries of health and national parliaments draft health codes and laws in El Salvador, Paraguay, and Venezuela and legislation on health-sector financing in Bolivia, Ecuador, and Nicaragua.

Definition of the role of the State in health, inclusion in the constitution of components on the right to health and on establishment of a national health system, passage of laws on paid maternity and infant care, and a proposed network of social protection are among health policies in Ecuador to which paho has contributed.

Too often in the past, the health sector has targeted primarily middle- and high-income groups, thus reproducing inequities prevalent in society. To redress that situation and alleviate poverty, many countries—among them, Brazil, Chile, the Dominican Republic, and Mexico—are signing on to a new program, Progres, that integrates nutrition, education, and health efforts to improve people’s lives and, in the process, their productivity.

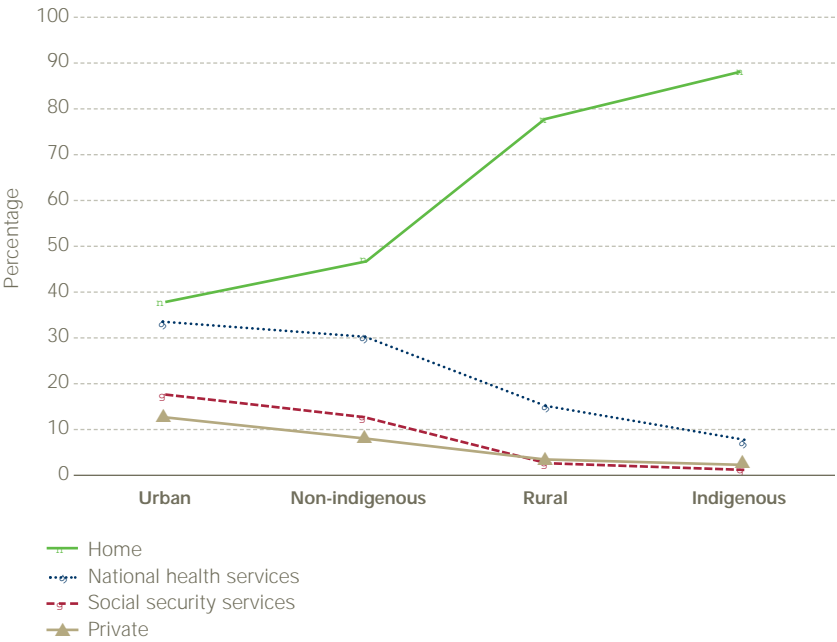
National health care expenditures in Latin America and the Caribbean
Expressed as a percentage of gross domestic product



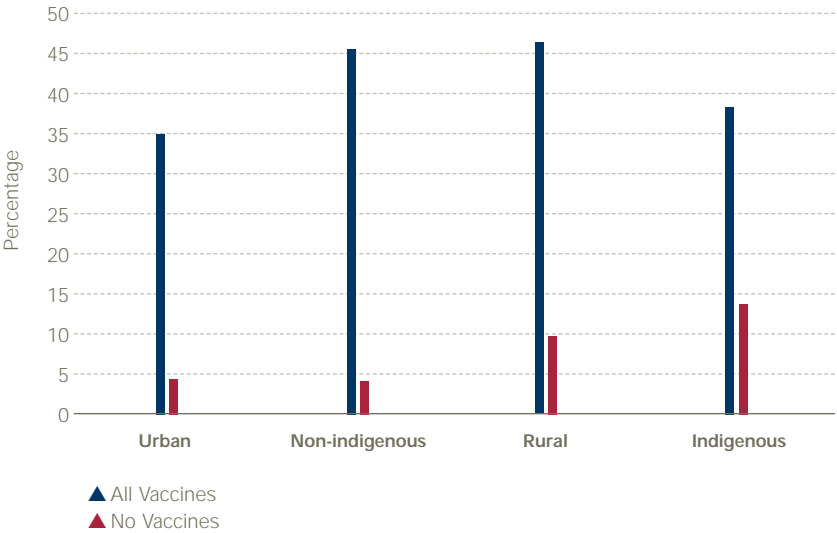
■ PAHO has gathered evidence that indigenous groups and peoples of African descent in Brazil, Colombia, Ecuador, and the United States are more vulnerable to certain diseases, have less access to health services, and spend more out-of-pocket for health care. The work of Guatemalan counterparts shows that indigenous people lack access to birthing and immunization services.



Gaps in delivery of birthing care in Guatemala

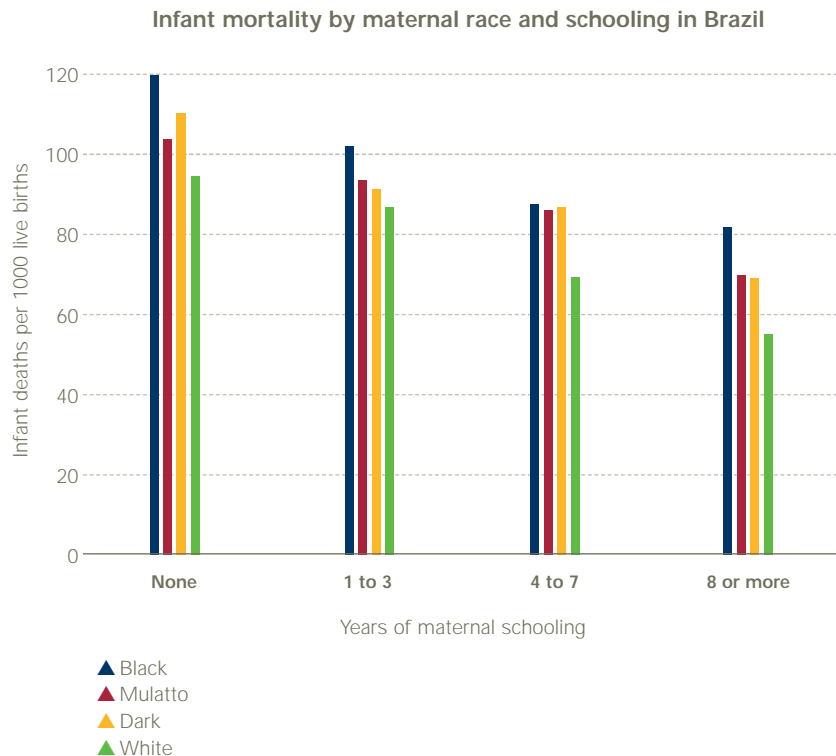


Gaps in immunization in Guatemala



“We express our deep concern whenever indicators in the fields of education, employment, health, housing, infant mortality, and life expectancy for many peoples show a situation of disadvantage, particularly where the contributing factors include racism, racial discrimination, xenophobia, and related intolerance.”

—U.N. World Conference Against Racism, Racial Discrimination, Xenophobia, and Related Intolerance



■ The work of Brazilian epidemiologists relates mothers' race and schooling to infant mortality. A mother's education alone does not guarantee her child's health: the infants of black women with eight or more years of schooling have roughly the same chance of survival as the offspring of illiterate white mothers.



The Organization has taken findings of ethnic inequities to parliamentarians, policymakers, nongovernmental organizations, and international forums to press the case that ethnic communities merit special attention. PAHO's advocacy has resulted in, among

other political gains, a declaration and a plan of action of the U.N. World Conference Against Racism, Racial Discrimination, Xenophobia, and Related Intolerance that, together, promote a closing of ethnic-based health gaps.

■ PAHO has helped ministries of health and national parliaments draft health codes and laws in El Salvador, Paraguay, and Venezuela and legislation on health-sector financing in Bolivia, Ecuador, and Nicaragua.



Coordinating a New Approach to Health Research

The purpose of science is to benefit humankind. The specific aim of public health research is to enhance the well-being of all people, especially the poor. The study of the same health issue by a number of research centers in many countries, following the same protocol, enables investigators to compare and contrast findings. Those findings, in turn, can be used to direct technical cooperation and inform health policies regarding the quality and effectiveness of services, the proper use of scarce resources, the means of promoting behavioral change, and much more.

The Organization began executing multicentric research projects as far back as the early 1970s producing, among others, the path-breaking investigation of infant

mortality by Ruth Puffer and collaborators. At that time and over ensuing decades, however, such projects were at best sporadic. Today, PAHO has taken the multicentric approach to another level, by making it a regular means of assuring regionwide contributions to original knowledge on subjects of great significance to public health in the Americas. The advantages of this approach are many: selection of topics that affect a number of countries or the Region as a whole; collaboration of researchers in the process and its results; cooperation among countries and the creation of networks; mobilization of resources and shared accountability; and use of technical cooperation to mediate regional research.

■ To overcome a dearth of research on health inequities in the Americas, PAHO coordinated analysis of a large number of household surveys on the relationship between socioeconomic characteristics, health conditions, and the use of, and spending on, health care services in Bolivia, Brazil, Colombia, Nicaragua, and Peru. The project revealed, among many other findings, that not everyone who has a health problem seeks care. Whether or not people do relates directly to their economic means, as shown in this graph of health inequalities among people seeking care in those five countries, 1997-1999.

Multicentric research: Relation between seeking health care, income quintile, and gender



“The advantages of multicentric research are many: selection of topics that affect a number of countries or the Region as a whole; collaboration of researchers in the process and its results; cooperation among countries and the creation of networks; mobilization of resources and shared accountability; and use of technical cooperation to mediate regional research.”

Multicentric research is exploring the causes of obesity in the Caribbean, where its rising incidence is contributing to increases in morbidity and mortality from cardiovascular diseases. Combating obesity requires changes in dietary behavior and exercise. To better understand the psychosocial factors involved in making such changes, a PAHO study in Belize, Jamaica, St. Kitts-Nevis, and Trinidad and Tobago analyzed

dietary behavior and exercise by gender. The study found that:

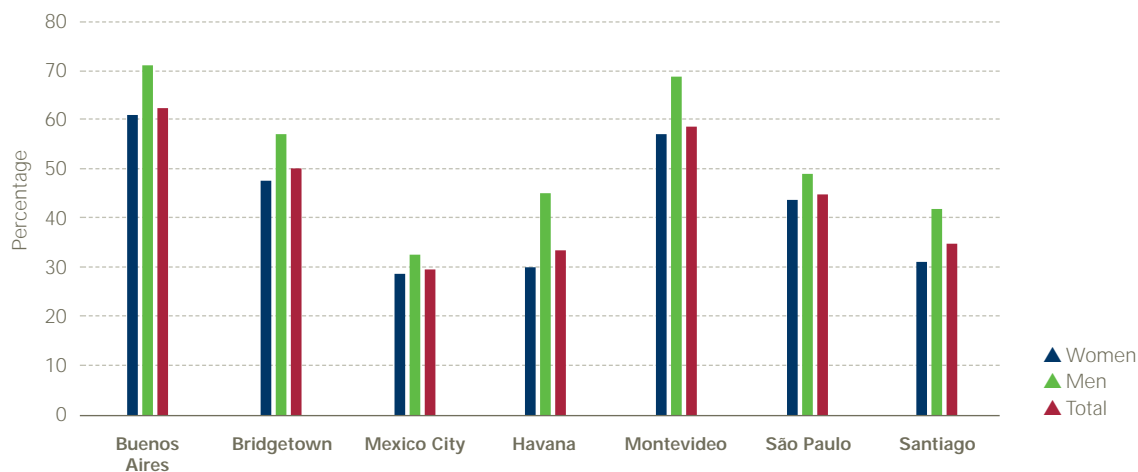
- ♦ Size is a very important determinant of perceived beauty, social adequacy, functioning, and responsiveness.
- ♦ People tend to know about the importance of diet and exercise, yet are reluctant to change their lifestyles accordingly.
- ♦ Television is in large measure responsible for current perceptions, values, and attitudes regarding weight.



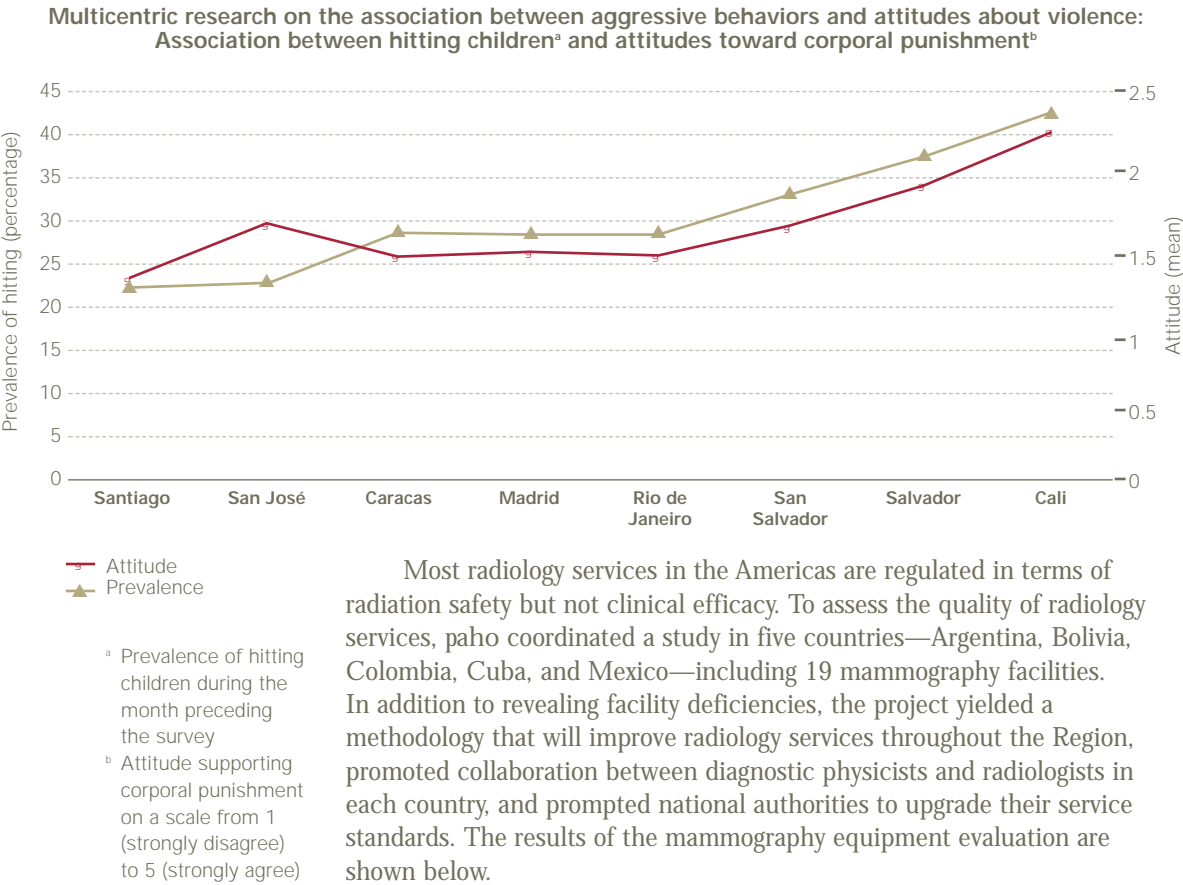
■ PAHO coordinated a study of health and well-being of persons 60 and older in urban areas in Argentina, Barbados, Brazil, Chile, Cuba, Mexico, and Uruguay. The study found that hypertension is the most often reported chronic disease, followed by arthritis; older persons receive more care from public than private services; men are more likely to be married; women are more likely to live alone, be less educated, smoke less, be more obese, and have more difficulty carrying out basic activities; and from two-thirds to less than one-third of the population report being in good health, with men consistently reporting good health more often.

■ To involve other sectors in health research and to inform the public of its results, PAHO brings together investigators, policymakers, and the media to discuss how to apply research findings. Among topics at a major meeting to explore the use of scientific information as leverage to achieve health equity (Cuernavaca, Mexico, 2001) were the transferral of research results to decisionmakers; the perceptions of researchers, policymakers, and journalists regarding specific issues; and the use of new technologies to promote research results.

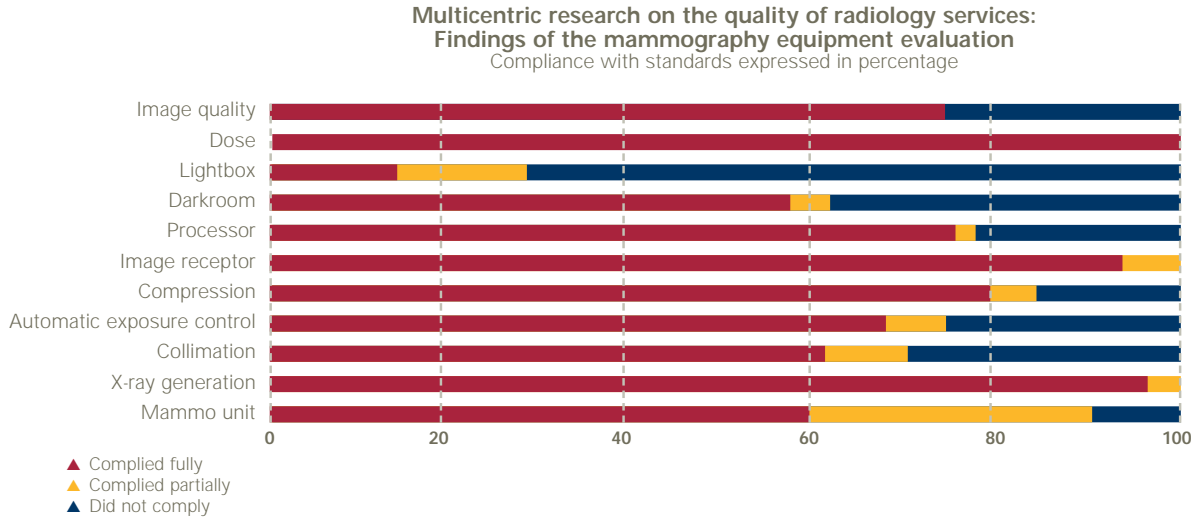
Multicentric research on health and well-being of persons 60 and older:
Those reporting good-to-excellent health



To evaluate the association between aggressive behaviors and attitudes regarding alternatives to violence, paho supported research based on household surveys in eight metropolitan areas of Latin America and Spain. The study found that people who resort to aggression are less likely to believe that they can otherwise resolve conflicts. Aggression toward nonfamily members is found most frequently among young men who engage in binge drinking, carry a firearm, or consider the police inefficient.



Most radiology services in the Americas are regulated in terms of radiation safety but not clinical efficacy. To assess the quality of radiology services, paho coordinated a study in five countries—Argentina, Bolivia, Colombia, Cuba, and Mexico—including 19 mammography facilities. In addition to revealing facility deficiencies, the project yielded a methodology that will improve radiology services throughout the Region, promoted collaboration between diagnostic physicists and radiologists in each country, and prompted national authorities to upgrade their service standards. The results of the mammography equipment evaluation are shown below.





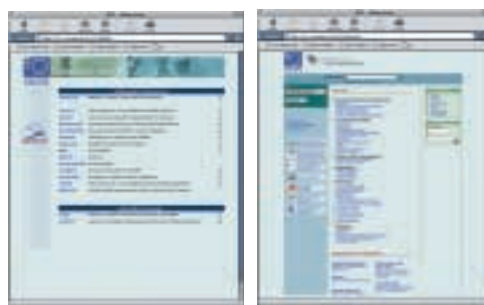
Mediating Evidence and Action for Health: Information

The Organization emphasizes evidence-based approaches to understanding the relationship between health and human development. It then uses that understanding to promote policies aimed at improving the major determinants of health equity in the Region, by providing regional and national policymakers information on public policies, health economics, legislation, health equity, health research, and bioethics.

The Virtual Health Library

Coordinated by the Latin American and Caribbean Center for Health Sciences Information (bireme) in São Paulo, the Virtual Health Library holds promise of contributing significantly to the development of health sciences. By providing equitable access to scientific literature in English, Spanish, and Portuguese, the vhl encourages the flow of information throughout the Region. One of its principal

services, scielo, is an online portal offering the best journals produced in Latin America and the Caribbean. The vhl targets creating a space where research stakeholders—investigators, funding agencies, governments, and the public at large—can interact; promoting virtual research networks; and enabling research results to be used in national planning and international technical cooperation.



■ BIREME is a PAHO Specialized Center, established in São Paulo in 1967, in collaboration with Ministry of Health, Ministry of Education, Secretary of Health of the State of São Paulo and the Federal University of São Paulo.

Another information service, EQUIDAD, a discussion group launched by PAHO in 2000 and already considered the best such source on health and human development in the world, enables the exchange of information among over 3000 subscribers.

“The demand for training by the Regional Program on Bioethics has tripled during the past four years; almost every country in the Region now has a national bioethics commission; and over 200 centers in Latin America and the Caribbean are conducting bioethical research.”



■ PAHO'S Regional Program on Bioethics publishes a journal and a newsletter that explore the dilemmas arising in research and health care today.

The Regional Program on Bioethics

The thrust of the Regional Program on Bioethics—which operates out of Santiago, Chile—is the exploration of moral dilemmas that arise in research and health care. Among other topics, the Program addresses patients' rights, death with dignity, just resource allocation, palliative care, drug use, ethical aspects of Latin American biomedical literature, including research involving human subjects. By providing training, through short courses and conferences, and

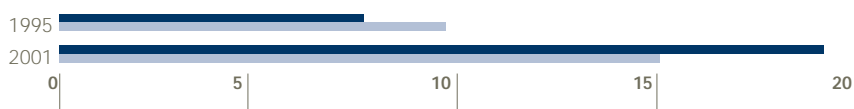
disseminating information, through its journal and newsletter, the Program builds countries' capacities to deal with these dilemmas for the good of their citizens. Its impact is measured in results: the demand for training by the Program has tripled during the past four years; almost every country in the Region now has a national bioethics committee; and over 200 centers in Latin America and the Caribbean are conducting bioethical research.

In recent years the number of national bioethics committees in countries of the Americas more than doubled...



...and there was a significant jump in the number of countries with hospital care and research bioethics committees...

▲ Hospital care bioethics committees
▲ Research bioethics committees



...while the total number of hospital care and research bioethics committees in the countries increased manifold.

▲ Hospital care bioethics committees
▲ Research bioethics committees





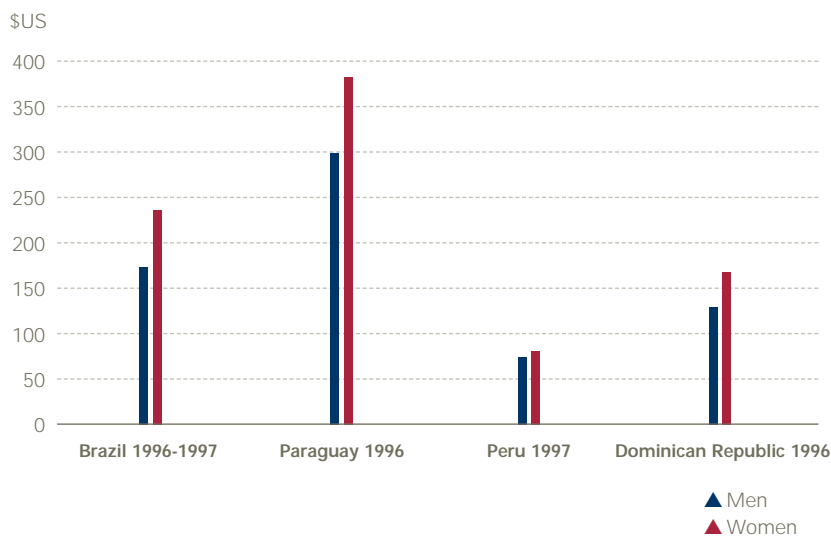
Mainstreaming Gender in Health

The Organization strives to incorporate gender in health policies and programs, with the aim of reducing related inequities throughout the Americas. Toward that end, PAHO promotes research, disseminates information, engages in advocacy, and encourages the adoption of laws and policies. It also contributes significantly to advancing gender equity by mobilizing funds for special projects: over US\$10 million has been raised in the past decade. And not all gender projects are women-centered: one for which funds are being mobilized entails the greater involvement of males in reproductive health.

Gender violence affects an estimated one-third to one-half of women in almost every country in the world. To eliminate gender violence, especially that which occurs within families, PAHO coordinates two major projects involving 10 countries in the Region. One project, financed by the governments of Sweden and Norway, involves the Central American countries of Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama; the other, funded by the Kingdom of the Netherlands, covers Bolivia, Ecuador, and Peru. With its national counterparts in each of these countries and covering over 100 communities, PAHO has developed an integrated care model: each community comprises a network that plans, carries out, and evaluates programs to prevent violence. Thus far, the projects have yielded rich rewards: training of health workers, police, and members of the judicial system; conduct of media campaigns; creation of advocacy materials,

norms, and protocols; establishment of support groups for battered women and their abusers; and cooperation among countries. As examples of the last, Panama and Bolivia are exchanging information and expertise of use to their respective community networks and, through PAHO, Central American and Caribbean countries are sharing resources. The goal is to extend and institutionalize the model beyond the community and throughout the Region and, in the process, to effect changes in health policy and, ultimately, improve people's health. Realizing that goal is well under way: the Inter-American Development Bank has replicated PAHO's model in another six countries in the Region.

Annual out-of-pocket expenditures on health by men and women in selected countries of Latin America and the Caribbean



PAHO's research has shown that gender is an important determinant of inequalities in access to health care. Women use health care services more frequently, but their higher needs do not necessarily translate into higher levels of met needs. Women's greater needs are due to their reproductive role and more frequent illness over longer lifespans, which result in women spending more on health, although they have fewer means and less direct access to health care insurance than men.



■ Among the lessons learned from efforts to integrate care for victims of domestic violence in Central America: community members want to contribute to solving this problem; community health leaders have a crucial role to play in preventing it; and community health services should be organized to provide women quality care.



■ One of the main features of the integrated-care model is a research tool—the “critical route”—that provides information on gaps in health care for women and uses that information to advocate for change. Application of the protocol in 10 countries in the Region indicates that the interventions of most help to women are information on their rights and available resources, legal guidance, and emotional and moral support.

paho advocates violence-free lives at major international and interagency meetings. A symposium on gender violence, health, and rights, held in 2001, defined the Region’s approach and commitment to mobilize the health sector to combat gender violence. Bringing together groups that represent a wide spectrum of sectors and agencies throughout the Americas enables them to share experiences and advance means of preventing violence.

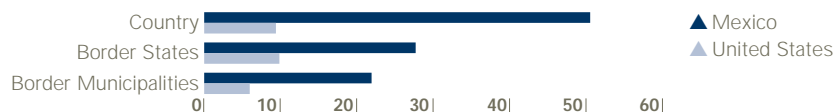
Information is a major element of paho’s gender approach. gensalud, an electronic discussion group on gender and health issues (gensalud@paho.org), has achieved wide and regular participation. A paho training module on gender, health, and development, as well as other publications and instruments, and databases of training programs and persons working in gender, women, health and development are available on paho’s website (www.paho.org).

The Americas is the region of the world that has made the greatest progress toward combating domestic violence through legislation and programs. Today all countries in Latin America have laws against such violence—in large measure thanks to paho and its counterparts’ promotional efforts. Among other advances, the First Inter-Parliamentary Ibero-American Conference on Health (Cuba, 1999) highlighted the topic of violence against women, and the 120 legislators from the Region in attendance agreed to take interparliamentary action to redress the problem.

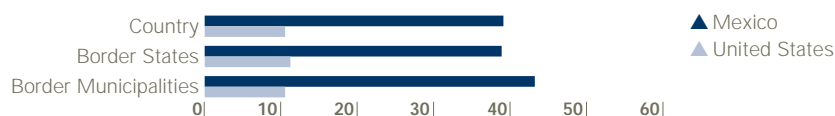


■ PAHO research on the differences in mortality in the United States-Mexico border states reveals significant health inequalities. Mexican women suffer disproportionately compared to women in the United States from highly preventable mortality, such as that associated with pregnancy complications and cancer.

Deaths due to pregnancy complications in the United States, Mexico, the border states, and border municipalities, for 100,000 live births 1995-1997

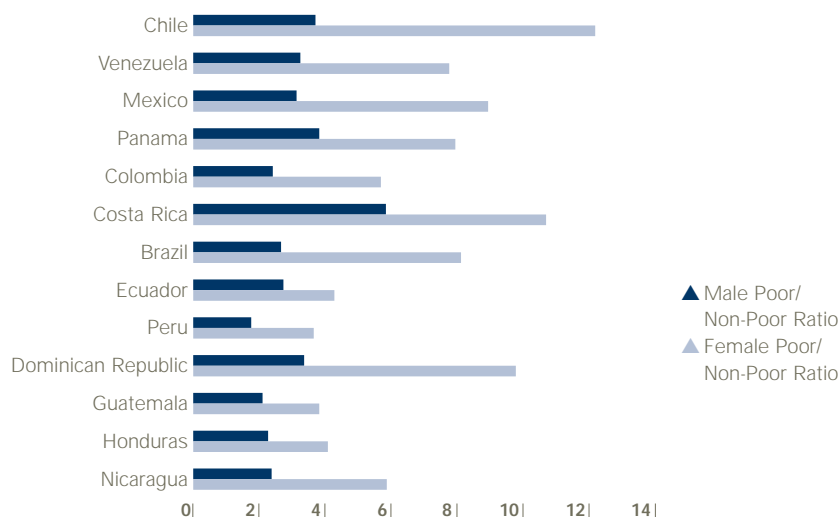


Deaths due to uterine cancer in women 45-67 years of age in the United States, Mexico, the border states, and border municipalities, for every 100,000 women, 1995-1997



■ Among those between the ages of 15 and 59 mortality is generally low, so that a death in that period is considered "excessive." Nonetheless, excessive deaths occur more frequently among poor women. In 13 countries in Latin America, the ratio of the probability of dying of poor to non-poor is much higher for women.

**Ratio of dying of poor to non-poor—males and females—
in selected countries of the Americas**
Expressed as a ratio per 1000 inhabitants



■ In the interest of improving the quality of local health care, nine Guatemalan communities brought together health services personnel and indigenous women. Their interaction proved mutually beneficial: indigenous women learned and were trained to become promoters of modern approaches to health care, such as breast examinations and the PAP test; and health workers learned about effective traditional healing, such as the use of medicinal plants, and began to include traditional healers in their referral systems.



Preventing and Controlling Diseases



At the core of the establishment of the Pan American Sanitary Bureau in 1902 is the determination to stamp out infectious disease epidemics in the Western Hemisphere. Over the decades, preventing, controlling and—in some cases—eradicating diseases has been a major thrust of the Organization's program of technical cooperation with the countries of the Region. The targets have ranged from yellow fever, malaria, Chagas' disease, tuberculosis, and leprosy to diseases preventable by vaccination, HIV/AIDS, and noncommunicable diseases.

Food protection is among the earliest interests of the Pan American Sanitary Bureau. Governing body recommendations aimed at promoting a safe milk supply, for instance, date as far back as 1927, 1934, and 1938.

Veterinary public health becomes an increasingly important component of the work of the Organization. In 1947, the Pan American Sanitary Conference adopts a resolution proposing an inter-American commission for the study of brucellosis and calls attention to the need to control rabies transmitted by stray dogs. In 1949 veterinary public health becomes an official part of PAHO's institutional structure, with the hiring of the first consultant in veterinary medicine. In 1983 the countries set the goal of eliminating rabies from 414 cities in 20 countries of Latin America; by 1989, 364 of those cities are rabies-free. The need for international cooperation to limit the spread of foot-and-mouth disease spurs the Organization of American States, in 1950, to request that PAHO develop a program to fight the disease; the following year the Pan American Foot-and-Mouth Disease Center opens near Rio de Janeiro.

In 1975, the Caribbean Epidemiology Center is established in Port of Spain, Trinidad. Two years later, PAHO launches the Expanded Program on Immunization in the Americas; at the time, only 25-30% of the children in the hemisphere are covered by vaccines against measles, diphtheria, pertussis, tetanus, tuberculosis, and poliomyelitis.

Today, the successes in eliminating smallpox and poliomyelitis are well known. Soon measles, rubella, neonatal tetanus, human rabies, onchocerciasis, and leprosy will be among the vanquished threats to regional public health—the results of PAHO's effective partnership with the countries of the Americas.





Leading the Region and the World in Life-saving Immunization Programs

Working together, the countries of the Americas and the Pan American Health Organization have achieved a decades-long track record of success in saving lives through vaccination. Immunization programs have long been the backbone of preventive, primary health care services in the Region, benefiting large sectors of the population—from urban slums to the remotest of rural areas. Vaccinators—who have been known to work seven days a week, for little pay, travelling treacherous roads and crossing rivers in search of that last child to be immunized—have been major contributors to the breakthroughs in disease prevention achieved by all the countries of the Americas. Most notable of these breakthroughs have been the eradication of smallpox in 1971 and poliomyelitis in 1991—the Americas was the first region in the world to accomplish these feats—and interruption of indigenous measles transmission, now underway.

How immunization programs are built varies from country to country. In some, emergency strategies have initially been required. In others, critical information regarding disease burden is already being developed that clearly shows the potential impact of a new vaccine. The key component of paho's partnership with the countries is the securing of a steady flow of epidemiological information to monitor progress and inequities in immunization.

With the goal of attaining 95% coverage of all antigens included in national immunization programs, paho and the countries are striving to reach the as-yet unvaccinated, who generally live in out-of-the-way rural and socially marginal urban areas. To reach them, paho promotes a many-pronged approach: crafting national policies, tapping mayors to carry out local campaigns, working with preschools and schools to establish vaccination requirements, involving community members and local health workers, and educating mothers about the importance of completing their children's vaccination schedules.

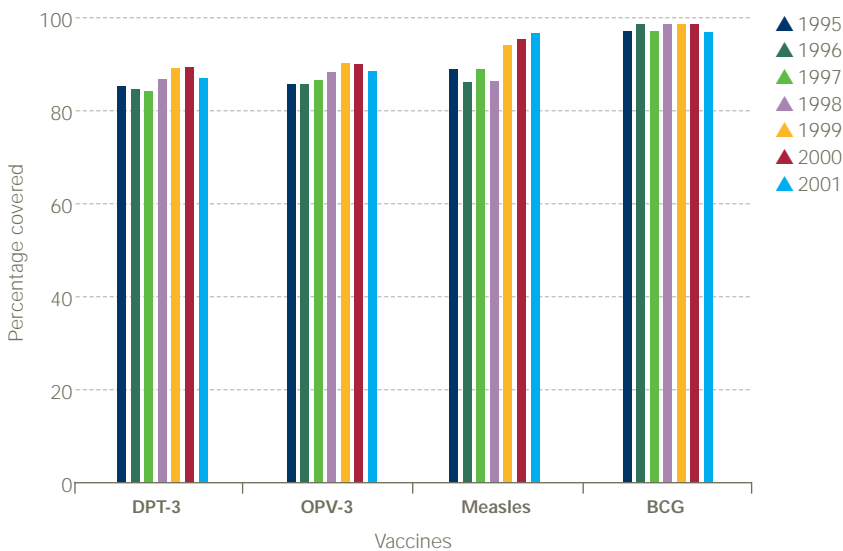
To assure success, paho carries out periodic evaluations of national immunization programs, promotes the use of five-year plans and interagency coordinating committees, and advocates the passage of immunization laws and policies.

paho also takes advantage of joint interventions such as the administration of vitamin A supplements and the treatment of parasitic diseases during national immunization days—resulting in

Vaccines in use in the Americas

BCG	Tuberculosis
DPT, DT, and TT	Diphtheria, pertussis, tetanus
Hep A and Hep B	Hepatitis
Influenza	Influenza
OPV and IPV	Poliomyelitis
Polysaccharide and conjugate pneumococcal	Pneumococcal disease
MMR, MR, M	Measles, mumps, rubella
Meningococcal A, B, C, W 135, Y	Meningococcal disease
Yellow fever	Yellow fever
Varicella	Chickenpox
Hib conjugate	<i>Haemophilus influenzae</i> type b

Vaccination coverage of children* in the Americas**, 1995-2001***



* Coverage for BCG, OPV-3 and DPT-3 among children <1 year of age. For measles, coverage among children 1 year of age.

** Canada administers DTP/IPV/Hib, data for year 2000 only. Data for the United States for years 1999 and 2000 and polio coverage is for two doses of IPV, third dose generally given during second year of life. The United States and Canada do not vaccinate with BCG.

*** 2001 data provisional.

increased coverage of those programs. A major benefit of such cross-fertilization is better planning and information management. In Bolivia and Nicaragua, programs to integrate management of childhood illnesses collaborated to strengthen vaccination at health services, particularly incorporation of the pentavalent and MMR vaccines. During national immunization campaigns in Ecuador and Nicaragua, immunization programs collaborated in delivering vitamin A supplementation and monitoring vitamin A and iron coverage among pregnant women and children under 1 year of age as well as vaccination coverage of children under 1 and among pregnant women.

Quality Vaccines for Quality Immunizations

On a single National Immunization Day, the same lot of vaccines can

be administered to several hundred thousand children. paho works with countries to make sure that they can attest to the quality of vaccines being used on a daily basis in the Americas. Toward that end, the focus is on strengthening national regulatory authorities' compliance with the six basic regulatory functions, developing a regional system for quality testing of vaccines, and assuring that local vaccine producers comply with good manufacturing practices and national and international requirements. The countries of Central America and the Dominican Republic are developing common regulatory procedures and formulating a unique subregional licensing process.

Concurrently, work is underway to implement a regional database for vaccine lot release. Developed by paho, the database allows for the registration of all



■ Vaccination coverage of children under 1 year of age in the Americas has progressively increased over the years, reaching levels above 90% for most antigens.

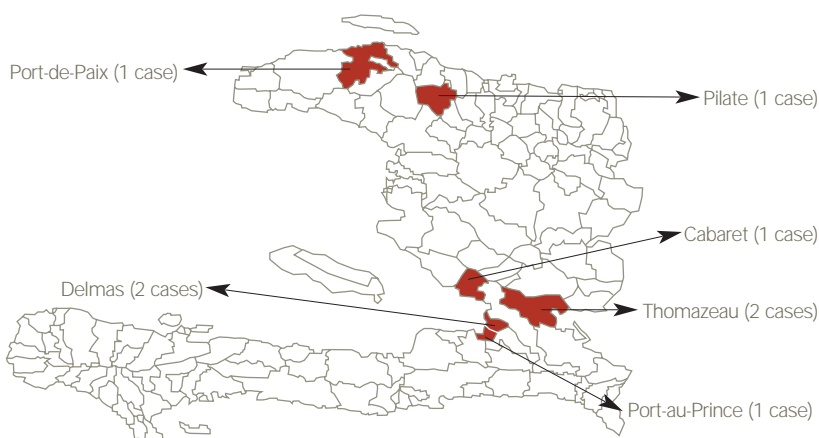
PAHO cooperates with Haiti to quash outbreaks of polio and measles



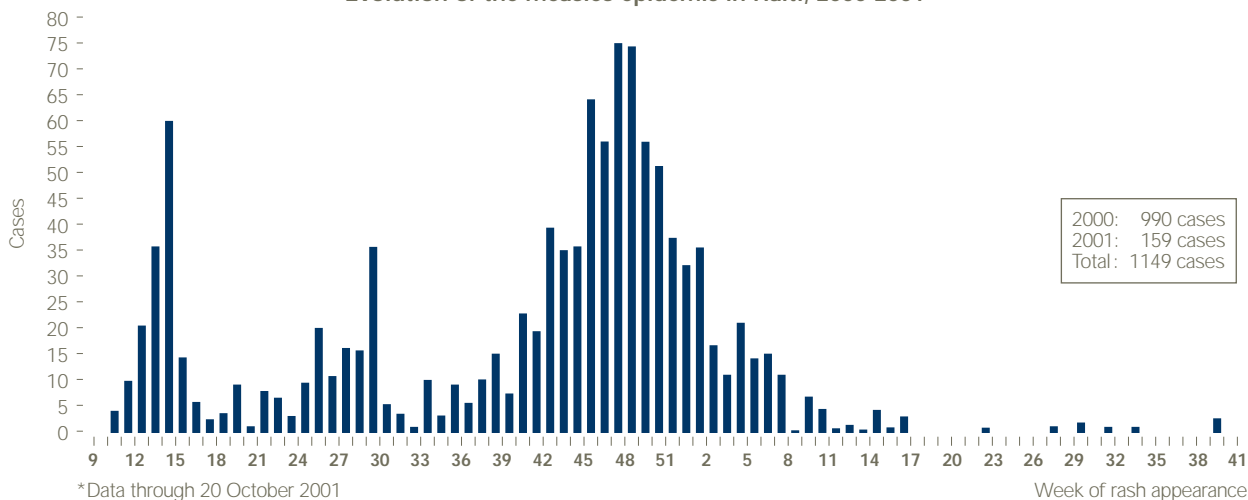
Haiti's government has been determined to overcome a myriad of obstacles to carry out immunization campaigns, and the country's health authorities have shown unwavering commitment to ensuring adequate planning and implementation of the campaigns. For its part, PAHO—convinced that Haiti could carry out immunization activities and that a national program could be built—assembled a team of national and international experts with the support of Canada, UNICEF, Rotary International, WHO, and the World Bank. The team's remit was to ensure sufficient resources for and careful execution of the campaigns. The international community raised over US\$4 million in 2001 to support Haiti's efforts. In addition to accomplishing their primary objective, Haiti's vaccination campaigns have resulted in overall improvements in the managerial capacity of health professionals at the central, departmental, and local level. The country's cold chain is being strengthened through rapid assessment of the equipment and swift repair of broken refrigerators and solar equipment. Local

health workers have been trained in conducting complete field investigations of suspected cases of measles and acute flaccid paralysis. Hundreds of health workers have learned the methodology for monitoring coverage in the field—a tool to validate reported coverage. This experience, in turn, is providing a number of best practices for replication by other health programs.

Cases of polio in Haiti, 2000-2001



Evolution of the measles epidemic in Haiti, 2000-2001*

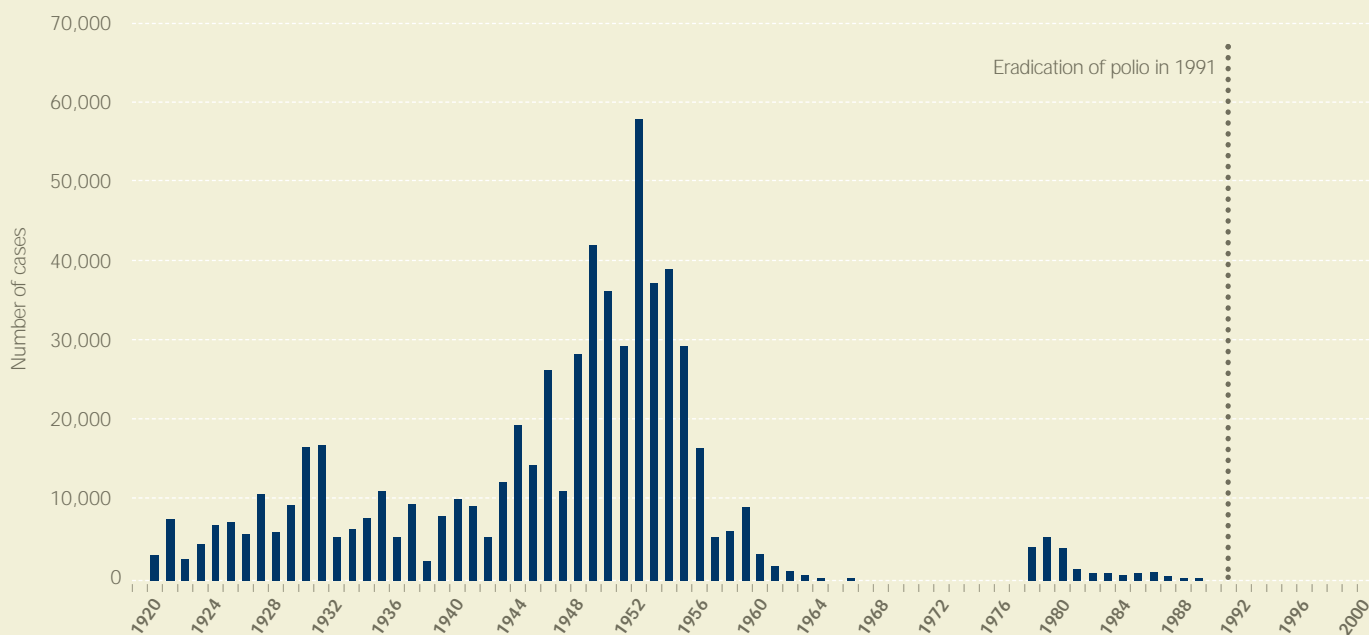


Building on past experience—from smallpox to measles

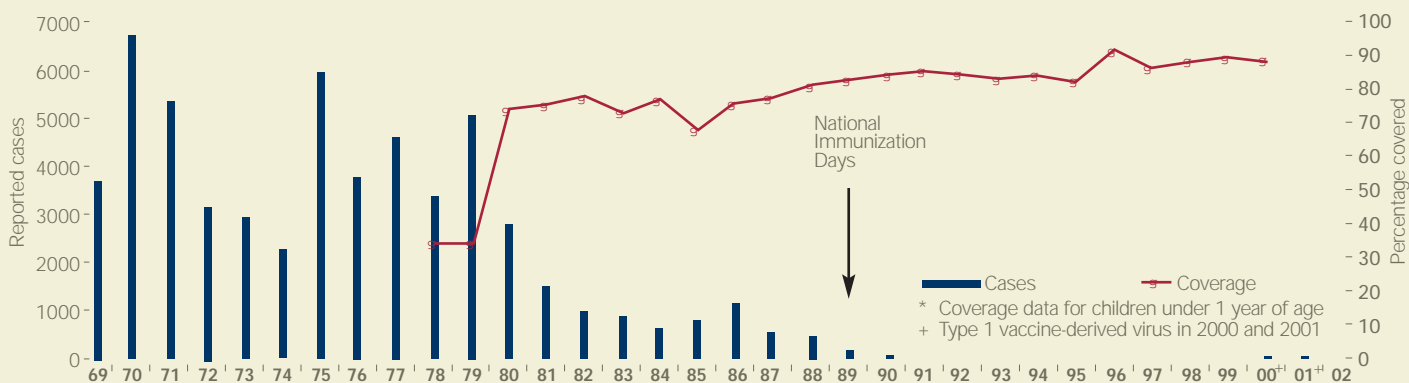
On 19 April 1972, the Americas became the first region in the world to achieve the goal of smallpox eradication. The last case of naturally occurring smallpox was detected in Rio de Janeiro, Brazil. Smallpox eradication became the foundation for development of the Expanded Program on Immunization (EPI), and many of its lessons informed the campaign that eventually eradicated poliomyelitis from the Western Hemisphere.

PAHO's strategy to eradicate wild poliovirus transmission focused on accelerating the EPI, with special vaccination strategies tailored to each country's needs. Key components of the strategy included intensification of immunization activities through national immunization days, house-to-house mop-up campaigns, and achievement and maintenance of high vaccination coverage of children under the age of 5 years. A surveillance system was developed for early detection of cases of acute flaccid paralysis. The last case of polio in the Americas was reported in 1991 in Peru. In September of 1994—following extensive review of surveillance information, key polio surveillance indicators, and laboratory results—an International Commission for the Certification of Poliomyelitis Eradication formally declared that transmission of wild poliovirus had ceased in the Americas. In 2002, the Region will be completing its 12th year without indigenous transmission of wild poliovirus. Success in eradicating smallpox and polio has spurred the Americas and the entire international community to tackle the challenge of eradicating measles in the Western Hemisphere.

