A HISTORY OF THE PAN AMERICAN HEALTH ORGANIZATION

PRO SALUTE NOVI MUNDI

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Pan Ameritan Health Organization
Pan Ameritan Sanitary Bureau,
Regional Office of the
World Health Organization

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IN PRO OF HEALTH IN THE NEW WORLD

Ninety years ago, on 2 December 1902, representatives of the countries of the Americas gathered in Washington, D.C., to organize a united front against the spread of pestilente and disease that engulfed the Region at the turn of the century. Their determination—both visionary and pragmatic—gave birth to what was to become the oldest, continuously functioning international health agency in the world, the Pan Ameritan Sanitary Bureau.

Since its founding the Bureau, which shortly before mid-century became the Pan Ameritan Health Organization, Regional Office of the World Health Organization for the Americas, has been the agent of many "firsts"—in providing direct technical cooperation to prevent, control, and eradicate diseases and to promote health; in stimulating research; in educating and training health workers; and in informing professional and the populace about the scientific, technical, and social aspects of health.

Over time, the scope of the Organization's work has widened: a focus on quarantinable diseases gave way to a primary care movement that crystallized the moral and political obligation of the countries to improve the health of all society, to reduce the gap between the health "haves" and the health "have nots." What have remained constant are the countries' shared vision and their concerted political will-their prevailing awareness of common interests, common concerns, and a common destiny and their unflagging commitment to find common solutions to their problems. That communality has steadily informed and nurtured the institution's growth and development.

The history of PAHO is replete with heroes—men and women of vision, determination, knowledge, and dedication. Over the generations, they have formed a pageant of mostly nameless movers and shakers that have blazed a trail of progress toward health for all. Yet, in the end, it is the institution, the Pan Ameritan Health Organization—a coalition of countries representing some 30% of the earth's land mass and some 14% of the world's current population—that has made the difference. Evidence of that difference are the untold millions alive and healthy today, significant decreases in the population's death rates and increases in their life expectancy, and the ongoing transformation of countries' health services. These achievements have been wrought in large measure through the cooperation of the Governments of the Region and the Pan American Health Organization.

This publication purports to tell that story. In researching it, we came to realize that a detailed history of the Organization would require tomes. That, evidently, is not the intention of Pro Salute Novi Mundi. What we have attempted to do is recount how the Organization has worked to fulfill its mission. We have done this in three parts. The first shows how PAHO addresses, through concerted action, major regional health problems, as exemplified by its response to the recent cholera epidemic. The second traces the progress of the Organization through the years. The last part focuses on special programs and priorities.

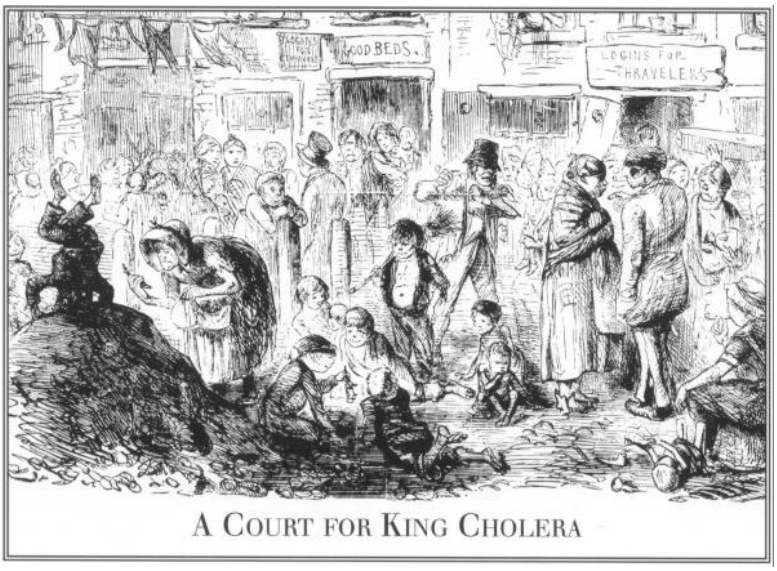
As we approach the third millennium, the principles upon which the Organization was founded and that have evolved over time represent a legacy that can be used to confront new problems and seek new solutions that will assure that our people lead socially and economically productive lives. To achieve that goal, we, like the original founders of the Bureau, will continue to dream . . . but, like them, we will do our dreaming with our feet planted firmly on the ground.