The rise, fall, and disappearance of polio in the Americas



Coverage with the poliomyelitis vaccine (OPV3) and incidence of paralytic poliomyelitis in the Americas*



vaccine lots released and circulating in the Region. Furthermore, the network of national control laboratories is undergoing a certification program that seeks to establish the capacity of national laboratories to test specific vaccines. As a result of its evaluation, Mexico's National Public Health Laboratory has already implemented the recommendations issued by the certification team. Chile and Venezuela will undergo similar evaluations.

The Future of Vaccination

Over the past decades, work in the area of childhood immunization has yielded a wealth of knowledge regarding the epidemiology of diseases. That knowledge is now positioning immunization programs to extend their services to other age groups—adolescents, women of childbearing age, and the elderly.

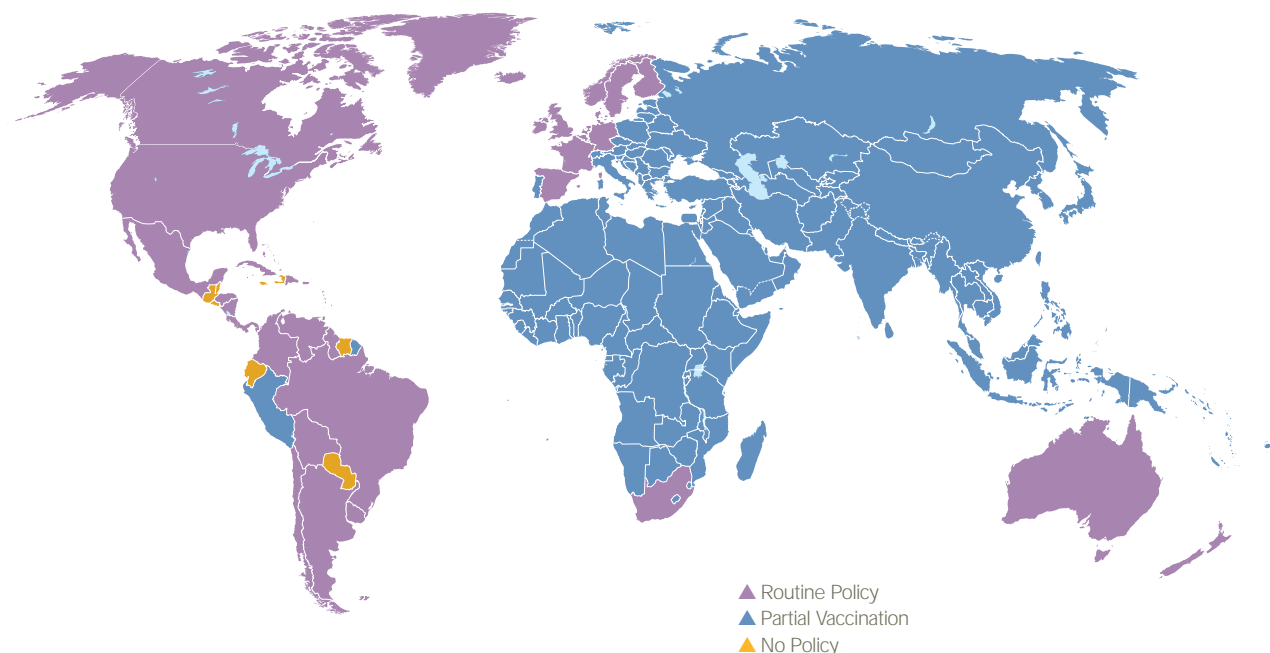
Countries are devising programs to prevent influenza among those at high risk of hospitalization and death from this infection and its complications, as well as strategies to reduce rubella infection in women of childbearing age. Control of yellow fever in the Americas—especially reducing the possibility of its re-urbanization—is another goal: routine yellow fever vaccination is now available, endemic countries have secured vaccination for residents in enzootic areas, and surveillance and laboratory diagnosis have improved.

New generations of vaccines of public health importance are coming out. The availability and use of combination vaccines—such as dtp+hib, dtp+hb, and dtp/hb+hib—hold the promise of simplifying immunization delivery, improving the performance of existing vaccines, and protecting children against other vaccine-

preventable diseases. These vaccines are considerably more expensive, however, than those currently in use.

The sustainability of introducing new and combined vaccines in routine immunization programs—and how and when to do so—is a topic of considerable discussion throughout the Region. A second-generation vaccination schedule that includes pentavalent, mmr, bcb, and polio vaccines costs an estimated US\$12 per person for the biologicals. Introducing these new vaccines, moreover, will require the updating of cold chain systems in the Americas, most of which were built 15-20 years ago to handle the traditional six basic vaccines. Second-generation vaccination schedule costs should be kept relatively low, compared to other health interventions, because of the paho Revolving Fund for Vaccine Procurement.

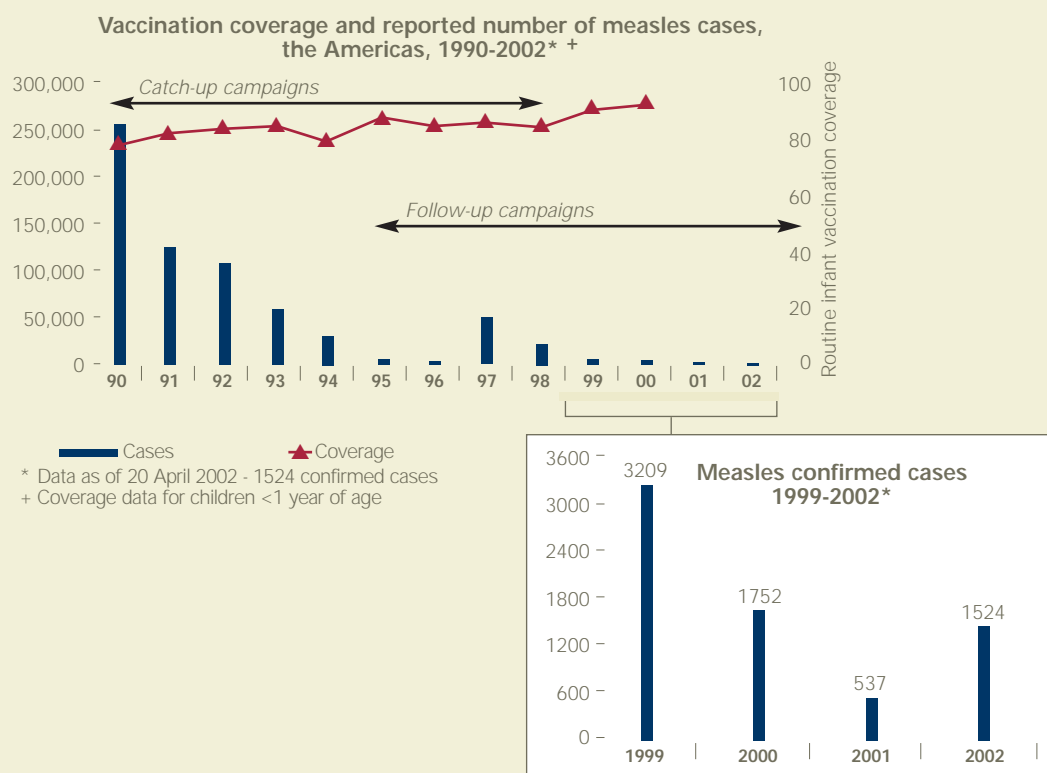
Closing the gap: global status of *Haemophilus influenzae* type b vaccination*



* As of December 2001

Making measles history

The Western Hemisphere has progressed far towards the goal of interrupting indigenous measles transmission—a goal set by all the countries in the Americas in 1994. Intensified vaccination and surveillance, coupled with active search of cases in health centers and high-risk communities, has effected a sharp reduction in the incidence of measles. The number of confirmed cases in the entire Region dropped from 14,332 in 1998 to 537 cases by the end of 2001, with endemic transmission in only one country. As recently as 1990, the countries of the Americas were reporting some 250,000 cases of measles. PAHO's recommended strategy for measles eradication has been instrumental in the steady reduction of measles morbidity in the Western Hemisphere. Global efforts towards measles control, especially aimed at the reduction of measles mortality, are being accelerated, following the strategies and lessons learned from the Americas. Those countries that have fully implemented the strategies recommended by PAHO have successfully interrupted indigenous transmission of the measles virus.



Notwithstanding, the importation of measles virus from regions where the disease remains endemic poses a major threat. Such importation triggered measles outbreaks in Argentina, Bolivia, and the Dominican Republic in 1998-1999, in Haiti in 2000-2001, and in Venezuela in 2001. Those instances of importation initiated endemic transmission, because the virus found large susceptible populations where PAHO's recommended vaccination strategy for measles eradication had not been fully implemented. On the other hand, although Brazil had an importation from Asia in 2001, the country had a high level of measles immunity following intensive efforts to achieve high vaccination coverage in 1999-2000 and strengthened measles surveillance. Likewise, El Salvador's efforts to reach >95% measles coverage rates proved instrumental in preventing resurgence of indigenous measles virus when the country was confronted with two instances of importation from Europe in 2001.

One of the legacies of the measles eradication initiative in the Americas will be its role in improving the technical and managerial capabilities of health workers at the local level. The initiative has been implemented largely while countries are changing the steering and delivery of national health programs. Immunization programs have capitalized on every opportunity brought about by these systemic processes to reinforce local political commitment to the allocation of financial and human resources to population groups at high-risk for measles and other vaccine-preventable diseases. Moreover, the enhanced measles surveillance system has revealed widespread circulation of rubella virus in the Americas and has identified congenital rubella syndrome as an important public health problem. The use of a vaccine containing measles and rubella when vaccinating against measles has been widely practiced throughout the Region in the past four years. That practice has been critical in controlling rubella which—if it infects women in their childbearing years—can result in a newborn child with congenital rubella syndrome, which in turn is linked to cataracts, hearing loss, and delayed development. Based on the experiences of rubella control strategies in the English-speaking Caribbean, Chile, Costa Rica, and Brazil, PAHO is supporting country initiatives to accelerate rubella control.

■ The ministers of health of Bolivia, Chile, Colombia, Ecuador, Peru, and Venezuela—meeting with the Director of PAHO in Sucre, Venezuela on 23 April 2002—agreed to band together to eradicate measles from their countries. The only country still registering cases is Venezuela, where incidence is declining dramatically.

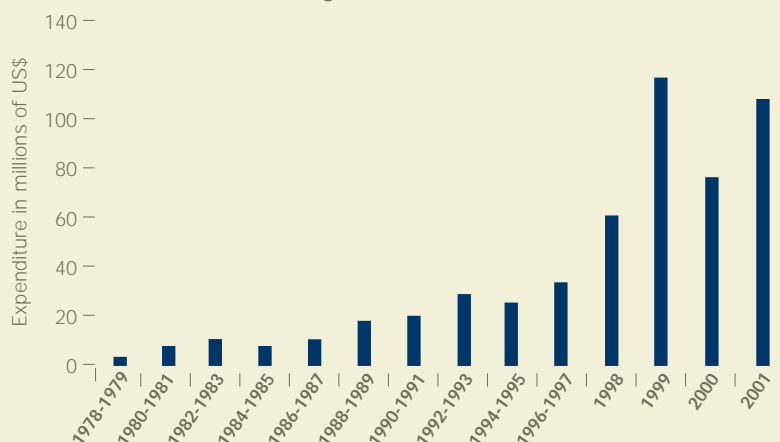


Securing access to old and new vaccines

The PAHO Revolving Fund for Vaccine Procurement—established in 1979 to purchase vaccines, syringes, needles, and cold-chain equipment for countries throughout the Region—assures the supply of high-quality vaccines for national immunization activities. The Fund:

- Makes vaccines affordable as the result of competitive procurement of bulk purchases, with the attendant economies of scale, which both keeps prices low and helps manufacturers make long-term production plans and capital investments.
- Enables delivery of technical cooperation directly to health authorities responsible for immunization programs.
- Requires a specific line item in countries' budgets to cover recurrent costs, five-year workplans, and the appointment of a national immunization program manager.
- Introduces new and additional vaccines rapidly and at affordable prices. Two examples are *Haemophilus influenzae* type B vaccine, used in only two countries in 1996 and now widely used in most countries in the Americas; and hepatitis B vaccine, used only for risk groups in 1997 and today part of routine immunization.

Enabling access to vaccines for national immunization programs: the PAHO Revolving Fund for Vaccine Procurement



The Organization is following a dual strategy of ensuring widespread utilization of vaccines that have been on the market for many years—such as MMR hepatitis B and newer vaccines such as *Haemophilus influenzae* type b—and of supporting the development of essential epidemiological information to aid in deciding about the introduction of new vaccines.

To monitor bacterial pneumonia and meningitis, a network of sentinel hospitals links public health laboratories and epidemiological units of the ministries of health. Initiated in 1993 with six countries and now comprising almost every country in the Region, the network generates data and information on the prevalent pneumococcal serotypes responsible for invasive diseases in children and on their antimicrobial susceptibility patterns; the impact of vaccination on hib diseases; and, soon, the status of meningococcal serogroups responsible for diseases in the Region.

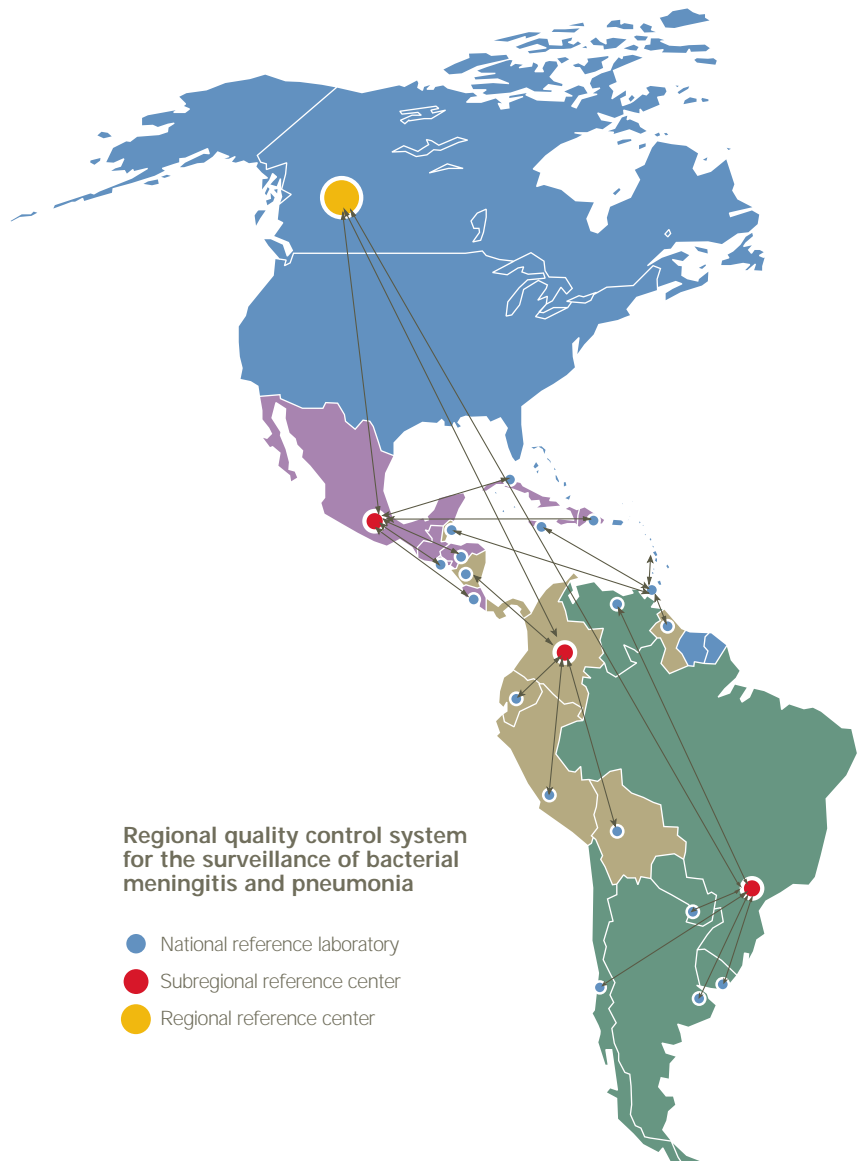
Recently, improvements have been made to the surveillance system, to link the information gathered with the results of ongoing clinical trials of pneumococcal vaccines. Diagnostic criteria used are similar to those used in the trials. Parallel cost-effectiveness studies are being conducted that will generate comparative costs for different interventions. A similar approach is being followed by the network for rotavirus vaccines, with the participation of the same sentinel hospitals. These activities are strengthening the laboratory and diagnostic capabilities of hospitals throughout the Americas.

Regional Vaccine Production

To adapt to changes in the marketplace and gain access to new technology, local vaccine producers are entering into joint ventures with private manufacturers and contemplating major investments to upgrade their facilities, equipment, and procedures so that they comply with good manufacturing practices as well as national and international requirements. paho is encouraging and supporting countries to conduct technical and economical

feasibility studies to identify their strengths, weaknesses, and areas needing improvement.

Bio-Manguinhos in Brazil has requested certification from the World Health Organization for its yellow fever vaccine, and the Genetic Engineering and Biotechnology Center in Cuba has done so for its hepatitis B vaccine. With paho's assistance, the National Institute of Health of Colombia has undertaken a feasibility study to establish priorities and alternatives for its production of yellow fever vaccine.





■ The Organization has built long-lasting partnerships in immunization, which will play a major role in sustaining the gains made in the fight against diseases preventable through vaccination.



Spain



Kingdom of the Netherlands



Partners in Immunization

paho's record of success has attracted major partners—in multi- and bilateral organizations, the private sector, and civil society—to support national immunization programs. For their part, countries are coordinating partners' work through interagency committees, established by paho during the poliomyelitis eradication initiative, that identify and address priorities. Given today's multiplicity of partners, interagency coordinating committees have become the most effective means of merging the individual agendas of diverse parties and steering them towards common goals.

With the World Bank, paho is supporting Bolivia, Ecuador, Paraguay, and Peru in efforts to

strengthen health sector reform, with the aim of expanding coverage, enhancing service, empowering communities to improve their members' health, and bolstering local capabilities to respond to health needs. paho has continued its long-term collaboration with the United States Agency for International Development, initiated during the polio eradication campaign, to reach the goal of interrupting indigenous measles transmission in the Americas. In the past several years, the U.S. Centers for Disease Control and Prevention and the Government of Spain have joined the measles initiative. That initiative, in turn, has been instrumental in establishing and

enhancing national surveillance infrastructures in countries throughout the Region, strengthening laboratory diagnostic capabilities, and bolstering countries' abilities to handle outbreaks. The Canadian International Development Agency has provided Haiti critical support to launch sustainable surveillance and immunization programs in that country. paho has also teamed up with the March of Dimes to reinforce regional rubella control efforts, and with the Bill and Melinda Gates Foundation to establish national surveillance systems and sustainable financing mechanisms for introducing *Haemophilus influenzae* type b, pneumococcal, and rotavirus vaccines.

A sampling of PAHO disease prevention and control activities in countries of the Americas

PAHO joined the Ministry of Health of **VENEZUELA** in using a number of strategies, including social communication, to combat epidemics in that country.

SURINAME has set immunization goals achieving >95% coverage for all antigens; sustaining the absence of indigenous cases of polio, measles, rubella, and congenital rubella syndrome; and strengthening surveillance of all vaccine-preventable diseases. Towards those ends, PAHO and nationals collaborated on an evaluation of the EPI program, which resulted in important recommendations regarding the cold chain, training and supervision, surveillance, organization and resources, and user satisfaction. PAHO has joined national counterparts in **TRINIDAD AND TOBAGO** to prevent and control cancer, diabetes, hypertension, tuberculosis, and AIDS.

In the face of measles, rabies, malaria, dengue, and hantavirus threats to health in **PARAGUAY**, PAHO has offered technical and financial support for promotion, prevention, care, and research activities.

To prevent and control diseases in **MEXICO**, PAHO bolstered the national reference laboratory, provided free and low-cost drugs to reduce the incidence of tuberculosis and leprosy, helped evaluate national malaria and dengue programs, contributed to efforts culminating in the country's cholera-free status, supported AIDS research and information outreach, and provided training to deal with diseases preventable by immunization.

PAHO is supporting the efforts of **COLOMBIA** to extend the tuberculosis control DOTS strategy throughout the country. In 1998, the strategy reached only 15% of the population; two years later, it covered more than twice as many. The safety of food is a major concern in the **CARIBBEAN**, where PAHO helps strengthen national programs, prepare legislation, promote common standards and regulations, enhance the quality of food safety research, and prevent, monitor, and control foodborne diseases.



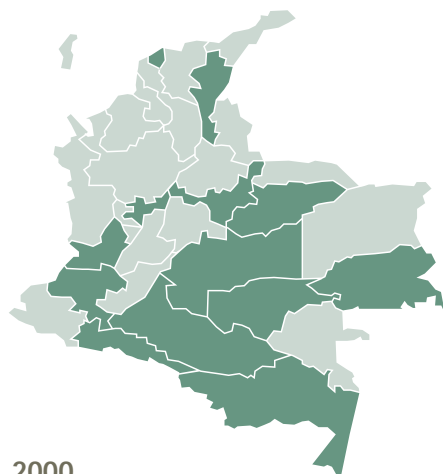
ECUADOR was the first country in the Region to pass a vaccine law, and its legislative branch allocated the resources needed to sustain the Expanded Program on Immunization and to cover the costs of new vaccines. The country has registered no further cases of measles or poliomyelitis, and the numbers of cases of neonatal tetanus, yellow fever, diphtheria, and whooping cough continue to drop.

Implementation of the DOTS strategy in Colombia



1998

- ▲ Population in the DOTS area: 6,068,422 (15%)
- ▲ Population where DOTS not applied: 34,704,572 (85%)



2000

- ▲ Population in the DOTS area: 12,954,881 (31%)
- ▲ Population where DOTS not applied: 29,344,420 (69%)



Integrating the Management of Childhood Illnesses

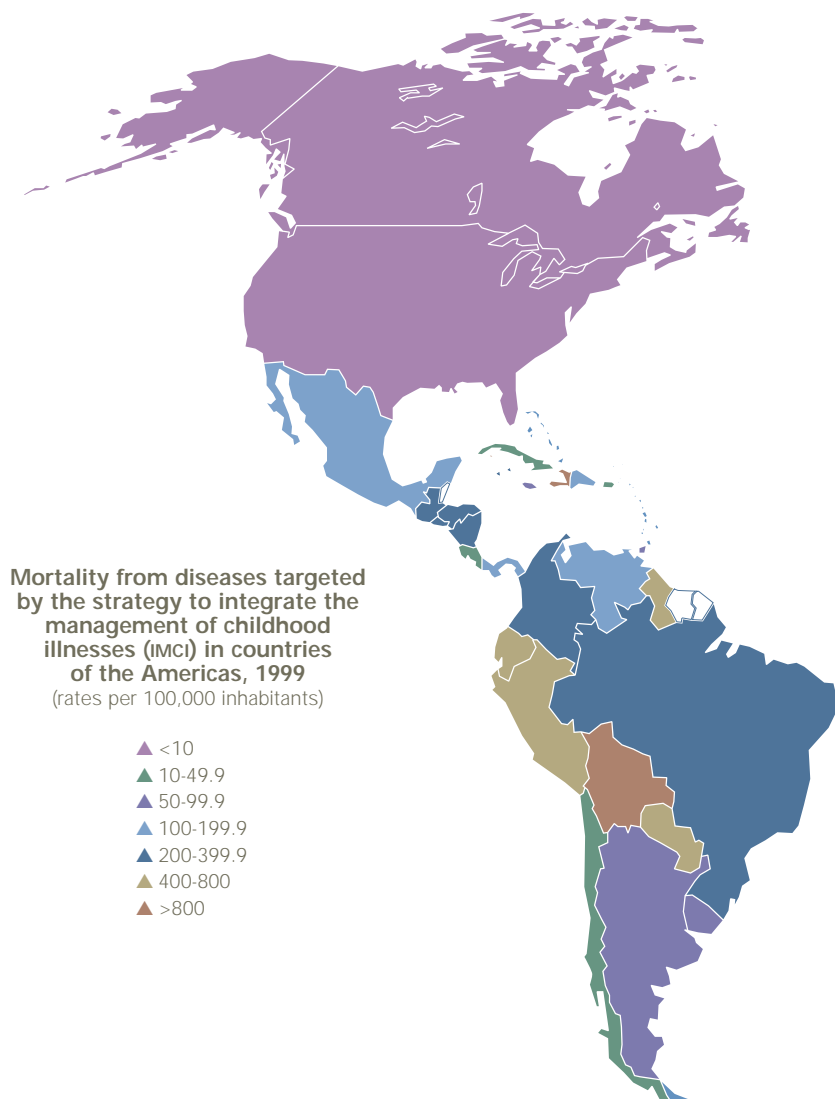
Childhood illnesses—diarrheal diseases and acute respiratory infections, in particular, as well as intestinal helminth infections, meningitis, and conditions resulting from malnutrition—continue to take a heavy toll in the Americas. A decade ago, countries in the Region—in league with *paho*, *who*, and *unicef*—committed to apply a strategy integrating the management of these childhood illnesses (*imci*).

The aim of the strategy is to reduce infant and child mortality and morbidity, improve growth and development in the first five years of life, and guarantee proper care in health services—throughout the community and within families. As a consequence of *imci*, the number of deaths due to infectious diseases, especially diarrhea and pneumonia, has dropped significantly. In Bolivia, Brazil, Ecuador, El Salvador, the Dominican Republic, Haiti, Honduras, Nicaragua, Paraguay, and Peru—countries that adopted the strategy between 1996 and 1998—the results have been encouraging. In one year alone, from 1998 to 1999:

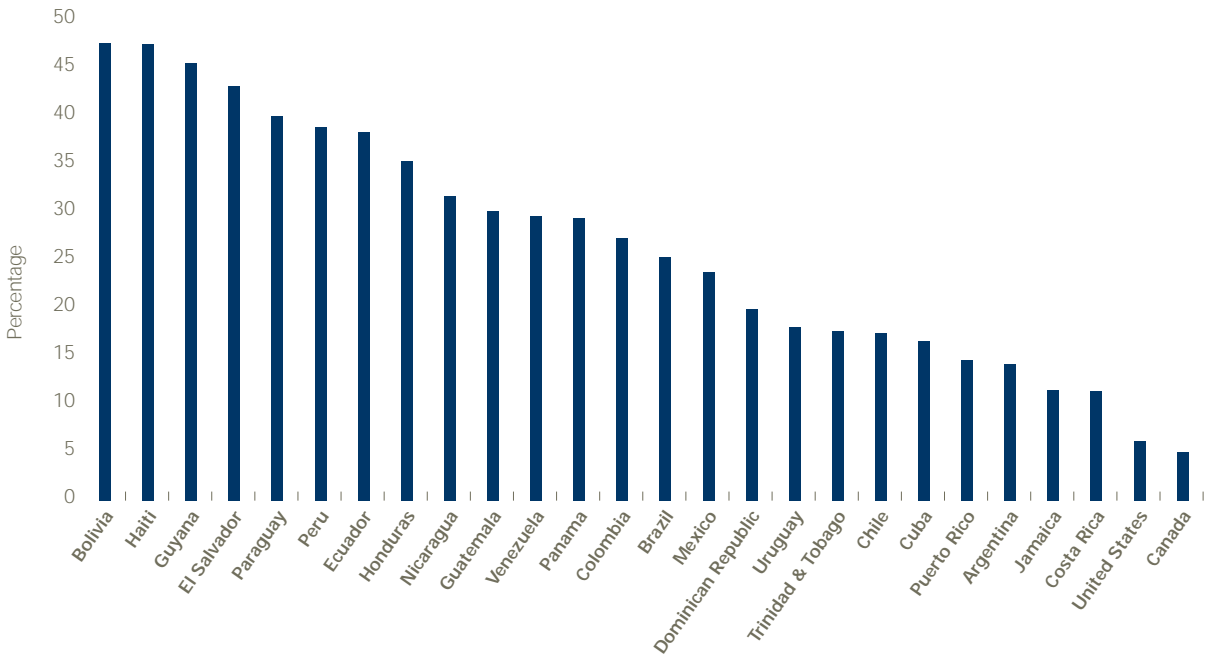
- Overall mortality in children dropped 7.3%.
- Mortality from diseases targeted by *imci* declined 15.3%.
- Some 22,000 fewer deaths of children from *imci*-targeted diseases occurred.

Information on mortality in 19 countries with more than 10,000 births a year shows that the proportion of deaths in children under five from diarrheal diseases and pneumonia shrank from 20% in 1991 to 12% in 1999.

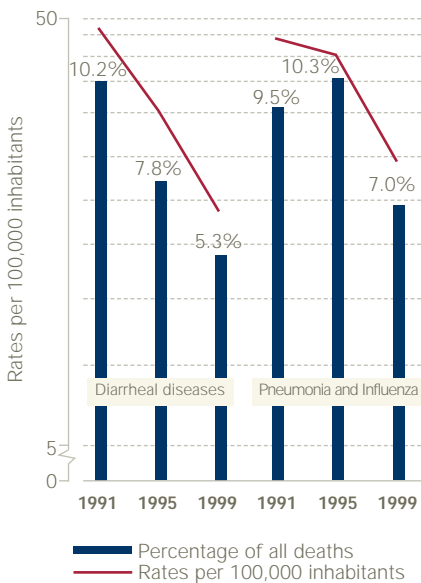
Encouraged by *imci*'s initial progress, the Organization launched the Healthy Children: Goal 2002 initiative, which proposes a reduction of 100,000 deaths in children under five for the period 1999–2002. In its first year, the initiative succeeded beyond expectations: instead of the projected reduction of 25,000 deaths, 33,000 lives were saved—a 6.4% reduction in mortality in this age group; more than two-thirds of that reduction was attributable to *imci*-targeted diseases, which dropped 15%.



Of all deaths in children under five years of age in countries of the Americas, the proportion attributed to diseases targeted by IMCI, 1999



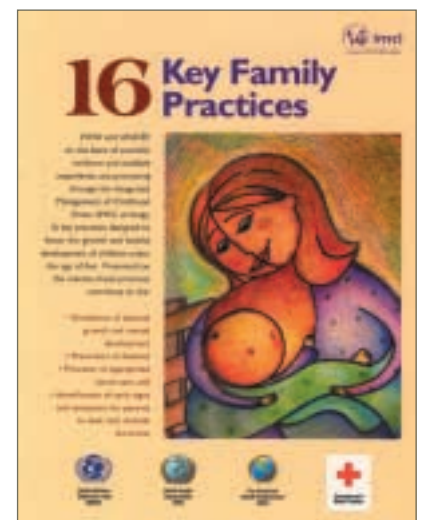
Diarrheal diseases and pneumonia are claiming fewer and fewer lives of children under five in the Americas*



* Argentina, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guyana, Mexico, Nicaragua, Panama, Paraguay, Peru, United States, Uruguay, and Venezuela

In addition to saving the lives of infants and children, imci provides other benefits. A major one is improved quality of care as a result of focusing on children's health conditions; broadening the strategy to include other perinatal problems, asthma, bronchitis, accidents, and abuse; and adding health promotion elements such as detecting and treating developmental problems, early stimulation, and oral health.

The strategy's attempts to reach out to families and communities have resulted in their greater satisfaction with care provided by imci-trained staff and their enhanced ability to care for their children and to know when to alert health services of potential problems. Along with who, unicef, and the American Red Cross, paho has promoted "the 16 key family practices" to foster the healthy growth and development of children under five.



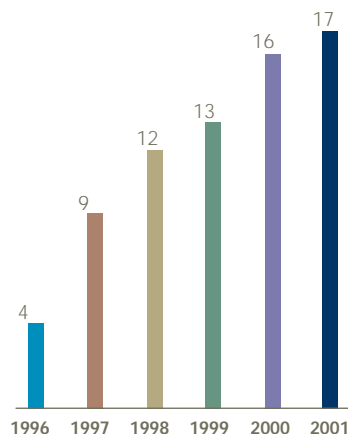
Controlling intestinal helminth infections



Although the Region is experiencing a decline in the prevalence and intensity rates of infections related to intestinal helminths, these parasites continue to pose a public health problem in the Americas, especially in poorer countries. In response to that problem, PAHO is promoting a multi-pronged approach that combines parasite-specific control programs with the healthy school initiative, environmental sanitation, diarrheal disease prevention and control, maternal and child health, nutrition, health education, and mass communication.

Application of the IMCI strategy continues to expand among the countries in the Americas*

Number of Countries



*Countries with >10,000 births per year.

- ▲ Bolivia, Dominican Republic, Ecuador, Peru
- ▲ Argentina, Brazil, El Salvador, Honduras, Nicaragua
- ▲ Haiti, Paraguay, Venezuela
- ▲ Colombia
- ▲ Guatemala, Guyana, Uruguay
- ▲ Panama

Some 35,000 health workers in primary care services and more than 7000 community health workers have received imci training. To broaden application of the strategy, PAHO has obtained us\$9 million from the American Red Cross and the United Nations Foundation for a five-year project targeting communities throughout the Region.

The imci strategy has been incorporated in the curricula of 90 medical and 62 nursing schools in the Region and is targeted for inclusion in those of schools of nutrition and public health. Coordination with Latin American associations of pediatrics and nursing has resulted in teaching the strategy to last-year students as preparation for their postgraduate year of social service among rural and marginal populations, where application of imci can have a major impact.



Launching of the Healthy Children: Goal 2002 initiative: (Left to right)

Dr. George A.O. Alleyne, Director, PAHO;
Dr. Carmen Lissi Campos de Fernández,
First Lady of the Dominican Republic; Mrs.
María Isabel Rodríguez de Chávez, First Lady
of Venezuela; and Mrs. Lourdes Rodríguez
de Flores, First Lady of El Salvador.

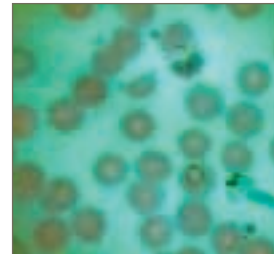


Reducing the Burden of Preventable Diseases Among the Poor

Malaria

PAHO continues to work with the countries to reduce deaths and illness caused by malaria, as well as the related health and economic burden, especially among the Region's most vulnerable groups. As part of the "roll back malaria" initiative launched by WHO in 1998—in partnership with countries where the disease is endemic, other international agencies, nongovernmental organizations, and civil society—countries in the Americas have progressively come on board. The nine countries sharing the tropical Amazon rainforest (where disease endemicity is the highest in the

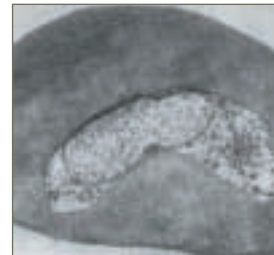
Region), the Central American countries, the Dominican Republic, Haiti, and Mexico have drawn up and are executing national plans and cooperating on areas of common epidemiological interest. Caribbean Basin countries are strengthening their surveillance systems to prevent reintroduction of malaria.



Plasmodium vivax

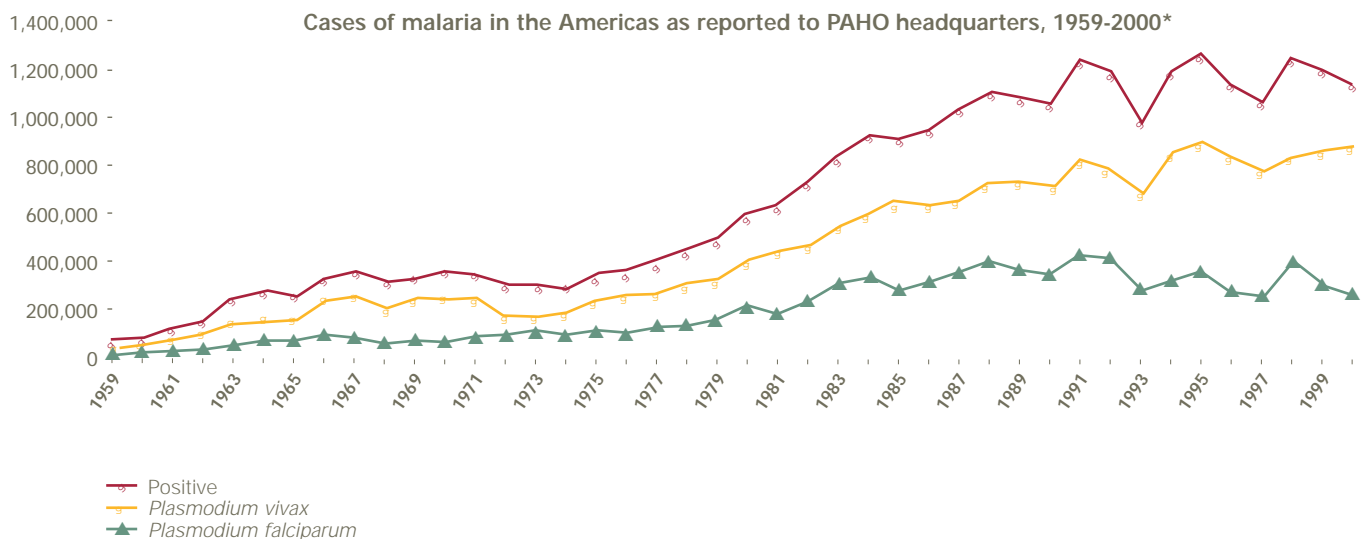


Anopheles albimanus



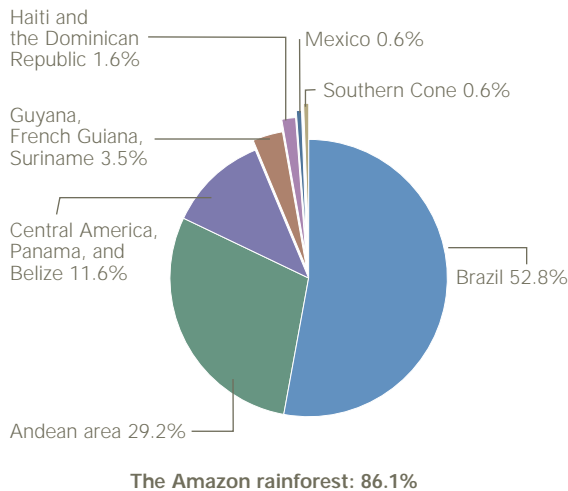
Plasmodium falciparum

■ **MALARIA** In nature, anopheline mosquitoes transmit various species of the genus *Plasmodium*, causing malaria—one of the most ancient infections known.

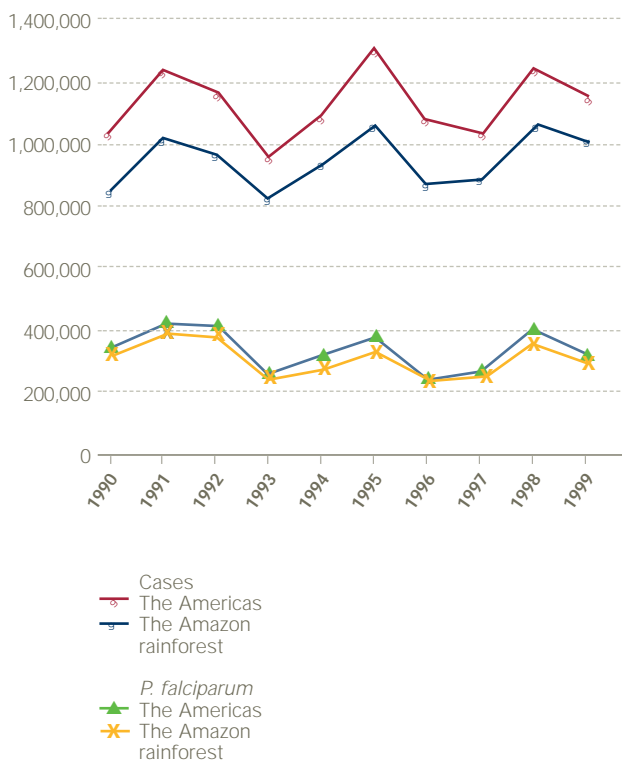


* The Region of the Americas launched a malaria eradication program in the mid-1950s. By the end of that decade, countries began to report cases of the disease, and data collection improved from year to year.

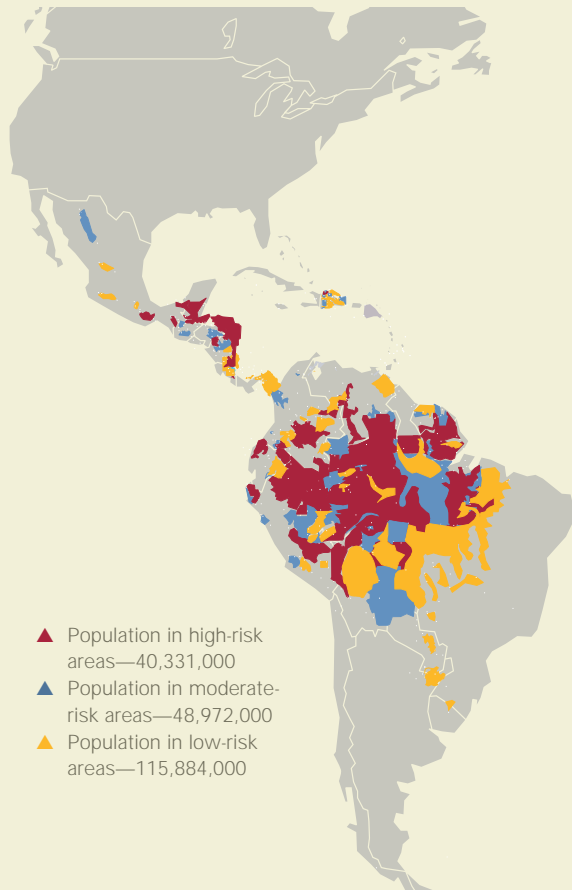
Distribution of cases of malaria, 2000



Malaria cases and those due to *P. falciparum*



Population distribution by risk of malaria transmission



The number of cases of malaria reported annually has been below 1.3 million over the past several years and is decreasing, and the number of related deaths has plummeted. Although cases due to the parasite *Plasmodium vivax* have increased to more than 80% of all cases in the Region, in the Amazon rainforest cases associated with *P. falciparum* are reported to have developed resistance to antimalarial drugs. To monitor drug resistance, rainforest countries have agreed to establish a surveillance network, to be funded by the countries, the United States Agency for International Development, the United Kingdom Department for International Development, and who; its findings will be used to inform national and regional drug treatment policies.

Dengue

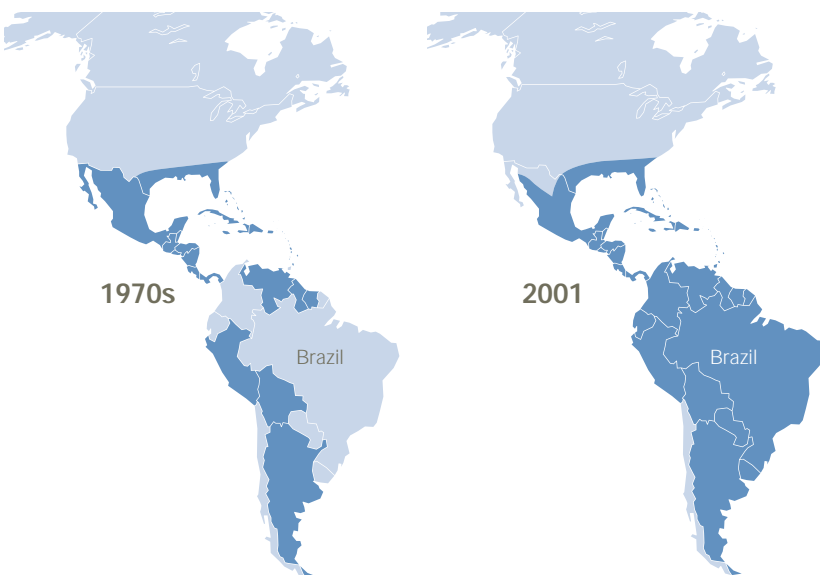
The situation of dengue has worsened in the Region in recent years. Countries in Central and South America have experienced repeated epidemics of the disease and of its more severe form, dengue hemorrhagic fever (dhf). The public health community is greatly concerned that the disease will spread in the Americas as it has in Asia, which reports hundreds of thousands of cases of dhf yearly. Moreover, the possible

reurbanization of yellow fever is alarming. To confront these problems, paho is working with the countries to build political commitment, promote government and private sector funding, reduce mosquito breeding sites, establish mechanisms for timely and uniform case reporting throughout the Region, and promote intersectoral coordination, community participation, and public education.

■ **DENGUE FEVER** and its more fatal version, dengue hemorrhagic fever, occur in more than 100 countries worldwide. In 2002, the disease hit hard in Brazil, where dozens of people have died since the beginning of the year.

■ **DENGUE FEVER** is caused by one of several viruses. The viruses are transmitted by an infected female mosquito, *Aedes aegypti*, which is primarily a daytime feeder and lives around human habitation.

Countries in which the vector mosquito was and is present

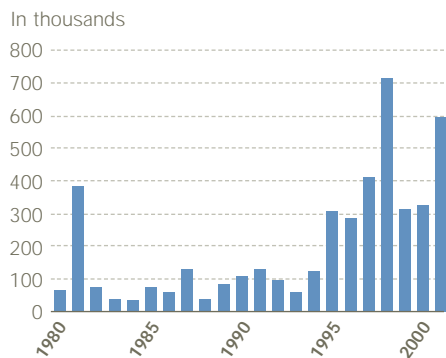


Pupae of *Aedes aegypti*

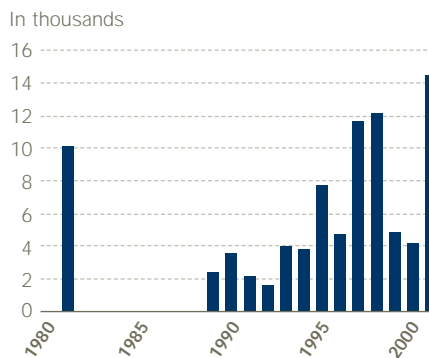


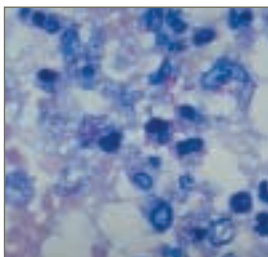
Aedes aegypti

Number of dengue fever cases in the Americas, 1980 to 2001



Number of dengue hemorrhagic fever cases in the Americas, 1980 to 2001





■ **TUBERCULOSIS**— caused by the bacillus, *Mycobacterium tuberculosis*— represents a public health threat in the Americas.



Tuberculosis

Tuberculosis continues to be a public health threat in every country in the Region, despite the availability of means to control the disease. Of all cases reported worldwide, the Americas accounts for 7%—almost 239,000 cases in 1999, a 5.4% reduction over the previous year. Eight countries report three-fourths of all regional cases—Bolivia, Brazil, the Dominican Republic, Ecuador, Haiti, Honduras, Mexico, and Peru; and two countries—Brazil and Peru—account for one-half of all cases. Of countries in the Americas, Brazil alone ranks among the 22 countries of the world with the highest burden of disease, as Peru has greatly reduced incidence of tuberculosis in recent years.