Carlyle Guerra de Macedo
Director

Through Concerted Action

PAHO AT WORK TODAY

THE CASE OF
CHOLERA



A COURT FOR KING CHOLERA

The countries of the world first began to organize their collective efforts to improve the health of their peoples in the mid-19th century Epidemics of cholera, plague, typhus, and influenza had ravaged populations since ancient times, and as far back as the 14th century countries had sought to defend their borders from the introduction of exotic diseases through quarantine of foreign persons and goods. Little was known, however, about the causes of individual diseases and the epidemics they triggered-an ignorance that frustrated attempts to stem their spread. The Industrial Revolution gave way to an explosion of international trade and, with it, boundless opportunities for the spread of infectious diseases.

The spur that was to unite countries in the combat to control diseases was cholera, an acute illness characterized by massive diarrhea and vomiting, rapid dehydration, shock, and—at that time—death in more than half of all cases. Known in Asia since remote times, this scourge first reached Europe in 1817, producing six successive pandemics that spanned a century. In response to the initial waves of Asiatic cholera, the First International Sanitary Conference was held in Paris in 1851. The achievements of that first meeting were slim, however, because, although the impact of the disease was clear, its cause was unknown.

Knowledge first came as a result of John Snow's findings regarding the 1854 cholera epidemic in London: "If the cholera had no other means of communication than those which we have been considering, it would be constrained to confine itself chiefly to the crowded dwellings of the poor, and would be continually liable to die out accidentally in a place, for want of the opportunity to reach fresh victims; but there is often a way open for it to extend itself more widely, and to reach the well-to-do classes of the community; I allude to the mixture of the cholera evacuations with the water used for drinking and culinary purposes, either by permeating the ground, and getting into wells, or by running along channels and sewers into the rivers from which entire towns are supplied with water."

John Snow

Snow identified how cholera was transmitted, showed that contaminated water played a major role in its spread, and demonstrated that it could be controlled. Three decades later, in 1884, Robert Koch identified the bacteria *Vibrio cholerae* as the etiologic agent of cholera.

These discoveries armed scientists and health workers with the knowledge needed to combat the disease. Time would prove, however, that knowledge alone was not enough to extend the health benefits of science to the world at large. If cholera was to be wiped out, nothing short of the political will of the concert of nations would suffice.