Since resistance to anti-tuberculosis drugs (isoniazid and rifampicin) is an emerging problem, the countries of the Region have stepped up surveillance. Thus far, surveys in Canada, Chile, Colombia, Cuba, Mexico, Nicaragua, Uruguay, and Venezuela indicate, however, that multi-drug resistance is either not a problem or not a significant one.

WHO promotes the directly observed treatment shortcourse (DOTS) strategy, which has proven effective in the diagnosis and treatment of tuberculosis. The number of countries applying the strategy increased from 19 in 1998 to 25 in 2001. To date, two-thirds of the population of the Americas is covered by DOTS.

Onchocerciasis and Filariasis

The Organization participates actively in the regional initiative to eliminate onchocerciasis, or river blindness, from the Americas, where the six remaining endemic countries—Brazil, Colombia, Ecuador, Guatemala, Mexico, and Venezuela—have dramatically reduced the at-risk population. paho has cosponsored regional conferences on elimination of the disease, provided technical support to national programs, and developed standardized epidemiological evaluations. Those evaluations indicate that the at-risk population shrank from 4,700,000 in 1995 to 660,000 in 1999.

Although the World Health Organization has called for the global elimination of lymphatic filariasis by 2020, the Region of the Americas expects to reach that goal much sooner. In the seven endemic countries—Brazil, Costa Rica, Dominican Republic, Guyana, Haiti, Suriname, and Trinidad and Tobago—the infection is focalized and the number of cases small. Elimination will entail mass multi-

drug therapy of the at-risk population, and GlaxoSmithKline is donating one of the drugs, albendazole, for as long as the disease persists. To ensure success of the regional program, the Organization is orchestrating partnerships with the endemic countries' ministries of health, the private sector, including the Bill and Melinda Gates Foundation, cdc, other international and bilateral agencies, and nongovernmental organizations. paho has advocated the designation of national program managers in all seven countries, four of which have also set up national task forces. With paho's support, the countries are using new diagnostic tools—antigen detection cards—to map and measure the magnitude of the problem. Those tools are enabling Guyana, Haiti, and the Dominican Republic to identify target populations and, perhaps, to show that Brazil, Costa Rica, Suriname, and Trinidad and Tobago may not require an elimination program and may only have to deal with residual morbidity.



■ The Caribbean is the most tourism-dependent region in the world: one in every five jobs and one-third of the gross domestic product depend on tourism. The Caribbean Epidemiology Center, the Caribbean Hotel Association, and the Caribbean Alliance for Sustainable Tourism have created a joint venture to promote healthy tourism and resource conservation. The aim of the project is to develop and establish Caribbean-wide standards and systems to ensure healthy, environmentally safe products and services.



Onchocerca volvulus

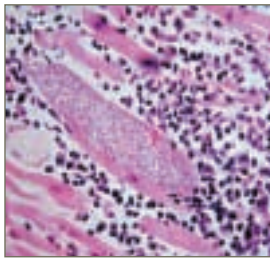


Simulium fly

■ **ONCHOCERCIASIS**—caused by the nematode *Onchocerca volvulus* and transmitted by the female *Simulium* fly—is the target of near-term elimination in the Americas.



■ The Caribbean Epidemiology Center cooperates with 21 of PAHO's member countries to manage outbreaks and emergency situations related to dengue and dengue hemorrhagic fever, malaria clusters in previously malaria-free countries, tuberculosis, food- and water-borne diseases, HIV/AIDS, violence, diabetes, and obesity. The Center operates a subregional surveillance system that serves to strengthen national epidemiological and laboratory capabilities.



■ **LEPROSY**—caused by the bacillus *Mycobacterium leprae*—is on the verge of elimination from the Americas.

Leprosy

A country that reduces the prevalence rate of leprosy to 1 case per 10,000 inhabitants can be considered to have eliminated the disease as a national public health problem. In the Americas, almost all countries have achieved elimination, and Paraguay and Suriname are expected to do so in the short term. Brazil, the only other country where leprosy constitutes a public health

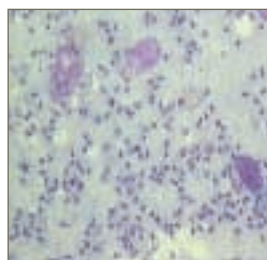
problem—registering 4.5 cases per 10,000 inhabitants and accounting for 90% of the total regional disease burden—is stepping up elimination efforts by decentralizing activities to municipalities and educating the community about leprosy. paho is advocating the countries' adoption of a regional plan for 2002-2004 to consolidate elimination of leprosy in the Region.

Status of Chagas' disease control in the Americas



Chagas' Disease

paho acts as the technical secretariat to subregional initiatives in the Southern Cone, Central America, and the Andean Area that target control of Chagas' disease. The objective is to interrupt transmission of *Trypanosoma cruzi* by the vector *Triatoma infestans* through spraying, improved housing conditions, and public education. Argentina, Bolivia, Brazil, Chile, Paraguay, and Uruguay have committed to eliminate *T. infestans*, by using entomological surveys and spraying residual-action insecticides.



Trypanosoma cruzi



Triatoma infestans

■ **CHAGAS' DISEASE** In Latin America, the blood parasite *T. cruzi*, is transmitted by the reduviid bug, *T. infestans*.

Emerging and Re-emerging Diseases

Emerging and re-emerging infectious diseases represent an increasing public health risk, because of the agents involved, their easier transmission in changing physical and social environments, and their growing resistance to existing drugs. The impact that the appearance of such diseases can have on public health reverberated worldwide in 2001, when human cases of anthrax were identified in the United States. To help countries better prepare for the natural or deliberate release of biological agents, paho convened an expert consultation. It made recommendations regarding national preparedness that dealt with contingency plan development, public health surveillance, and laboratory capacity. The consultation

also recommended that paho's technical cooperation focus on information, support in national planning, training, identification of reference laboratories and assistance in building their capacity, and coordination of rapid response in the face of natural or intentional release of biological agents.

Currently, five networks—three subregional and two regional—deal with the surveillance, prevention, and control of emerging infectious diseases. paho has helped strengthen these networks by convening epidemiologists and laboratory staff to discuss emerging infectious diseases and providing training on bacteria identification, antimicrobial susceptibility, and laboratory quality control. Eight countries took part in a meeting that included preparation

of protocols and workshops on surveillance and laboratory diagnosis of influenza, hemolytic uremic syndrome, and hantavirus.

A comprehensive project to develop communicable disease surveillance has benefited the countries of Central America, the Dominican Republic, and Haiti. The project includes surveillance, information systems, detection and response to outbreaks, field epidemiology training, laboratory infrastructure building, and infectious disease surveillance during natural disasters. These countries have established interinstitutional technical groups to coordinate detection, research, and response to emerging and re-emerging infectious diseases.

Research and Training

The Organization promotes research and training as vital components of disease prevention and control. paho partnered with who, undp, and the World Bank on an initiative providing small grants in support of more than 40 research projects in countries of the Region. These grants have enabled research on:

- Efficacy of antimalarial therapies and treatment compliance in Bolivia, Brazil, Colombia, Ecuador, Peru, and Venezuela;
- Community participation for dengue control and risk factors for dengue transmission in Argentina, Brazil, Cuba, the Dominican Republic, and Honduras;

- Use of inadequate tuberculosis chemotherapy and its impact on morbidity and mortality;
- Leishmaniasis and filariasis in Argentina and Brazil.

The initiative also fosters training as a way of recruiting scientists to carry out research. An expanding network has connected institutions engaged in

interdisciplinary work, and workshops on epidemiological research methods have trained over 80 professionals from 14 countries.





Combating HIV/AIDS in the Americas

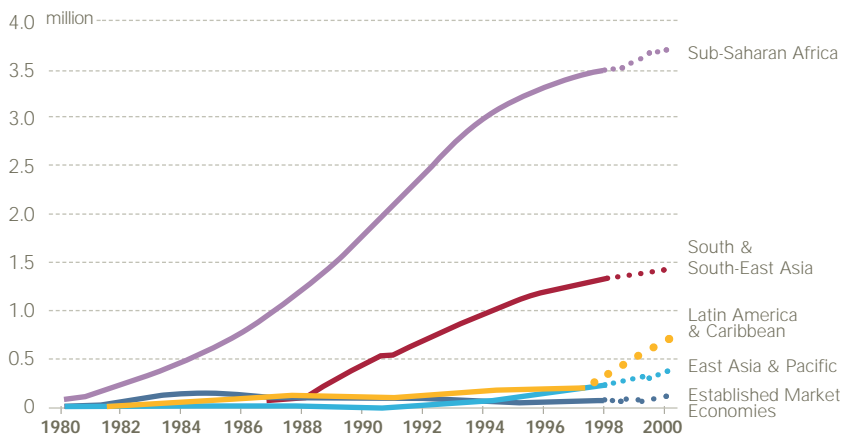
As the human immunodeficiency virus (hiv) epidemic enters a third decade, the challenges it poses to families, societies, governments, and science continue to mount. The complexities of hiv, the virus that leads to aids, and the behaviors that spread it are great. Nowhere is this more the case than in the Americas—especially in Latin America and the Caribbean, where the levels, patterns of spread, and responses to the epidemic are unusually varied.

second most affected area in the world, it lags far behind sub-Saharan Africa, where one adult in 12 is infected with hiv. Moreover, despite its persistent increase, the hiv/aids epidemic has not reached the general population in most countries of the Region, which bodes well for efforts to contain its spread.

hiv and other sexually transmitted infections are problems whose solutions demand a multisectoral approach. Because the determinants of these infections are largely behavioral, dealing with them requires a combination of political commitment, adequate and large-scale application of scientific knowledge and technology, new financial resources, and—most of all—individual and societal changes in attitude about gender equity, social stigmatization, and discrimination.

In the first decade of the fight against aids, the Organization made significant gains—among them, development of national aids programs, blood supply safety, and preventive interventions. paho has devoted major efforts to ensure that those gains have not been lost. The next phase of the epidemic will require strategic alliances, coordinated efforts, and greater mobilization of resources. In addition to placing hiv/aids on the “shared agenda” with the World Bank and the Inter-American Development Bank, paho is collaborating with the technical cooperation agencies of Canada, France, Germany, Norway, Spain, Sweden, and the United States, among others and is helping the

Estimated annual number of new hiv infections, by Region



In the Americas at the end of 2001, approximately 2.7 million men, women, and children were living with hiv. One of each 200 adults is infected with hiv—a prevalence rate of around 0.56% for the Region as a whole. Nearly four times that many are infected in the Caribbean, however, where 2.1% of adults are thought to be living with hiv. While the Caribbean is the

countries prepare to participate in the Global Fund for aids, Tuberculosis, and Malaria.

paho has contributed to improving comprehensive care by developing a model—"Building Blocks"—that provides guidance in crafting policies and strategies and comprises the full spectrum of care required to meet the needs of people living with hiv/aids, their families, and caregivers. The model, which is already being applied in a number of countries, contemplates three scenarios, depending on available resources, and provides a set of standards for care in the household and the community and at the primary, secondary, and tertiary levels of health care.

A major component of comprehensive care is access to antiretrovirals (arv). arv are drugs that, by interfering with viral replication mechanisms, cause a drastic reduction of viral particles in the bloodstream. This reduction is accompanied in many cases by dramatic improvement of clinical conditions, which reduces hospitalizations and augments survival among aids patients. To strengthen antiretroviral access, paho has promoted a regional protocol for arv treatment, assessed needs and devised plans for arv treatment in several countries, created a regional database on arv prices, and supported a regional fund for strategic public health supplies.

To improve epidemiological assessment of hiv/aids, paho has disseminated methods and strategies for "second-generation" surveillance, including characterization of hiv-i subtypes in eight countries, aids reporting, hiv sentinel surveillance and prevalence studies, and behavioral aspects such as condom use. paho fostered

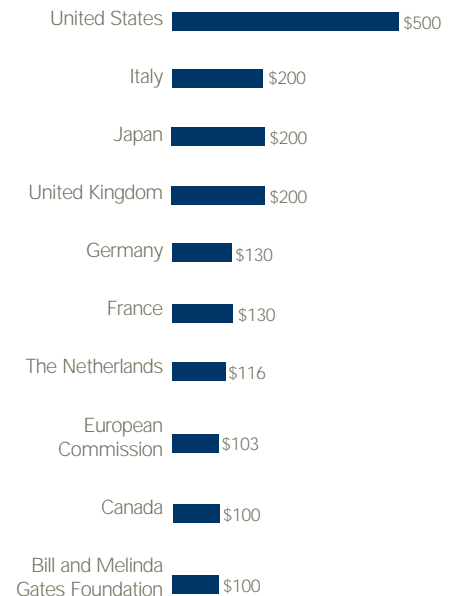
widespread application of surveillance methodology through an epidemiological network, Epi-Net, and helped countries draft strategic plans to improve national surveillance.

The emergence of hiv/aids has raised awareness of the urgent need to step up sexuality training and devise a more concerted, comprehensive approach to sexuality problems. Toward that end, paho arranged regional consultations and collaborated with the World Association of Sexology to produce information on promoting sexual health that has been widely disseminated and used for advocacy and teaching.

Despite efforts to broaden awareness of hiv/aids and increase knowledge of how the virus is contracted, the pandemic continues to spread. To make hiv/aids communication more effective, paho is conducting a study of the communication component of national aids programs in 13 Latin American and Caribbean countries. The results are expected to help programs capitalize on the experiences of other countries and adopt proven, research-based planning methodologies.

The United Nations has proposed that the countries of the world attain a 20% reduction in the number of infants infected with hiv by 2005 and a 50% reduction by 2010. To meet that goal, 80% of pregnant women will have to have access to hiv-prevention services in the context of prenatal care. Research indicates that when women receive such services before, during, and after the birth of their children, the mother-to-child transmission of hiv/aids can drop as much as 70% or more, and in resource-poor settings simple interventions (such as one dose of

Donors' pledges to the Global Fund for AIDS, Tuberculosis, and Malaria. The fund now totals nearly \$2 billion.
(figures in millions)



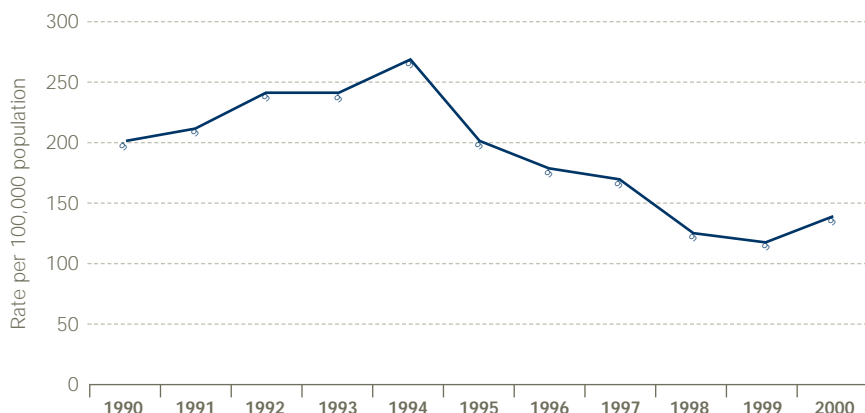
■ PAHO is helping the countries of the Americas position themselves to benefit from the Global Fund for AIDS, Tuberculosis, and Malaria.

the antiretroviral drug nevirapine) can reduce transmission by 50%. Prevention of mother-to-child transmission is a high priority in Latin America and the Caribbean, where many countries are executing pilot projects and others are launching full-scale programs. Communication will be a key to the success of these programs, so PAHO and UNICEF have supported

consultation among communicators. They, in turn, have recommended targeting adherence to treatment, attendance at counseling by both men and women, early and regular antenatal care attendance, healthy behavior in HIV-negative pregnant and lactating women and their partners; postnatal care attendance, proper breastfeeding, and testing acceptance.

■ To obtain information on perceptions about HIV/AIDS among out-of-school youth in **SURINAME**, PAHO participated in qualitative research involving focus groups throughout the country. To reverse negative trends revealed by that research, the project underscored the importance of using films and social marketing to educate these youths.

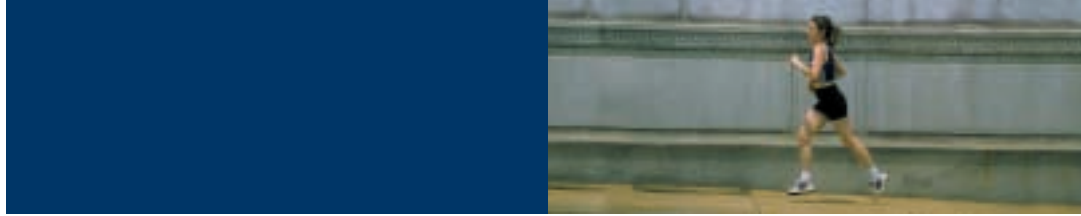
Incidence of HIV, Bahamas, 1990-2000



■ Since 1986, the Organization has been collaborating with the National AIDS Program in the **BAHAMAS**, where great progress has been achieved since the mid-1990s in reducing the incidence of HIV. Given its success, the Bahamas is now providing technical cooperation to other countries.



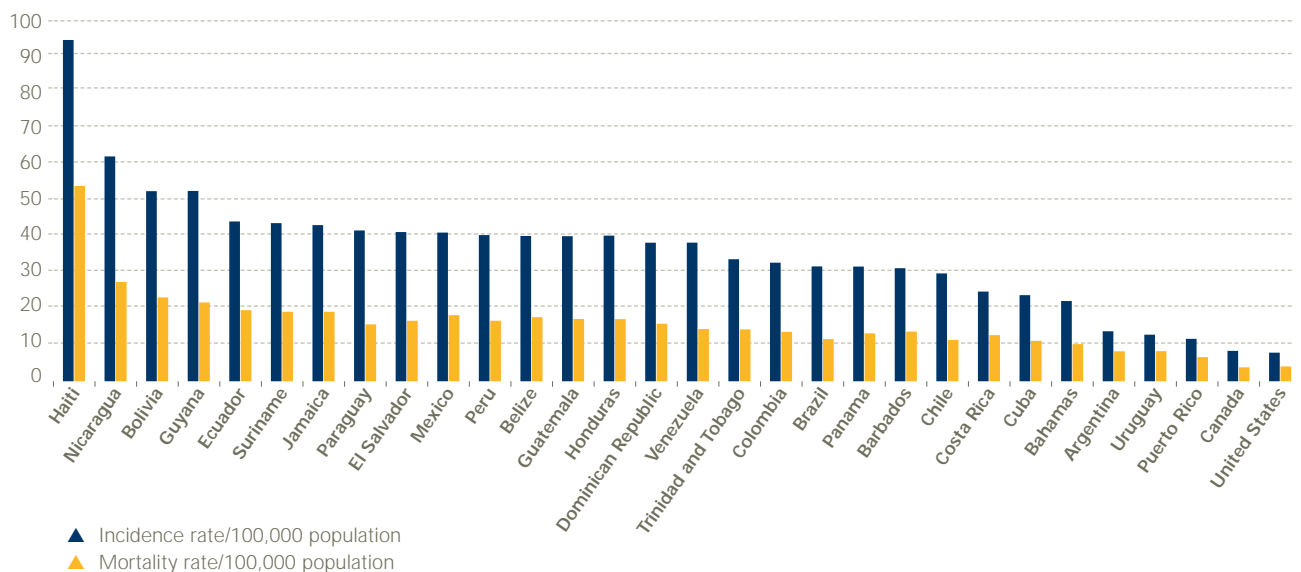
■ PAHO has been actively involved, through its country offices and CAREC, in promoting strategies and programs to prevent mother-to-child-transmission of HIV/AIDS. Countries of the **CARIBBEAN** are seeking resources to implement the programs and are providing clinical and social services to infected children to retard progression of the disease and improve the quality of their lives. Together PAHO and the countries launched a landmark agreement to combat HIV/AIDS.



Preventing and Controlling Cervical Cancer

Cervical cancer is a major threat to women's health throughout the world. Incidence and mortality rates in the Americas are particularly high in poorer countries. To confront the threat, the Organization joined a partnership in 1999 of five international organizations, the Alliance for Cervical Cancer Prevention, that is funded by the Bill and Melinda Gates Foundation.

Cervical cancer in the Americas, 2000



Because access to effective screening and treatment services is one of the main obstacles to reducing the high rates of cervical cancer in Latin America and the Caribbean, PAHO has developed projects that incorporate appropriate prevention services, based on screening and treatment technologies, at the primary care level—especially in low-access areas. In Peru, the Organization and another Alliance partner, PATH, are conducting a project in the region of San Martín to evaluate the acceptability, safety, and cost-effectiveness of various screening methods. Among methods evaluated are naked-eye visualization of acetic-acid-washed cervix, visual inspection aided by a low magnification instrument, testing for the presence of human papilloma virus, and thin-layer cytology. The project aims to screen 80,000 women aged 25-49 over a three-year period, as an integral part of the region's routine delivery of health services.



■ To ascertain the risk factors and the prevalence of human papilloma virus and cervical dysplasia in an urban area of Santiago, **CHILE**, PAHO is coordinating a study with the Ministry of Health, the International Agency for Research in Cancer, and two Chilean universities.

■ Without proper follow-up, many women do not receive the care that could save their lives. In **EL SALVADOR**, PAHO evaluated the follow-up care of women with abnormal Papanicolaou results in the rural area of Chalatenango. The evaluation found that:

- Of 109 women with abnormal results, 89 (95%) were so informed and referred for colposcopy.
- Of those, 72 (77%) had a colposcopy and/or biopsy.
- Of those, 62 (86%) were identified as needing treatment.
- Of those, 56 (90%) received treatment.

These findings will serve as a baseline for a demonstration project that will screen women aged 30-59 in Chalatenango.

To help countries establish information systems to record, track, and monitor women's screening tests and follow-up results, as well as to measure the impact of screening services, paho has developed a model that comprises system characteristics, requirements, data components and capabilities, and other features. The model, to be used as part of paho's package of technical cooperation with the countries, enables services to improve their management by incorporating functions such as an automatic generation of lists of women requiring follow-up.

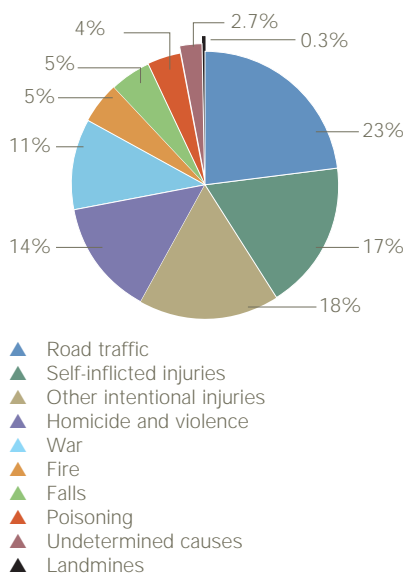
To collaborate in an external quality assurance process, over 40 laboratories in seven countries—Bolivia, Chile, Costa Rica, Ecuador, Mexico, Peru, and Venezuela—have formed a Pan American Cytology Network, with paho sponsorship. Problems abound: lack of registries of information, inconsistent diagnostic classifications, poor quality-assurance mechanisms, limited continuing education for

cytotechnicians and pathologists, and poor coordination between laboratories and health services to ensure follow-up care. paho conducted an appraisal of the network with a view to expanding the quality-assurance mechanisms of laboratories.

paho studies on women's participation in and perceptions of cervical cancer screening in Ecuador, El Salvador, Peru, Venezuela, and (in collaboration with path) Mexico confirmed that:

- Shame, limited access, and socioeconomic factors hinder women's full participation in screening programs.
- Peace of mind, being able to take care of themselves and their families, a sense of responsibility, health, looking good, and increased social acceptance are among the benefits of screening that women perceive.
- Peers, families, and friends most influence women to participate in screening.

Distribution of deaths due to injuries worldwide, 1999



Targeting the Prevention of Violence

A five-year plan to deal with social violence in **HONDURAS**, the result of paho's work with nationals, targets strengthening the country's governmental capacity and municipalities' development of violence prevention projects. A specific plan for San Pedro Sula aims to prevent violence against children, youth, and women.

To prevent violence in **NICARAGUA** and **EL SALVADOR**, national committees are preparing plans that will be informed by injury surveillance systems underway in those countries

with support of the ministries of health, paho, who, and cdc.

With the commitment of the **ANDEAN COUNTRIES** to strengthen it, a network for injury prevention and surveillance—created at the University of the Valle in Cali, Colombia—seeks to share experiences and information throughout the area.

In support of countries' activities, paho is teaming up with the idb, oas, unesco, cdc, and the World Bank in a coalition that taps resources from various sectors to prevent violence in the Americas.



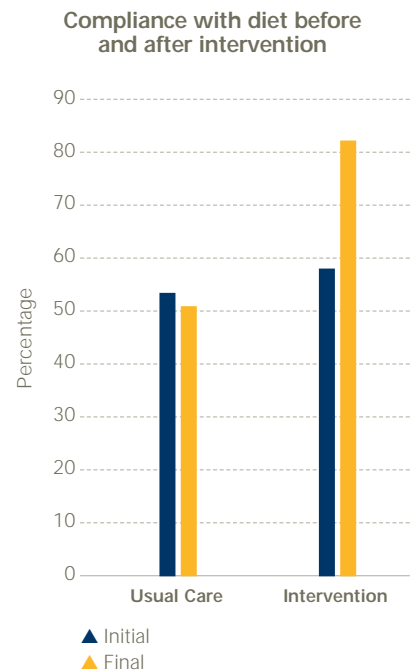
Reducing Noncommunicable Disease Risks

Noncommunicable diseases are emerging as the new pandemics of the 21st century. Many of the risk factors for diabetes, hypertension, and cardiovascular disease are due to patterns of individual behavior: physical inactivity, unhealthy diets, and smoking are prominent causes. To integrate approaches to prevent and control these diseases in Latin America and the Caribbean, paho created a network in 1996 that is commonly referred to as *carmen*, after the network's acronym in Spanish. Its aim is to reduce a set of risk factors common to these diseases by combining preventive health care services for high-risk individuals and health promotion strategies for the general population. *carmen* now comprises Argentina, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, and Puerto Rico, covering a population of over 5.5 million. Panama, Peru, and Venezuela are preparing to join *carmen*, and the English-speaking countries are creating their own network, *carli*.

paho and the International Diabetes Federation are working together to implement the Declaration of the Americas on Diabetes, with the aim of improving prevention and control of the disease. Diabetes education has been a major thrust of this work, with programs set up in Argentina, Barbados, Colombia, and Puerto Rico and standards published for all of Latin America and the Caribbean.

The Organization has proposed the development of a system for surveillance of noncommunicable disease risk factors that would work in the countries of Latin America and the Caribbean. As part of the process, and working with who and cdc, paho has consulted experts and conducted literature reviews to determine what variables such a system should measure, what population groups it should cover, what sampling methods to use, and what logistical problems to expect.

■ A PAHO study in three clinical settings in **CHILE** proved that interventions to educate diabetes patients—especially regarding diet compliance—can significantly improve their metabolic control.



■ The prevalence of diabetes in Latin America will double within the next two decades. Type 2 diabetes is already among the first causes of mortality in the Latin American adult population due to chronic complications related to premature and accelerated atherosclerosis. An estimated one-third of women and one-half of men in the region remain undiagnosed for years. In the face of a looming epidemic, the countries, with PAHO's cooperation, are creating national diabetes programs to improve treatment and access to health care services.





Cooperating in Veterinary Public Health

To chart the course of technical cooperation in veterinary public health—of vital importance to the Region because of its enormous social and economic consequences—the Organization brings together representatives at the highest political level to address matters of common concern to the countries' health and agriculture sectors. paho has been convening these inter-ministerial meetings, now known as RIMSA for their Spanish acronym, since 1968. In the beginning, the meetings dealt primarily with animal health; today they convene Ministers of Agriculture and Health to discuss much broader issues of common concern.



■ In 2001, Brazil hosted RIMSA, and the President of Brazil, the Honorable Fernando Henrique Cardoso, addressed the representatives, stressing the importance of cooperation among the countries of the Americas, trade as an instrument of peace, and hemispheric solidarity.

Protecting Food, Safeguarding the Public's Health

Food-borne diseases constitute a major public health problem and lead to decreased economic productivity as a result of diarrhea, cholera, salmonellosis, listeriosis, infections from enterohemorrhagic *Escherichia coli*, and chronic poisoning caused by chemical contaminants. In addition to the suffering they cause, food-borne diseases impose a substantial economic toll on those affected and their families, as well as on industry—especially tourism and trade, and health care systems.

One of the principal components of paho's veterinary public health program is food safety.

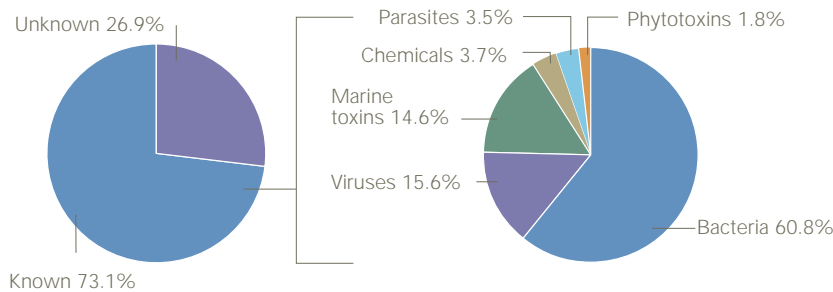
The aim of work in this area is twofold: to reduce the risks to humans of food-borne diseases and to facilitate world food trade. In 2000, the Organization's Directing Council approved a strategic plan for food protection and assigned responsibility for overseeing its regional implementation to paho and its Institute for Food Protection (inppaz). The following year, rimsa set up the Pan American Commission for Food Safety to advocate establishment of national food safety programs and promote intercountry and intersectoral collaboration across the entire food production chain.

To facilitate the exchange of information about food-borne outbreaks, INPPAZ coordinates a regional information system for food-borne disease surveillance, SIRVETA, in which 21 countries

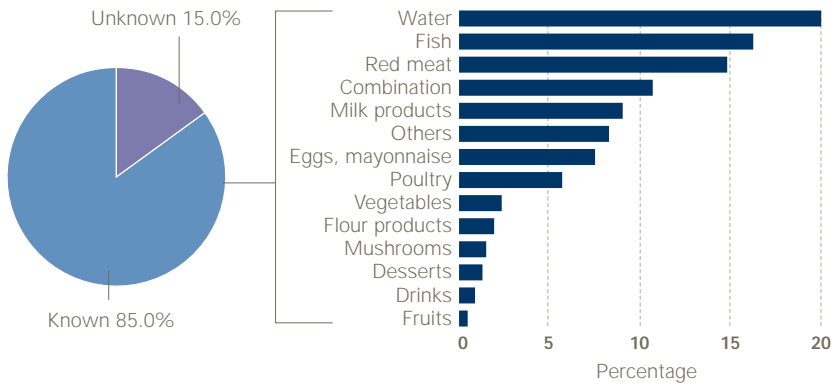
actively take part. It provides information about food-borne outbreaks—what causes them, the foods implicated, and where those foods are consumed.



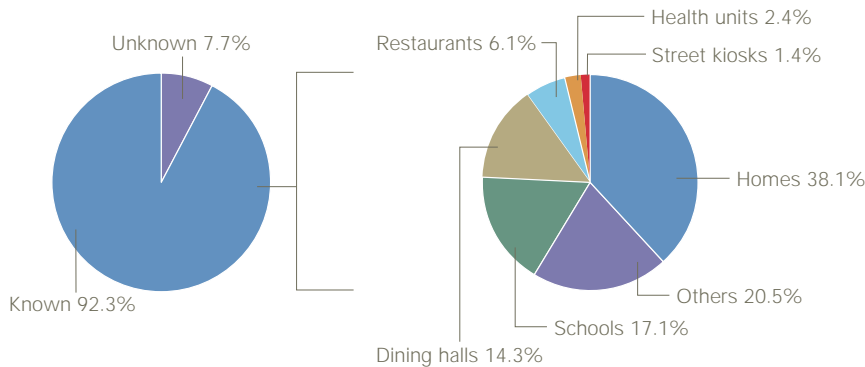
Causes of 2,575 outbreaks of food-borne diseases in the Americas, 1998-2001



Foods implicated in 2,575 outbreaks of food-borne diseases in the Americas, 1998-2001



Places where food implicated in 2,575 food-borne outbreaks was consumed in the Americas, 1998-2001



The effectiveness of SIRVETA has been widely recognized as a unique tool for developing food-borne disease prevention and control programs. With the expectation that it be replicated in other regions, WHO invited INPPAZ staff to make a presentation on SIRVETA, as part of a consultation to develop a strategy for global surveillance and risk analysis of food-borne diseases. CDC and INPPAZ have recently launched a hemisphere-wide epidemiological network to improve surveillance of food-borne diseases throughout the Americas.



Eradicating Foot-and-Mouth Disease

The countries and the Pan American Center for Foot-and-Mouth Disease (panaftosa) have joined forces to eradicate that disease throughout the hemisphere. Up until mid-2000, the disease-free zone included the Southern Cone subregion—Argentina, Chile, Paraguay, Uruguay, and the states comprising the cattle-producing zones of southern, central-western, and eastern Brazil—covering approximately 6.2 million square kilometers and some 140 million cattle. Argentina, Chile, and Uruguay had achieved international recognition for being foot-and-mouth disease free without vaccination, and Paraguay and Brazil as free with vaccination. This situation represented an important economic benefit for the Southern Cone countries, which eliminated losses occasioned by the disease, saved the cost of vaccination and treatment, initiated exports of meat to North America, and expanded trade with Europe and the Orient.

Until mid-2000 foot-and-mouth disease was either eradicated or on the decline in Latin America and the Caribbean

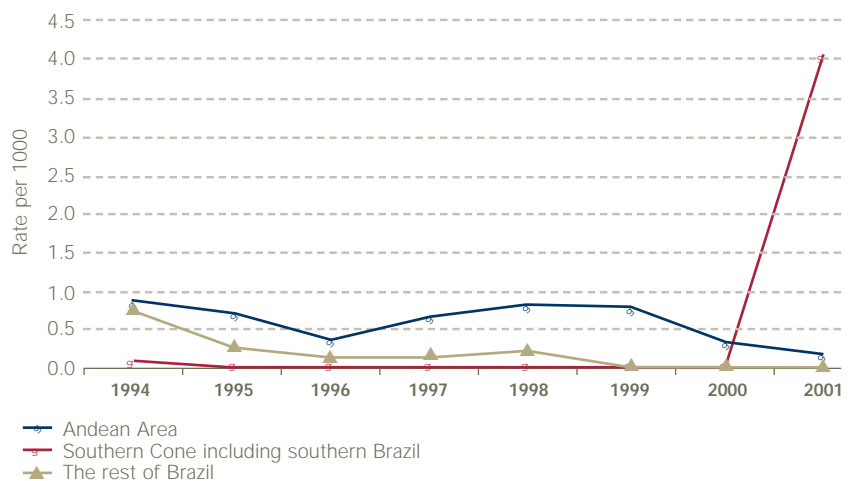


This situation deteriorated, however, in the second semester of 2000 with the appearance of outbreaks in Brazil and Uruguay—outbreaks that were rapidly eradicated. Unfortunately, a serious epidemic appeared in Argentina in February of the following year and spread throughout the country (except Patagonia) to Uruguay and southern Brazil. Export losses in Argentina and Uruguay are estimated at US\$400 million and US\$300 million, respectively. Chile, Paraguay, and the rest of Brazil remained free of the disease.



■ The Pan American Center, PANAFTOSA, is responsible for helping the countries of the Americas eradicate foot-and-mouth disease and prevent and control zoonoses.

Herds affected with foot-and-mouth disease in South America



Today, with PANAFTOSA's cooperation and experience acquired over many years, the affected countries are advancing rapidly towards eradication. At those countries' request, PANAFTOSA is providing close, ongoing supervision of national programs. Brazil has made important progress, where—as a result of the Amazon Basin Project—16 of the federal units are now recognized as disease free, as is Guyana. In the Andean area, Colombia obtained international recognition

as being free of foot-and-mouth disease with vaccination in a zone that includes the Atlantic Coast Project, with an estimated 7 million cattle. Peru, too, has made good progress in its eradication program. And PANAFTOSA is working with the Andean Pact to enable programs to achieve eradication of foot-and-mouth disease throughout South America by 2009. Countries in Central America, North America, and the Caribbean have maintained their disease-free status.



Preventing and Controlling Zoonoses

Following the recommendation of an external advisory group in 1996, panaftosa assumed responsibility for the Organization's technical cooperation in the area of zoonoses, while inppaz directed its efforts exclusively to food safety.

In relation to **RABIES**, panaftosa targeted strengthening national programs, coordinating a regional epidemiological surveillance system, assuring medical attention for exposed individuals, supervising the use of biologicals of recognized quality and safety, promoting the creation of diagnostic laboratory networks coordinated by who/paho Collaborating Centers, and carrying out massive vaccination campaigns. The frequency of cases of human rabies transmitted by dogs continues to trend downward. From an annual average of 293 cases in the decade from 1980 to 1989, the annual average for the decade from

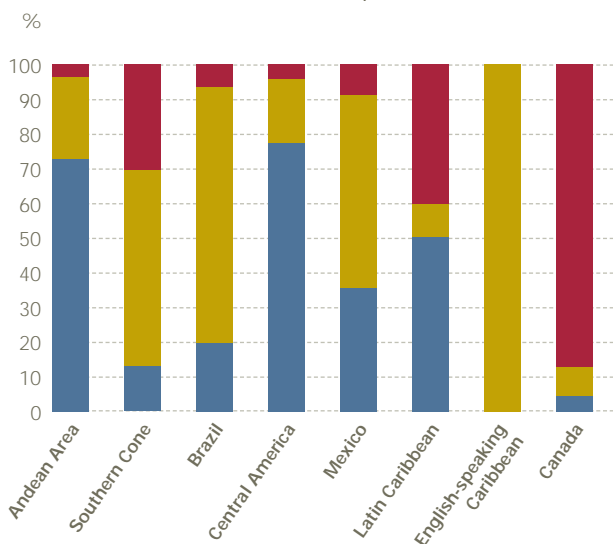
1990 to 1999 dropped to 168 cases; 64 and 42 cases were recorded in 2000 and 2001, respectively—roughly half of which represented rabies transmission by dogs. Human rabies of canine origin has virtually disappeared in the major cities of Latin America.

The same downward trend is observed in canine rabies. The annual average of 17,600 cases in the decade 1980-1989 dropped to 6,600 in 1990-1999; 2,086 and 801 cases were registered in 2000 and 2001, respectively. This reduction has had a direct impact on the occurrence of human rabies. Among the countries that have remained free of human rabies transmitted by dogs are Argentina, Canada, Chile, Costa Rica, Panama, the United States, Uruguay, the English-speaking Caribbean countries, and the Brazilian states of São Paulo, Rio de Janeiro, and the Federal District. As has occurred in other parts of the



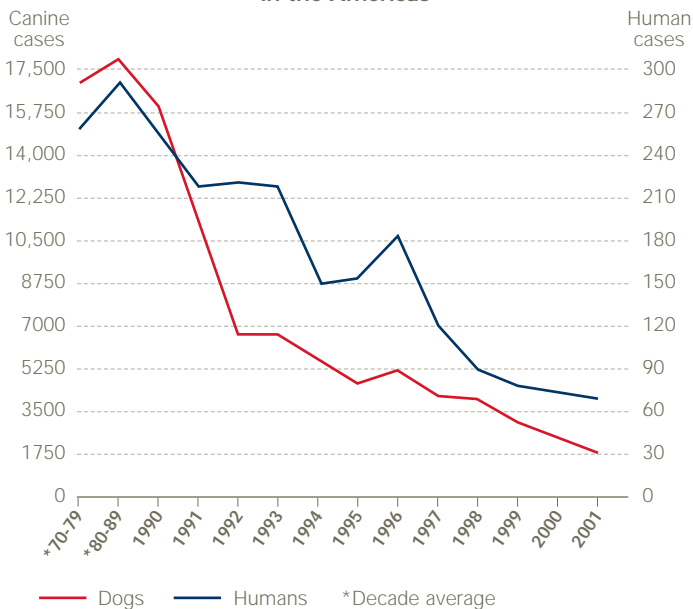
■ As part of a weekly supplement, "Vida," appearing in the newspaper *La República*, the PAHO/WHO Office in Peru produced cartoons promoting health including this one, part of a series intended to educate the community about preventing rabies.

Proportional distribution of rabies cases in animals in the Americas, 2001



■ Pets: dogs and cats
 ■ Farm animals: cows, sheep, goats, etc.
 ■ Wild animals: bats, skunks, opossums, etc.

Canine and human rabies are on the decline in the Americas



world, with the decline in cases of canine-transmitted rabies in the Americas, rabies transmitted by wild animals has become a more serious problem. Of all human cases registered in 2001 for which the source of infection could be identified, 8.8% were transmitted by bats. Of all cases of rabies in other animal species during 2001, the proportion corresponding to wild animals was 87.8% in Canada; the United States has had similar figures in previous years; 8.3% in Mexico; 40% in the Spanish- and French-speaking Caribbean; 3% in Central America; 2.6% in the Andean Area; 5.4% in Brazil; and 29.6% in the Southern Cone.

BRUCELLOSIS AND BOVINE TUBERCULOSIS continue to be serious economic and public health problems. panaftosa conducted a situation analysis of programs to combat these diseases in 24 countries. That analysis showed that Canada and the United States are almost free of these diseases; the English-speaking Caribbean and Cuba have very low disease levels; Central and South America continue to be endemic; and control and eradication programs are being strengthened in Mexico and the Southern Cone countries. Brucellosis caused by *Brucella melitensis* continues to be a serious public health problem in Mexico, Peru, and the area bordering Argentina, Bolivia, and Paraguay, but control programs based on mass vaccination of sheep and goats are being developed. All the countries are committed to eradicating these diseases, encouraged by their success in eradicating foot-and-mouth disease.

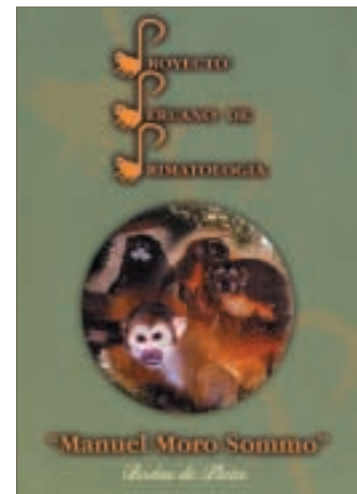
panaftosa coordinates an **EQUINE ENCEPHALITIS** information and surveillance system that comprises

Brazil, Colombia, Ecuador, Honduras, Mexico, Panama, and Venezuela—the countries that, with the exception of Brazil, pose the greatest risk of Venezuelan equine encephalitis outbreaks, which seasonally trigger epidemics. Complementing the surveillance system is laboratory diagnosis to characterize the antigen of the strains involved. This information is then used to advance campaigns for mass vaccination of equines, which helps reduce the risk of human cases.

Sporadic cases of **PLAGUE**, in areas that had cases in the past, were reported in Bolivia, Brazil, Ecuador, Peru, and the United States. No outbreaks of plague occurred, however, during the past several years in Peru or Ecuador, which had had large outbreaks in 1992 and 1997, respectively. Efforts to break the cycle of transmission between rodents and humans, by controlling infestation of rats in silos where corn and other foods are stored and developing a surveillance system with laboratory back-up, appear to have been successful.

In the wake of Hurricane Mitch, Central America and the Caribbean experienced an increase in cases of **LEPTOSPIROSIS**. To strengthen epidemiological surveillance of the disease, panaftosa cooperated with the affected countries by improving their laboratories' diagnostic capacity.

The Americas continues to be free of cases of **BOVINE SPONGIFORM ENCEPHALOPATHY**. To bolster prevention and epidemiological surveillance plans, paho organized a consultation of experts from Europe and the Americas, in which directors of national veterinary services partook, that issued recommendations to avoid introduction of the disease.



■ The Peruvian Primatology Project celebrated a quarter-century of protecting neoprimate species at risk of extinction by means of controlled harvesting and reproduction in captivity. As part of this scheme, the Project was able to supply samples for development of vaccines such as hepatitis A and B, as well as carry out basic research into malaria, physiology and human nutrition. An estimated 250 specimens of neotropical primates of biomedical interest are transferred yearly to scientific institutions.



Promoting and Protecting Health



During the first part of the 20th century, the state of public health is generally described in terms of the presence or absence of diseases, and controlling diseases is the primary focus of the Organization's work. Before the century reaches its midpoint, however, a modern understanding of health emerges, as enshrined in the Constitution of the World Health Organization: "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."

In 1946 the Organization creates the Institute of Nutrition of Central America and Panama in Guatemala City "to foster the development of nutrition science"; three years later, it establishes a Nutrition Section at its headquarters in Washington, D.C.; and, in 1967, it sets up the Caribbean Food and Nutrition Institute in Kingston to promote and provide training, technical assistance, research, information dissemination, and policies as they relate to food and nutrition.

Family health is an increasingly important component of the Organization's work. The 1953-1956 edition of *Health Conditions in the Americas* notes that: "nearly all the countries and other areas of the Americas have very young populations, and health programs would be directed principally to the problems of infancy, childhood, and young adult life. In many of these areas, more than 40% of the population is under 5 years of age." Twenty years later, the 1973-1976 edition of that title warns that: "Although the birth rate has been dropping since 1960 in most countries, the percentage of high-risk births is significant."

The historic Ottawa Charter of 1986 declares: "Health promotion is the process of enabling people to increase control over, and to improve, their health." That same year, WHO endorses the Charter, shifting the principal thrust of its work from disease-oriented medical interventions to the promotion of health. In 1987, PAHO's director, Dr. Carlyle Guerra de Macedo, states priorities: "Health promotion in the pursuit of well-being represents the primary objective of development and the primordial justification for any social policy." In 1990 the Pan American Sanitary Conference clarifies that "health promotion is increasingly perceived as the sum activity of the population, the health services, the health authorities, and other productive and social services aimed at improving the status of individual and collective health."

Today, we recognize that active application of the strategies of health promotion is essential for preventing much of the disease that still burdens the Americas as well as for maintaining a healthy mind in a healthy body.





Enhancing Families’ and the Population’s Health

“It is not enough to look at health outcomes. We must look at those social conditions that determine health outcomes—the determinants of health. We must look at the disparities in those determinants of health and assess to what extent they are distributed so unequally as to produce health inequalities or inequities.”