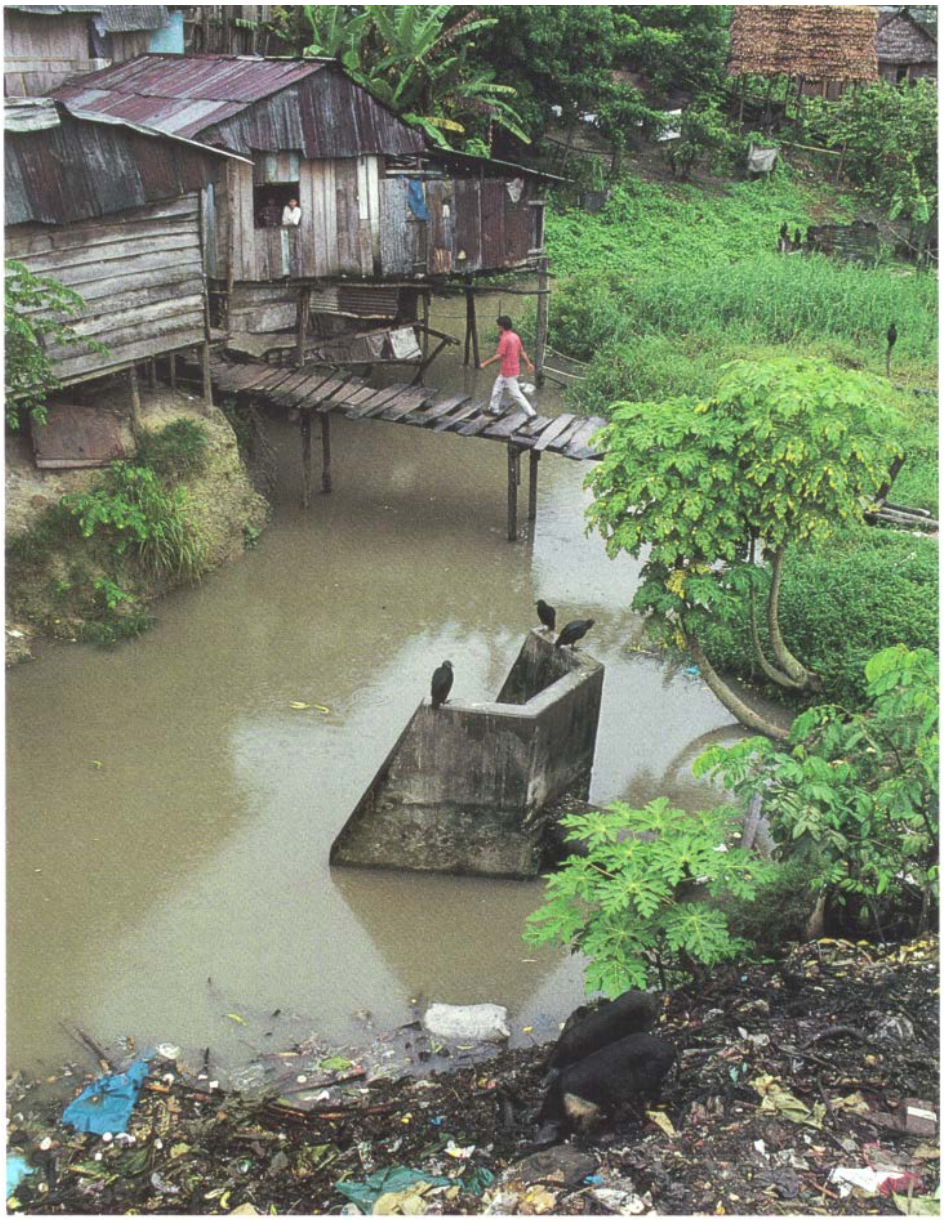
Robert Koch

The five pandemics of the 19th century afflicted all the countries of the Americas, but the Region was spared the sixth of 1902-1923 and had escaped the current seventh pandemic, which started in Indonesia in 1961, until l991. On 23 January of that year, an inordinately large number of persons—atypically, adults—fell prey to acute diarrhea in the small Peruvian coastal village of Chancay. The disease next broke out in Chimbote, another town along the coast, hospitalizing over 900 people in the first week.

The initial reaction among health workers, who in their lifetime had never seen a case of cholera, was bewilderment. A doctor at Hospital de la Caleta, Chimbote, describes what happened: "Cases of diarrhea are usually numerous during the summer among children, but the hospital doctors observed that in the last week of January diarrhea cases among adults multiplied day by day. The hospital's capacity was overwhelmed. The number of sick that arrived made it necessary for us to attend to them on cots, in the hallways, on mattresses, benches, and even chairs. None of us had a clear idea of what we were dealing with, because cholera was a disease of the poorest of countries, of the poorest of people."

Within a month, thousands of cases were being reported from throughout Peru, and before mid-year a major epidemic was under way. This modem-day scourge—the worst of its kind in this century—would eventually affect most of the countries of Latin America.

The cholera epidemic, with its burden of death and suffering, clearly reveals the huge deficiencies in the delivery of essential public services in Latin America: lack of safe drinking water, poor sanitation and waste management, and inadequate epidemiologic surveillance and health care. These deficiencies go hand in hand with the extreme poverty facing more than 40% of the population in Latin America and the Caribbean. Combined with lack of education, poor personal hygiene, and unsafe food handling habits, these factors have allowed cholera to join the list of communicable diseases entrenched in the Region.