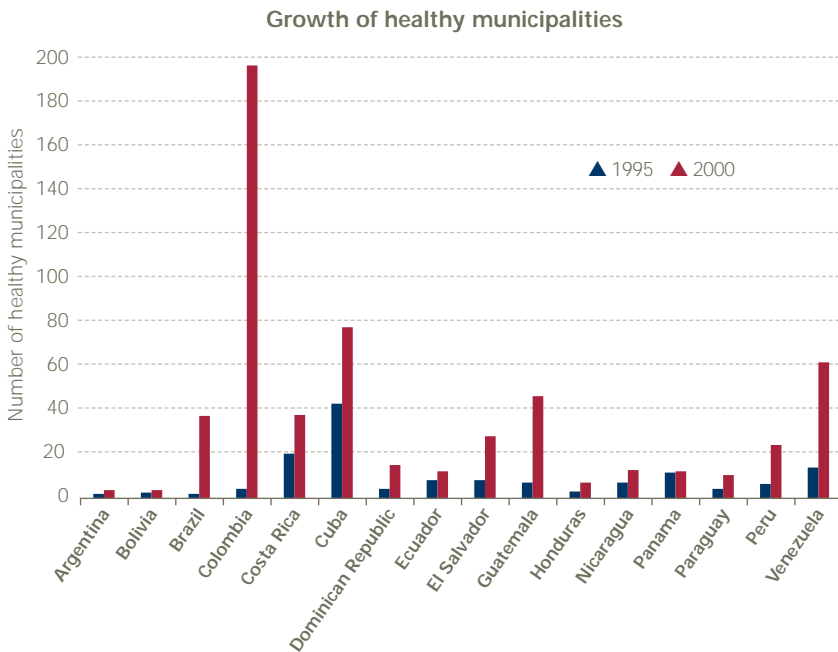
— Dr. George A.O. Alleyne at the Fifth Global Conference on Health Promotion

The Pan American Health Organization is committed to fostering a culture of health in the Americas by encouraging countries to share experiences, expand their knowledge, and enhance the practice of health promotion. Toward that end, paho co-organized and participated actively in the Fifth Global Conference on Health Promotion (Mexico City, June 2000), which showcased the world community’s commitment to bridging the equity gap by advancing from ideas about health promotion to action. The

Conference further served to accelerate and enhance national policies and action plans in support of health promotion, as shown by the reports of progress towards that end from a selection of countries highlighted below and on the facing page.

Healthy Municipalities and Communities

paho has actively promoted the healthy community movement in the Americas by disseminating tools, information, and experiences



PAHO actively promotes healthy communities throughout the Americas

Healthy community projects in **ARGENTINA** target community participation, local health services, networking, and environmental management. The country's healthy prisons project stresses that even prisoners are entitled to a healthy environment where the incidence of disease is kept low and psychological and physical well-being are assured.

In **BOLIVIA** the focus of healthy communities in Sucre, El Alto, Tupiza and La Paz is on healthy markets and schools, nutrition, youth organization and involvement, and basic sanitation. The healthy community serves as a strategy for realizing the national health plan, with priorities of family medicine, basic health insurance, epidemiological surveillance, and reduced maternal mortality.

In **BRAZIL** municipal health secretariats have formed a network and meet regularly to promote healthy municipalities throughout the country. To boost the **CARIBBEAN** community's awareness of the importance of health, every year PAHO presents an award for excellence in health journalism. Mayors in **CHILE** have signed an agreement establishing the national network of healthy *comunas*, which subsequently convened a national congress on health promotion.

The national health promotion plan assigns the *comunas* a major role in addressing the country's top health priorities: cardiovascular diseases, mental health, accidents, and cancer.

In **COLOMBIA** some 200 communities are engaged in the healthy-municipalities-for-peace strategy that targets prevention of crime and violence, eradication of illicit crops and drugs, provision of transportation, protection of the environment, and celebration of national culture.

About half of all the communities in **CUBA**, among them the spectacular Cayo Las Brujas, participate in the healthy municipality movement, emphasizing physical exercise, nutrition, stress management, and reduced cigarette and alcohol consumption.

One of the newest healthy communities in the Americas is Villa Centenario OPS—a rural settlement of 100 new houses in

EL SALVADOR built for families left homeless following an earthquake that devastated the country. Named in honor of the Pan American Health Organization's centennial, the housing project, with more to come, was the fruit of the collective labor and support of local and national authorities, PAHO, and the governments of the Bahamas, Canada, Italy, Norway, Sweden, and the United Kingdom. PAHO has contributed to health promotion efforts in **MEXICO** by enabling exchange of information among the country's 3000 healthy municipalities, developing health programs used in over 30,000 schools, producing information to fight addictions, strategizing to improve elders' health, and supporting the Fifth Global Conference on Health Promotion.

In **PARAGUAY**, PAHO has supported the designation of 22 healthy municipalities where the community participates in making a range of decisions about local affairs—running of municipal markets, controlling water quality, monitoring quality of iodized salt, and setting up neighborhood mediation centers. PAHO has accompanied the Office of the First Lady in establishing a national network of 17 health-promoting schools that emphasize primary environmental care, nutrition, oral health, school gardens, and hygiene.

Villa El Salvador, **PERU** began as a squatter settlement of impoverished families and today is internationally recognized as one of the world's most successful healthy communities. Others in the country have undertaken initiatives to improve food vendor hygiene, involve the elderly in community development, strengthen youth clubs, and foster local industry. Communities in **URUGUAY** pursue better health by improving their physical and social environment, mobilizing resources for local development, and involving all sectors and all ages in community activities. Among recent successes in **VENEZUELA** are Zamora's efforts to lobby industries to reduce pollution, Sucre's focus on the quality and nutritional value of food vendors' offerings, and Moran's leadership of local development.



to enable countries to develop their own models. In the span of five years, the number of healthy communities has measurably increased.

Moreover, these communities are forming national and regional networks to capitalize on, and share, the lessons they have learned. paho is taking the lead in evaluating the effectiveness of strategies employed by healthy communities; findings will be used to foster policymakers' support of health promotion in these communities. paho is conducting an evidence-based assessment of the healthy community experience in 10 countries of the Americas, with the United States Centers for Disease Control and Prevention, the University of Toronto, Quebec's Laval University, the University of New Mexico, the University of São Paulo, the University of the Valle in Colombia, and the University of Chile. Already a by-product of the assessment is a strengthened network of mayoral offices, health secretariats, and school health associations.

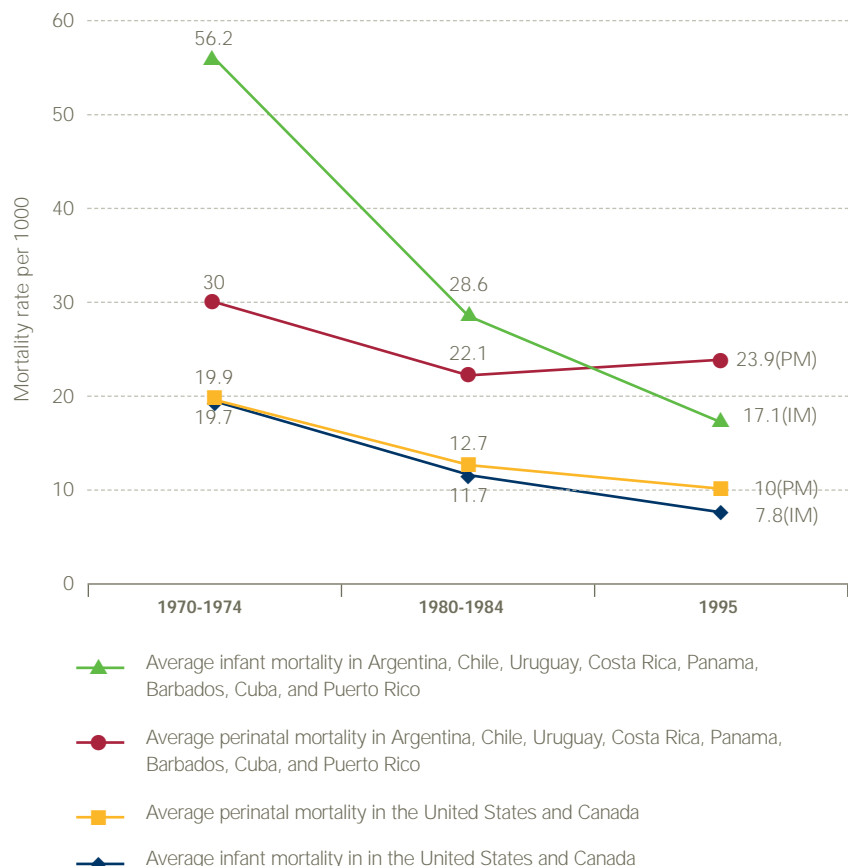
Reproductive Health

From 1970 to 1995 the infant mortality rate in the Americas dropped significantly, whereas perinatal mortality remained stationary.

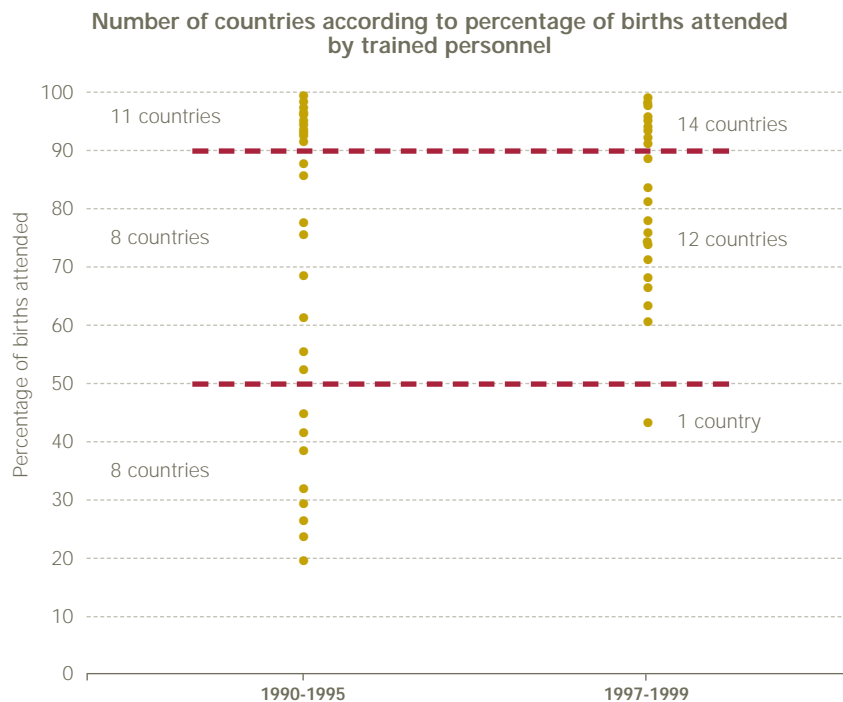


■ In Peru, a series of cartoons was created to teach the community the importance of perinatal care.

Infant and perinatal deaths in selected countries of the Americas, 1970-1995



During the decade of the 1990s, the percentage of births attended by trained personnel increased many times over.



■ The Latin American Center for Perinatology and Human Development works with the countries of the Region to improve the care of mothers and their newborns.

The Latin American Center for Perinatology and Human Development (CLAP) is using an array of strategies to improve the quality of perinatal care in the Region: a survey of evidence-based practices, dissemination of information about those practices, advocacy and promotion of rights, a project on “distinguished motherhood,” and research on the use and evaluation of evidence-based practices. The Center has also established 20 associate centers in 12 countries—Argentina, Bolivia, Brazil, Chile, Cuba, the Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, and Peru—to identify the existing perinatal care infrastructure, strengthen those institutions that are weak, and inform paho’s technical cooperation in maternal and perinatal health.

To better serve countries’ needs in reproductive health, CLAP and the United States Centers for Disease Control and Prevention (CDC) are developing a computer program based on CLAP’s perinatal clinical record form and CDC’s statistical software for epidemiological analysis. The program will discriminate between individual clinical cases and population trends—showing the social determinants of health inequities.

“Today, children in the Americas are much more likely to survive infancy, live in dwellings equipped with adequate water and sanitation, be properly fed, and attend school. ”

Maternal Health

As a result of complications related to pregnancy and childbirth, approximately 22,000 women in Latin America and the Caribbean die each year and countless more become disabled and seriously ill—consequences that are largely preventable. To redress this situation, the First Ladies of the Americas and paho—with the support of USAID—launched a regional initiative to reduce maternal mortality at the First Ladies’ Summit in 1996.

The initiative emphasizes strengthening the delivery of essential obstetric care, advocating supportive policies, and enabling community access to services.

To date, 11 countries have signed on: Bolivia, Brazil, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Paraguay, and Peru. An interagency task force—comprising the World Bank, the idb, usaid, unicef, and unfpa and for which paho serves as the secretariat—reinforces the countries’ programs.

paho’s member countries, the Secretariat, and cdc conducted an assessment of epidemiological surveillance systems for maternal mortality in 26 countries. The assessment showed that most countries have improved and are producing evidence that can be used to drive public policy. paho supports a shift in countries’ family health and population programs—from a birth-control orientation to

one of comprehensive sexual and reproductive health. In this respect, three factors provide evidence of improved services in the Region: increased contraceptive prevalence rates, higher percentages of births attended by trained personnel, and lower infant and child mortality rates. paho’s contributions to these improvements range from provision of guidelines and tools to the promotion of appropriate policies and better managed services.

To be effective, sexual and reproductive health care services must count on the involvement of men. paho works with the countries of Latin America and the Caribbean toward enactment of laws that protect children and adolescents, increase access to services, and ensure confidentiality.



■ PAHO promotes healthy maternity and healthy children through active social communication initiatives throughout the Region.



Child Health and Development

To prioritize the health and well-being of children, the 1990 World Children's Summit set decade goals in critical areas affecting their health. PAHO has participated actively in periodic evaluations of efforts to meet those goals, as well as in the V Interministerial Summit in Jamaica, where the Kingston Consensus was approved, setting forth the Region's commitment to better the welfare of children.

Children's health in the Americas— Progress towards attainment of the goals of the World Children's Summit		
	Goal	Progress
Infant mortality	Reduce 33%	Reduced 25%
Malnutrition as measured by weight/age	Reduce 50%	Reduced 38%
Malnutrition as measured by height/age	Reduce 50%	Reduced 34%
Low birthweight★	Reduce to 10% of newborns	Reduced to 8%
Water supply	Reduce by 25% the proportion of the population without access	Reduced by 16%
Basic sanitation★	Reduce by 17% the proportion of the population without access	Reduced by 25%
Primary education★	Universal access, with 80% completing basic education	94% completed
Literacy	Reduce illiteracy by 50%	Reduced by 37%
Breastfeeding	100% of mothers of newborns breastfeed 4-6 months	Average of 36% breastfeed
Neonatal tetanus	Eliminate as a public health problem (<1 case/1000 live births)	Reduced by >90%
Acute diarrhea★	Reduce mortality by 50%	Reduced 50%

★ GOAL MET OR SURPASSED

Achievement of optimum integrated child development in the Region requires strategies that improve child survival and also take into account their psychosocial needs. PAHO has developed a regional strategy to promote the health and development of children as one means of reducing inequity and interrupting the intergenerational poverty cycle.

Health-promoting Schools

The countries of the Americas have made great strides in educating children and youth between the ages of 5 and 18: primary school enrollment has become almost universal, and illiteracy has dropped from 42% (1950) to 14% (1995).

Capitalizing on this positive context, the Organization has spearheaded a health-promoting schools initiative that strengthens national activities aimed at creating school environments that are conducive to children's healthy lifestyles. The initiative entails reviewing and updating school health policies, promoting agreements between the health and education sectors, and strengthening the capacity of joint health and education commissions to include health education components in school curricula. *paho* has also developed materials, which are being widely used by health-promoting schools, to help children deal with anger and conflict, to decrease violence in schools, and to teach environmental education.

paho, who, and *cdc* helped countries carry out surveys to identify key health-risk behaviors among youth and, on the basis of the findings, design and implement health-skills education programs. An effective vehicle for the exchange of information, ideas, resources, and experiences are the Latin American and Caribbean networks of health-promoting schools—an integral part of *paho*'s initiative that now includes every country in Latin America and the Caribbean. *paho* supports Colombia's make-peace campaign—"Haz Paz"—a principal thrust of which is the development of health-promoting schools.

Children's health is a major focus of *paho*'s technical cooperation in Ecuador. The country now has more than 500 health-promoting schools benefiting over 100,000 children. Some 4000 health workers have been trained as part of the strategy to integrate management of childhood illnesses, one goal of which is a further reduction of 4000 deaths of children under the age of 5. Ecuadorean children, in turn, become promoters of health and the environment in their communities.



■ Ecuadorean schoolchildren have become promoters of a healthier environment, and Colombia's schools are a centerpiece of that country's "make-peace" campaign.

Adolescent Health

A pioneer in the field of adolescent health, paho has devised a three-pronged action plan for adolescents that addresses their needs today, promotes development of lifelong healthy attitudes and behavior, and recruits them as agents of social change. To effect the plan, efforts have targeted changing public policy: individual countries assess the health of their adolescents and, on the basis of that assessment, craft national norms and guidelines and establish national adolescent health programs.

To increase commitment and political support for youth legislation, paho has brought together health care workers, personnel from other sectors, and youths themselves.

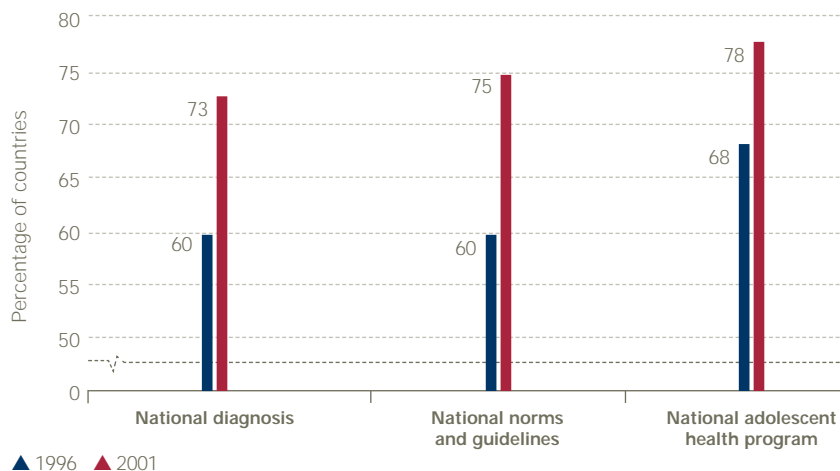
The process has produced notable successes: in the Dominican Republic, for instance, the President recently signed the National Youth Law, which sets aside 1% of the national budget and 4% of the municipal budget for youth development.

The Organization is capitalizing on advances in information technology to build countries' capacities to promote the health of adolescents. Work with the University of Monterrey in Mexico, Catholic University in Chile, and the University of Rio de Janeiro in Brazil has resulted in development of distance-education courses that health professionals can take online. paho has also collaborated with the Johns Hopkins University in the United States to produce a cd-rom in Spanish that teaches sexual and reproductive health to primary care workers. A regional website on adolescent health (<http://www.adolec.org>) and a series of cd-roms provide access to a wealth of materials for those committed to creating a safe, healthy, and prosperous community where adolescents can thrive.



■ Adolescents are a country's present and future. In Honduras, PAHO supports their comprehensive care and development by conducting focal groups to discern their needs, promoting legislation, and conducting public awareness campaigns.

Improvement in countries' diagnosis of adolescents' health, elaboration of national norms, and development of national adolescent health programs in the Americas



■ The Dominican Republic has passed a national youth law that allocates money for development of the country's youth.

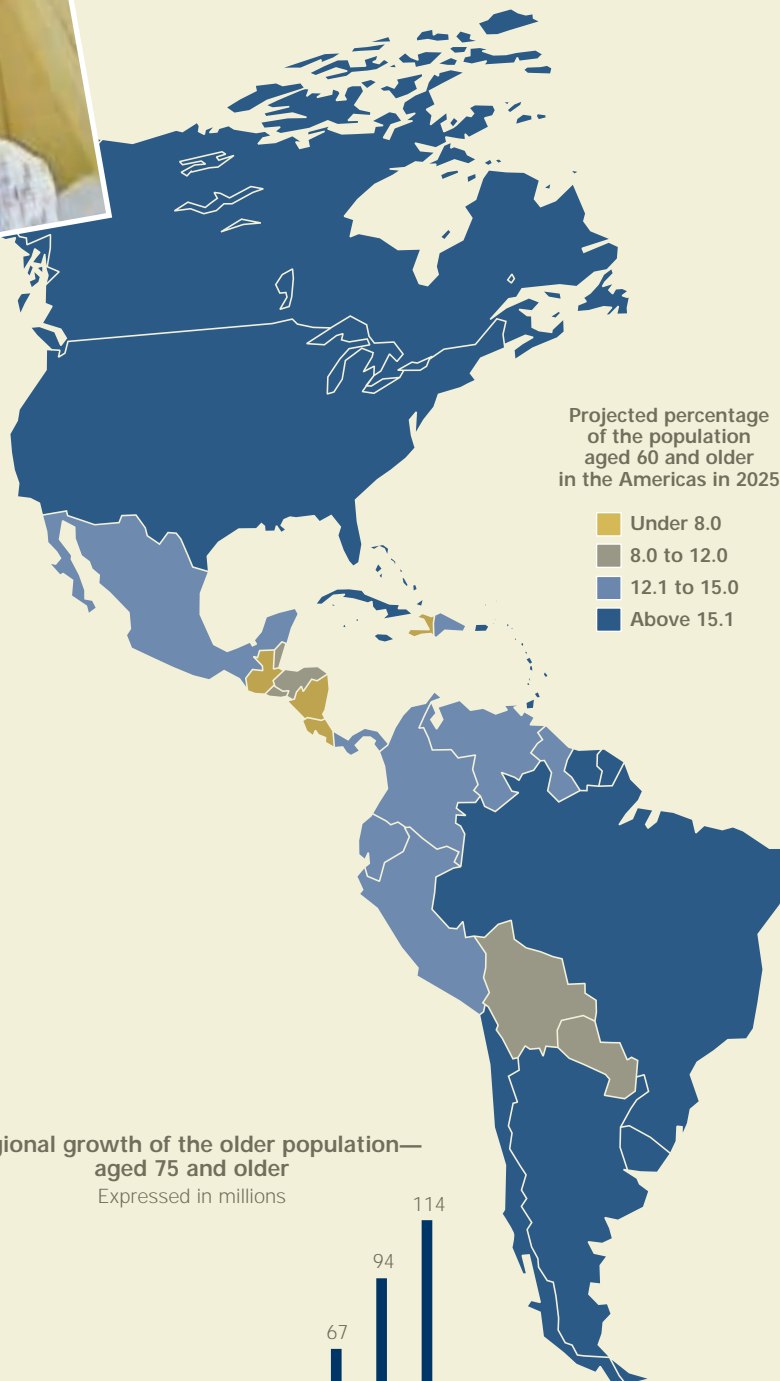


■ On his visit with Dominica's Elizabeth "Pampo" Israel—born in 1875 and at 127 reputedly the oldest person in the world—the Director of the Pan American Health Organization, Dr. George Alleyne, learned the secret of her longevity: discipline and hard work, countless friends, good nutrition, and a powerful faith. Still lucid and blessed with a hearty appetite, Pampo claims that: "My days are not numbered ... I plan to live another 10 years!"

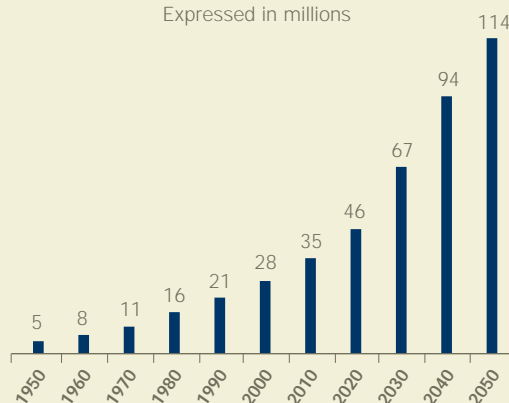
Health and Aging

The demographic trends that are occurring in the Region require immediate public attention. In the year 2000, the United States and Canada have over 50 million people aged 60 and older, while in Latin America and the Caribbean the number totals 42 million. By 2025, over 14% of the population in Latin America and the Caribbean—approximately 97 million people—will be 60 and older.

By the end of the 100-year span from 1950 to 2050, the increase in the number of people aged 75 and older is projected to be spectacular (see chart on this page). A PAHO-coordinated multicenter study has provided population-based information on the determinants of physical and mental health and well-being in urban elders, their functional status and behavior, their access to services, their financial and retirement situations, and familial relations across generations. This information—presented in the forms of city surveys and a regional report, a survey database, a research kit, and training materials—will be used in the preparation of national age-appropriate policies and programs. PAHO has also held subregional forums on public policies and aging, conducted a regional study on primary health care and aging with tools to differentiate treatment of the most common health problems of older adults, and produced kits on depression and aging and on physical activity and aging.



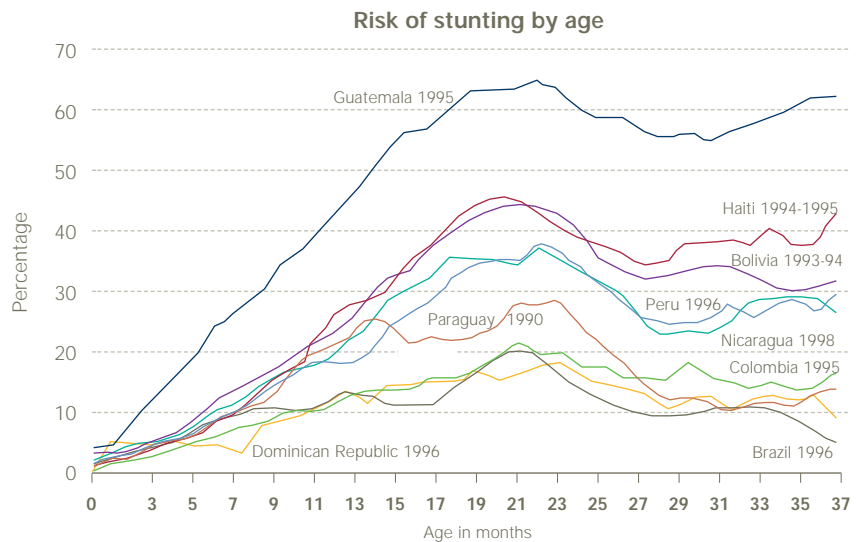
Regional growth of the older population—aged 75 and older
Expressed in millions



Improving Food and Nutrition

The first two years of life represent a critical window of opportunity to improve the foundations of human and social development through good breastfeeding and complementary feeding practices. The greatest risk of both stunting (low height-for-age), the most prevalent indicator of poor growth, and iron-deficiency anemia, the most prevalent micronutrient deficiency, occurs during this period.

Even if nutritional intake is adequate after the first two years, stunting is irreversible, as are the damaging effects of iron-deficiency anemia on young children's mental and motor development and their cognitive performance later at school. Therefore, good breastfeeding and complementary feeding practices, coupled with the correct mix of micronutrient-rich foods, are essential to ensure optimal growth and motor and cognitive development.



Infant and young-child feeding behaviors do not occur in isolation; rather they reflect the environment in which they occur. Policy and program initiatives have resulted in better breastfeeding practices, but much remains to be done to ensure that all infants experience the full range of health and development

benefits of breast milk. Moreover, little has been done to improve complementary feeding, especially access to high-quality, low-cost fortified foods that are essential to ensure adequate iron status—an area requiring urgent attention.

To promote better infant and young-child feeding practices, the



■ In Peru, PAHO is actively promoting breastfeeding through the use of social communication cartoons.

Organization has reviewed and disseminated information on nutritional formulations and means of production, cost, and coverage of fortified complementary foods. It has also reviewed the recommended duration of exclusive breastfeeding, which has changed from 4-6 to 6 months.

PAHO produced guidelines for infant and young child feeding;

developed a manual for assessing infant and young-child feeding practices and an intervention strategy based on the assessment; translated into Spanish and promoted a WHO/UNICEF Breastfeeding Counseling Course; and translated and disseminated WHO/UNICEF materials on infant and young child feeding.

PAHO is spearheading implementation of the WHO/UNICEF Breastfeeding Counseling Course in the Americas

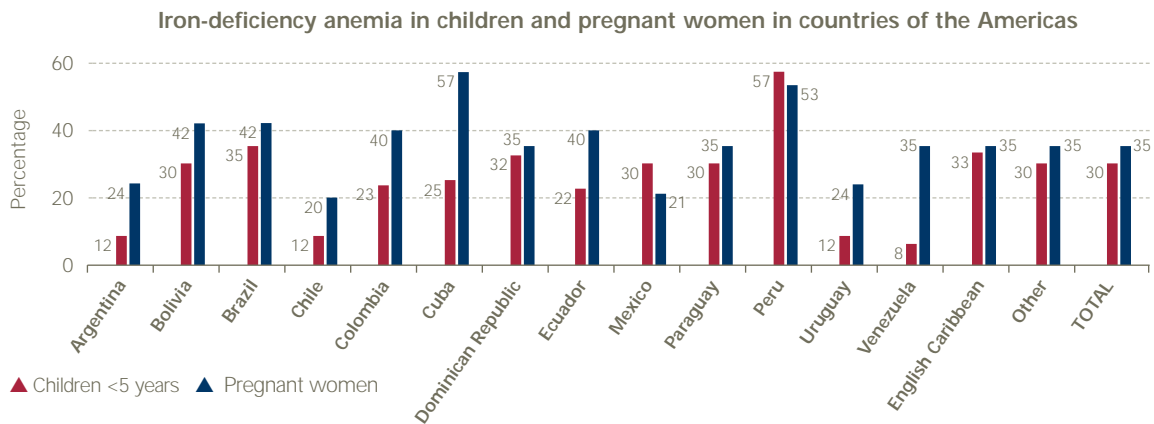


■ The Institute of Nutrition of Central America and Panama (INCAP) helps communities throughout the isthmus start small businesses—from pig-breeding farms to bakeries—that both improve their economic situation and provide them nourishing food.

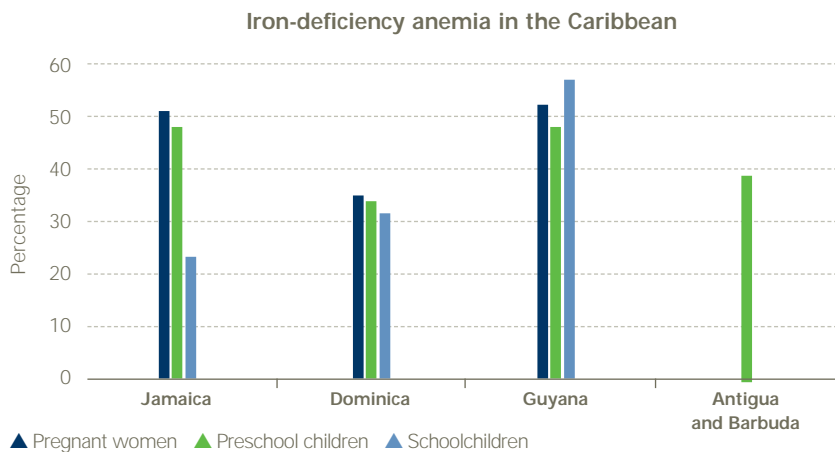


Micronutrients

Iron-deficiency anemia is a major public health problem in the Americas that especially affects pregnant women and young children.

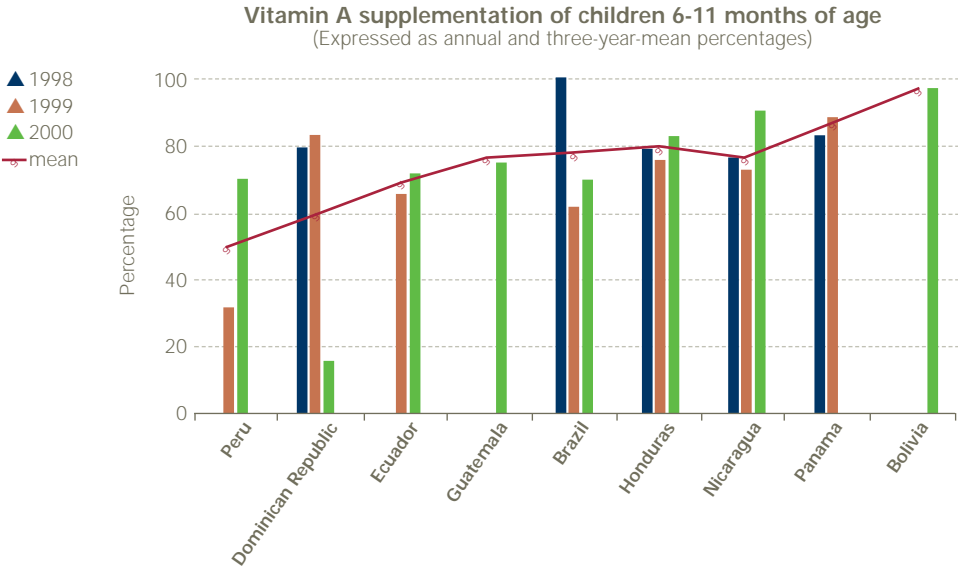


An assessment by the Caribbean Food and Nutrition Institute determined that as many as one-fourth to one-half of all women and children in four Caribbean countries suffer from iron-deficiency anemia.

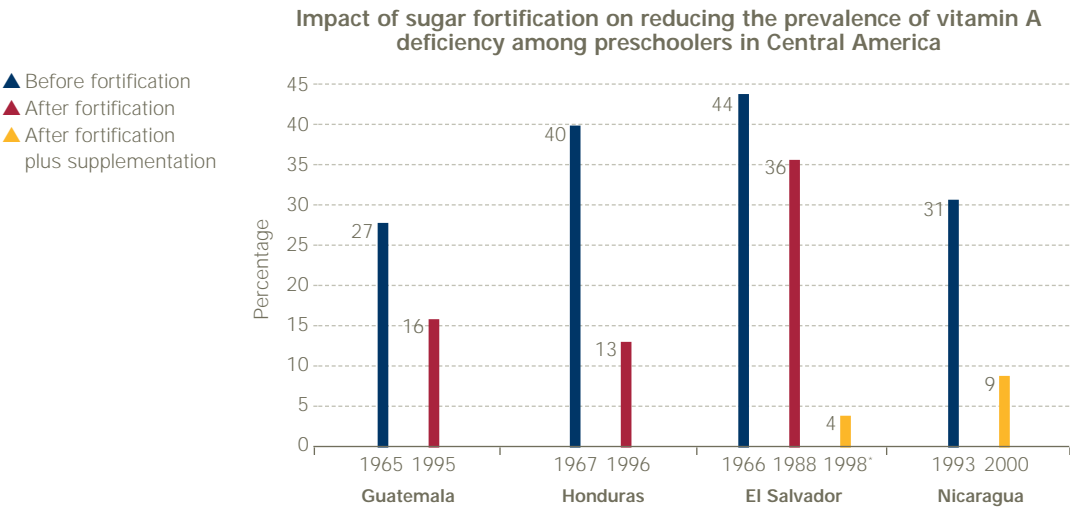


To ameliorate the situation, paho and incap have advocated the importance of mandatory mass fortification of wheat and corn flour with iron and folic acid—now public policy in 22 countries of the Region. They also supply iron supplementation for pregnant women and small children and dietary diversification for the entire population.

To increase coverage of vitamin A in nine countries whose populations suffer deficiency of the micronutrient, paho has advocated that vitamin A supplementation be incorporated in national immunization campaigns. As a result, coverage of postpartum women and children, especially those under 1 year of age, has registered significant gains.



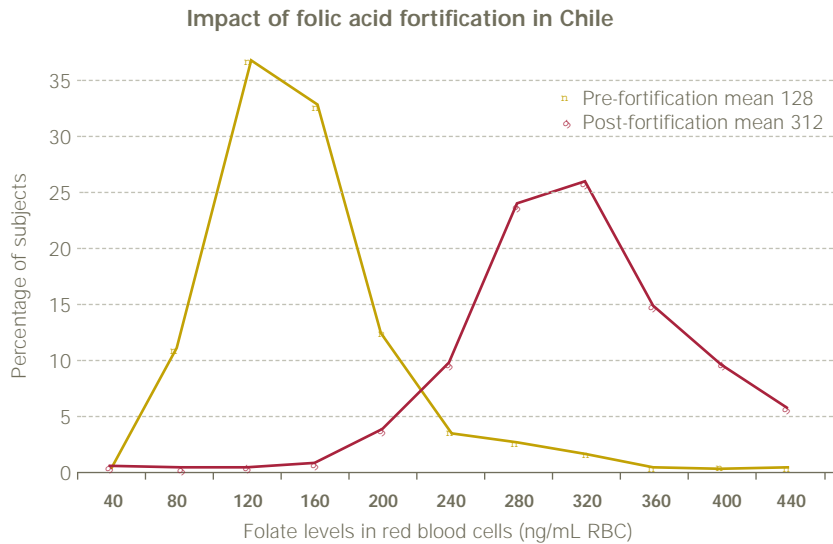
In Central America, incap has been a major advocate of sugar fortification with vitamin A—a low-cost strategy that has yielded spectacular results in reducing the prevalence of vitamin A deficiency.



paho, unicef, the Kiwanis Club, and Canada (as part of that country's initiative to promote micronutrients) have coordinated assistance to the countries of the Region in providing access to iodized salt—with over 90% of the population now consuming it.



To reduce the incidence of neural tube defects, paho has taken the lead in the Region in promoting folic acid fortification. The Organization, the March of Dimes, and cdc helped Chile evaluate its program of fortifying wheat flour with folic acid, which revealed a dramatic increase in red blood cell folate levels.





■ To reverse the recent increase in chronic, non-communicable diseases in the Region, PAHO supports countries' efforts to craft policies, plans, and programs aimed at promoting healthy lifestyles, especially healthy eating and physical activity. Encouraging community involvement and providing appropriate spaces for recreation are critical to promoting health. Toward that end, PAHO sponsored a competition among 150 communities to encourage their members to eat well and be physically active.

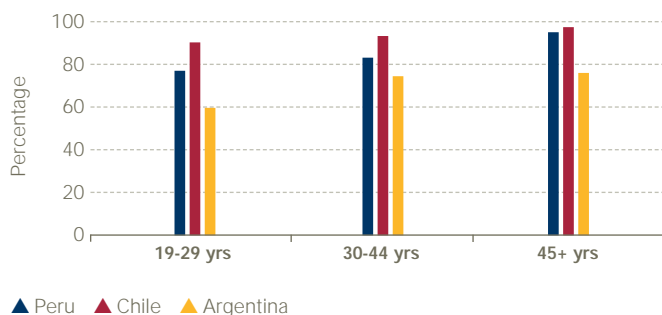


■ The Caribbean Food and Nutrition Institute conducted a multicenter study of Caribbean diet and exercise behavior, by gender. The study explored the population's readiness to change the two behaviors, obesity status and stages of change, and factors that positively influence health promotion campaigns.

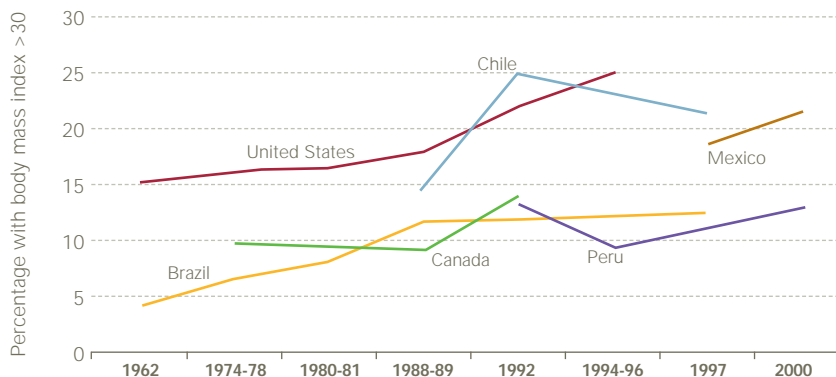
Healthy Diet and Physical Activity

Too little activity and excessive food intake invariably result in overweight and obesity and, together, contribute significantly to the alarming increase in recent decades in chronic, noncommunicable diseases throughout the Americas.

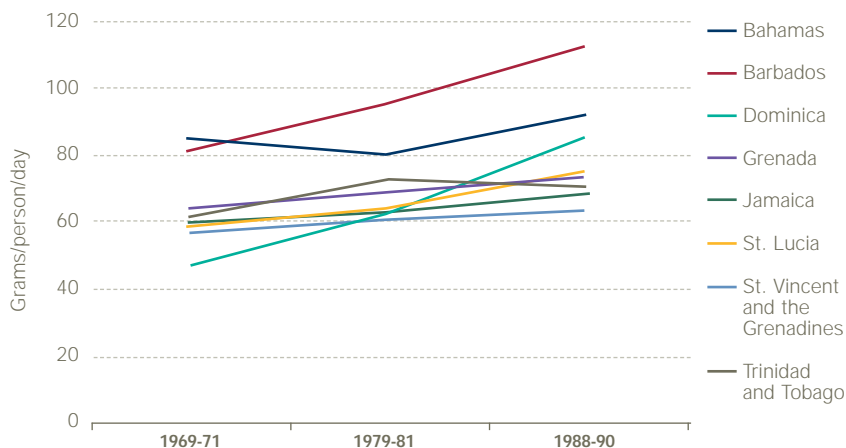
Physical inactivity—not practicing walking, jogging, or sports—in three age groups in three countries of the Americas



Obesity trends among women in six countries of the Americas



Fat consumption in eight countries of the Caribbean





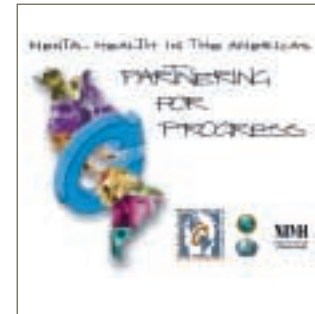
Ensuring Mental Health, Advocating Healthy Lifestyles

Mental health is crucial to the overall well-being of individuals, societies, and countries. Nevertheless, an estimated 150 million people in the Americas suffer from mental or neurological disorders or from psychosocial problems. Some 17 million young people in the 5-17-year age group in Latin America and the Caribbean are affected by mental disorders that are severe enough to require treatment. One in five people in the Americas will suffer a mental disorder over the course of a lifetime. Such disorders contribute significantly to disability and

represent one-fourth of the Region's burden of disease. Mental health has been neglected for far too long, especially in light of the fact that many people with mental and brain disorders can be successfully treated:

- Up to 60% of people can be expected to recover from depression.
- Up to 60% reduction of drug use is feasible.
- Up to 70% of patients with epilepsy can live free of seizures.
- Up to 80% of relapses of schizophrenia can be prevented.

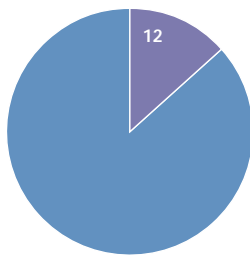
Nevertheless, millions have no access to effective treatments and interventions.



■ As part of its promotion of mental health, PAHO sponsored a conference for partners interested in supporting mental health projects.

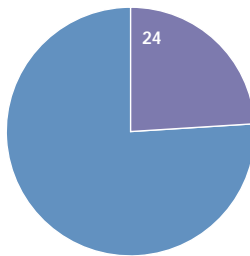
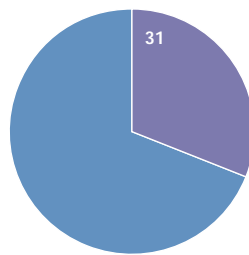
Burden of neuropsychiatric conditions as a proportion of the total burden of disease, globally and in the Americas, estimates for 2000
Expressed in percentage

Disability adjusted life years (DALYs) attributable to neuropsychiatric disorders as a proportion of all DALYs

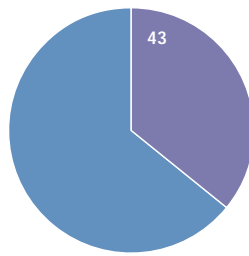


The World

Years of life lived with disability (YLDs) attributable to neuropsychiatric disorders as a proportion of all YLDs



The Americas





The Organization has helped craft national mental health policies and plans in Barbados, Chile, El Salvador, Mexico, Peru, Saint Lucia, and Trinidad and Tobago, and has worked to improve mental health care services in Chile, El Salvador, Guatemala, and Mexico.

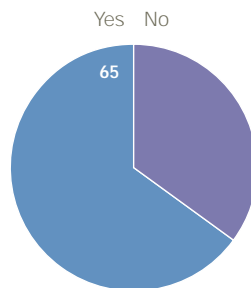
To protect those suffering from mental illness, PAHO and the

oas's Inter-American Commission on Human Rights devised a strategy that couples mental health and human rights.

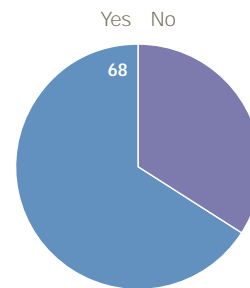
Workshops conducted in Brazil, Costa Rica, Nicaragua, Panama, and Paraguay have served to disseminate international standards and norms so that they will be incorporated in national legislation.

Presence of mental health policies and legislation in countries of the Americas, 2000
Expressed in percentage

Presence of mental health policies



Presence of mental health legislation



■ The Organization has undertaken initiatives to reduce the prevalence of depression and its complications through a comprehensive program that involves self-help groups, educators, community members, labor and management, and health workers. For that purpose, PAHO is developing didactic materials for those who come in regular contact with depressed individuals—primary care professionals, religious leaders, hairdressers, and the like. In Panama, PAHO's work on dealing with depression *Cónozca la depresión y enfréntela* is being used by hairdressers to help their clients.



de las depresiones; la mayoría, ni se diagnostican ni se tratan. Es por esto que la Organización Panamericana de la Salud (OPS/OMS), ha diseñado un programa preventivo para ayudar a resolver este problema; "Conozca la depresión y enfréntela".

PAHO works closely with national counterparts—in policy development, program planning, and community involvement—to promote healthy lifestyles



The **CARIBBEAN** Community has designated mental health a regional priority. In response to the countries' goal of improving national programs, PAHO supports mental health reform initiatives, encourages evidence-based decisions, promotes community services, and lobbies to reduce the stigma attached to mental illness. Aiming to "build a healthier nation," **CHILE** elaborated a national plan and constituted a national council for health promotion, Vida Chile, that comprises 24 institutions from different sectors in the country. The PAHO Country Office both helped craft the plan and is a member of the council. Among the initiatives launched is a "healthy university" to promote students' well-being.



A plan of action to promote health in **EL SALVADOR** prioritizes the protection

of mental health, especially in times of disaster, fosters healthy communities, and strengthens adolescent health. Every public school in the country has enlisted in the health promotion campaign, resulting in schoolchildren's improved nutrition, reduced dental caries, and lowered exposure to intestinal parasites. Victims of the recent earthquake in El Salvador sought refuge in El Cafetalón—a center that at one time housed over 7000 homeless—where community kitchens were set up and cooking stoves and utensils supplied.

The government of **JAMAICA** sought PAHO's cooperation to reverse trends in children's educational underachievement, growing incidence of mental problems, and increasing manifestations of violent behavior. To shed light on the impact of children's education, socioeconomic status, home and family life on school performance, cognition, and behavior, PAHO conducted a survey. It found that the country needed to improve the quality of education and provide services for children with behavioral problems and mental disorders, especially among the poor. These findings are being used to upgrade the Jamaican school system. PAHO participates fully in efforts to

promote and protect health in **TRINIDAD AND TOBAGO**, where "Health Promotion Month" is celebrated every April and a national council has been set up to encourage healthy lifestyles and environments. Wellness programs, community empowerment, peer counseling groups for adolescents, sexual and reproductive health programs, and physical exercises are among the interventions already proving successful. PAHO's efforts to stem the use of tobacco in **VENEZUELA** have helped reduce the prevalence of adult smokers in the country from 40% in 1984 to 30% in 1998 and have halved the per-capita consumption of cigarettes.