The next few pages chronicle the Pan American Health Organization's efforts to collaborate with the countries of the Americas to prevent and control this latest pandemic. Through this chronicle, we hope to illustrate the way in which the Organization works, for this one story—PAHO's response to the recent cholera outbreak-exemplifies the quintessential institutional story of PAHO in action: many people, in many programs, in many places throughout the Region, pulling together to help the countries of the Organization in their time of need, when the health of their peoples is in jeopardy. In the face of cholera, PAHO is playing many critical roles-as agent of epidemiologic information, as catalyst in the coordination of technical expertise, as facilitator of social and technical communication, and as mobilizer of resources. What follows, then, is that story . ...

PAHO IN PERU: RESPONSE TO AN EPIDEMIC

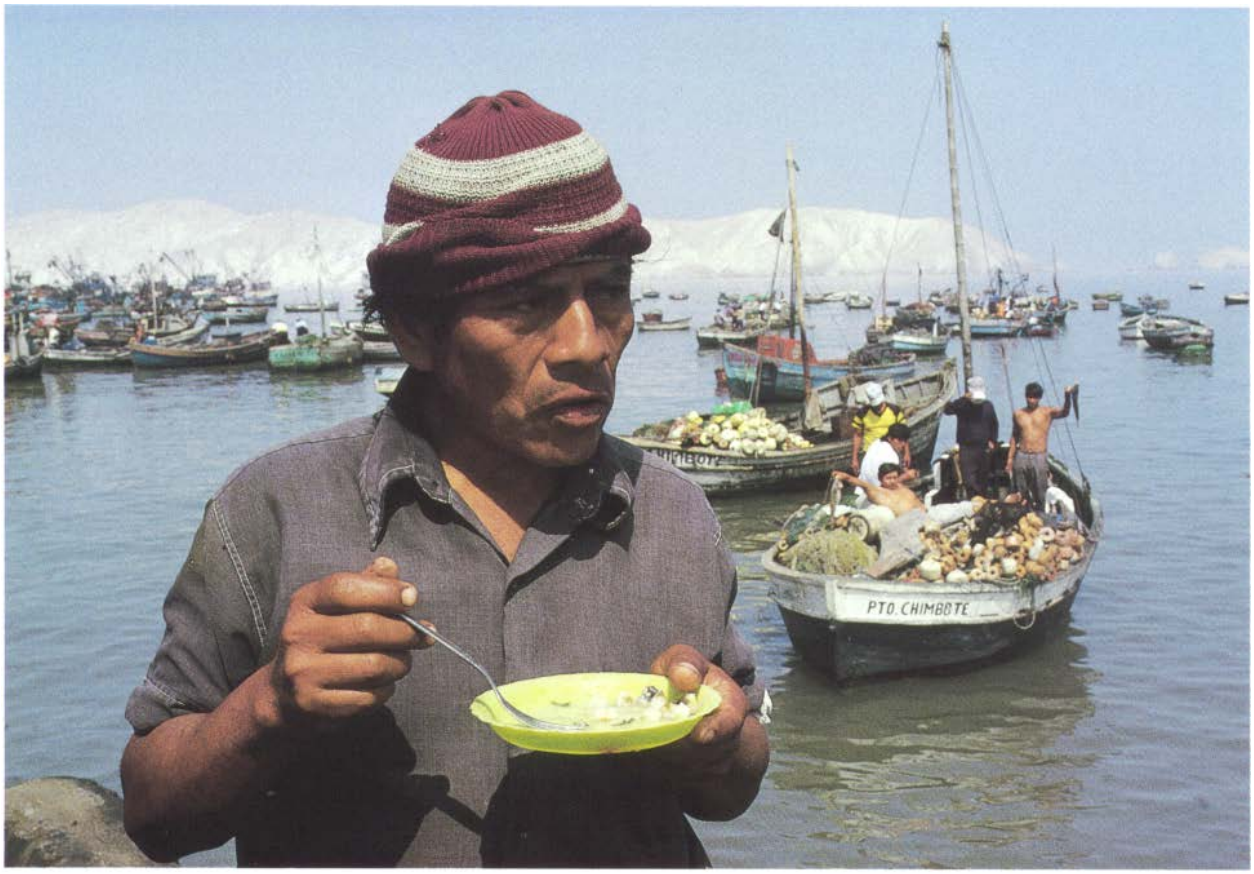
PAHO was first notified on 5 February 1991 of the cholera outbreak in Peru by the Minister of Health, who was in Washington, D.C., at the time attending a PAHO technical conference. To assure the Organization's coordinated and effective response to the problem, the Director of PAHO at once established an internal task force of experts to mobilize assistance in epidemiology, diarrheal disease, laboratory services, emergency preparedness and disaster relief, information, communicable diseases, environmental health, food safety, and research. From the outset, attention focused on determining Peru's needs for investigating the outbreak, supporting the country's efforts to control it, and alerting the international community.