■ "Vida Chile" is promoting a healthy university movement. And, in support of mental health, Chile has committed to bring epilepsy "out of the shadows." The country's work in this area contributed significantly to a Latin American declaration of action.

Tobacco Control

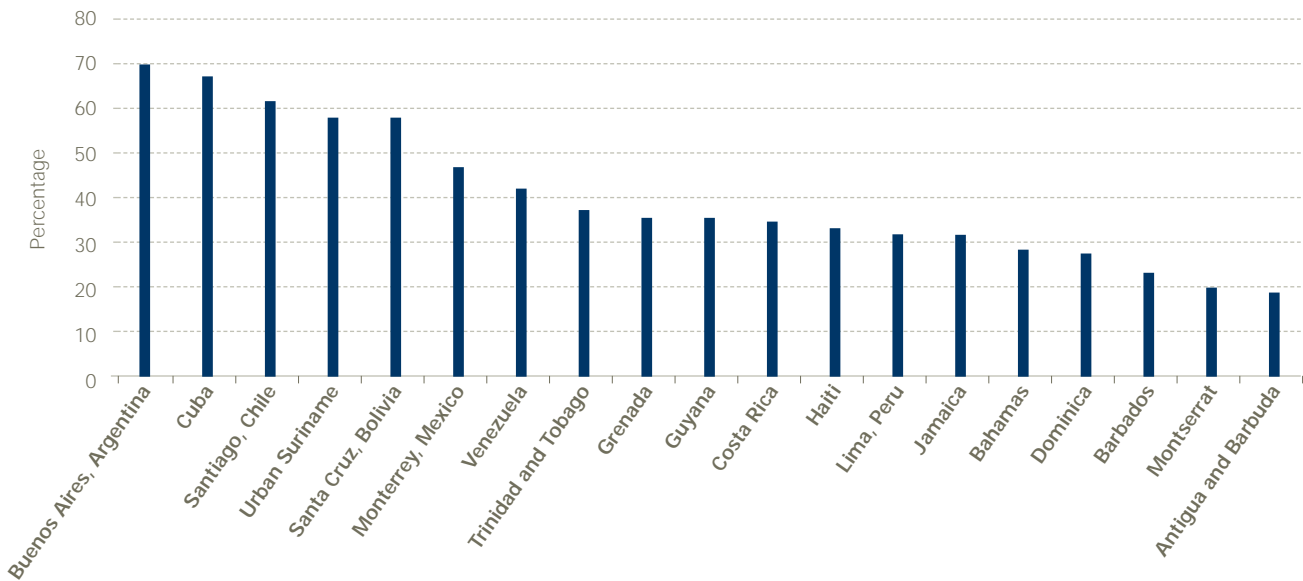
Recent years have brought mixed results for tobacco control in the Americas, where the prevalence of tobacco use has remained stable in most countries. An international treaty on tobacco control under development holds promise, however, as a means of reversing the trend.



■ Brazil and Canada now require tobacco packaging to carry powerful health messages.

For its part, paho focuses efforts on broad-based policy areas known to be effective in reducing tobacco use: increases in tobacco taxes, elimination of tobacco promotion, and creation of smoke-free environments.

Children's exposure to smoke at home in selected cities and countries of the Americas

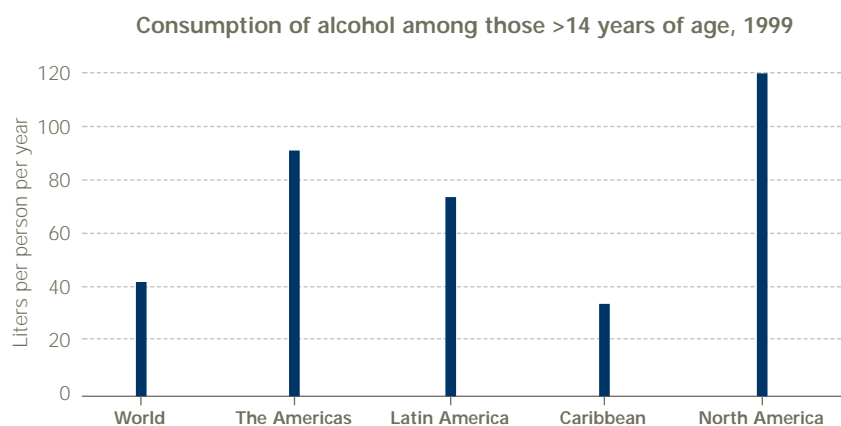




■ Exposure to second-hand smoke, particularly among children, is a serious concern that is the target of PAHO's recently launched "Smoke-Free Americas" initiative.

Alcohol Control

After the most developed countries, where 15.6% of the burden of disease is attributable to alcohol, Latin America has the second largest burden—14.7%. Adolescents and young adults are responsible for the greatest portion of that burden. In response to this situation, PAHO is developing a "strong families" program to target those with teenagers.





Protecting and Developing the Environment



At the first sanitary conference, countries are urged to adopt measures to dispose of garbage and other wastes to prevent the spread of diseases, and the Bureau is instructed to elicit from the countries information regarding the sanitary conditions of their ports and territories and to encourage or enforce seaport sanitation, including sanitary improvement of harbors, sewage disposal, soil drainage, street paving, and elimination of the sources of infection from buildings. In 1929, the pages of the *Boletín de la Oficina Sanitaria Panamericana* admonish that: "Without knowledge of hygiene and sanitation and without the means of applying that knowledge, protection of the public's health is reduced to a mere myth."

Reflecting the social situation at mid-century, the 1950-1953 edition of *Health Conditions in the Americas* notes that: "Since the countries and territories of the Americas are essentially rural ... there are increasing needs and opportunities for promotion by health services of satisfactory water supplies and safe disposal of sewage in rural areas." Nevertheless, toward the end of the 1950s, less than 60% of people living in urban areas have access to water services and less than 8% in rural areas do; sewerage is available to only 28% of those living in cities and to practically no one in rural areas.

In 1967 the Organization establishes the Pan American Center for Sanitary Engineering and Environmental Sciences in Lima to address regional environmental health concerns. A decade later, member countries request the Director to set up a disaster unit to define the policy of the Organization, formulate a plan of action for various types of disasters, make an inventory of available resources, and train the necessary personnel.

Environmental concerns expand beyond the traditional focus on water supply and sanitation. By the late 1980s, then director Dr. Carlyle Guerra de Macedo draws an association between industrial development and environmental deterioration: "Air, water, and soil pollution and the exposure to toxic substances are the principal environmental health risk factors associated with development."

Today, in large measure thanks to the work of the Organization with its member countries, good progress has been made in extending coverage of water supply and sanitation, improving the quality of the environment, protecting workers' health, and reducing the vulnerability of countries in the face of disasters.





Striking Alliances between the Health and Environment Sectors

Socioeconomic development, a sound environment, and human health are inextricably linked. To ensure that development in the Americas is sustained, the countries' health and environment sectors are striking alliances—at the local, national, and international levels—to address environmental threats to human health. Many countries—among them Bolivia, Brazil, Ecuador, and Mexico—have established formal alliances between the two sectors, and others—including Cuba, El Salvador, Guatemala, Paraguay, Uruguay, and Venezuela—have informal agreements and are considering more formal ones.

For the past decade, Central America has been at the forefront of efforts to integrate health and environment, and ministers from both sectors met (Panama, November 2001) to adopt Central

American policies and draft a plan for health, environment, and sustainable human development.

Directors from the ministries of health and environment have met periodically (Puerto Rico, 1998, Barbados and Mexico, 1999, Santiago, Chile, 2000, and Brasilia, 2001) to address issues of mutual interest—from coordination among the sectors to participation of community members in enhancing their own health and the environment in which they live.

These various alliances within and among countries culminated in a meeting of the health and environment ministers of the Americas (Ottawa, March 2002). A product of the third Summit of the Americas and organized by Canada, with the collaboration of PAHO and UNEP, the meeting aimed to build bridges between the health and environment sectors, enable them to agree on specific goals, and strengthen the countries' capacity to meet them. The health and environment ministers urged that scientific assessments and quantitative indicators be used to measure the environmental health burden of disease and to inform priorities, policies, and actions. They committed to working toward shared goals in such priority areas as water and environmental sanitation, clean air, chemical safety, and reduced vulnerability of water and sanitation systems and housing in the face of disasters. The ministers indicated that, thenceforth, they would use existing mechanisms, including PAHO Governing Body meetings, as a forum for pursuing the agreements they had struck.

■ The environment where people live, work, and play poses a major challenge to health and development in Latin America and the Caribbean. PAHO works with the countries to integrate public policies that recognize that the safety of the environment is critical for health and development in the Region.



**PAHO works with national centers
to promote and protect environmental health
throughout the Americas**



- 1 Canadian Center for Occupational Health and Safety (CCOHS), Hamilton, Ontario
- 2 National Water Research Institute (NWRI), Environment Canada, Burlington, Ontario
- 3 Department of Environmental and Industrial Health, School of Public Health, University of Michigan, Ann Arbor
- 4 National Institute for Occupational Safety and Health (NIOSH), CDC, Washington D.C.
- 5 National Center for Environmental Health (NCEH), CDC, Atlanta
- 6 Center for Population Health Research (CISP), National Public Health Institute, Morelos, Mexico
- 7 Division of Occupational Safety and Health, Ministry of Public Health, Bogotá
- 8 Chilean Association of Safety (ACHS) - Workers' Hospital, Santiago
- 9 Department of Occupational Health and Environmental Contamination, Institute of Public Health, Santiago
- 10 Jorge Duprat Figueiredo Foundation for Occupational Safety and Medicine (FUNDACENTRO), São Paulo, Brazil

- 11 Quebec University Hospital Center (CHUQ), Canada - Environmental and Occupational Health Impact Assessment and Surveillance
- 12 Quebec Network of Healthy Cities and Towns and Research Team for Socio-Political and Environmental Aspects of Health Promotion (ERASEPS)
- 13 Center for the Study of Biological Interactions between Health and the Environment (CINBIOSE), Montreal
- 14 Water Quality Program - Health Canada, Ottawa
- 15 Environmental Radiation Hazards Division - Health Canada, Ottawa
- 16 Division of Occupational and Environmental Health, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, MD
- 17 Center for Devices and Radiological Health, Food and Drug Administration, USDHHS, Rockville, MD
- 18 Institute of Occupational Medicine, Ministry of Public Health, Havana
- 19 National Institute of Hygiene, Epidemiology, and Microbiology (INHEM), Havana
- 20 Environmental Agency of São Paulo State (CETESB)
- 21 Brazilian Association of Sanitary and Environmental Engineering (ABES)
- 22 Institute for Research and Development in Water and Sanitation (CINARA), University of the Valle, Colombia
- 23 Mexican Institute of Water Technology (IMTA)

★ The HEALTH-IN-HOUSING NETWORK that includes Buffalo, (New York), Buenos Aires, La Paz, Brasília, Santiago, Havana, Quito, San Salvador, Guatemala City, Port-au-Prince, Mexico City, Managua, Asunción, Lima, Washington, D.C., and Caracas



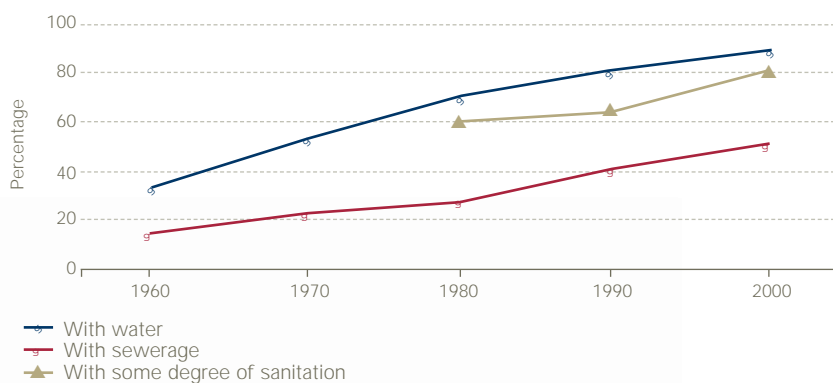
Evaluating Regional Water Supply and Sanitation Services

In the year 2000 paho conducted an evaluation of the status and prospects for water supply and sanitation in the Americas. The evaluation confirmed that progress continues to be made in increasing access to drinking water supplies and sanitation services.



■ The Organization's evaluation of the situation regarding water supply and sanitation services in the Region is a landmark report.

Evolution of drinking water and sanitation services in Latin America and the Caribbean



The portion of the total population in Latin America and the Caribbean covered with water supply and sanitation

Water supply

Household connection 74%

Easy access 11%

Sanitation

Household connection 49%

In situ means 31%

■ Despite the progress made in extending water and sanitation coverage, inequities persist that pose health risks for many. The data are discouraging. Some 76.5 million people—39% of the rural population and 7% of the urban population—lack water supply services; another 53.9 million people have no household connections, which implies that they must fetch their water—usually the job of women and children.



“Countries are urged to strengthen the capacities of the ministries of health and their activities in environmental health, to fulfill their responsibilities, including drinking water quality surveillance and improving the quality of drinking water and sanitation services; promote and collaborate with other ministries or institutions in reforms aimed to improve coverage, quality, equity, and sustainability of drinking water and sanitation services, particularly in rural areas, small towns, and urban poor settlements; and promote actions and establish regulations to enable drinking water and sanitation services to contribute to environmental protection and conservation in the Americas.”

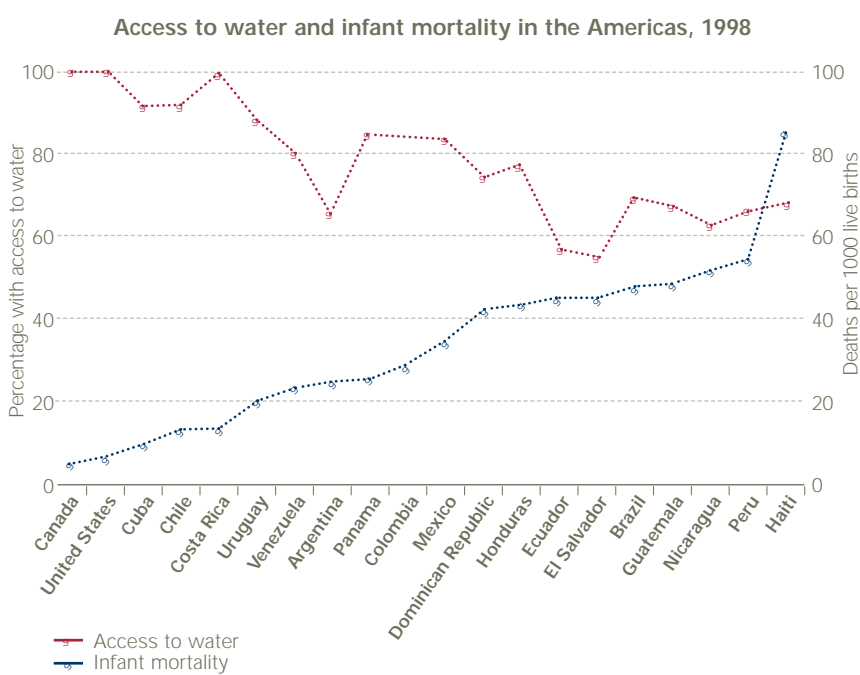
—Resolution of the Directing Council of the Pan American Health Organization, September 2001

Some 103.2 million inhabitants—50% rural and 10% urban—lack access to sanitation services. Moreover, only 13.7% of the wastewater collected by sewerage systems is treated before being discharged; only about 41% of those with household connections to water receive disinfected water. Some 60% of water supply systems are operationally intermittent, putting approximately 219 million people at risk for contracting diarrheal and other waterborne diseases. Of all the water produced, 45% is lost.

Poverty is a major factor influencing access to and quality of water services in the Region. A study based on household surveys in 11 countries of Latin America and the Caribbean, undertaken from 1995 to 1999, showed that the poorest families spend proportionately more on drinking water services. This inequitable situation is worse in urban areas, where household connections are four to five times greater for the affluent than they are for the poor. The poor tend to use little water, are less able to maintain good hygiene, and suffer more diseases related to water and sanitation.

Availability of safe drinking water is critical to the health and well-being of individuals, families, and communities. An epidemic of

cholera, which began in the early 1990s as a result of contaminated water, has led to over 1.2 million cases and 12,000 deaths. An estimated 77,600 children under 5 die each year in Latin America and the Caribbean from diarrheal diseases—deaths often linked to contaminated water and food, coupled with poor hygiene. Moreover, a clear relation exists between infant deaths and lack of access to water. Inversely, as water access increases, infant mortality decreases.



Consistent with the United Nations' Millennium Development Goals, countries of the world have committed to a global strategy, labeled "Vision 21," for achieving universal access to water, sanitation, and hygiene in the first quarter of the 21st century. Among others, targets of Vision 21 include:

BY THE YEAR 2015

- Universal public awareness of the importance of hygiene.
- A halving of the portion of people who lack adequate sanitation and safe water.
- Education about hygiene provided to 80% of primary schoolchildren.
- All schools equipped with facilities for sanitation and hand washing.

BY THE YEAR 2025

- Universal practice of good hygiene.
- Adequate sanitation for all.
- Safe water for all.
- Reduction of diarrheal disease incidence by 80%.

To promote Inter-American Water Day, celebrated each year for the past decade on the first Saturday of October, PAHO became a founding member, along with the Inter-American Association of Sanitary and Environmental Engineering and the Caribbean Water and Wastewater Association, of an international coordination group. The initiative, whose sponsors now include the Organization of American States, is expected to become part of PAHO's "shared agenda" with other international agencies.

Inter-American Water Day highlights a special theme each year—

"Getting to Safe Water: Let's All Get Involved," "Each Drop Counts:

Let's Use It Wisely", and "Water and Health: A Toast to Life"; and a flagship country is selected to lead the celebration, beginning in 2002 with El Salvador.



Promoting the Disposal of Solid Wastes

Since 1995, the Organization has collaborated in analyzing the solid waste sector in 13 countries in Latin America and the Caribbean—most recently Ecuador, Panama, Paraguay, Venezuela and, slated for the near-term, the Dominican Republic, Guyana, and Haiti. One or more agencies—the Inter-American Development Bank, World Bank, the U.S. Agency for International Development, the U.N. Development Program, the U.N. Children's Fund, and the German Agency for Technical Cooperation—collaborate with PAHO in the analyses. In support of the process, cepis has helped prepare three manuals and two guides on municipal and hospital

solid wastes. Other paho solid-waste management efforts include: revision of a methodological guide for preparing municipal solid waste master plans; elaboration of user guides for urban cleaning services software; and workshops for a Pan American network for environmental waste management. As part of the “shared agenda” with the Inter-American Development Bank and the World Bank, PAHO has planned a comprehensive regional evaluation to ascertain the current situation and prospects of solid waste services in the countries of the Americas. The findings will be used to inform policies, plans, and programs to improve those services.



■ To assure that, in the future, no child in the Americas is exposed to the hazards of a garbage dump, PAHO is promoting solid waste management in all the countries it serves.

The countries of the Region are instituting effective solutions to ensure proper disposal of solid wastes

As an alternative to solid waste disposal in cities of up to 20,000 inhabitants, **CUBA** has developed technology for the design and manual construction of sanitary landfills.

To strengthen an inter-institutional committee created in 2001 to coordinate waste management, **ECUADOR** is drafting national solid waste policies.

CEPIS coordinates a regional network for dangerous and solid wastes, which helps countries such as **EL SALVADOR** build sanitary landfills to deal with their solid wastes.



GUATEMALA has set up a national network for environmental waste management and is conducting applied research to identify appropriate waste management solutions.

On the basis of the sector analysis conducted by its ministry of health and PAHO, **PERU** enacted a general solid waste law.

In rural **SURINAME**, a community development project focusing on solid waste disposal has helped introduce composting technology and provide for safe disposal of waste generated by a nearby regional clinic. Another recycling project entails collecting plastic bottles, cutting them into pieces, and mixing them with cement to make concrete blocks.

The executive branch of the government of **URUGUAY** issued a decree about the handling of wastes from health care facilities. PAHO cooperated with several ministries in **VENEZUELA** to carry out a solid waste sector analysis that included hazardous, industrial, and hospital wastes.





Improving Air Quality

Thirteen countries in the Region now have air quality standards.

The Organization promotes both use of the WHO air quality guidelines and implementation of the PAHO regional plan on urban air quality and health for 2000-2009. It is partnering with the World Bank to launch a clean air initiative in cities of Latin America and is establishing collaborative centers for air quality in Chile and Mexico.

Exposure to lead—a chemical agent that, once ingested, does not decompose—causes serious health problems. Leaded gasoline is

typically responsible for 90% of the lead in the atmosphere in most urban areas where leaded gasoline is still in use, representing an immediate health risk through inhalation, accumulation in the soil, contamination of drinking water, and entry in the food chain.

The first Summit of the Americas (1994) initiated a campaign to eliminate leaded gasoline throughout the Region, with PAHO subsequently monitoring implementation of national plans and providing risk assessments, methodological approaches, and training. To date, 21 countries have banned leaded gasoline, and the rest have plans to do so soon.

Measures underway in Latin America and the Caribbean to improve air quality

- ▲ Well-defined legal system, established urban air quality surveillance programs, pollution control programs and prevention plans underway
- ▲ Relatively well-defined legal systems, limited quality surveillance and emission control programs
- ▲ Relatively well-defined legal systems, no air quality surveillance and emission control programs
- ▲ Some cities with limited air quality surveillance programs
- ▲ No air quality surveillance programs



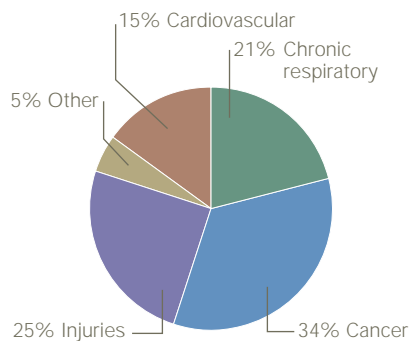
To ascertain the regional air quality situation and programs in place to improve it, CEPIS conducted a survey of the countries of Latin America and the Caribbean. It found that some countries have taken great strides to improve air quality, while others still have far to go. It also revealed that knowledge about the effect of air pollution on health is generally limited or minimal, and that information, education, and training related to air quality are a low priority.



Reducing Workers' Risks, Protecting Their Health

In Latin America and the Caribbean between 30 and 50 occupational accidents occur every minute, and some 300 persons die each day from work-related injuries. These injuries and deaths result from social, economic, and health inequities; excessive fragmentation of responsibilities in agencies; and poor protection of workers' health in the informal labor market—especially children, indigenous women, and the elderly. In Latin America only 1-4% of all occupational diseases are reported.

Estimated distribution of categories of global work-related mortality



* Other* includes pneumoconiosis, nervous system and renal disorders

To redress this situation, the Organization works with the countries to monitor occupational risks, accidents, and deaths; helps develop healthy workplace models; and lobbies for national legislation and favorable terms of trade. paho's Directing Council adopted a regional plan on workers' health in 1999 to chart the Secretariat's and the countries' progress toward preventing occupational accidents and illnesses and promoting and protecting workers' health.

Brazil—with the support of the national industrial social services agency, several universities, and paho—developed a model for healthy workplaces that is being applied by 14 companies and the informal sector in the country. Colombia and Costa Rica are adapting the model for use by small businesses. It is being used as well to craft a research project, the aim of which is to formulate workers' health standards for export industries in Central America.

As a result of paho's efforts to promote national and regional plans in this area, the Caribbean Community countries formally recognized workers' health as a priority in their Cooperation in Health Initiative.

Networking for Health in Housing



To foster health in housing, PAHO supports the organization of health-in-housing centers into national networks, 16 of which now comprise an inter-American network (see starred references on map on page 105).

The network of centers enables the exchange of information through, among other means, its website (<http://www.cepis.org.pe/bvsasv/e/home.htm>). PAHO has supported the centers' elaboration of national assessments of the situation of health in housing, the findings of which are to be used for a regional assessment coordinated by Bolivia and PAHO.

A recent meeting of the network served to reformulate national projects into a multicenter project to be presented to potential donors.





Banning Agricultural and Industrial Pollutants to Protect Health



■ The incidence of acute pesticide poisoning is on the decline in Central America, thanks to a PAHO-executed and Danish-funded project to protect the environment and health in the region, known as MASICA, and a pesticide control effort, PLAGSALUD.

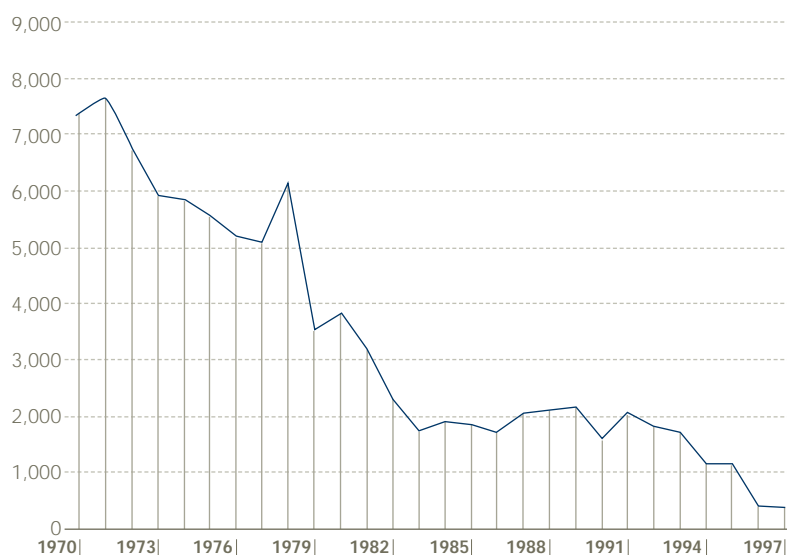
The amount of pesticides consumed for agricultural purposes in Central America—some 1.5 kilograms per capita per year—is the highest in the world.

Over the past several decades, pesticide consumption in the isthmus—more than 45 million kilograms per year—has tripled or quadrupled the world average. To correct this problem, PAHO proposed that a dozen dangerous pesticides currently being used in the area be restricted. In a historic decision, the ministers of health of Central America adopted the proposal unanimously and agreed to take steps to eventually ban a total of 107 pesticides that are internationally prohibited but

continue to be used in Central America.

The chemical industry is a vital part of contemporary industrial economy, and the number of different chemicals produced is on the rise—some 70,000 are manufactured regularly and many new ones appear each year. The dramatic growth in the quantity and variety of substances released into the environment poses a range of growing threats to human and environmental health. Among the biggest threats are persistent organic pollutants, commonly referred to as “POPs”—highly stable, toxic, organic compounds that resist natural degradation and can last for years, contaminating air, food, water, and soil.

Use of DDT for malaria control in the Americas
(Expressed as tons of DDT)



■ To phase out DDT and reduce the long-term effects of exposure to the pollutant, PAHO has brought together authorities from Mexico and Central America to develop a comprehensive program. That effort is part of a global campaign to eliminate persistent organic pollutants, for which PAHO will be the executing agency in the Americas.



The pops requiring most urgent attention are DDT, aldrin, chlordane, dieldrin, dioxines, hcb, and polychlorinated biphenyls (pcbs). PAHO collaborates with other agencies to help countries build their capacity and carry out programs to manage chemical risks, including strengthening poison control centers and poison surveillance systems, networking, and training.

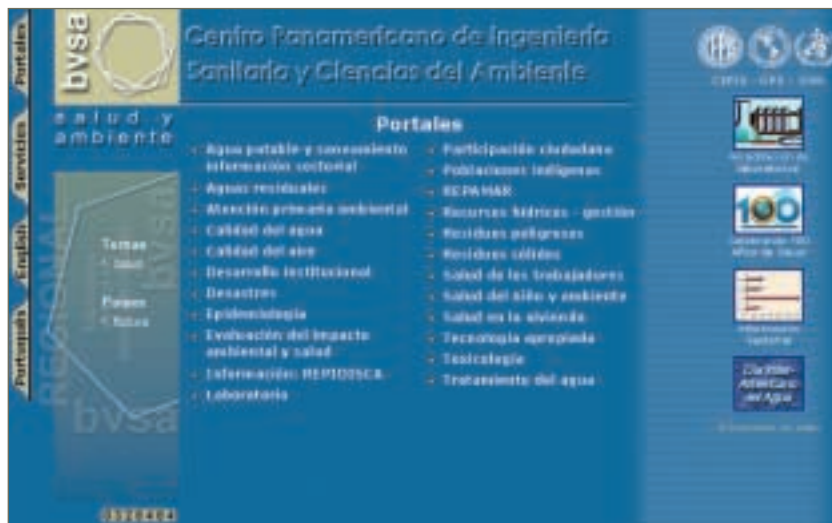


■ In order to assure the provision of reliable, accurate testing of drinking water, the Pan American Center for Sanitary Engineering and Environmental Sciences (CEPIS) is working with the Standards Council of Canada and the Canadian Association for Environmental Analytical Laboratories to provide accreditation services to water-testing laboratories. CEPIS's own laboratory has long been accredited in accordance with rigorous international standards.



Cooperating Internationally to Benefit Local Communities

To improve water treatment in three Mexican communities in Morelos State—Miacatlán, Cuautla, and Tres Marias—the Organization fostered and facilitated discussions between the Mexican Institute of Water Technology and the Colombian Institute for Research and Development in Water and Sanitation. With PAHO's support, one of the projects is now complete and construction of the community's water treatment system has begun.



To respond to the information needs of Latin America and the Caribbean, PAHO and the Inter-American Association of Sanitary and Environmental Engineering have created a virtual library on health and environment. Coordinated by CEPIS, the library is based on the Pan American Network of Information and Documentation in Sanitary Engineering and Environmental Sciences (REPIDISCA) and uses the Internet to expand access to its

information. Created in 1981, REPIDISCA now comprises 352 cooperating centers in 23 countries. As recognition of its expertise in this area, CEPIS has been designated focal point for the Global Water Information Network by the German Agency for Technical Cooperation.



Primary environmental care in the Americas—a sampling of PAHO activities

As people better understand and take responsibility for dealing with health and environmental problems—the concept behind primary environmental care—they acquire more control over their lives. No issue is of greater importance to a community, and none empowers it more, than water and sanitation. The Organization is thus promoting two initiatives—healthy municipalities and primary environmental care—that reinforce each other. To advance that process, PAHO has sponsored the formation of a network of municipal primary environmental care centers that have held regional meetings—the first in Brazil (June 2000) and the second in Argentina (June 2001).

ARGENTINA has pioneered a number of creative approaches to improve environmental health. Fifty of its municipalities formed a network for primary environmental care. To deal with toxicological issues, the country set up a network of 46 centers providing information, care, and analysis. Argentina has joined its neighbors, Bolivia and Paraguay, to solve environmental health problems of indigenous communities along their common border. And, as the result of an international “ecoclub” school founded by Argentina, young people from 11 countries in the Region created an electronic network so that they could continue exchanging experiences after returning home.

To extend safe drinking water and sanitation services to poor communities in **HONDURAS**, PAHO assisted production and installation of 17,000 of its specially designed hand pumps and mediated donations by the governments of Spain and Japan of 36,000 latrines—benefiting some 216,000 Hondurans.

With funding from the European Union and involvement of local institutions and professionals, PAHO managed two major inner-city projects in Kingston, **JAMAICA** to reduce health risks and upgrade the environment. Benefiting almost 96,000 residents, the projects targeted urban renewal, improved water supply and sanitation systems, repaired drainage channels, educated the public about hygiene and healthier life styles, and taught community members marketable skills to help raise them from poverty.

To boost efforts in **MEXICO** to improve health and the environment, PAHO has contributed to strengthening the national water commission’s reference laboratory, carried out local sanitation projects, trained technical personnel, applied appropriate low-cost technology to remove arsenic from water supplies, and published information on landfill and sludge management.

With cooperation from PAHO, **PARAGUAY** has committed to carrying out a primary environmental care campaign, recruiting municipalities, civil society, and community sanitation services.

In **SURINAME**, PAHO staff joined national engineers, nurses, and educators in promoting sanitation and health education in upgrading water supply and sanitation facilities in the country’s schools. And, to dispose of voluminous infectious medical wastes—needles, syringes, and other materials—resulting from a mass vaccination campaign, PAHO worked with Surinamese vocational students to make incinerators out of drums donated by local oil companies.

To enhance tourism on the island of **ARUBA**, PAHO supported development of Arikoko, a national park, as a healthy space and improved epidemiological surveillance of foodborne diseases.





Reducing Countries' Vulnerability in the Face of Disaster

Over the past several years, some of the worst natural and manmade disasters in memory have beset the countries of the Americas. The death toll from three of the most destructive disasters—Hurricane Mitch (1998), the El Niño phenomenon (1997-1998), and the Venezuelan landslides (1999)—surpassed 30,000. In all, more than 44,000 people in the Region lost their lives as a result of the devastating consequences of large-scale disasters in the past four years. Disasters affected an estimated 10 million persons in the Americas in one way or another—from the temporary or permanent loss of their homes, to a reliance on food distribution programs, to the onset of economic hardships. Because of its demonstrated leadership in helping countries prepare for and deal with emergencies, the Organization has served as a major catalyst for humanitarian assistance when disasters strike. The principal focus of paho's technical cooperation, however, is on reducing countries' vulnerability—the most sustainable approach to disaster management.

In 1998 Central America experienced its worst storm in a century. Hurricane Mitch, so powerful that its name has been retired, left a trail of destruction across the isthmus. Over 50 paho staff members—epidemiologists, sanitary engineers, and other public health specialists—mobilized to help the most affected countries, Honduras and Nicaragua. To meet pressing public health needs, paho also served as a conduit for over US\$6.1 million in international aid.

That aid, coupled with the focus of international attention on Central America that prompted it, have enabled paho to extend its technical cooperation in disaster preparedness and mitigation to the community level.



■ The direct and indirect economic losses caused by disasters in the past four years exceed US\$18 billion. Well over half that amount is attributable to Hurricane Mitch, El Niño, and the Venezuelan landslides. Although these figures are dramatic, the social cost of reduced access to health services and drinking water for months and sometimes years after a disaster is invariably greater.

“We commit to strengthening hemispheric cooperation and national capacities to develop a more integrated approach to the management of natural disasters. We will continue to implement policies that enhance our ability to prevent, mitigate, and respond to the consequences of natural disasters. We agree to study measures to facilitate timely access to financial resources to address emergency needs.”

—Heads of State of the Western Hemisphere countries at the third Summit of the Americas, Quebec City, April 2001



■ Well-organized and trained community members know best the hazards that surround them and can play a critical role in reducing their vulnerability to disaster. A recent celebration of “Disaster Day”—the most inclusive disaster prevention activity ever organized in Nicaragua—testifies to the power of involving the community. Some 3000 members of the municipality of Moyogalpa, at the foot of the Concepción volcano on the island of Ometepe in Lake Nicaragua, organized a parade of floats depicting the risk the volcano poses, every day, to their safety. The best floats received modest monetary prizes to help in preventing disaster—such as the \$350 award used to repair the health center’s generator, which will come in handy if a future disaster disables the primary power source.

Hurricanes Georges and Mitch (1998), the devastating landslides in Venezuela (1999), hurricanes Keith, Iris, and Michelle (2000-2002), and the earthquakes in Colombia (1999), El Salvador and Peru (2001) triggered the collective declaration for disaster management of the third Summit of the Americas (2001).

In support of the declaration, PAHO cosponsored a hemispheric conference on disaster reduction to which it enabled the attendance of more than 130 health professionals; their participation, along with

financial experts, assured that issues important to the health sector in the wake of disasters received appropriate attention.

Preventing disaster-related damages to hospitals and other health infrastructures is not solely the responsibility of the health sector; it requires involvement of the financial sector as well. Toward that end, PAHO has lobbied global and regional banks and funding agencies on the importance of incorporating disaster mitigation measures when building new facilities and retrofitting existing ones.



■ Hurricane Georges dealt the Caribbean a devastating blow in 1998, inflicting, among other effects, heavy damage on the JN France Hospital and the Cayon Clinic in St. Kitts. In response, timely donations from the United States, the European Community, the United Kingdom, and the Kingdom of the Netherlands made it possible for the Ministry of Health and PAHO to complete rehabilitation of the maternity ward, the laboratory/eye clinic, and the pediatric wards. A model of retrofitting, this rehabilitation has incorporated the features necessary to reduce the impact on these critical facilities of hurricanes, earthquakes, and torrential rains.



When the 1997 volcanic eruption destroyed Montserrat's capital, Plymouth, including the island's only hospital and most of the health infrastructure, the Organization stood behind the authorities in their successful struggle to protect public health. PAHO conducted mass casualty and supply management training and facilitated the transfer of emergency patients to Guadeloupe and Martinique and sent staff from neighboring islands to assist local medical staff. A post-disaster assessment revealed serious sanitation facility problems, and PAHO helped build two wastewater treatment plants and a sewer network and trained nationals in plant operation and maintenance.

Not all disasters are natural in origin. Some have their roots in manmade causes, such as the massive displacement of much of the rural population in Colombia in recent years as a result of violence. By the end of 2001, an estimated 250,000 people had been forced to flee their homes, and many more had been deprived of access to health care. PAHO has responded by reorganizing its technical cooperation in the country: five new field offices now improve direct coordination with nongovernmental organizations at the local level and enable the displaced to access health and basic sanitation services.



■ The production of technical and training materials has always been a cornerstone of PAHO's disaster-related work. The updating of older publications complements the issuance of new titles on vulnerability reduction, disaster mitigation for water and sanitation systems, and lessons learned from selected disasters. New electronic communication technologies and the Region's rapidly growing access to the Internet have enabled the Organization to broadcast these materials by placing their full texts on the PAHO web and on CD-ROMS. The reach of this unique information is further broadened through translation, as in the case of the Vietnamese and Khmer versions of PAHO's *Natural Disasters*.

With PAHO's support, the countries of the Americas have developed a world-renowned humanitarian supply management system, suma. A key component of the system is volunteers: when disaster strikes, suma mobilizes some of the 3000 volunteers that it has trained to assist the affected countries. Originally conceived as a technical tool to help disaster managers track all the supplies entering a country, suma has become a political instrument that ensures—in the eyes of the disaster-stricken population and the international donor community—transparency and accountability. When a specialized nongovernmental organization, fundesuma, deployed more than 20 trained suma volunteers to assist countries affected by Hurricane Mitch, the international community took notice. Subsequently, in the face of their own disasters, India, Rwanda, and East Timor requested the assistance of countries in the Americas and fundesuma to manage humanitarian supplies. This interregional cooperation has laid the groundwork for international agencies (PAHO, the United Nations Office for the Coordination of Humanitarian Affairs, the World Food Program, and who as the lead agency) to develop a global suma project.



The countries of the Americas and PAHO cooperate before, during, and after disasters to mitigate their effects—with a priority focus on saving lives



In the wake of the destruction wrought by Hurricane Mitch in 1998, PAHO worked with nationals to rebuild health facilities, deliver safe drinking water, and train the community in disaster preparedness and emergency relief. In addition to Mitch, disasters have taken a heavy toll on **EL SALVADOR** in recent years: the El Niño phenomenon in 1997-98; floods in 1999; outbreaks of cholera in 1999, dengue in 1999-2000, and methyl alcohol poisoning in 2000; and earthquakes in 2001. PAHO's cooperation has ranged from elaborating national emergency plans, ensuring the viability of water supply and sanitation services, monitoring food and nutritional safety, and protecting the mental health of disaster victims. To better prepare for future disasters, PAHO and nationals have explored the lessons learned from dealing with the earthquakes.



PAHO worked with counterparts in **ECUADOR** and the Canadian International Development Agency to mitigate damages to health and the health sector caused by eruption of the Guagua Pichincha volcano in Quito in 1999. Efforts targeted improvement of epidemiological surveillance, water and sanitation, mental health, and supply management.



Thanks to the civil preparedness efforts of **CUBA**, when Hurricane Michelle hit the country in late 2001, some 750,000 people were safely evacuated and casualties greatly minimized. Following Cuba's example could help improve preparedness and response elsewhere.



When Hurricane Lenny hit the southwest Caribbean in 1999, the Windward Islands suffered severe damage. On the island of Saint Martin, **NETHERLANDS ANTILLES**, PAHO responded by assessing mudslide damage, suggesting measures to minimize it, and training health personnel to mitigate other disaster effects.



In **VENEZUELA**, PAHO helped elaborate the national plan to manage risks and mitigate disasters and to establish a permanent disaster committee. Then, in 1999, the country suffered the worst tragedy in its history. Heavy rainfall caused landslides from Cerro Ávila, the mountains surrounding Caracas, that buried entire villages and affected eight states. The Organization played a key role in coordinating aid agencies in epidemiological surveillance, communication, mental health, and supply management activities.



Respaldo al desarrollo de los sistemas y servicios de salud



From its initial emphasis on quarantinable diseases, the thrust of the work of the Pan American Sanitary Bureau increasingly shifts to the development of health services. As early as 1936, the Bureau-sponsored Conference of Directors of Health debates the question of public health administration and recommends the establishment of special technical services to study public health problems, the organization of national health activities, and the creation of urban and rural health units staffed with trained full-time health workers.

The 1947 Pan American Sanitary Conference addresses the organization of national health services and relations between public health and social security agencies. Then, in 1953, the Directing Council approves long-range Bureau health programs “based on continuous survey and evaluation of the needs and resources of the member countries,” which would serve to strengthen basic health services and, thereby, to promote and preserve health.

The Charter of Punta del Este, in 1961, indicates that the goal of better health requires, among other measures, that governments “improve basic health services at national and local levels.” A decade later, the countries’ ministers of health, in the Ten-Year Health Plan for the Americas (1972), set as their principal goal the extension of health services to the un- and underserved urban and rural populations “to make it feasible to attain total coverage of the population by the health service system in all countries of the Region.”

To reach the goal of Health for All, in the late 1970s the countries of the Americas establish national and regional basic health strategies that target primary health care to raise the levels of well-being and extend health services to the entire population, community participation in health sector matters, use of appropriate technologies for local conditions, and technical cooperation among countries. By 1980, all the countries have formulated national health strategies, and many have developed national health sector plans.

In 1983, PAHO launches the Regional Program on Essential Drugs to support the development and application of basic drug tables and help the countries create drug programs and policies based on their national health needs and their supply-and-demand profile.

In 1988, PAHO’s Directing Council recognizes “the urgent need to accelerate the transformation of national health systems” to attain health for all through extension of services to those previously unreached. The Organization promotes and supports national efforts to establish networks of local health systems that respond to the specific needs of the people and communities they serve.





Advancing Health Sector Reform

In recent years, the countries of the Americas have worked tirelessly to implement a demanding two-track approach to health. On the one hand, this approach takes into account the need for maintaining and, oftentimes, expanding health services in order to meet citizens' growing needs and demands, despite financial constraints and escalating health care costs. On the other, when implementing sector reforms, the countries have had to develop agendas that can accommodate the sweeping institutional, technical, and financial changes in health system organization, in order to respond to demands for change from inside and outside the health sector. The Organization has worked closely with the countries in these efforts, while fulfilling the mandates of its Governing Bodies as well as those of the heads of state and government of the Americas concerning these issues.

paho's work in health systems development and health service delivery improvement, human resource management and development, drug policy, access to essential drugs and other basic supplies, and disaster preparedness has contributed to institutional development of the health sector in the countries.

The countries' health systems are instituting reforms to reduce inequities in access to care and health service financing, improve the quality of care, and correct the poor performance and lack of efficiency in health system operations. In response to mandates issued at the first Summit of the Americas (Miami, 1994), the governments of member countries again convened at the Special Meeting on Health Sector Reform (Washington, D.C., 1995), at which they identified the need for a process to monitor health sector reform in the countries. In response, paho designed a methodology for monitoring and evaluating health sector reform in Latin America and the Caribbean, as a means of helping governments implement health system reforms. The countries of the hemisphere are now making extensive use of this methodology.

As an additional consequence of these mandates, the Health Sector Reform Initiative for Latin America and the Caribbean was launched in 1997. A five-year project cosponsored by paho and the U.S. Agency for International Development, the primary objective of the initiative is to provide support for health sector reform in the Region.





■ PAHO organized a number of visits to study successful health sector reform experiences in the Region, in addition to training activities coordinated with the World Bank Institute related to sector reform and sustainable financing in Latin America and the Caribbean.

As part of this initiative, several methodologies and instruments have been developed or improved, including guidelines for health sector performance, guiding principles for preparing health investment master plans, and the above-mentioned methodology for monitoring and evaluating health sector reform. Moreover, regional and subregional forums have been held in Lima, San Salvador, Santa Cruz de la Sierra, Salvador (Bahia), and Ocho Ríos on health service provider payment mechanisms, the institutionalization of national health accounts, public insurance and social health insurance in sector reform, research on health policies and health systems and their application to sector reform processes, as well as the impact of hiv/aids on sector reform. A clearinghouse for information on and analysis of health sector reform was created. Administered by paho, the clearinghouse gathers information on health reform efforts in the Americas, conducts comparative analyses of the primary trends, and disseminates the available information. It also contains a thesaurus on health sector reform and a database of gray literature with over 1000 documents on the subject, as well

as a registry of regional experts on sector reform.

During the Special Meeting on Health Sector Reform, the governments of the hemisphere identified five fundamental regulatory principles: equity, quality, efficiency, sustainability, and social participation. Each of these objectives can be subdivided into a series of variables that, in turn, can be associated with quantitative or qualitative indicators adapted to the specific conditions of each country, thus helping to determine the progress made.

Work in designing the methodology began in 1997 with formulation of the baseline for monitoring and evaluating sector reform, which was implemented in 17 countries of the Region. On the basis of that experience, subsequent efforts entailed: the preparation of a preliminary version of the methodology; a feasibility study in five countries—Chile, Dominican Republic, El Salvador, Jamaica, and Peru; an international consultation in May 1998 at paho headquarters; and the preparation of a revised version of the methodology, which was subsequently incorporated into guidelines for preparing health system profiles for the countries of the Region, issued by paho.

The methodology is a tool for helping decisionmakers prepare reports that are as objective as possible, manageable in length, and easily updated. Essentially, the methodology uses data that are already available, giving preference to institutional data published by official national sources. In addition, it makes use of technical data published by international cooperation and financing agencies, as well as unpublished data from official national sources, whenever the use of such data is authorized; finally, it uses relevant data published in unofficial sources. The methodology contains variables

and indicators based on qualitative and quantitative data. It has two main components: one for monitoring reforms and another for evaluating results. The methodology compiles information on strategies developed and measures implemented. It includes an evaluation of each country's legal framework and of the rights of citizens to health care and insurance. It provides detailed background information on the leadership of the health authorities, the separation of health system functions, and the degree of decentralization as well as social participation and control. It describes health services financing and expenditures, available services, the management model, human resources, and progress made through development efforts; it further assesses health technology and its quality. Thirty-one countries have already developed a preliminary or revised version of a health system profile that includes the two modules on monitoring and evaluation of sector reforms.

In addition to individual country reports, a database is under development that will facilitate comparative analyses of the different variables within the monitoring and evaluation components of the methodology. Based on data gleaned from the methodology, paho has conducted a preliminary assessment of the reforms, which indicates:

- ♦ **EQUITY.** Only some of the reforms appear to be contributing, albeit slowly, to reducing disparities in the coverage of some services and basic programs. Difficulties persist in terms of measuring changes of this nature in the health sector. In most countries, reforms are not helping to reduce unjustifiable disparities in the

Countries of the Americas that have developed health service system profiles



distribution of resources and services. Moreover, it is extremely difficult to determine the extent to which these reforms have contributed to reducing disparities in the health situation.

- ♦ **EFFECTIVENESS AND QUALITY.** Relatively little progress has been made toward improving the overall effectiveness of the health system or meeting quality of care and user satisfaction objectives.
- ♦ **EFFICIENCY.** More progress has been made in productivity and developing methods for obtaining supplies than in reorienting resource allocation. No significant changes have been made, for example, in resource allocation to address problems related to major externalities or to increase social protection in health.
- ♦ **SUSTAINABILITY.** Efforts are under way to link health system expenditures to income, but very few countries are working to generate the necessary medium- or long-term resources for expanding or maintaining current service delivery levels. This situation is exacerbated by the high degree of dependence of many countries on external sources of financing and the lack of mechanisms to replace them once they have been exhausted. Moreover, the issue of social legitimacy has only begun to be addressed.
- ♦ **SOCIAL PARTICIPATION.** There are indications of greater receptivity on the part of governments as a result of health sector reform plans. It remains to be seen, however, if it will have an impact in terms of reorienting the course of the reforms. There will be an ongoing need to refine the methodology and expand the techniques used to monitor the



most significant and controversial aspects of the reform process. The success of the approach will be contingent on widespread dissemination of analysis to the relevant institutions throughout the Americas and on development of the institutional capacity required for its utilization.

It is precisely at this crossroads in health system development that PAHO faces the challenge of providing relevant technical cooperation to member countries that will enable them to design, execute, and evaluate health sector reforms in an integrated manner. PAHO has sought to position and keep itself in the main currents of the policy debate and the generation and dissemination of information, maintaining its ability to support national efforts aimed at building capacity in this field. This involves all regional and country programs. Moreover, this effort requires synergy with other international partners—bilateral agencies, multilateral organizations, development financing institutions, and nongovernmental organizations—if progress is to be made in health.

■ The issues at stake in the policy debate regarding health sector reform are the primary concerns common to health sector agendas in virtually all countries of the Region, and PAHO has worked hard to prepare responses consistent with the countries' expectations.



Essential Public Health Functions

1. Monitoring, evaluation, and analysis of health status
2. Public health surveillance, research, and control of risks and threats to public health
3. Health promotion
4. Social participation in health
5. Development of policies and institutional capacity for planning and management in public health
6. Strengthening of institutional capacity for regulation and enforcement in public health
7. Evaluation and promotion of equitable access to necessary health services
8. Human resource development and training in public health
9. Quality assurance in personal and population-based health services
10. Research in public health
11. Reducing the impact of emergencies and disasters in health (includes prevention, mitigation, preparedness, response, and rehabilitation)

Assessing the State of Public Health

One of the challenges facing sector reforms is to strengthen the steering role of the health authority, as one of the essential public health functions that correspond to the State at the central, intermediate, and local level. paho therefore launched an initiative, Public Health in the Americas, aimed at defining and measuring performance of the essential public health functions, as the basis for improving public health practice and strengthening the leadership of the health authority at all levels of the State. This initiative involves all headquarters technical units and all paho/who Country Offices and has benefited from the collaboration as adviser of the project of Dr. Carlyle Guerra de Macedo, Director Emeritus of the Organization. As a central part of the initiative, paho has developed instruments to measure the performance of the essential public health functions, in conjunction with the U.S. Centers for Disease Control and Prevention and the Latin American Center for Health Research of Chile. The project involves a wide network of institutions, permitting interaction with experts from academia, scientific societies, health services, and international organizations.

The intention is that the initiative serve to:

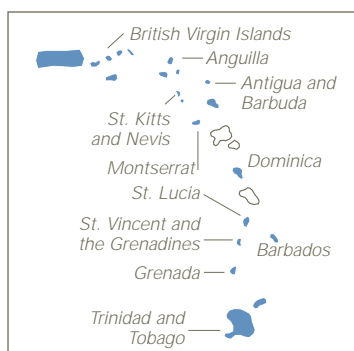
- Promote a common understanding of public health and its essential functions in the Americas;
- Develop a framework for evaluating the performance of essential public health functions, applicable to all countries in the hemisphere;
- Evaluate public health practice in every country by measuring the degree to which the essential public health functions are being carried out;
- Develop a hemispheric plan of action to strengthen the public health infrastructure and improve public health practice, based on the indicators of the performance of essential public health functions; and
- Publish *The State of Public Health in the Americas*, which will summarize the different products generated by the project and provide an overview of the degree to which essential public health functions are being carried out in the Americas.

Health authorities in 42 countries and territories in the Americas have completed exercises to measure the essential public health functions. An analysis of the primary trends is already available for the Region as a whole, as well as by subregion. Moreover, steps are being taken to develop national and subregional plans, as well as a hemispheric agenda for improving public health practices and public health infrastructure, based on analyses of the strengths and weaknesses identified in these exercises.



Countries of the Americas that have measured performance of the essential public health functions

Eastern Caribbean



Extending Social Protection in Health

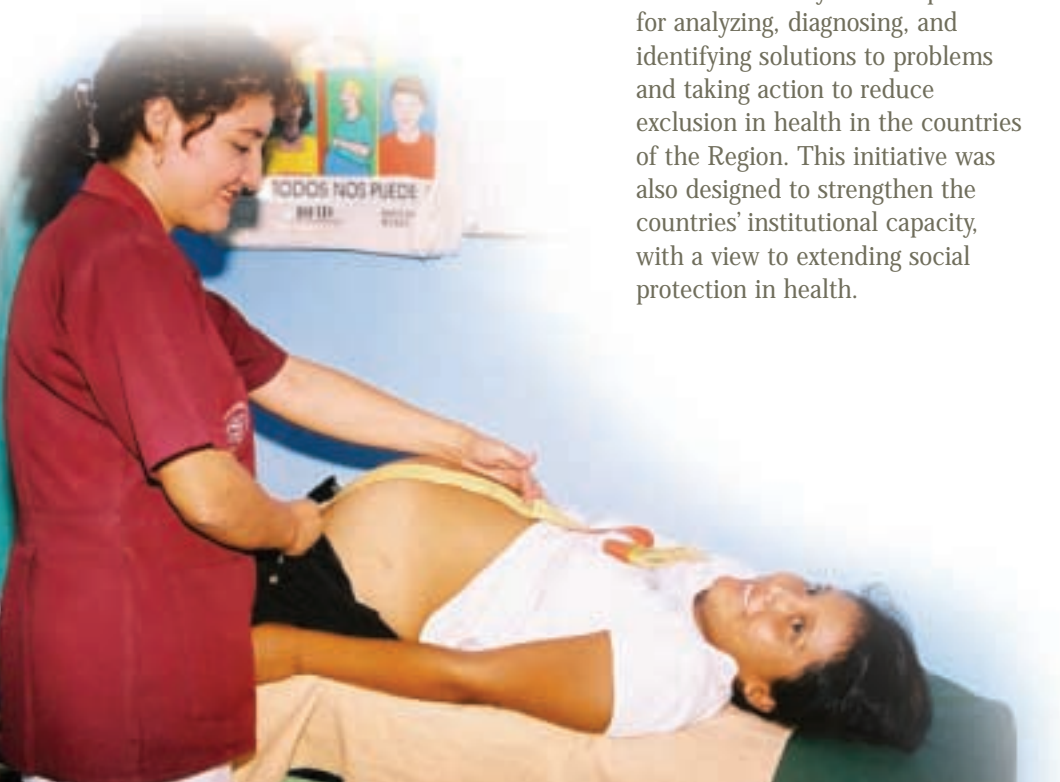
It is estimated that some 100 million people in Latin America and the Caribbean are not covered by existing health systems, and some 240 million people are not protected by social security programs or private health insurance. Extending social protection in health assures, through the different offices of government, that the health needs and demands of an individual or group of individuals will be met through adequate access to the services offered by the public health system or other health subsystems in the country, where ability to pay is not a limitation.

In response to the need to extend social protection in health, the International Labor Organization (ilo) and paho

launched a regional initiative in 1999 that established a framework for cooperation with a view to formulating and implementing a joint initiative to promote the extension of social protection in health in Latin America and the Caribbean. paho and the ilo have produced four regional studies: an assessment of the magnitude of health exclusion; a comparative analysis of policies governing social protection in health; an analysis of regional experiences with microinsurance for health; and a study of behavior with respect to out-of-pocket expenditures in health. The two organizations set up a regional tripartite meeting of governments, employers, and workers (Mexico City, 1999) to deal with the extension of social protection in health to excluded groups in Latin America and the Caribbean. Based on the recommendations issued at that meeting, ilo and paho committed to a regional initiative to promote and establish a systematic process for analyzing, diagnosing, and identifying solutions to problems and taking action to reduce exclusion in health in the countries of the Region. This initiative was also designed to strengthen the countries' institutional capacity, with a view to extending social protection in health.



■ To support countries' efforts to reduce inequities in access to health care and extend social protection in health, PAHO disseminates information in a variety of forms to a wide spectrum of audiences.





Developing Human Resources

Imbalances persist between the distribution of professionals and the demand for services by the population; between staff training models and the need for services; between the working conditions of health personnel and public health financing; between administrative inflexibility and deregulation of professional practice. This array of problems has further complicated sector reform processes. New demands have emerged in the areas of human resource management, labor flexibility, the change in health worker profiles and mass training needs, and the globalization

of labor markets into integrated trading blocs—thus posing the need for new national and international regulatory systems.

HUMAN RESOURCE POLICIES, PLANNING, AND REGULATION. The Observatory of Human Resources in Health, launched by PAHO in 1999 in collaboration with the Economic Commission for Latin America and the Caribbean and the ILO, aims to help develop national capacity for generating knowledge and information, with a view to formulating comprehensive human resource policies in health and evaluating and monitoring the human resource aspects of sector reform. Fifteen countries actively participate in the initiative and have already compiled a set of core data. For these countries, the Observatory constitutes a mechanism for sector consensus that introduces a new style of negotiating and decisionmaking. The initiative has inspired two international seminars on human resource policy and the development of two intercountry studies.

IN-SERVICE EDUCATION AND DISTANCE LEARNING. As part of the strategy to promote in-service training and strengthen national capacity to develop distance learning mechanisms, educational models have been developed to address diverse training needs and conditions in the countries. An Internet-based distance learning program developed for the topics of decentralized human resource management and adolescent health and based on the latest concepts in teaching, has been adapted to the situation in each country. It includes a technology component to promote educational uses of



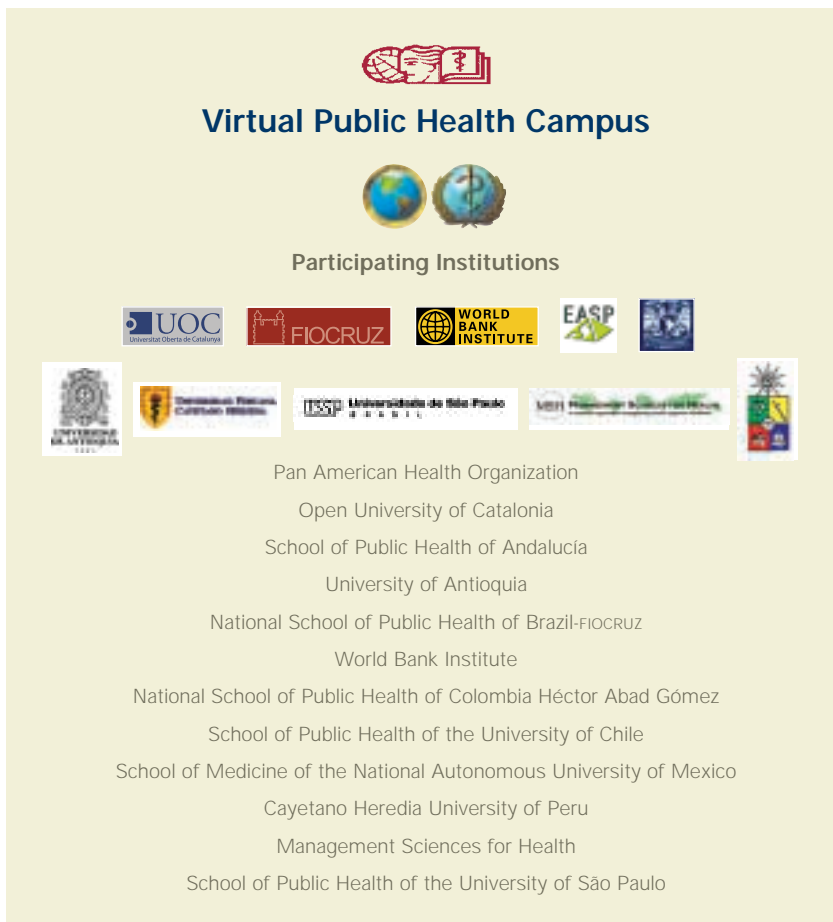
Countries of the Americas participating in the Sector Reform Observatory of Human Resources in Health

the Internet and the transfer of national capacity for autonomous management of this type of program. The program has been successful in Brazil, Chile, and Peru. Six countries are currently training their cadres of instructors: Bolivia, Costa Rica, Ecuador, El Salvador, Honduras, and Nicaragua. The courses are being translated for use in the English-speaking countries.

With respect to education, 25 training components in reform projects for health personnel have been successfully evaluated in eight countries of the Region, facilitating identification of new challenges in health education in terms of educational management and pedagogical design. Continuing education projects have been implemented in 10 Latin American countries. A manual for evaluating the performance of health services personnel has been designed.

PROFESSIONAL AND TECHNICAL EDUCATION. The Pan American Conference on Public Health Education (Mexico City, 1998) provided a forum for debate on the need to reorient public health education, focusing on health sector reforms and determining which essential public health functions should be the responsibility of the health authority. The biannual meeting of the Latin American and Caribbean Association of Public Health Education (Havana, 2000) reviewed progress made by the task force created at the aforementioned Pan American Conference, with a view to advancing reorientation of public health education.

In medical education, intensive efforts have targeted the development of professional accreditation processes, with emphasis on developing criteria and procedures to guarantee



The graphic for the Virtual Public Health Campus features a central title "Virtual Public Health Campus" in blue. Above the title is a logo with a stylized face and a book. Below the title are two globes. Underneath the globes is the heading "Participating Institutions" in bold. Below this heading are two rows of logos for various institutions. The first row includes logos for UOC (Universitat Oberta de Catalunya), FIOCRUZ, WORLD BANK INSTITUTE, EASP, and a logo for the School of Public Health of the University of Chile. The second row includes logos for the School of Medicine of the National Autonomous University of Mexico, the School of Public Health of the University of São Paulo, and the School of Public Health of the University of Antioquia. Below the logos, the names of the institutions are listed in a column: Pan American Health Organization, Open University of Catalonia, School of Public Health of Andalucía, University of Antioquia, National School of Public Health of Brazil-FIOCRUZ, World Bank Institute, National School of Public Health of Colombia Héctor Abad Gómez, School of Public Health of the University of Chile, School of Medicine of the National Autonomous University of Mexico, Cayetano Heredia University of Peru, Management Sciences for Health, and School of Public Health of the University of São Paulo.

educational quality and on strengthening the capacity to regulate the supply of educational curricula offerings.

In nursing, work continues to emphasize quality of care and professional nursing education, as well as regulation of professional practice. The migration of nurses from the English-speaking Caribbean has led to study of the problem.

An exercise was carried out to define the responsibilities of journalists and health communicators in developing a strategy to position health as a specialized area of communication and thereby generate processes in human resource education that can respond to the challenges of communication in health.

■ The groundwork has been laid for launching the Virtual Public Health Campus. Promoted by PAHO, this cooperative initiative includes the participation of several highly prestigious public health education institutions in the Region and Spain, as well as other international institutions and organizations. The initiative is designed to promote equitable access by the Region's health professionals to the available public health education curricula, information on health, and bibliographic resources in a participatory, high-quality academic environment.



■ PAHO's human resource development activities include professional and technical education, in-service education, and fellowships.

The International Health Residency Program recently completed its 16th year of uninterrupted service (1985-2001), turning out 143 professionals in the field of international health from 27 countries of the Region who have gone on to fill positions of high-levels of technical and political responsibility. Demand for this program is growing.

FELLOWSHIPS. The Organization trained and supervised more than 2,500 fellows during the period—30% from the Americas and 70% from other who regions. PAHO is preparing to expand its services with the creation of a database capable of identifying and selecting educational programs that meet the development needs of the countries.

EXPANDED TEXTBOOK AND INSTRUCTIONAL MATERIALS PROGRAM.

The program, well known for its Spanish acronym as *pal tex*, and managed in cooperation with the Pan American Health and Education Foundation, has been

operating since 1968 and has achieved significant success throughout the Region, with coverage extending to approximately 700 schools and universities. In the current biennium, a technical and administrative evaluation was conducted with a view to reorienting the program. Toward that end, several lines of action were identified, including strengthening the production of materials to assist in development of public health education; expanding and strengthening education in the health services; consolidating support for undergraduate and graduate studies; and improving support for PAHO technical cooperation processes. Work began on a project to modernize the administrative capacity of *pal tex*, to automate information and expand sales.



■ The primary care approach and health promotion criteria are critical elements of the reorientation of health systems and services.

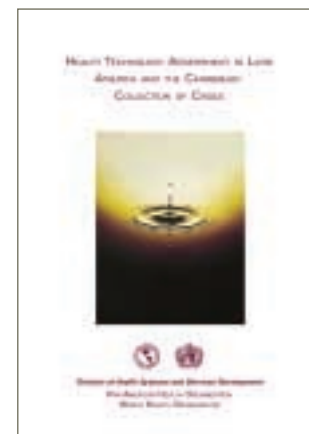
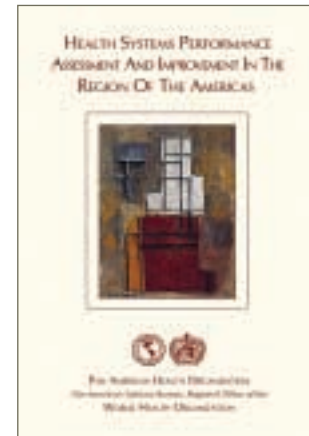
Assessing and Improving Health System Performance

In *World Health Report 2000: Health Systems—Improving Performance*, who provides a comparison of health system performance in its 191 member countries. The study is based on criteria and parameters that have been widely debated over the past two years, generating a great deal of interest and controversy among countries, international organizations, and academic institutions. The concerns expressed in this regard led to adoption of a paho Directing Council resolution in September 2000 urging countries to mobilize national intelligence sectors within their respective ministries of health, universities, research institutes, and related agencies, with a view to their monitoring and assessing their health systems. The who Executive Board adopted a resolution in January 2001 aimed at helping countries contribute regularly to who assessments of their health systems by establishing a regional consultation process that brings together staff from the member countries in the different who regions in order to take into account their points of view. The first in a series of regional consultations on health system performance assessment in the Americas was held in May 2001 at paho headquarters. It aimed to:

- Discuss different conceptual and methodological approaches to assessing the performance of the health systems;
- Take stock of the different country and regional experiences in the Americas related to health system performance;

- Identify critical issues for furthering the conceptual and methodological development of a framework for measuring the performance of health systems, which could be applied by countries on a regular basis and reported to who periodically;
- Discuss the link between health system performance assessment practices and health system policy and managerial decision-making processes; and
- Develop an international technical cooperation agenda to support the countries' efforts to measure the performance of their health systems.

The consultation brought together 70 experts from 19 countries; professionals from paho/who, who headquarters, usaid, the World Bank, the Hipólito Unanue Agreement, and caricom; and observers from the who regional offices for Europe and the Western Pacific. It resulted in a report with recommendations that were forwarded to who headquarters for inclusion, together with recommendations from other regions, in a proposal submitted to the who Executive Board in January 2002. After the consultation, a regional working group met (Ottawa, September 2001) and expanded on those recommendations. The results of the two meetings were issued as a publication on assessing and improving health system performance in the Region of the Americas.



■ PAHO has published studies of assessments of health systems performance and health technology in the Americas.



Strengthening the Delivery of Health Services

The Organization's efforts targeted strengthening the operating and decisionmaking capacity of health services in the countries. One of the main developments in this regard has been a collaborative effort between the Government of France, through the Cooperation Agency for Health Care Services Development, and PAHO to produce a publication on reforming hospital management in Latin America and the Caribbean. In addition to its

conceptual and methodological content, the publication will be used in conjunction with health management education and as a basis for developing ongoing training programs for health services personnel, especially those offered through the virtual public health campus. PAHO has consolidated the development of its much anticipated Windows-based Referral and Counter-Referral System and Health Management Information System (WinSIG), now available in five languages: Dutch, English, French, Portuguese, and Spanish. WinSIG is designed to improve the capacity to generate and utilize service delivery information at hospitals and outpatient care centers, with a view to analyzing performance and productivity, calculating costs, disaggregating billing functions by service and procedure, and providing the basic elements needed for health services performance management. WinSIG has already been implemented in 17 countries, at national and subnational ministry of health and social security facilities.

Most countries have recently established or moved forward with national programs for the continuous quality improvement of health care services. PAHO has cooperated in sharing national experiences for the identification of successful practices; bolstering regulatory activities related to the quality of care, aimed at strengthening institutional development and thus, boosting the capacity of health authorities to exercise quality assurance



Countries in the Americas that are using software developed by PAHO (WinSIG) to improve the management of hospital and outpatient information services

functions; developing guidelines for the design, implementation, and assessment of protocols and pre-established treatment procedures and health services risk management. PAHO has also collaborated on the USAID-sponsored Quality Assurance Program, helping to prepare a conceptual and methodological framework for analyzing the links between sector reform processes and quality of care improvement activities and results. This framework is being disseminated to bilateral agencies, development banks, and national agencies responsible not only for improving the quality of care programs but for developing and implementing sector reforms in order to promote better and broader consideration of the quality of care in sector reforms and in planning investments in this field.

With a view to developing health care models designed to reformulate the contents of care using a primary health care approach and to encourage

effective reorientation of health systems and services guided by health promotion criteria, the Organization has concentrated its efforts in three primary areas:

- ♦ Preparation of one of six official technical reports that fueled debate at the World Conference on Health Promotion (Mexico City, 2000) on the need to reorient health systems and services to incorporate the health promotion approach as a critical pillar of sector reforms;
- ♦ Facilitation, in collaboration with WHO headquarters, of a regional consultation on development of primary health care in the Region of the Americas (Brasília, 2000), as well as a detailed study on this issue in conjunction with the School of Public Health of the University of Chile; and
- ♦ Support for the development of family health and family medicine models within the primary care strategy framework in Bolivia, Brazil, Chile, Cuba, the Dominican Republic, Ecuador, and Jamaica.



■ PAHO has conducted research on health sector reform processes and their link with improvements in the quality of care in the Region.

Oral Health 2002

Data collected from national programs show high rates of prevention of caries. Despite potential methodological differences in the implementation of salt fluoridation programs as well as in the assessment of effectiveness outcomes, salt fluoridation has clearly achieved dramatic preventive results in the Americas. Selected data collected from throughout the Region corroborate those findings.

The integration of oral health services in the public sector has been a major focus of PAHO technical cooperation through cost-effective simple techniques such as atraumatic restorative treatment (ART). The recipient of a large grant from the IDB, PAHO launched the promotion of the ART technique throughout the Region. Transfer of technology has been successful in more than six countries and cost-effective evaluation is in progress in three others.

SALT FLUORIDATION

▲ Advanced Programs

Mexico, Belize
Costa Rica, Jamaica
Venezuela, Colombia
Ecuador, Peru
Bolivia, Uruguay

▲ Initial Programs

Cuba, Dominican Republic,
Guatemala, El Salvador,
Haiti, Honduras, Nicaragua,
Paraguay





Providing Access to Essential Drugs

■ Inadequate use of drugs has been responsible for increasing patient hospital admissions and hospital stays, lowering productivity in working hours, and increasing health costs. PAHO has been involved in improving pharmacotherapy teaching in medical schools and updating pharmacy curricula based on the pharmaceutical care concept. Universities from Argentina, the Dominican Republic, Ecuador, Guatemala, and Peru are implementing some of the recommendations. In a joint effort with professional organizations, a pharmaceutical forum of the Americas has been established to disseminate national drug policies through specific projects using a network of community pharmacies from the private and public sectors. To date, projects in pharmaceutical care in hypertension and in diabetes have been formulated and a pilot project started.

Accessibility to drugs continues to be a major concern in most countries of the Region. Many of them are identifying strategies to establish frameworks for accelerated access to priority drugs, such as antiretrovirals and those for tuberculosis and malaria. Some of the strategies are being applied at the subregional level in the Caribbean Community and in Central America. Strategies include negotiating for lower prices with pharmaceutical companies, implementing generic drug programs, and improving drug supply systems. Those strategies are likewise being applied to increase availability and accessibility to drugs used for hypertension, diabetes, and other conditions. The Organization has established a strategic fund to assist the countries in their efforts to obtain better drug prices through international bidding. At the same time, it is strengthening technical cooperation in drug selection, programming, and procurement, emphasizing pre-qualification of suppliers. Countries that have received support in this regard include Nicaragua, Honduras, Brazil, and Guatemala.



Drug regulation, through improved drug registration, continues to be a central part of national drug policies aimed at enhancing drug quality. The Organization, with the active participation of drug regulatory authorities and the pharmaceutical industry, has established a regional network to standardize drug regulations in support of processes ongoing in the subregional groups—Mercosur, the Andean Community, and Central America. Several working groups—under the leadership of national drug regulatory authorities in the United States, Brazil, and Argentina—are following up the implementation of concerted, consolidated proposals in the areas they coordinate: good manufacturing practices, bioequivalence, dealing with counterfeiting, and good clinical practices. Drug quality includes implementation of an external quality control program performed jointly with the United States Pharmacopoeia. This program, with the participation of the official quality control laboratory in each country, aims to strengthen countries' surveillance capacity to check the quality of products in national pharmaceutical markets.

The Organization is actively involved in designing a pharmaceutical clearinghouse to offer data and indicators gathered in a systematic manner, which will facilitate analysis of the pharmaceutical sector and support rational drug policy decision-making. This initiative is being developed jointly with the World Bank, the Inter-American Development Bank, and the United States Agency for International Development, and is involving other institutions from the Region as well as collaborating centers outside the Region.



Supporting Laboratory and Blood Services

Based on strategies recommended by the countries, PAHO provided support for managerial and technical strengthening of public health laboratories in the Region, with the collaboration of the Association of Public Health Laboratories, George Washington University, the American Society for Microbiology, and the Walter Reed Army Institute of Research. With the support of USAID and CDC, the strategies were applied in the countries affected by hurricanes Georges and Mitch. At the regional level, PAHO strengthened national and international laboratory networks, trained staff, provided materials for proper transport of infectious substances, and facilitated interaction with national epidemiology departments.

Planning and monitoring of technical cooperation to achieve universal, accurate, and efficient screening of blood took place at subregional meetings held in Trinidad and Tobago (1998); São Paulo, Brazil (1998); Cartagena, Colombia (1999); Mérida, Mexico (2001); and the Bahamas (2001). In Latin America, Brazil, Cuba, El Salvador, French Guiana, Peru, Uruguay, and Venezuela managed to screen all units of blood collected to detect markers for HIV, hepatitis B and C, syphilis, and Chagas' disease. In the Caribbean, Aruba, the Bahamas, Barbados, Curaçao, Dominica, Jamaica, Saint Lucia, Suriname, and Trinidad and Tobago achieved 100% screening for HIV, hepatitis B and C, syphilis, and h1 tv I and II.

PAHO expanded the regional external performance evaluation program (EPE) to most of the

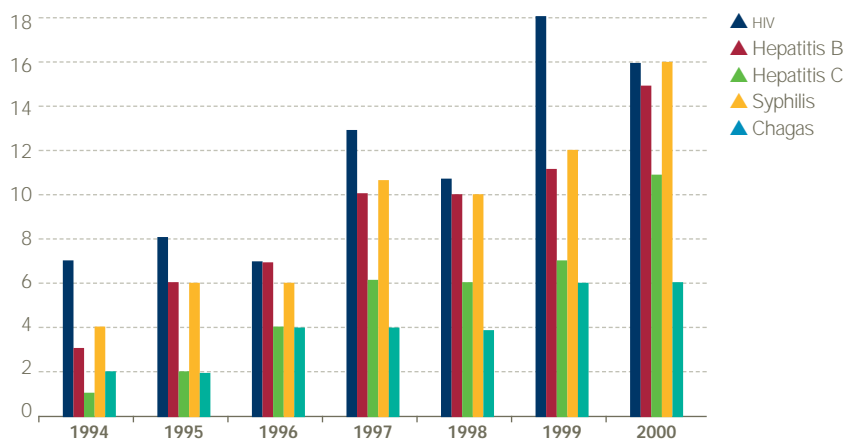
countries of the Region for both the markers of infection and immunohematology. A national EPE program was established in all Latin American countries, except Costa Rica, Guatemala, and Haiti. To guide the programs, PAHO produced work standards in collaboration with the American Association of Blood Banks. Screening efficiency remains low in the Region, due to the excessive number of blood banks. Aruba, Cuba, and Curaçao have achieved suitable numbers of blood donors. Preliminary financial analyses conducted with PAHO support in El Salvador, Guatemala, Honduras, and Nicaragua indicate that the cost of processing one unit of blood under the national systems' current structure is US\$1,035; if the blood were collected and processed in five centers in each country, the cost would drop to US\$53.

Anthropological studies conducted with PAHO support in 15 countries clearly indicate that physical access and scheduling constraints in the services and lack of consideration in how people are treated represent significant obstacles for potential blood donors.

PAHO targets improving the managerial capacity of laboratory networks in training their staff in aspects of administration and acquisition of computer equipment for information management. With the participation of professionals from the national services, PAHO published guidelines for the intervention of laboratories and blood banks in disaster situations, manuals of procedure for diagnostic methodologies, a biosafety manual, and documentation on quality management. The continuous quality improvement approach has been applied to clinical laboratories, as an ongoing effort with the Latin American Confederation of Clinical Biochemistry.

The PAHO Directing Council adopted a resolution in 1999 urging the countries to strengthen their blood services by promoting volunteer blood donations and quality assurance. Substantial improvements have been made in the safety of blood available for transfusions in the Region. The availability, timeliness, and quality of blood products will not improve, however, until the ministries of health in the countries reduce the number of blood banks, promote volunteer donations and appropriate use of blood, and monitor both compliance with standards and transfusion costs.

Number of countries with 100% blood screening





Improving Radiological Health

With other major players in the field, paho has cosponsored publications on the principles, requirements, guidelines, and reports related to radiological protection and dosimetry. Some of these publications are enabling countries throughout the world to take into account radiological health principles established by who and paho.

■ On the basis of guidelines it has published, PAHO conducts assessments of radiological imaging and radiation therapy services in countries throughout the Region.



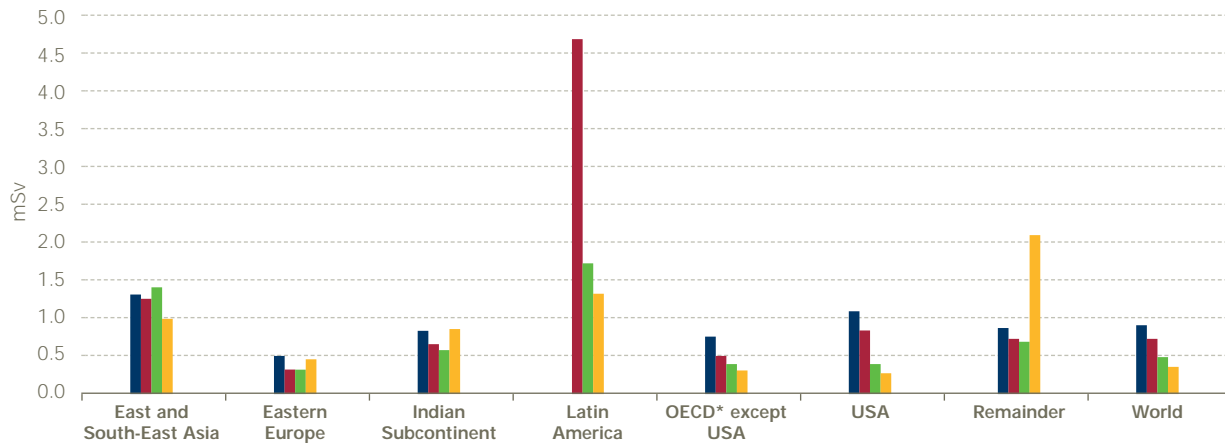
The radiological health program covers three lines of work: diagnostic and therapeutic radiology services; ionizing and non-ionizing radiation safety, and preparedness for and response to radiological emergencies, which includes radioactive waste management. To assess whether radiology services comply with paho's published guidelines, imaging services in Belize, Haiti, and Trinidad and Tobago, and radiotherapy services in Colombia, Costa Rica, Honduras, Panama, and Trinidad and Tobago were evaluated from the viewpoints of physical infrastructure, equipment, human resources, and quality assurance and maintenance programs. Technical specifications for radiological equipment were

prepared and tested in St. Kitts and Nevis and in Dominica, respectively. Investigators in Argentina, Bolivia, Colombia, Cuba, and Mexico conducted a paho-subsidized research project on quality assessment of radiology services to correlate radiology service quality indicators with the diagnostic accuracy of radiological interpretations. A regional program to evaluate mammography services in Latin America and the Caribbean was launched in collaboration with the Inter-American College of Radiology, a paho-affiliated nongovernmental organization, two paho/who Collaborating Centers, and the American College of Radiology.

Through the postal dosimetry service of the International Atomic Energy Agency, the calibration accuracy of over 100 high-energy radiotherapy units used for cancer treatment in public and private radiotherapy facilities throughout Latin America and the Caribbean has been checked annually since the 1960s. Implementation of the international radiation safety standards, endorsed by the Pan American Sanitary Conference in 1998, has been promoted in the Region through country visits, educational activities, and participation in an interagency committee on radiation safety. Potential radiation overexposures of cancer patients were investigated in Costa Rica. Assistance was also provided to Honduras and Peru regarding radiation accidents involving occupationally exposed personnel. To improve preparedness for nuclear accidents or radiological emergencies, paho joined an interagency committee

Average annual effective dose of radiation to which monitored workers have been exposed worldwide, 1975-1994

(expressed in millisieverts—the unit of measurement of effective dose)



■ Although a quarter of a century ago, workers exposed to radiation in Latin America had 4-5 times the exposure of workers elsewhere in the world, more recently the effective radiation dose has been reduced by a factor of greater than 3.

▲ 1975-1979 ▲ 1980-1984
▲ 1985-1989 ▲ 1990-1994

* Economically developed countries

on nuclear accidents and radiological emergencies. It tested its capability to respond to a nuclear accident, taking part in nuclear accident simulations in Canada and France. Participation in who's radiological emergency preparedness and assistance network continued.

paho's principles on efficacy, quality, and safety in health services were disseminated through educational activities and publications. The Organization cosponsored and participated in international scientific congresses and in conferences of the International Atomic Energy Agency. It convened a workshop on implementation of the international radiation safety standards in the Netherlands Antilles, with the participation of Dutch, English, and French Caribbean countries, followed by a regional training course in Jamaica and a national course in Trinidad and Tobago. Regional training courses in diagnostic radiology were

cosponsored in Brazil, Cuba, and Mexico, and in nuclear/radiological terrorism in Costa Rica and Honduras. National seminars in radiation therapy were sponsored in Honduras and Peru. Lectures were also given in universities in Venezuela, Colombia, and the United States.



■ Over the past century, radiological equipment used to diagnose an array of ailments has evolved radically.



Supporting Health Services Engineering and Maintenance

Promoting Health Services Information Technology

The Organization cooperated in promoting information and communication technology in health by disseminating aggregate research, data, and case studies and by sponsoring exchanges among users and countries to demonstrate technological opportunities and solutions to policymakers, providers, government, purchasers, and providers of capital. PAHO advanced an understanding that the deployment of information and communication technology integrates technology, geography, culture, language, and different health system models as opposed to a single "cookbook" or "translated" solutions. It also advocated standards, regulation, and policy development and implementation.

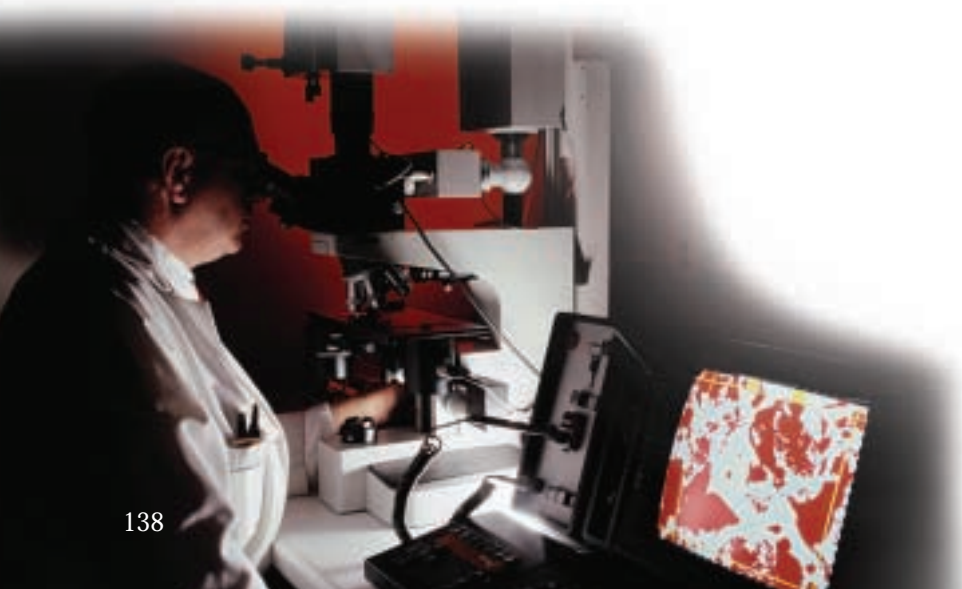
During the past several years, the Organization made major contributions in the area of physical infrastructure and equipment of health services. paho supported the countries and who in preparing contingency plans for potential computer problems in health services at the outset of the year 2000 (y2k). It has cooperated in developing and strengthening the countries' capacity for regulating medical equipment and devices, with the support of the United States Food and Drug Administration, the Medical Devices Bureau of Canada, and the Emergency Care Research Institute (ecri) in the United States. The Directing Council of paho (September 2000) mandated that a medical devices and equipment program be developed. The countries of Latin America and the Caribbean are actively participating in a task force for global standardization of medical equipment. A network of communication and information exchange regarding medical

equipment and devices among the regulatory authorities was implemented, with 53 authorities of 15 countries participating.

paho worked to strengthen programs of clinical engineering and technological management, with the collaboration of the American College of Clinical Engineering (acce). The advanced workshops of clinical engineering were decentralized to the countries of Latin America and the Caribbean. To date, workshops have been held in Mexico, the Dominican Republic, Panama, Cuba, Brazil, Ecuador, Costa Rica, and Peru. Certification councils for clinical engineers have been organized in Brazil and Mexico.

paho also contributed to the organization and implementation of a global network of communication and information exchange on physical infrastructure and technology in the health services, coordinated with who and the acce. And it translated and published monthly on the paho website the health technology newsletter, ecri-monitor.

■ In support of countries' efforts to standardize medical equipment, the Organization has issued an international guide for a model regulatory program for medical devices and a guide for developing medical device regulations.



Developing health services and systems— a sampling of PAHO activities in the countries

In the Americas, an estimated 43 million indigenous people suffer economic, legal, and social disadvantages, which translate into extreme poverty and deplorable health conditions. In **NICARAGUA**, some 10% of the population, or 5 million residents, are indigenous. Among their health problems are diarrheal diseases, respiratory ailments, maternal and infant mortality, lack of access to safe drinking water and basic health services, alcoholism, domestic violence, and malnutrition. As a priority PAHO works with national authorities to reduce inequities in indigenous peoples' access to health services.

Hurricane Mitch was the worst meteorological disaster ever to



The aftermath of Hurricane Mitch

hit **HONDURAS**. Among other havoc wrought, it completely destroyed a number of health services and seriously damaged many others. On the basis of a rapid assessment by PAHO and national counterparts, many services were up and running again within a week. Honduras is producing prostheses for landmine victims, thanks in good measure to a tripartite initiative of support from Canada, Mexico, and PAHO. And, so that they can attend to their own communities, hundreds of indigenous workers receive auxiliary health care training in Honduras.

hit **HONDURAS**. Among other havoc wrought, it completely destroyed a number of health services and seriously damaged many others. On the basis of a rapid assessment by PAHO and national counterparts, many services were up and running again within a week. Honduras is producing prostheses for landmine victims, thanks in

Health sector reform in **EL SALVADOR** focuses on five sectors—professional societies, commercial enterprises, civil society, the government, and unions—all of which envision a model integrating health promotion, disease prevention, and rehabilitation. Research on indigenous groups in El Salvador revealed glaring health inequities, which has led to a greater appreciation for ancestral cultural practices and more flexibility in the care provided by the medical community.

In **COLOMBIA**, to cooperate more closely with national counterparts working to help displaced persons gain access to health services, PAHO set up field offices and prepared information on the rights and responsibilities of the displaced. The **CARIBBEAN** has long been known for its excellent nurses and physicians. To bolster that reputation, PAHO has produced a directory of health training programs in the region so that health professionals and decisionmakers can match training opportunities to individuals' and countries' needs. Moreover, by providing fellowships and contributing to the creation of comparable curricula and a regional registration examination, PAHO supports the free movement of health professionals throughout the region, in line with CARICOM's quest for a single-market economy.

In **ECUADOR**, PAHO helped set up a network of 16 postgraduate public health programs and schools in six provinces. Courses cover public health, epidemiology, health economics, gender, service management, and local health programming. Some 800 professionals have graduated in the past four years.



Training indigenous health workers in Honduras



Production of prostheses in Honduras



Partnering for Health



The desire to form a regional health partnership motivates representatives of the various American republics to meet in 1902 and establish the Pan American Sanitary Bureau. That constituting desire to partner in health is echoed in an early message in the *Boletín de la Oficina Sanitaria Panamericana*: “The ideals of that unique concept we call ‘Pan Americanism’ comprise all facets of human activity—cultural, commercial, economic, and political. ... Our purpose is to strengthen the ties of understanding, extend cooperation among health workers in the three Americas and demonstrate the ideals of brotherhood and harmony.” Indeed, over the ensuing decades countless partners—from the Rockefeller Foundation in the 1920s to the Bill and Melinda Gates Foundation in the 21st century—join the Bureau in its regional health work.

In 1958, then director of the Bureau, Dr. Fred Soper, notes that: “Over the past decade, the most important accomplishment in the field of public health in the Americas has been the rapid increase in international collaboration to solve health problems in the hemisphere and the sustained improvement in the coordination of activities of the various official entities participating in this work.”

In 1961, with the Charter of Punta del Este and especially the Ten-Year Public Health Program of the Alliance for Progress, health transcends the sphere of specialized agencies to become a collective concern of heads of State. Countries in the Region, at the highest political level, agree for the first time on a continental program to advance health. Their commitment underscores the fact that health can no longer be considered just a sector matter; rather, it conditions and is conditioned by social progress and economic development.

In 1986, director Dr. Carlyle Guerra de Macedo notes the Organization’s evolution: “In the early decades of its existence, the Pan American Sanitary Bureau had as its mission the control of infectious diseases in order to stimulate commerce among nations throughout the Region. Today health is seen as a human right and as a foundation of peace among nations. The Bureau’s original purpose has evolved in tandem with economic, social, and political changes experienced in the Americas and across the globe.”

Today, every one of PAHO’s programs of technical cooperation enjoys the partnership of an array of entities—national, international, nongovernmental, and private sector—in a shared agenda to advance health in the Americas.





Contributing to Subregional Integration

In recent years, the Organization has closely followed the progress of integration processes ongoing throughout the Region and, at the request of member countries and the various bodies administering those processes, has collaborated in the development of health agendas for the integration groups. The nature and extent of that cooperation has depended on the degree to which the various subregional integration processes have developed and on the demand for cooperation itself. Nonetheless, in all cases paho's work has been grounded on common principles: Pan Americanism, equity, coordination with the steering authorities of the respective subregional health bodies, support in formulating health agendas and mobilizing resources, promotion of technical cooperation among countries, pursuit of economies of scale and multiplier effects, and standardization of approaches to health issues best addressed in the international sphere. Highlights of paho's cooperation with intercountry groups are presented in the sections that follow.

Central America

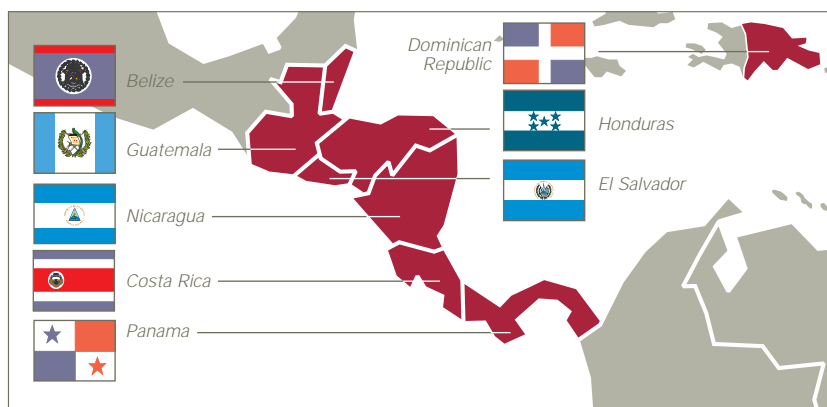
The Organization worked with the countries of Central America to define a health agenda for the isthmus that was adopted at the Meeting of the Health Sector of Central America and the Dominican Republic (resscad), held in 2001. The agenda sets forth a strategic vision in health for the period 2000-2010 that includes a common framework for participation of multi- and bilateral agencies and integration institutions as well as nongovernmental organizations, which should improve their coordination and effectiveness.

In the aftermath of Hurricane Mitch (October 1998), paho supported the General Secretariat of the Central American Integration System (sica) in its rehabilitation and reconstruction efforts, including assistance at advisory group meetings in Stockholm (May 1999) and Madrid (March 2001), in which the countries presented national and subregional projects. Geared to reducing social vulnerability in Central America, the projects target:

- Reduction of vulnerability due to disasters
- Joint drug procurement
- Disease surveillance and response
- Food safety and nutrition

One of the most noteworthy of financial partners to have channeled, through paho, resources for health in the isthmus is Sweden, which provided continuous support for the Central American Health Initiative up until 2001. In large measure thanks to that support, the Initiative has made major gains:

- The countries have an integrated health system in place and continue



to carry out activities using their own resources, within the framework established by resscad.

- Various health sector forums are coordinating their work, including resscad, the Central American Council of Social Security Institutions (cociss), and the Council of Central American Health Ministers (cociss).

The Caribbean

paho assisted caricom member and associate countries in designing and launching the second phase of the Caribbean Cooperation in Health Initiative (cch), which has eight priority areas:

- Chronic noncommunicable diseases
- Communicable diseases
- Human resource development
- Family health
- Mental health
- Food and nutrition
- Environmental health
- Health system development

The Initiative was endorsed by all the ministries of health of caricom countries, and several of them have made their national

health plans consistent with its priority areas. Together with the caricom Health Desk, paho acts as the Secretariat of the cch Steering Committee, whose workplan includes monitoring and evaluating the process, preparing the next phase of work, and strategic planning.

The Organization also supported the countries in launching a Caribbean Charter for Health Promotion. The result of a broad consultation and approved by the ministers responsible for health in the Caribbean, the Charter outlines six strategies:

- Formulating healthy public policies
- Reorienting health services
- Empowering communities to achieve well-being
- Creating supportive environments
- Developing and increasing personal health skills
- Building alliances, with special emphasis on the media

All the countries have adopted the Charter, with the result that reorganized health programs will focus not only on disease prevention and control but on health and wellness.





The Andean Community

The Organization and the Hipólito Unanue Agreement (conhu), the health entity of the Andean Community of Nations, agreed on a joint plan of work to improve the health of the Andean population and to promote health integration. The plan covers the following areas:

- Sharing of experiences aimed at improving hospital management
- Identification of health institutions and programs, development of epidemiological surveillance in border areas, and consensus-building on international health regulations
- Development of interactive telecommunication applications in health
- Exchange of experiences in disaster prevention and management

Among important results of the plan is the creation of an Andean hospital information network. The network will generate, integrate, and collect up-to-date information on programs and institutions and link that information to a digitized map of the Andean countries, focusing particularly on the border areas.



The Southern Cone

mercosur—which comprises the member states of Argentina, Brazil, Paraguay, and Uruguay and the associate states of Bolivia and Chile—established a subgroup for health in 1998 to promote uniformity of their respective national legislation governing goods, services, raw materials, and products in the field of health. paho has provided technical expertise to the subgroup in the following areas:

- Notifiable diseases—dengue, yellow fever, measles, and cholera
- Drug policy and drug price databases
- The International Sanitary Code
- Smoking prevention and control
- National health accounts

Among achievements thus far are the definition of a common terminology based on adoption of technical glossaries, dissemination of techniques such as good manufacturing practices, adoption of health standards, and training for negotiating with other trade and integration blocs.

The Amazon Cooperation Treaty

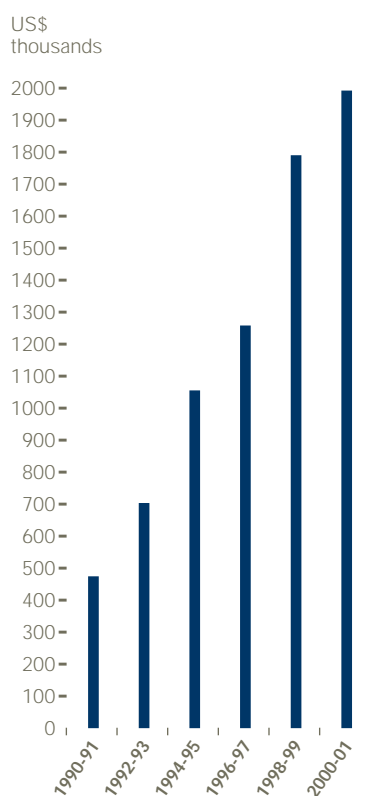
paho has supported efforts of the Special Commission on Health of the Amazon Region (cesam), the entity in charge of health of the Amazon Cooperation Treaty (act), to improve the management and effectiveness of its health activities. Because of their significance in the region, malaria and vector-borne diseases have become the focus of the Commission's work. To bolster that work, the Organization has helped mobilize financial resources.





Stimulating Technical Cooperation Among Countries

Funds approved by PAHO's Secretariat for technical cooperation among countries



In good measure as a result of the Organization's work with the countries over the past century, they have now attained a level of competence in health that enables them to cooperate directly with each other, and to reap the fruits afforded by technical excellence throughout the hemisphere. In the early 1990s, paho established a special fund to catalyze intercountry activities. In 1998, the Pan American Sanitary Conference reviewed this strategy, labeled "technical cooperation among countries" or tcc, and recommended:

- Continuation of tcc for the period 1999-2002
- Coordination with other agencies of the United Nations and Inter-American systems to incorporate tcc as a core element of national development strategy
- Training on the concept, management, and implementation of tcc in health with the governments and the ministries of health of the Region

Among accomplishments thus far, the countries have engaged in numerous exchanges to build capacity and strengthen health. They submitted some 200 projects for technical cooperation among countries over the past four years, three-fourths of which have been approved. Almost all the countries have participated in at least one such project, including first-time participants Puerto Rico and Aruba. Countries that have established international cooperation agencies—including Brazil, Ecuador, and Peru—tend to submit more projects for funding and serve to encourage countries with which they cooperate to make greater use of the Organization's tcc funds. The volume of those funds, which are used

directly by the countries, increased significantly from 1990 to 2001.

To promote more cooperation among countries, the Secretariat is coordinating efforts with other partners, including the United Nations Development Program (undp), the Organization of American States (oas), and the Latin American Economic System (laes). paho and the oas cosponsored a workshop on preparation of tcc projects for Central American countries, the Dominican Republic, and Mexico in San José in 2001. At the invitation of laes, paho cosponsored a similar workshop in Montevideo in 2002.

According to reports issued by some of the joint commissions that represent countries cooperating with each other, ministries of foreign affairs are becoming increasingly involved in preparing, monitoring, and evaluating these projects. They have, moreover, voiced recognition of paho's critical role as catalyst in tcc projects—as in the case of the joint project of Venezuela's Rafael Rangel National Institute of Hygiene and Brazil's Oswaldo Cruz Foundation and the joint health service development project in the border region of Brazil, Colombia, and Peru.

On completion of projects, countries are giving increasing importance to monitoring and evaluating them. They are also going to greater lengths to document the results of technology transfers and the sharing of experiences. Canada prepared a publication on its experience with the tcc process and its findings from joint projects with countries of the Region. Guatemala, as part of its effort to organize the demand for international technical cooperation, stressed the importance of tcc.

Countries Cooperating with Countries to Improve the Health of their Populations



**Argentina
Brazil
Paraguay**

Developing Services and Epidemiological Surveillance in the Border Region

Federal and local health authorities of the three countries undertook a project to strengthen the health service network in the border cities of Puerto Iguazú, Foz de Iguaçu, and Ciudad del Este, given the volume of cross-border traffic and the large disparities of service capacity in the region. The project will also undertake environmental activities. The aim is to mobilize resources and lay the groundwork for permanent coordination in health in the tri-state border region.



**Bahamas
Belize**

Preventing Mother-to-Child hiv/aids Transmission and Strengthening Health Information Systems

Enlisting the participation of various governmental and nongovernmental agencies, the two countries committed to work together to prevent mother-to-child transmission of HIV/AIDS. They are also capitalizing on Belize's expertise in health information systems to execute a project in the Bahamas designed to consolidate health information generated by various programs and agencies into a single, widely accessible national database.



**Antigua and Barbuda
Barbados
Dominica
Trinidad and Tobago**

Strengthening Oral Health

The countries conducted a study on the prevalence of oral health problems in young children and schoolchildren and, on the basis of its findings, agreed to strengthen their oral health programs through salt fluoridation activities. The project proved effective and could be replicated in other countries.



**Belize
Dominica
Guyana
Jamaica
Trinidad and Tobago**

Promoting Mental Health Nursing in the Caribbean

Jamaica provided support to the other countries in reviewing mental health nursing legislation. A model resulted that could be adapted elsewhere in the region, thereby enabling greater standardization of mental health legislation and practice in the Caribbean.



**Canada
Eastern Caribbean Countries*
Jamaica**

Building Capacity in Hospital Governance

Health personnel from the Eastern Caribbean countries made study visits to learn about hospital governance in Canada and were further briefed about the experience in Bermuda. As a result, the Eastern Caribbean countries acquired tools to deal with the changes in hospital governance that are taking place in their respective health systems.

*Eastern Caribbean Countries: Antigua and Barbuda, Bermuda, Dominica, Grenada, St. Kitts and Nevis, St. Vincent and the Grenadines, and St. Lucia.



Argentina Bolivia Paraguay

Improving the Health of Indigenous Peoples in the Chaco Region

With approval of national health authorities in the three countries, PAHO provided support to organizations of indigenous groups living in the Chaco region, primarily the Guaraní. A comprehensive plan—formulated and approved by representatives of these indigenous groups and recognized as valid by the countries' health authorities—comprises four components: expansion of health service coverage, control of prevalent diseases, food safety, and water and sanitation. The water and sanitation component is already under way, with broad participation by nongovernmental and religious organizations.



Brazil Colombia Peru

Developing Services and Epidemiological Surveillance in the Border Region

The countries' national and local health authorities agreed to undertake a project for epidemiological surveillance, basic sanitation, and health service development in their common border region, known as the "Amazonian trapezoid" and encompassing Tabatinga, Leticia, and Santa Rosa. The first stage of this project has been a success and has led to proposals for five more projects.



Ecuador Peru

Promoting Health Projects in the Border Region

Following the signing of a peace accord, the two countries have undertaken, with PAHO's support, border projects dealing with health and environment, proper management of pesticides, development of health service networks, healthy and safe motherhood, and prevention and control of malaria and other vector-borne diseases.



Cuba Haiti

Improving the Environment

The two countries agreed to work together to improve environmental quality in Haitian cities with fewer than 20,000 inhabitants through sanitary solid waste management, by bringing together experts from countries' various public ministries.



Chile Cuba

Death Certificate Coding in the Chilean Health Statistics System

The two countries are collaborating on a project to prepare Chilean health workers in the coding of death certificates, with experts from Cuba traveling to Chile to train national and regional health service staff.



Brazil Venezuela

Enhancing Laboratory Performance

To increase their diagnostic and reference capacity, the Oswaldo Cruz Foundation in Brazil and the Rafael Rangel National Institute of Hygiene in Venezuela have exchanged experts and jointly designed courses on specific laboratory techniques.



Costa Rica Dominican Republic

Targeting Social Security

The two countries have worked together to strengthen and develop their social security systems.



Canada Mexico

Promoting Active Aging

The two countries are collaborating on development of a national health program for the elderly. One product of this joint effort has been the publication of guidelines for developing a comprehensive support system for active aging that could be useful to all the countries of the Region.



Canada Costa Rica

Implementing a Comprehensive Care Model

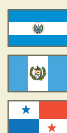
Canadian experts supported their Costa Rican counterparts in developing a model of comprehensive care for users at the Hospital de Mujeres in San José.



Costa Rica Cuba Nicaragua

Fostering Nutrition and Food Safety

Based on Cuba's experience during the 1990s with "productive municipalities"—that is, agricultural communities whose production targets both economic and social (namely food and nutritional safety) gains—the three countries agreed to share experiences and technologies in all areas of nutrition and food safety—food production, food processing, food distribution and marketing, and food and nutritional surveillance.



El Salvador Guatemala Panama

Assuring Safe Water and Sanitation for Indigenous Populations

The countries committed to transfer appropriate safe water and sanitation technologies to indigenous populations in Central America. With PAHO's support, cooperation allowed them to take advantage of various simple, economical technologies that had been developed in Nicaragua and subsequently adapted in Bolivia.

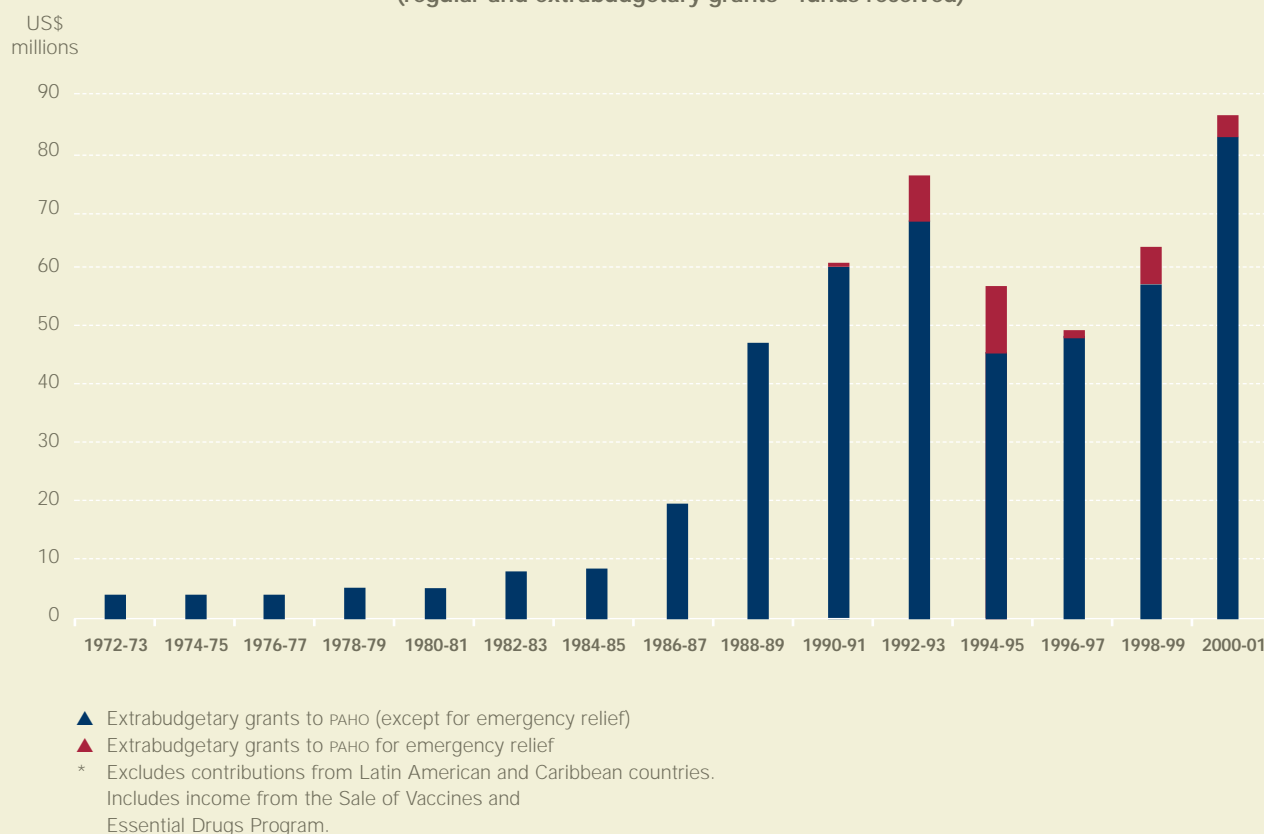


Honduras Puerto Rico

Developing a Renal Health Program

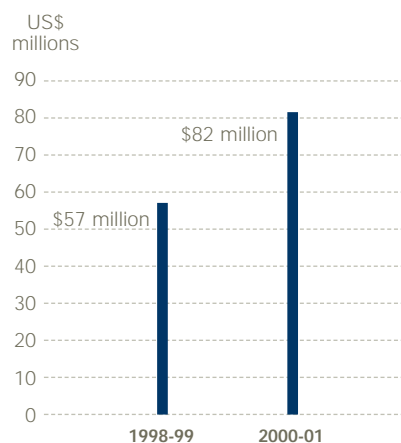
The Renal Council of Puerto Rico, together with the Latin American Nephrology Society, provided cooperation to Honduras for development of a national renal health program. Its focus was preventive interventions, which can have a tremendously positive impact, especially in countries that do not have the infrastructure required to offer highly complex treatment—such as kidney transplants or dialysis.

Three Decades of Resource Mobilization for Health by the Pan American Health Organization*
(regular and extrabudgetary grants - funds received)



Mobilizing Resources for Health

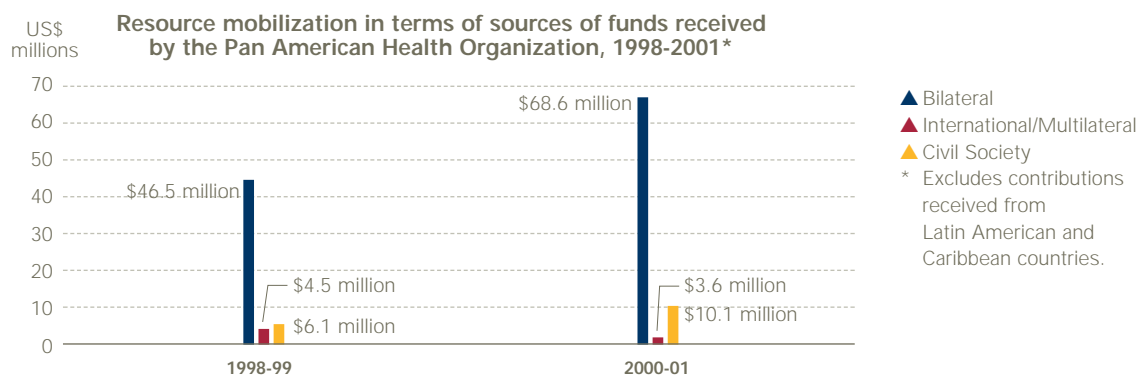
Resource mobilization in terms of funds received by the Pan American Health Organization, 1998-2001*



* Excludes contributions received from Latin American and Caribbean countries.

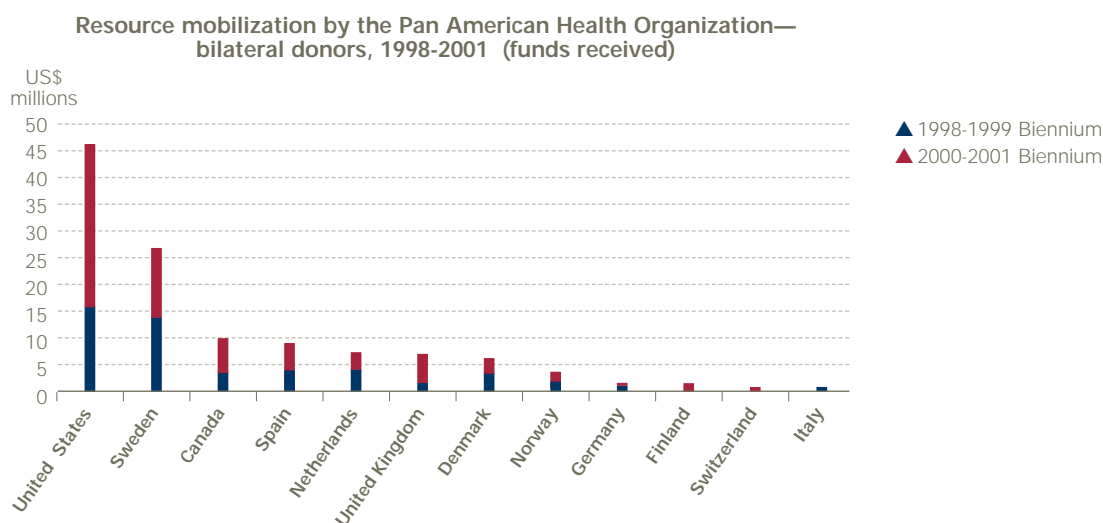
From 1998 to 2001, extrabudgetary funding provided directly to the Pan American Health Organization by developed countries, international and multilateral sources, and civil society totaled almost us\$140 million—representing 23% of paho's total budget for the four-year period and significantly enhancing paho's ability to fulfill its technical cooperation mandate. Despite the economic constraints affecting many of its partners in the late 1990s, paho experienced a significant increase in extrabudgetary contributions over the quadrennial period.

Most of the increase came from higher contributions by bilateral donors, which now represent 83% of paho's extrabudgetary funding.



This period also witnessed the expanding role of the civil society sector, which increased its funding to paho by two-thirds, reaching us\$10.1 million in 2000-2001. Contributions from this sector included large grants from two new partners: the Bill and Melinda Gates Foundation to prevent and control cervical cancer and to protect the safety of the blood supply; and the American Red Cross to support the integrated management of childhood illnesses. Contributions also came from a wide range of specialized nongovernmental organizations and foundations, such as the Rockefeller Foundation, for

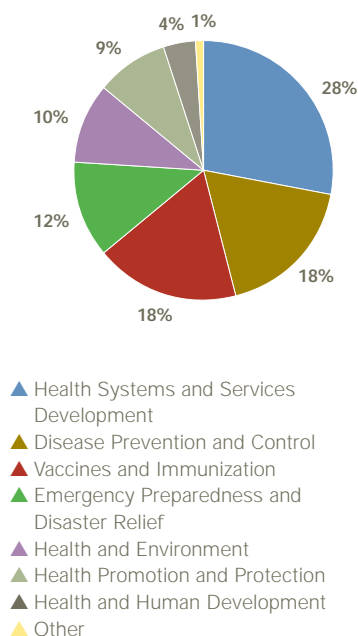
programs on women's health, communicable disease control, cancer, oral health, appropriate health technologies, and other health-related areas. Among bilateral donors, the United States of America provided the largest contribution during the quadrennium (almost us\$46 million), its level doubling during this period. Support focused primarily on the eradication of measles from the Americas. Other important areas of support by the United States included the Expanded Program on Immunization, aids research, maternal mortality, antimicrobial resistance, health of migrant





■ The Pan American Health and Education Foundation has been increasingly active in attracting funding in the United States and, over the past four years, has contributed more than US\$18 million in cash and in-kind donations to PAHO's program of technical cooperation with the countries of the Americas.

Proportion of extrabudgetary resources mobilized for major program areas of the Pan American Health Organization, 1998-2001



PAHO also received US\$17.9 million for emergency relief following natural disasters that affected the Region during the quadrennium.

populations, diabetes prevention and control along the United States-Mexico border, environmental health, and disaster preparedness.

Nordic countries provided substantial contributions in support of the peace process in Central America. Sweden—the second largest bilateral donor to PAHO (US\$26 million)—focused primarily on health sector reform in several Central American countries, adolescent health, and health aspects of the Central American integration process. Sweden and Norway jointly funded development of an effective model to combat domestic violence and together strengthened national HIV/AIDS programs in several Central American countries.

Nordic support also went to the environmental health program (MASICA), with Sweden funding the water supply component (PROAGUA), Norway supporting the component for strengthening institutional environmental health aspects (PROFIN), and Denmark providing decade-long support to the very successful component addressing the health impact of pesticide use in Central America (PLAGSALUD). Also during this period, Finland renewed its partnership with PAHO to support strengthening health services at the second level of care as part of health system reform in Guatemala.

Support from Canada totaled almost US\$9.6 million during the quadrennium and doubled over the two biennia. Support targeted primarily development of local health systems and perinatal health, assistance to landmine victims, advocacy for anti-tobacco legislation, nutrition, environmental health, immunization initiatives in

Haiti and in Central America, and emergency preparedness.

Contributions from Spain and the United Kingdom amounted to US\$8.4 million and US\$6.6 million respectively over the quadrennium. Most notably, they both increased between the two biennia—in particular the United Kingdom, which more than tripled during the period. Spain supported measles eradication, integrated management of childhood illnesses, HIV/AIDS, noncommunicable disease control, safe blood, advocacy against tobacco and drug use, and strengthening of radiological services. Support from the United Kingdom went primarily for communicable disease control in Central America and emergency preparedness and disaster relief programs throughout the Region.

Contributions from the Netherlands and Germany during the quadrennial period totaled US\$6.8 million and US\$1 million respectively, experiencing a small decrease between the two biennia. Dutch contributions went mainly to support a healthy municipality project in Ecuador, institutionalize a model to address violence against women and girls in the Andean region, consolidate local health systems in El Salvador, and enable development of a pharmaceutical system and management of essential drugs in Haiti. Funding from Germany initially helped support cholera prevention and control programs, establish a regional sanitary waste management network, and improve water and sanitation systems in indigenous communities; more recent support targeted men's participation in reproductive health.



Placing Health on the Agenda of the Summits of the Americas

The second Summit of the Americas (Santiago, Chile, April 1998) helped raise awareness among hemispheric leaders of the role that health plays in human rights and poverty alleviation. A roundtable on health was featured, where health ministers from the region, the then First Lady of the United States, Hillary Clinton, and the Director of paho, among others, discussed the importance of health service access to the preservation of democracy. At the Summit, leaders pledged to further equity by bringing health to the most vulnerable groups.

The third Summit of the Americas (Quebec City, April 2001) highlighted the many changes that have taken place in the hemisphere since the first Summit (Miami, 1994). Across the Region, the transition to democracy is almost complete, human rights abuses have declined, civil society has found a voice, and free trade in the Americas is expected to become a reality in the coming years. At the same time, inequities persist, including avoidable health disparities and unequal access to health services. Health will therefore continue to play a pivotal role, as a prerequisite for human development and achievement of economic and political goals.

The Declaration of the Quebec Summit comprises 32 points expressing leaders' renewed commitment to hemispheric integration as well as to national and collective responsibility for improving the economic well-being and security of the peoples of the Americas. The Declaration also

refers to commitments to fight hiv/aids, address the global problems of drugs and violence, protect the environment and improve labor conditions for all, including migrants, and craft policies to improve natural disaster management. It includes a commitment to attempt to reach international development goals—among them, halving the number of people who live in extreme poverty by the year 2015. It commits to protecting the rights of indigenous peoples and the disabled, eradicating racial discrimination, and promoting gender equality.

The Declaration is reinforced by the Summit's plan of action, which recognizes that health is important to the leaders of the Americas. In addition to the various priority health areas mentioned—health sector reform, prevention and control of communicable and noncommunicable diseases, and connectivity—the plan refers directly to mental health, the virtual health library, and the prevention of tobacco-related diseases.

Future health challenges will be brought about by the free trade agreement for the Americas—especially in the areas of environment, labor, and the intellectual property rights of drugs (particularly in relation to hiv/aids treatment). The agreement will require that paho's leadership role become even greater, in order to mobilize support of member countries at the highest political level for a strong health agenda in the hemispheric process.

“We emphasize that health and equal access to medical attention, health services, and affordable medicine are critical to human development and the achievement of our political, economic, and social objectives.”

—Heads of State at the Quebec City Summit of the Americas, April 2001

The Ibero-American Summits—which involve the countries of Latin America, Spain, and Portugal—have occurred annually since 1991, the last being held in Peru in 2001. Health has been a subject of debate in several summits, particularly in 1992, 1993, and 1999. At the summit held in Havana in 1999, countries agreed to establish a secretariat for Ibero-American cooperation, to be based in Madrid. paho cooperates with the secretariat and the Ibero-American countries to further health objectives and to link those objectives to other hemispheric efforts.



Creating a Shared Agenda for Health in the Americas

The Pan American Health Organization, Inter-American Development Bank, and the World Bank have been working together since June 2000 to effect a “Shared Agenda for Health in the Americas.” The three institutions set up a coordination group, with one representative of each institution; selected four leadership areas for collaboration—national health accounts, pharmaceuticals, disease surveillance, and environmental health; and set up work groups in the four areas to elaborate plans. Results thus far include:

NATIONAL HEALTH ACCOUNTS.

Coordination in this area targets creating national health accounts in all the countries of Latin America and the Caribbean within three years. The group’s work has been wide-ranging:

- Collaboration with national counterparts to program funds and conduct national health account estimates
- Plans to carry out comparative studies, regional conferences, database creation and maintenance, as well as dissemination
- Work with usaid, because of that agency’s extensive experience in promoting health accounts in the Americas
- Updating of a matrix of countries in the Region to reflect the status of their health accounts, possible initiatives, and sources of funds
- Arrangements for a translation into Spanish and publication of a manual on systems of health

accounts produced by the Organization for Economic Cooperation and Development

- A website

PHARMACEUTICALS. This work group focused on increasing coordination with the pharmaceutical industry to address corruption and governance issues in the sector, moving forward on a strategy for a pharmaceutical clearinghouse. A special seminar explored the multisectoral approach to improving ethical business practices, with the aim of improving access to medicines in Latin America and the Caribbean, and enabled a better understanding of the issues facing the pharmaceutical sector in its attempts to minimize corruption—such as transparency, accountability, and security management.

DISEASE SURVEILLANCE. The work group will promote shared expertise by supporting dissemination of a draft toolkit, prepared by the World Bank, for disease surveillance. The toolkit will enable task managers of international financial institutions as well as consultants and national specialists to prepare projects aimed at strengthening epidemiological surveillance and response, using standardized instruments across the Region.

ENVIRONMENTAL HEALTH. This work group is preparing objectives and a workplan to address water and sanitation, air quality, and solid wastes.



Inter-American
Development Bank



World Bank



Pan American
Health Organization/



World Health Organization

Summits of the Americas

Since the first Summit of the Americas in Miami in 1994, the heads of state and government of 34 countries in the Western Hemisphere have worked together to set social, political, and economic agendas for the Americas and have guided the actions of international organizations in support of their mandates. Summits represent an opportunity for these leaders to promote their collective belief that strong hemispheric partnerships contribute to the advancement of mutual goals—among them, peace, democracy, economic integration, social justice, and poverty eradication. The Summit process, by taking a multisectoral approach to dealing with a wide range of issues, brings governments together with international organizations, civil society, and other stakeholders to discuss political, economic, and social issues.

Health issues have been a core element of the three Summits, and the leaders attending them have issued clear mandates that have advanced the health agenda, facilitated work among countries, shaped the activities of international development institutions, and increased collaboration among inter-American and international organizations. Given the Pan American Health Organization's dedication to hemispheric health priorities, participation in the Summits of the Americas represents an extraordinary opportunity to highlight the Region's health agenda and to heighten PAHO's profile, which in turn increases its effectiveness in achieving the goals of its member countries.

THE FIRST SUMMIT, MIAMI 1994



The first Summit produced a Declaration of Principles. Its initiative 17 called for equitable access to basic health services, focusing on reducing

infant and child and maternal mortality, eradicating measles, supporting health sector reform, and preventing the spread of communicable diseases, in particular HIV/AIDS. Initiative 18 urged a strengthening of the role of women in society, and Initiative 23 proposed a partnership for pollution prevention. Among other initiatives, there followed the launching of the Healthy Children: Goal 2002 campaign, aimed at preventing 100,000 deaths in children under five years of age in the Americas by 2002 using the strategy for integrated management of childhood illnesses.



THE SECOND SUMMIT, SANTIAGO 1998

Leaders stressed the role that health plays in human rights and poverty alleviation. They

pledged to further the pursuit of equity by bringing health to the most vulnerable groups, placing emphasis on developing and using effective, low-cost health technologies. PAHO responded with an initiative, "Health Technologies Linking the Americas," aimed at promoting access to quality drugs and vaccines, strengthening information and surveillance systems, improving access to and quality of water and sanitation infrastructures, and assessing health technologies.



THE THIRD SUMMIT, QUEBEC CITY 2001

Leaders recognized that equitable access to quality health services is a prerequisite for a stable

democracy, a healthy workforce, and a strong economy. They stressed that solutions to health issues are an integral part of poverty eradication efforts and as such are extremely important to any dialogue concerning the Americas, including the free trade agreement. The Declaration placed the goal of a free trade agreement for the Americas squarely within the context of a broader commitment to prosperity, reduction of inequality and poverty, and balanced development. The plan of action covers health under its rubrics on environment, labor, drugs, indigenous health, and children, and deals specifically with health in chapter 14 featuring special commitments in equity-oriented health sector reform, communicable and noncommunicable diseases, and connectivity. In particular, HIV/AIDS was highly prominent both in the statements and discussions among the leaders, and in the specifics of the plan of action. The plan also refers to mental health, the virtual health library, and the prevention of tobacco-related diseases. Overall, health issues achieved a very high profile in the Quebec Summit, and the Director of PAHO had the opportunity to address the political leaders and participate in their discussions.

As globalization, democratization, and decentralization have progressed in recent years, it has become increasingly important for international organizations, countries, and civil society organizations to collaborate and enhance each other's efforts and initiatives as well as to avoid duplication of efforts. The "Shared Agenda for Health in the Americas"—signed in June 2000 by the Pan American Health Organization, the World Bank, and the Inter-American Development Bank—is just one example of recent collaborative efforts. Summits help streamline and coordinate cooperation by stimulating countries to work together in the time-honored spirit of Pan Americanism. The plans of action of the Miami and Santiago Summits enabled PAHO to mobilize approximately US\$50 million from partners in the United States, Canada, and Europe (Denmark, Norway, Spain, Sweden, and the Netherlands). And PAHO will receive close to CAN\$20 million from the Canadian International Development Agency for communicable disease prevention and control, as a result of the plan of action of the third Summit.

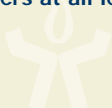


Working with Religious Groups

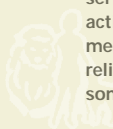
Communities of faith play an important role in the pursuit of health throughout the Americas. They conduct a range of health promotion and disease prevention programs, among them those dealing with HIV/AIDS, drug abuse, maternal and child health, and care of the elderly. In hard times and among populations suffering economic constraints, faith groups can be particularly effective, since they work directly with local communities. Their experience and the information derived from it can help inform decisions made by health workers at all levels.



Native American Church of America



Unitarian Church flaming chalice



Reorganized Church of Christ of Day Star



Christian Science cross and crown



Christian Reformed Church



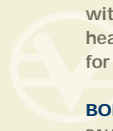
Aaronic Order of the Church



Atheist



United Moravian Church



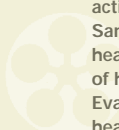
United Church of Religious Scientists



Konkō-Kyō Faith



The Church of World Messianity (sunome)



Tenrikyō Church

The Pan American Health Organization has emphasized the need to mobilize all social institutions working to improve health conditions in the Americas. Religious organizations, given their close relationship with communities and population groups, are particularly well positioned to enhance and protect human life and health. To foster cooperation with these organizations, PAHO held a consultative meeting (March 1998) that yielded a strong consensus that the time and conditions were ripe for joint activities in health. Since then, PAHO and the Episcopal Council of Latin America (CELAM) have been collaborating on projects to reduce health inequities, promote human development, and improve health conditions in the Region, including participation in CELAM's Third Conference for Latin America and the Caribbean (Dominican Republic, 1998) and the conduct of a course in Bogotá on health, human rights, and conflict resolution (July 2001). Relations have been established with the group, Christian Connections for International Health, and a program is being organized to work with religious institutions to exchange health services information and develop other joint activities. PAHO has also sought ways and means of promoting collaboration with religious organizations in the countries, some summary highlights of which follow.

ARGENTINA

Together with the Ministry of Foreign Affairs and its Religious Affairs Office, PAHO sponsored an event (December 2001) aimed at strengthening the relationships between state social service entities and religious organizations. More than 130 participants representing some 90 social and religious organizations—including Catholic, Protestant, Jewish, and Muslim groups—addressed issues such as health care management, human resource development, and the ethical and humanitarian role of religious groups in health reform processes.

BAHAMAS

The country celebrated PAHO's Centennial with an ecumenical service that stressed health promotion and raised money for the national cancer society.

BOLIVIA

PAHO has supported the creation of interreligious groups that facilitate and promote health activities, encourage self-care, and train religious leaders to prevent diseases and promote health. The Organization helps coordinate these activities in La Paz, Cochabamba, Chuquisaca, Santa Cruz, and Potosí. Other efforts involve health information campaigns, production of health education materials with the Evangelical Church, and improvement of health care quality with the Catholic Church.

BRAZIL

Working closely with the Ministry of Health, PAHO has collaborated on a number of programs organized by religious institutions. Of particular note is the Pastoral da Criança, developed by Catholic and other religious organizations in the states, that has had a significant impact in reducing infant mortality in the poorest areas of the country. PAHO also worked with the Institute of Religious Studies on a project, Odo-yá, to educate Afro-Brazilian groups about HIV/AIDS. Representatives from various churches met (Brasília, 1998) and issued a declaration committing to develop and coordinate activities to improve health conditions in the country. PAHO met with the Latin American chapter of the Union of Christian Entrepreneurs, which decided to increase its support of workers' health and better working conditions.

CHILE

PAHO has collaborated with the Ministry of Health and the Adventist Church to conduct smoking cessation campaigns and coordinate World No-Tobacco Day and with a Jesuit organization, Hogar de Cristo, in support of homes for the elderly poor.

COSTA RICA

PAHO has worked with several religious organizations that have come together as a permanent committee, the objective of which is to prevent and control HIV/AIDS. The Catholic Church has set up a House of Hope to assure terminal patients deaths with dignity; its Samaritans of Love help meet the needs of hospitalized patients; and priests perform "silent parish work" discreetly caring for the sick and their families. The Evangelical Church broadcasts radio and television messages, provides its ministers training on how to deal with AIDS patients, and, together with the Episcopal Church, has created an asylum for them.

DOMINICAN REPUBLIC

PAHO has collaborated with the Church of Jesus Christ of Latter-Day Saints in conducting a national survey of the strategy for the integrated management of childhood illnesses (IMCI), distributing equipment to primary health care services, and arranging missions of public health students from Brigham Young University to perform community service and research in the country. Application of the IMCI strategy has also been the focus of PAHO's association with the Order of Malta and Project Hope in the Dominican Republic, where the quality of care of children five years and younger has markedly improved.

HAITI

PAHO has worked with a network of reformed churches for health that is active

in programs for prevention of sexually transmitted diseases and HIV/AIDS, immunization, family planning, and teenage pregnancy. With the Catholic Church, the Organization launched another network for health that has explored the Church's role in the health sector, ways of enhancing its health institutions, and application of the IMCI strategy throughout the country.

JAMAICA

PAHO-sponsored qualitative research on the role of religious organizations in promoting and protecting health in Jamaica found that they do indeed offer many valuable services—medical examinations, screening for hypertension and diabetes, education about safe sex and substance abuse, among others. It further found that these organizations could be even more active in advocating prevention and control of sexually transmitted diseases, providing perinatal care, screening for cancer, and promoting proper diet and exercise. Because of the demonstrated success of religious organizations in enabling and empowering communities to improve their health, the researchers recommended that governments and nongovernmental organizations support and strengthen their endeavors.

PANAMA

PAHO has recruited religious groups as agents of its initiative "Recognize Depression and Confront It," training its members to identify individuals who are depressed and counsel them to seek health care. Today, practically every religious organization in the country—Catholic, Episcopal, Methodist, Baptist, Hossana Missionary, Indostan Society, Lutheran, Church of Jesus Christ of Latter-Day Saints,



Baha'i, Focolares, and Sai Baba—is using its networks to disseminate information about the initiative and incorporating PAHO's training materials in media outreach efforts.

PERU

The Organization has struck alliances with a number of religious groups in the country. PAHO disseminates health information, provides training, and undertakes career development programs for nurses together with San Camilo Institute and the MSC Cristóforis Deneke Institute. With PAHO's assistance, the Church of Jesus Christ of Latter-Day Saints donated basic equipment to eight primary health care services for the highly dispersed population of Huancavelica—one of Peru's poorest departments. For its part, the Pan American Center for Sanitary Engineering and Environmental Sciences, CEPIS, is helping the Social Works Center of the Chimbote Diocese develop one project to improve the water supply system and another to enhance and monitor the operation of a hospital-wastes incinerator.

SURINAME

A PAHO initiative to build effective, health-promoting relationships among religious groups in Suriname resulted in Hindu, Jewish, Christian, Muslim, and Baha'i groups in the country forming an Inter-religious Health Committee. The committee has published a common mission, vision, and set of health statements on nutrition, hygiene, family life, and social behaviors as well as an array of publications on religious ideas and practices regarding healthy lifestyles. Member groups, comprised of community leaders, participate with PAHO in safe blood initiatives, community marches, an AIDS-patient care conference, and other health campaigns. Recently, religious leaders met to discuss the dengue epidemic and propose activities to stanch its spread.

TRINIDAD AND TOBAGO

PAHO is working with SERVOL, a nongovernmental organization established by the Catholic Church, that provides pre-school education at its early childhood learning centers and vocational training at its community centers. PAHO's contributions included improving water and sanitation at the childhood centers and developing a method to screen vision and hearing.

■ In Panama, PAHO's publications on health promotion are being used by nuns working with local communities and by church authorities such as Archbishop José Dimas Cedeño.

“Our cautious but firm approach to religious institutions is another example of our willingness to seek new alliances and new partners in society, always with the specific aim of furthering the cause of health.”

—Dr. George Alleyne



Christian



Lutheran cross



United Methodist Church



Episcopal cross



Mormon Angel Moroni



Russian Orthodox cross



Serbian Orthodox



Native American Church of America



Unitarian Church of America



United Church of Christ



Christian Science cross and crown



Christian Reformed Church





Administering Resources



The resources available to the Pan American Sanitary Bureau at its outset are meager at best: a budget of US\$5000, borrowed staff and no permanent posts, not even a headquarters building. The first registered salary, that of an “executive clerk,” appears in the Bureau’s 1921 budget, which by then has quadrupled to US\$20,000. Still, the staff remains small, and “travelling representatives” perform most of the Bureau’s work throughout the 1920s. Successive directors appeal to successive meetings of the Organization’s governing bodies for budget increases to enable the Secretariat to enhance cooperation with the countries in efforts to meet their health needs.

The positive response to those appeals and the return on the countries’ increasing investments do not go unnoticed. In 1933, then director Dr. Hugh S. Cumming, claims that: “Fourteen years ago, the Pan American Sanitary Bureau existed in name only. Today its influence is felt not only in the countries of the Americas but throughout Europe.” For his part, the president of the United States, John F. Kennedy, echoes the sentiments of other heads of state in 1962 in celebrating an earlier anniversary of the Organization: “Throughout the 60 years since its founding here in Washington, the Pan American Health Organization has served the health of the people of our hemisphere. Thanks to its vigorous leadership and the active cooperation of the 21 American Republics, many millions of Americans have been protected against malaria, yellow fever, smallpox, and other scourges of mankind. Today, it is a pleasure for me to salute your distinguished past as the world’s oldest international health organization and to wish you every success in your continuing efforts to build a healthier hemisphere.”

The history of the Organization is one of adjustment to the times. Given the subsequent explosion of information technology, for instance, the prediction in 1969 of then director Abraham Horwitz that “computers would surely have some role to play in health administration in the Americas” proves prescient. He then establishes at PAHO’s headquarters a special section “charged with promoting computer science throughout the Region as well as with supportive functions for both the technical and the administrative activities of the Organization itself.”

Today, a zeal for recruiting outstanding personnel, streamlining operations, and maximizing cost benefits has earned the Bureau a reputation as one of the most efficient of international bureaucracies at the effective service of member countries.

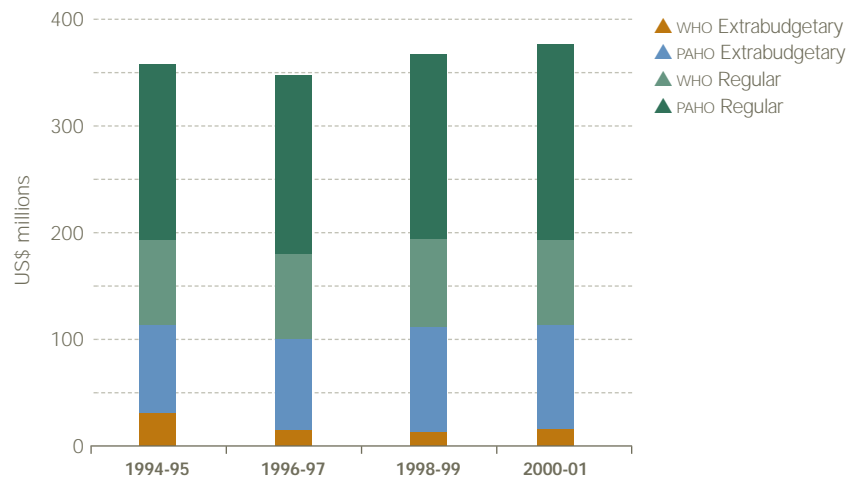




Budget

The Organization's Member Governments provided regular budget increases for both 2000-2001 and 2002-2003, which has made it possible to cover fully the cost of post increases.

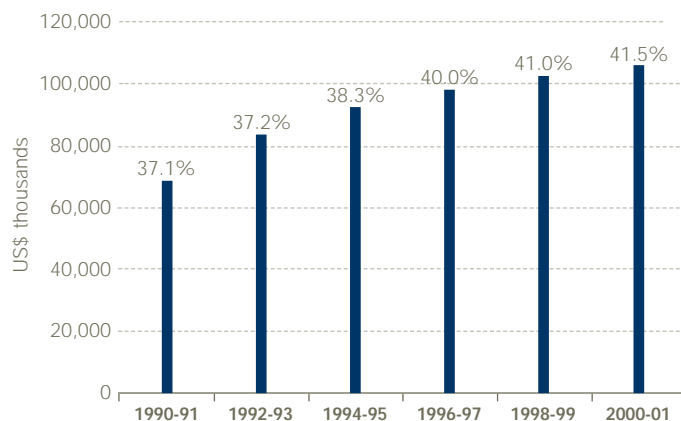
The PAHO and WHO (for the Americas) regular budgets and extrabudgetary funds for the past four biennia



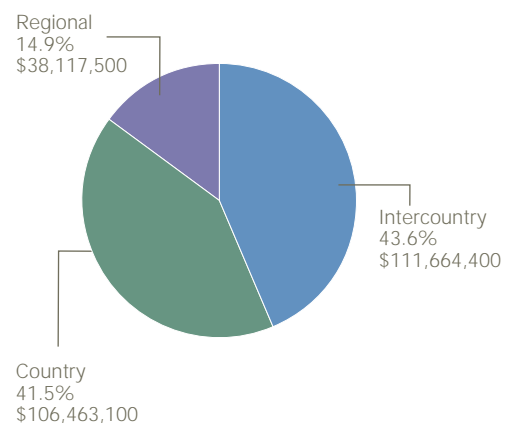
The Secretariat has enhanced its delivery of technical cooperation to the countries through innovative approaches to its work and a sustained search for efficiencies that have saved the Secretariat time and the Organization money. As a result, paho has kept administrative service costs low, making it possible for more funds to be channeled to technical cooperation.

The allocation of paho's regular budget directly to the countries has steadily trended upward—from 37.1% in 1990-1991 to 41.5% in 2000-2001. Taking into account country, intercountry, Pan American Center, and regional programs, some 85% of the regular budget directly supports work in the countries.

Allocation of the regular budget directly in support of the member countries (amount and percentage of total budget)

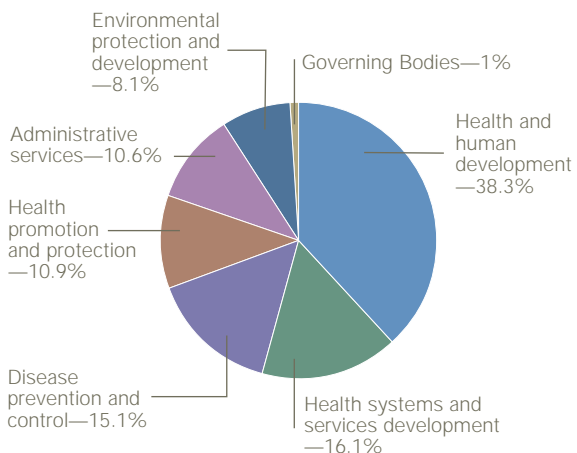


Distribution of the PAHO/WHO regular budget by organization level, 2000-2001

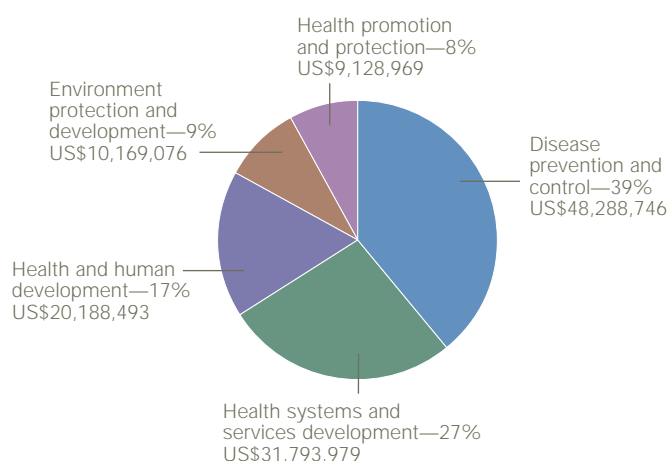


paho's strategic and programmatic areas receive the lion's share of the regular budget—88.4%—and are the sole target of paho and who extrabudgetary expenditures.

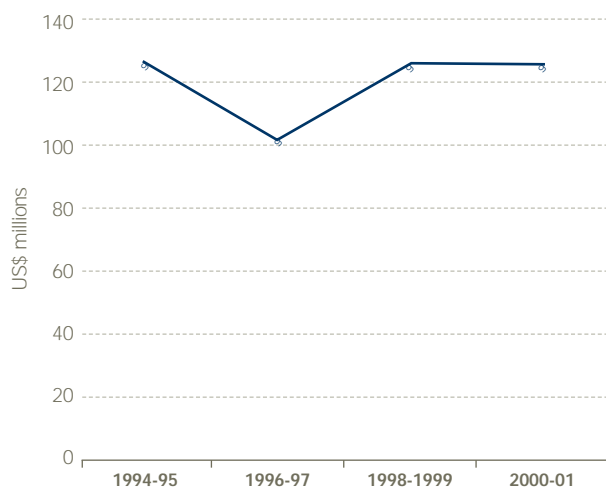
Distribution of the PAHO/WHO regular budget by major areas of appropriation, 2000-2001



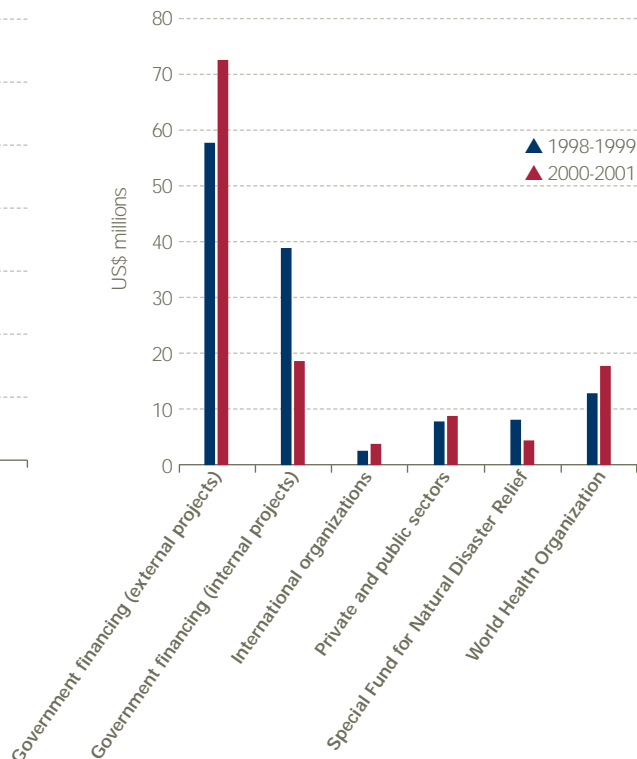
PAHO and WHO extrabudgetary expenditures by strategic and programmatic orientation, 2000-2001



Trends in PAHO/WHO extrabudgetary funding



PAHO/WHO extrabudgetary funds by source



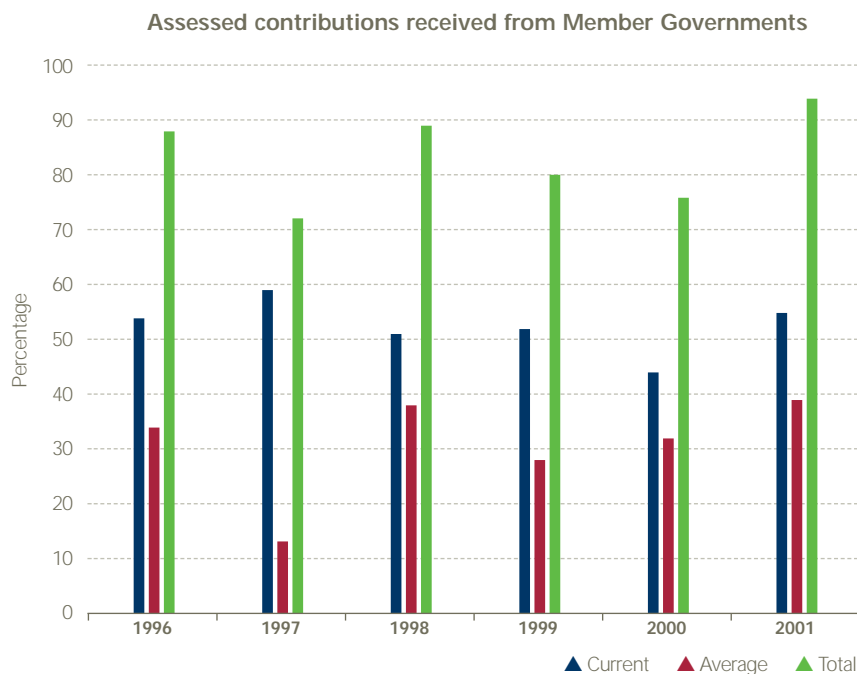


Finance

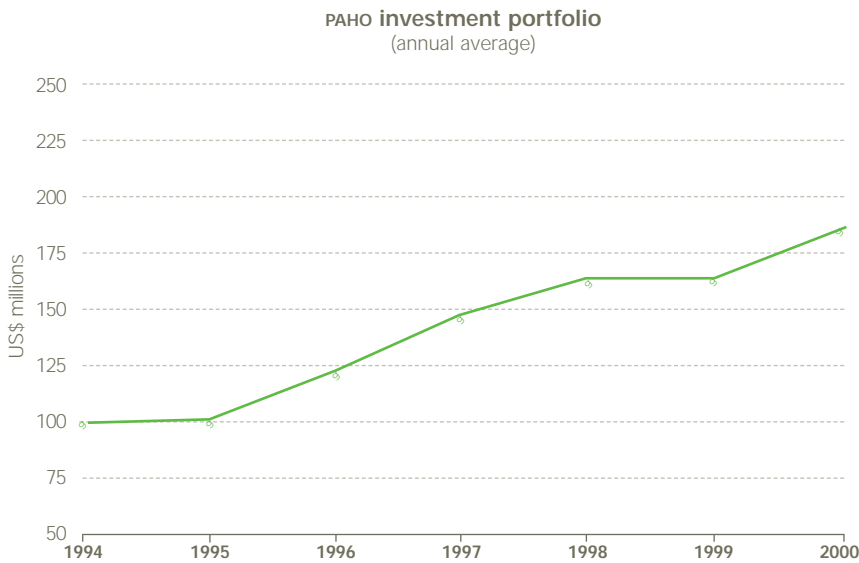
The Secretariat's Finance Section undertook a number of creative measures to enhance the efficiency of its operations and the service it provides both the member countries and paho staff. In addition to its customary functions, the unit responsible for payroll, pension, and taxes took advantage of electronic systems to streamline the reporting of earnings to the internal revenue service of the United States, to make tax payments more efficiently, and to assist staff in projecting pension entitlements. The unit also assumed responsibility for processing income tax reimbursements for 240 who employees subject to us taxes.

To facilitate the payment of medical treatment of paho field staff, the unit responsible for staff health insurance signed contracts with hospitals providing for 20% payment of invoices by individual staff members and the 80% balance by the Secretariat. Staff in Argentina, Colombia, Honduras, Jamaica, and Paraguay are already benefiting from this service, and similar contracts are being negotiated with hospitals in other countries.

The treasury unit handled receipt of quota contributions and invested the Organization's funds. The graphs on these pages indicate the record of quota collection and the return on investment of the Organization's funds.



Over the past six biennia, accounting activity related to purchases for Member Governments increased tenfold, without any staff increase in the Secretariat's accounts unit thanks to streamlining and other efficiencies.



“Considering the current interest rate environment and taking into account paho’s investment guidelines, the Organization is clearly maximizing the return on its investments.”

*—A senior investment official
at a prestigious international bank*

By instituting the use of procurement and travel credit cards—one of the most important administrative innovations in recent years—the unit responsible for staff and commercial payments streamlined related operational processes and saved the Organization tens of thousands of dollars. Significant savings continue to be attained as a result of changes in travel reimbursements.

Partners' Honor Roll

Direct Contributors to the Pan American Health Organization for Health Projects in the Americas, 1998–2001

MEMBER AND PARTICIPATING GOVERNMENTS

Antigua and Barbuda
Argentina
Bahamas
Barbados
Belize
Bolivia
Brazil
Canada
Chile
Colombia
Costa Rica
Cuba
Dominica
Dominican Republic
Ecuador
El Salvador
France
Grenada
Guatemala
Guyana
Haiti
Honduras
Jamaica
Mexico
Netherlands
Nicaragua
Panama
Paraguay
Peru
Saint Kitts and Nevis
Saint Lucia
Saint Vincent and the Grenadines
Suriname
Trinidad and Tobago
United Kingdom
United States of America
Uruguay
Venezuela

OTHER GOVERNMENTS

Denmark
Finland
Germany
Italy
Norway
Spain
Sweden
Switzerland

INTERNATIONAL ORGANIZATIONS

Caribbean Commonwealth Secretariat
Caribbean Council for the Blind
Caribbean Development Bank
Companions of the Americas
European Union
Inter-American Development Bank
International Bank for Reconstruction
and Development (World Bank)
International Decade for Natural
Disaster Reduction
International Labor Organization
International Society for Infectious
Diseases
Organization of Petroleum
Exporting Countries Foundation for
International Development
Organization of American States
Organization of Eastern Caribbean States
United Nations Children's Fund
United Nations Development Program
United Nations Disaster Relief Office
United Nations Environment Program
United Nations International Strategy
for Disaster Reduction
United Nations Institute for
Training and Research
United Nations Office for Project
Services
United Nations Population Fund
United Nations Joint Program on
HIV/AIDS
World Health Organization

PRIVATE AND PUBLIC SECTOR ORGANIZATIONS

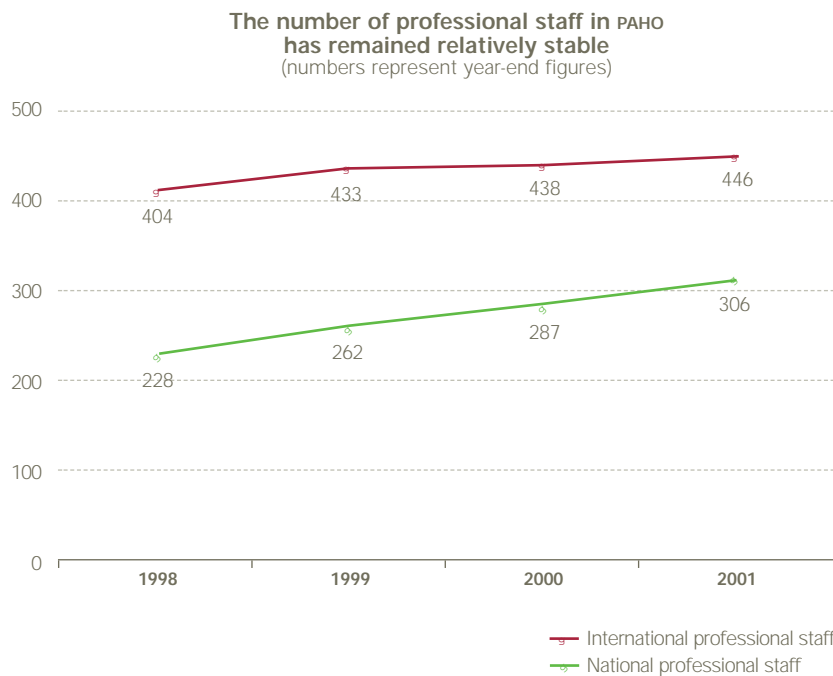
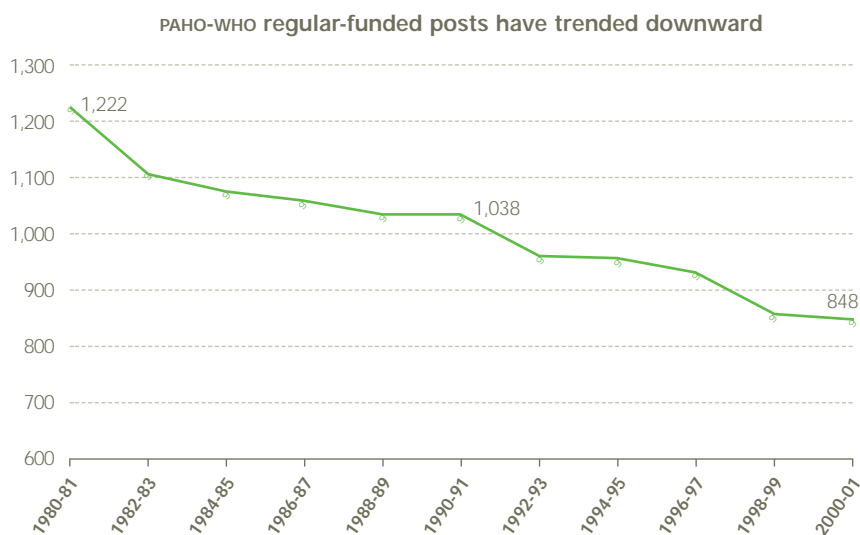
Academy for Educational Development
Agency for Assistance
Development and Resources
American Cancer Society
American Red Cross
Bill and Melinda Gates Foundation
Butler Hospital
Carnegie Corporation of New York
Center for Health Policies Study
Chlorine Chemistry Corporation
Ciba-Geigy, Ltd.
Church of Jesus Christ of the
Latter-Day Saints
Declaration of the Americas

Edmonton General Hospital
Eli Lilly Foundation
European Federation of Networks
Ford Foundation
Global Alliance
Gorgas Memorial Institute
Health and Development
International
Helpage
International Association
of Infant Food Manufacturers
International Association
of Neurosciences
International Congress of Oral
Implantologists
International Diabetes Federation
International Life Sciences Institute
International Union Against
Tuberculosis and Lung Disease
Johns Hopkins University School
of Public Health
Leprosy Relief Work Emmaus
March of Dimes
Merck, Sharp, and Dohme International
Negri Institute (Italy)
NWO/Shared Netherlands
Novo Nordisk Pharmaceuticals, Inc.
Pan American Health
and Education Foundation
Plan International
Program for Appropriate
Technology in Health
Rockefeller Foundation
Rotary International
Royal Commonwealth
Society for the Blind
Sight and Life Task Force
SmithKline Beecham
Spanish State Society V Centennial
Studio Multicentrico Italiano
U.S. Cancer Pain Relief Committee
University of Texas
Upjohn International, Inc.
Visión Mundial
W. K. Kellogg Foundation
West Virginia University
Wellcome Trust



Personnel

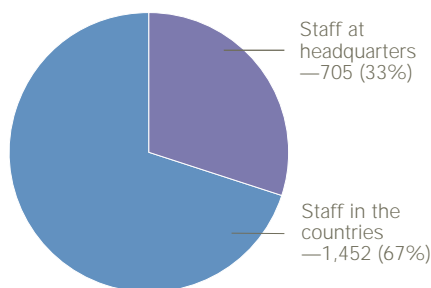
To fulfill its mandate, the Organization employs approximately 2,200 people under different types of contracts, including about 350 who are seconded from various ministries of health. Some two-thirds of these employees work directly in the countries of the Region supporting health-related activities and programs. Temporary employees supplement PAHO's workforce, making it possible to meet short-term staffing needs and carry out specific projects and assignments.



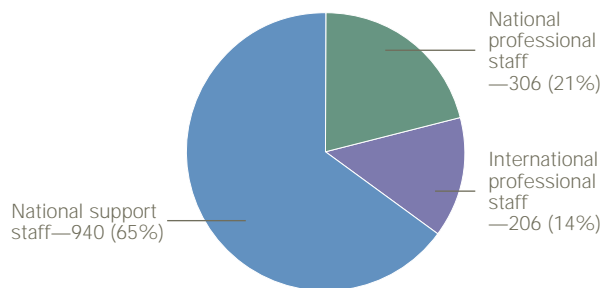
“To deliver the level of technical cooperation that the countries need and rightfully demand, we employ national professionals. That employment benefits the Secretariat, the countries, and—by providing opportunities to work in the international public health arena—the individuals themselves.”

—Dr. George Alleyne

Two-thirds of all staff work in the countries



Only 14% of country staff are internationals



To do more for the countries at less cost, the Organization continues to rely on national professionals to carry out many of its technical cooperation activities with member countries. These national professionals, numbering approximately 300, remain an integral part of the Organization's strategy of using well-trained local health experts to help carry out its country programs.

The employment of qualified female candidates also continues to be an institutional priority. Of paho's total professional staff, 45% are female—one of the highest rates in the United Nations system.

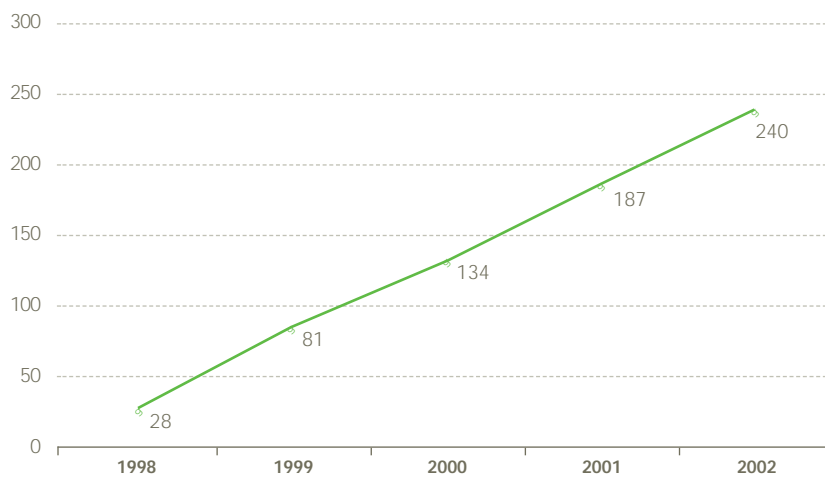
The heart of an organization is the people who serve it. Recognizing that, the Secretariat has experimented with a number of staff hiring and development innovations. It has sought ways to improve and accelerate recruitment, including the introduction of a web-based system that requires all candidates to apply for vacant positions online. It continues to invest in training and development opportunities to ensure that the staff's knowledge and skills remain current. Senior staff have taken management courses, and other staff have participated in courses and programs covering a wide range of areas. Because of the importance of balancing work and life demands, the Secretariat introduced paternity, bereavement, and compassionate leave; in addition, a study is being conducted on other work/life issues to further enhance staff productivity.

A new performance planning and evaluation system aims to ensure that staff resources are properly utilized and appraised; the system links results with work objectives, targeting the best possible level of performance and interaction between supervisors and those supervised by them. A new awards program recognizes meritorious levels of performance and service.

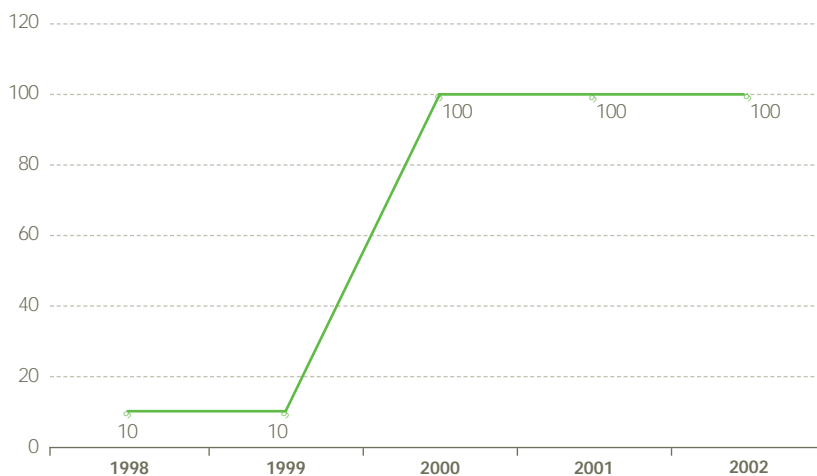
Management and Information Support

The Secretariat manages corporate information systems for program planning, monitoring, and evaluation; personnel; budget and finance; and procurement. It continuously refines these systems to improve institutional efficiency. It also manages a regionwide communications network using a variety of services and platforms, including the Internet and Intranet. This communications network facilitates the sharing and dissemination of information related to all facets of the Organization's work. In the past four years, the average communication bandwidths available to PAHO headquarters and field offices have increased by a factor of 10.

Bandwidth available to PAHO field offices
(expressed in kilobytes)



Bandwidth available to PAHO headquarters
(expressed in megabytes)



The Secretariat's Legal Services

- Advice and legal counsel to all parties of the Organization, including in regard to the application of national and international law to its programs and activities, as well as constitutional, administrative, and procedural matters;
- Drafting, review, and negotiation of contracts, treaties, agreements, resolutions, and other instruments that have legal implications;
- Representation and defense of the Organization before the Administrative Tribunal of the International Labor Organization and other judicial and quasi-judicial forums;
- Advice on the Organization's rules, procedures, and constitutional provisions and their applicability during Governing Body meetings and other contexts;
- Involvement in PAHO technical cooperation by virtue of the legal documents on the basis of which most of its extrabudgetary projects are carried out;
- Updating of the basic agreements that form the foundation of work in PAHO's member countries;
- Provision of legal support and advice related to technical cooperation, privileges and immunities, service contracts, administrative rules and procedures, personnel, finance, procurement, contracts, delegations of authority, health insurance, intellectual property, local law, relations with nongovernmental organizations, and issues related to emerging communication technologies; and
- Collaboration with technical units and other international agencies to promote international standards on protecting the human rights of people with mental illnesses.



General Services

After plans for construction of a new suburban paho campus fell through, the Organization undertook a four-year upgrade of its headquarters building, including the replacement of mechanical systems and the renovation of offices. Unlike many extensive renovation projects, the work was completed on schedule and within budget, thus conserving funds for technical cooperation.

The Secretariat continued to seek operating economies, absorbing a 6% cut in funding for headquarters general operating expenditures during the quadrennium through administrative efficiencies, including major savings in telecommunication and courier costs.

Central paho procurement increased from US\$171 million during 1994-1997 to US\$561 million for 1998-2001. Rather than the traditional focus on routine procurement for paho use, approximately 85% of all

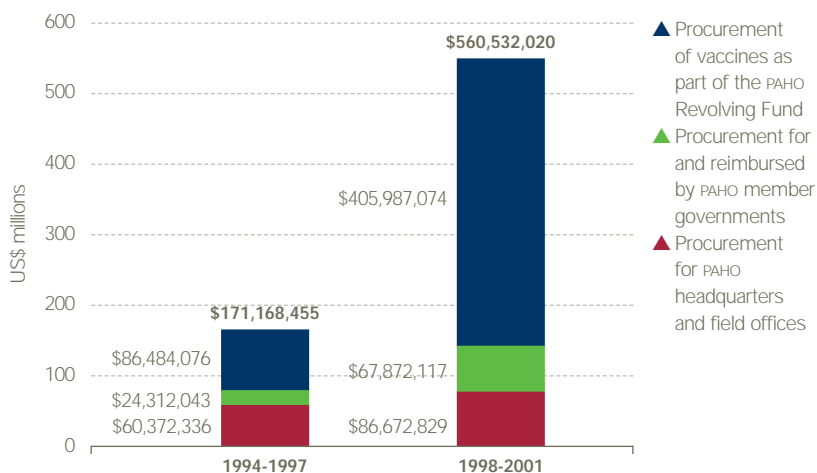
procurement is now done on a cost-reimbursable basis with paho acting as purchasing agent on behalf of Member Governments for items such as vaccines, pharmaceuticals, laboratory supplies, and insecticides.

paho's translation costs continue to be the lowest in the United Nations system, thanks to savings made possible by the Organization's machine translation software. A new user-friendly Windows version of the Spanish-English/English-Spanish systems was launched in 2000 and is now installed in 40 paho/who offices, regional centers, and national health authorities. paho staff members can obtain free draft translations quickly through the lan or the paho Intranet. The \$101,150 in license, training, and support fees received from 37 external clients is being used to add Portuguese, as both a source and a target language, to the service.

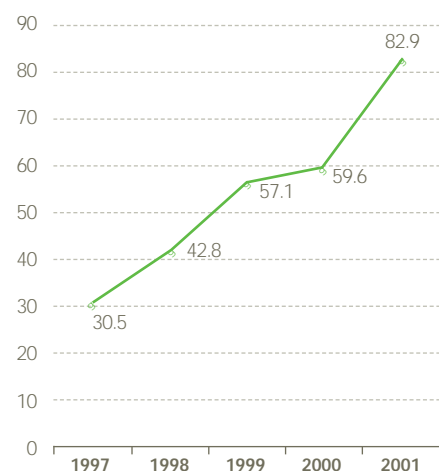


■ PAHO's machine translation software has increased the speed and reduced the cost of translation, while producing revenue that will enable further development of the service.

PAHO procurement more than tripled from one quadrennium to the next



Use of machine translation at PAHO headquarters trended upward (number of users—monthly average)



Public Information

The Organization created public information materials and used the mass media—television, newspapers, agencies, and wire services—to transmit crucial information on health topics to people throughout the Americas. Dozens of paho television messages on important public health issues, seen by millions of viewers on international television networks as part of a series of integrated campaigns, brought new awareness of public health in the Americas. These messages featured internationally known television star Don Francisco, urging viewers all over the Americas to donate blood; Brazilian cartoon character “Monica” asking people everywhere to “Stop Smoking Around Me” and warning of the dangers of second-hand smoke to children; and information about resistance to antibiotics, ways to fight dengue at home, the importance of physical activity, among other messages.

With fresh, modern graphics highlighting significant information on key subjects, paho reached ever-larger audiences, who were also able to see everything produced on the paho website at www.paho.org, in Spanish and English. Special posters, folders, calendars, publications, and related items helped spread the word about new initiatives of the Organization, ranging from the Inter-American Coalition to Prevent Violence to the Shared Agenda for Health, to tobacco-free sports, and many others. The Organization won prizes for its design work from groups such as the National Public Health Information Coalition and the International Association of Business Communicators. Its video on street children and aids

won a Silver Excellence award from Absolute Excellence in Electronic Media.

paho’s biannual magazine, *Perspectives in Health*, showed readers throughout the world the human face of public health. Through articles on such varied topics as antibiotic resistance, bioethics and health, and bioterrorism, the magazine highlighted the importance of the public health community to a growing audience.

Grassroots efforts also increased through direct alliances with such groups as the National Council for La Raza, Amigos de las Américas, the United Nations Association, and others. The Organization’s newsletter, *PAHO Today*, kept audiences abreast of its activities and programs, and its Speakers’ Bureau sent paho officials to speak to a wide variety of audiences on the Organization and its work.

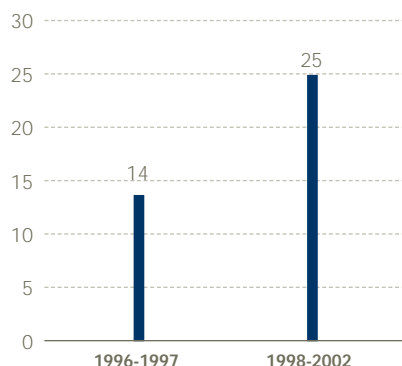
■ To commemorate its centennial in 2002, PAHO designed and prepared posters, bookmarks, special folders, and other materials.



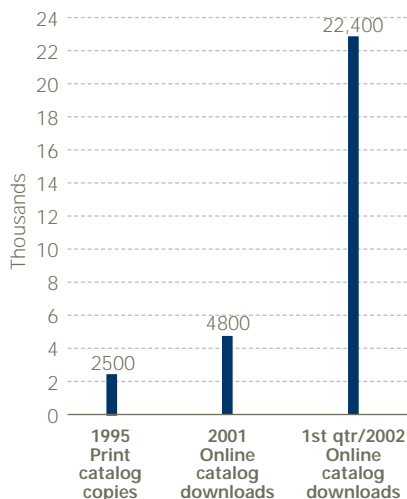


Scientific and Technical Information

Requests to reprint PAHO publications are on the increase
(annual average)



Awareness of PAHO publications has multiplied many times over



One hundred years ago, from 2 to 5 December 1902, representatives of 11 countries of the Americas met in Washington, D.C. as the First General International Sanitary Convention of the American Republics. The first of what would become a series of mostly quadrennial Pan American Sanitary Conferences, the Convention founded the International Sanitary Bureau, later the Pan American Sanitary Bureau and eventually the Pan American Health Organization/Regional Office for the Americas of the World Health Organization. From the very beginning, information was at the core of the institution's reason for being:

Resolution of the First General International Sanitary Convention of the American Republics to organize the International Sanitary Bureau

Whereas the Second American International Conference of the Pan American States, held in the City of Mexico, October 1901 to January 1902, provided that a sanitary convention convene in Washington within one year from the signing of the resolutions on sanitation and quarantine, and shall elect an International Sanitary Bureau, with permanent headquarters at Washington, for the purpose of rendering effective service to the different Republics represented in this convention: It is hereby

RESOLVED:

(a) That it shall be the duty of the International Sanitary Bureau to urge each Republic to promptly and regularly transmit to said bureau all data of every character relative to the sanitary conditions of their respective ports and territories.

Over the ensuing century, the constitutional mandate—to inform the member countries of health in the Americas—has remained constant. What has changed is the manner in which the Organization transmits its information.

“It is fitting to recall one of the objects of the Pan American Sanitary Code: ‘The stimulation of the mutual interchange of information which may be of value in improving the public health and combating the diseases of man.’ So it was in the beginning. So it should be forever.”

—Dr. George Alleyne



■ From cablegram to cyberspace—the Pan American Health Organization has used the technology of the moment to disseminate information of vital interest to the countries of the Americas. The latest electronic communication media offer the advantages of speed, breadth, and cost-savings. For a fraction of the cost and time of print publishing, PAHO is reaching a global audience via its website, www.paho.org—by mid-2002 over 75 million users.

Pan American Journal of Public Health



“The Pan American Journal of Public Health continues the impressive reputation of quality publications emanating from the Pan American Health Organization and the World Health Organization. Both institutions recognize the importance of disseminating information and the results of research, particularly from developing countries or of interest to the developing world.”

— Journal of the American Medical Association, June 1999

■ The *Boletín Panamericano de Sanidad de la Oficina Sanitaria Internacional*, today the *Pan American Journal of Public Health*, is the oldest journal of international public health. Issued monthly without interruption since May 1922, the Journal continues to offer a forum for researchers throughout the Americas to publish their findings and, thereby, to enrich the community of scientists worldwide. In recent years, the broadcasting of the Journal via a number of electronic portals—including Ingenta's prestigious CatchWord—has significantly enhanced the potential impact of its authors' work. Today the Journal is indexed in Index Medicus, Index to International Statistics, Cambridge Scientific Abstracts, Biological Abstracts, Congressional Information Services, among others. It is ranked “A International”—the highest level classification given a journal—by the Brazilian Government's Ministry of Education through the Fundação Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES).

Regardless of the delivery mechanism, it is the quality of its content that has established paho as the premier publisher on matters of health in the Americas. The Organization has originated classics in the field—from the first *Boletín Panamericano de Sanidad*, today the *Pan American Journal of Public Health*, to the three editions of *Zoonoses and Communicable Diseases Common to Man and Animals*, and the quadrennial series *Health in the Americas*. Because of the excellence of its productions, other publishers have proposed that the Organization copublish translations of their works.





■ PAHO's *Zoonoses and Communicable Diseases Common to Man and Animals* is used in veterinary schools throughout the world—from Sweden and Spain to Singapore and South Africa.

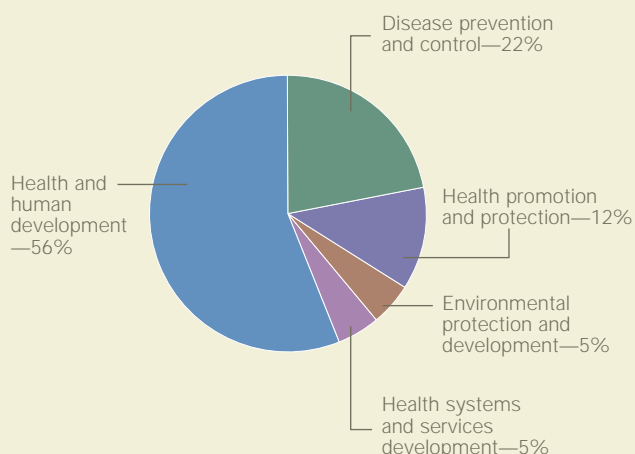
■ Among other areas of common work, the Organization and the World Bank share a publication agenda. PAHO has translated, at the Bank's request, a number of its titles.



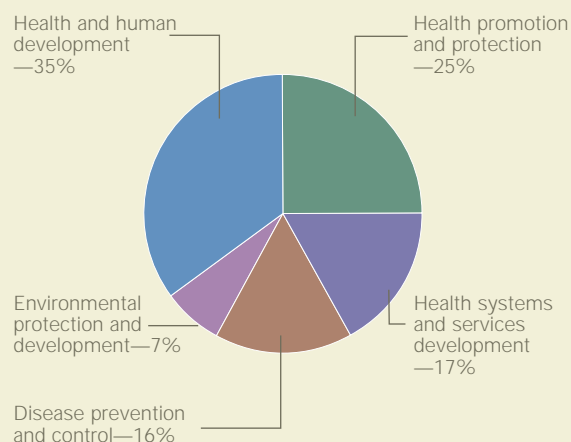
■ Since 1929, PAHO has issued translations—14 in Spanish and seven in Portuguese—of successive editions of the American Public Health Association's classic *Control of Communicable Diseases Manual*. With a pressrun exceeding 30,000 copies, the book is in demand by health authorities, libraries, universities, and individuals from throughout Latin America, the Caribbean, Spain, and Portugal.

PAHO information dissemination mirrors the principal strategic

Distribution of content published in the PAHO book series, 1998-2002 (14,153 pages)



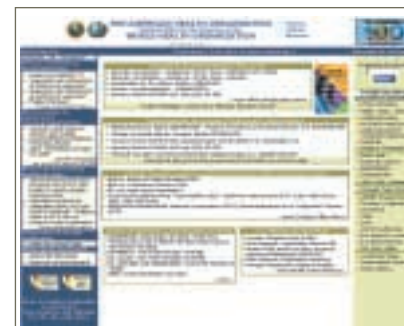
Distribution of content in the *Pan American Journal of Public Health*, 1998-2002 (3235 pages)



The outreach of paho's website has grown exponentially. In addition to the 75 million visits to the site, by mid-year 2002 more than 8000 other websites are linking to paho's. Because of the site's wealth of content and broad reach, numerous national and international entities have sought collaborative arrangements with paho. One of the most recent such arrangements is with the Laboratory of Applied Research in Computational Linguistics (rali), affiliated with the University of Montreal, which is using paho's website as the source for its linguistic database on health.

By taking advantage of electronic communication networks, paho is marketing and distributing its information products and services to ever-larger and more far-flung audiences—and in the process apprising a global public of the work of the Organization. Market research has resulted in production of an online version of the *Pan American Journal of Public Health*, has informed decisions regarding editorial topics and formats, and has enabled better targeting of outreach efforts.

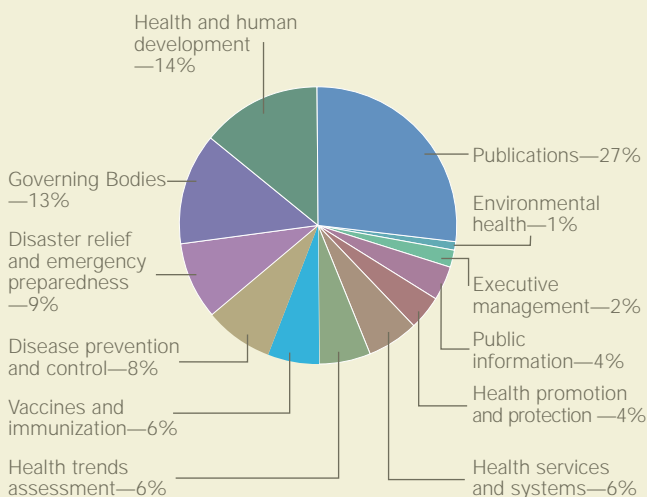
paho publications are being used to build capacity in the countries: *El cuidado del enfermo terminal* and *La salud y los derechos humanos* are basic titles in an online course on bioethics; Argentina's virtual hospital network features *Hipertensión clínica*, *La obesidad en la pobreza*, and *Conocimientos actuales sobre nutrición*; and ministries of health are using paho titles to train health workers within the framework of health sector reform. Among recent requests to reproduce and translate paho's publications are: Proctor and Gamble—to reprint 20,000 copies of an article in the *Pan American Journal of Public Health*; India—to reprint 1000 copies each of *The Challenge of Epidemiology* and *Diagnosis of Malaria*; Nicaragua—to reprint



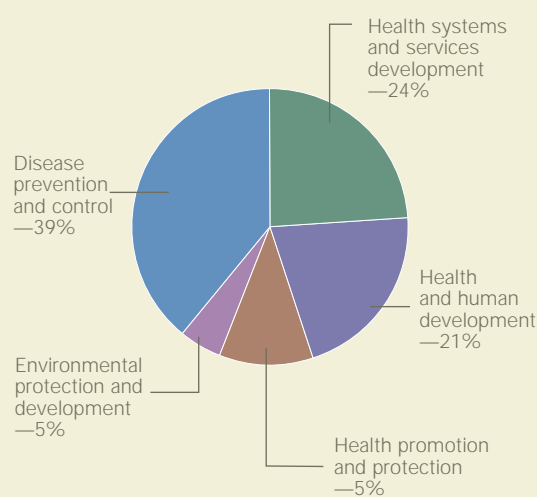
■ The Secretariat has created an internal communications forum, the PAHO Intranet, that enables staff to publish materials of interest to the community—at headquarters and in field offices—and in turn access information on a wide range of work and life issues.

and programmatic areas in which the Organization works

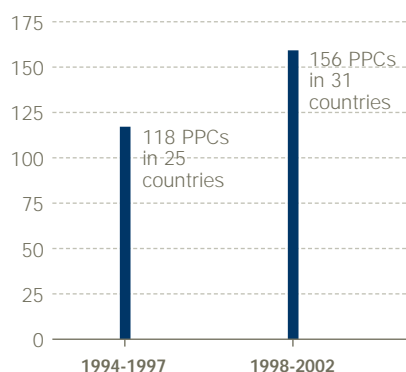
Distribution of content published on the PAHO website—
www.paho.org (57,500 files)



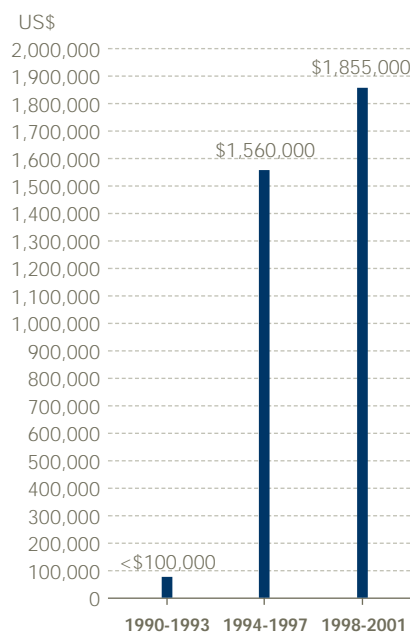
Distribution of content available via the
institutional memory database of the PAHO
headquarters library (6269 documents)



Growth in PAHO Publication Centers



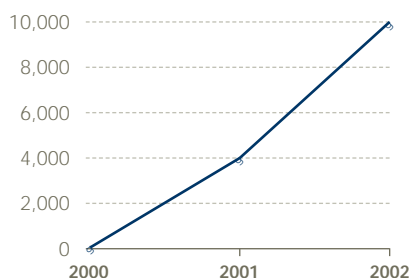
Sale of PAHO publications, 1990-2001



■ To make its publications available to those who otherwise would not have access or could not afford to buy them, the Organization created a network of PAHO Publication Centers in each of the countries of the Region. The marketing program has significantly increased revenues from the sale of PAHO publications over the past decade, which are used to cover printing costs—thus reducing the amount of funds required from the regular budget.

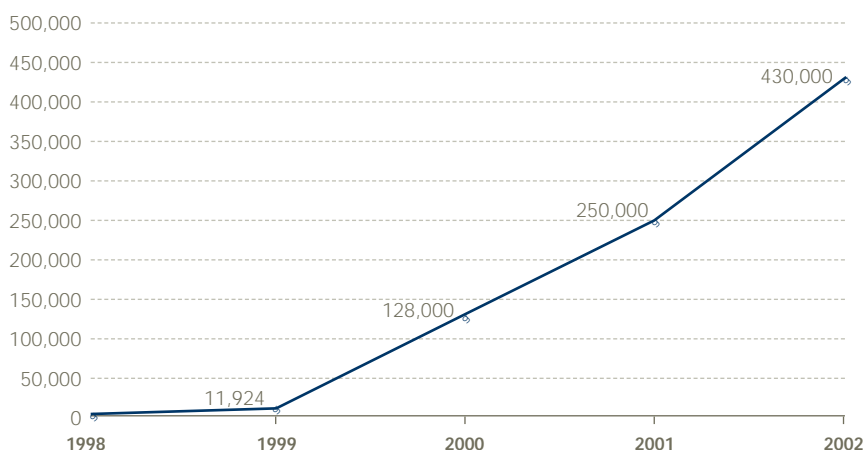
La erradicación del sarampión; Argentina—to reproduce 2500 copies of *Dengue y dengue hemorrágico en las Américas*; and the translation into Italian of *Women's Way Out*; into Russian, Japanese, Vietnamese, and Bengali of *Natural Disasters*; into Russian of *Health Service Organization in the Event of Disasters*; and into French, Arabic, and Bengali of *Zoonoses and Communicable Diseases Common to Man and Animals*.

Number of full-text institutional memory documents available online



■ By creating a database of its holdings—the most significant component of which is the full-text institutional memory—the headquarters library provides electronic access to PAHO's historical collection and its current documentation. Moreover, electronic dissemination has greatly reduced photocopying costs.

Number of images of the PAHO historical collection available electronically





Strategic Planning

Every organization should, from time to time, question its identity, its reason for being, and its performance. Even successful organizations—or perhaps especially those—need to relegate the achievements they have attained to the past where they belong. They should view the present as a point of departure, and, to be relevant in the future, they should craft a strategic plan.

Over the century of its existence, the Pan American Health Organization has enjoyed a record of successive accomplishments. With paho's leadership, the Americas was the first region in the world to conquer smallpox and polio, and today it holds the elimination of measles and rubella in its sights. No organization,

however, can afford to rest on its laurels. paho recognizes that, to position itself for a future as successful as its past, it must grapple with a host of societal changes.

In the most general of terms, the purpose of the Organization is, and has always been, to cooperate with the countries of the Western Hemisphere to improve the health of their citizens. The context in which that cooperation occurs changes over time. To assure optimal responsiveness to the needs and demands of the countries it serves, the Secretariat periodically assesses the forces and trends that affect the pursuit of collective health. The most recent assessment targeted elaboration of a strategic plan for the coming five years.

Values, Vision, and Mission

As a first step in crafting the strategic plan, the entire Secretariat deliberated the issues of organizational identity, direction, and work. Those deliberations resulted in a consensual statement of bedrock values, inspirational vision, and institutional mission.

Driving the Secretariat's vision are the principal **VALUES** of

- ♦ **Equity**—striving for fairness and justice by eliminating differences that are unnecessary and avoidable.
- ♦ **Excellence**—achieving the highest-quality performance.
- ♦ **Solidarity**—promoting shared interests and responsibilities and enabling collective efforts to achieve common goals.
- ♦ **Respect**—embracing the dignity and diversity of individuals, groups, and countries.
- ♦ **Integrity**—assuring transparent, ethical, and accountable performance.

Its **VISION** is to be the major catalyst for ensuring that all the peoples of the Americas enjoy optimal health and contribute to the well-being of their families and communities.

Its **MISSION** is to lead strategic collaborative efforts among member countries and other partners to promote equity in health, to combat disease, and to improve the quality of, and lengthen, the lives of the peoples of the Americas.



The strategic plan is an attempt to map the Secretariat's future course of action based on a thorough understanding of the forces driving change—principal among them globalization, the environment, and science and technology—and of the trends that impact its mission—in health and health care, politics and government, the economy, society and culture, the international development community, and a United Nations system undergoing reform.

The aim of the plan is to sustain and enhance the value the Secretariat adds in service to its membership by providing high-quality performance and responsiveness to change—by becoming the best it can be to fulfill its obligations in a challenging global environment. The plan contemplates a number of technical cooperation priorities—among them, prevention and control of diseases, promotion of healthy behavior, provision of safe physical environments, promotion of health in socioeconomic and development policies, and provision of universal access to integrated, equitable, and sustainable health systems. The plan also spells out critical issues for the Secretariat that target improving communications, use of technology, recruitment, planning, and performance. While providing a regional guide for the delivery of technical cooperation, the plan allows for flexible, relevant programming with individual member countries.

The course of any future can be altered by unforeseen obstacles and deterrents. Anticipating possible futures and preparing appropriate organizational responses to countries' evolving needs and demands entail risks. To minimize those risks, the enhanced planning process that the Secretariat has undertaken has proved innovative, introducing future-oriented tools and an organizational development component. It has analyzed the external environment and—for the first time—the internal context of technical cooperation in health.

Although many factors influence health, the Secretariat concentrates its efforts on those that fall within its mandate. It has questioned whether the trends that currently prevail will necessarily persist and has envisioned possible new scenarios. It has posited whether the services the Secretariat provides today will continue to be relevant tomorrow. And it has weighed the proper allocation of its resources and energies. On the basis of that experience, the Secretariat is presenting to the Pan American Sanitary Conference its strategic plan for 2003-2007.*

* The strategic plan, as approved by the Pan American Sanitary Conference in September 2002, will be available in full text online at www.paho.org as well as in print.