In the meantime, the PAHO Country Office in Lima set up a team to work alongside Peruvian health authorities to confront the epidemic. A PAHO epidemiologist accompanied national counterparts to Chimbote to investigate the distribution of cholera, determine the factors implicated in its transmission, and assist the community in organizing health services.

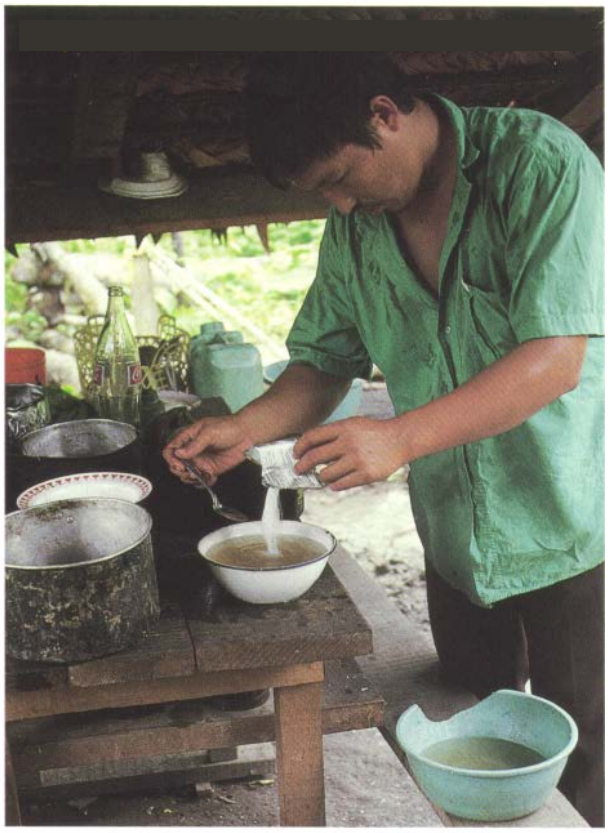
The epidemic drove home, in alarming terms, the truth of PAHO's basic message-without socioeconomic development there can be no health and, without health, social and economic progress will grind to a halt. Nevertheless, the devastation wrought by cholera in Peru would surely have proven far worse, were it not for a cumulative, decades-long experience—attributable in large measure to PAHO cooperation-in epidemiologic surveillance, environmental protection, food safety, and diarrheal disease control.

The background is telling. In 1978, when the World Health Assembly urged countries to strengthen measures to control acute diarrheal diseases, including cholera, Peru was one of the first to act. In the decade to follow, PAHO had trained all levels of health workers to manage cases of diarrheal disease. Together with the United Nations Children's Fund and the United States Agency for International Development, PAHO worked with the Ministry of Health in intense diarrheal disease control campaigns, setting up units to distribute oral rehydration salts packets and teaching pediatricians and the community how to use them. As luck would have it, some three million of these packets had just been distributed when cholera struck.

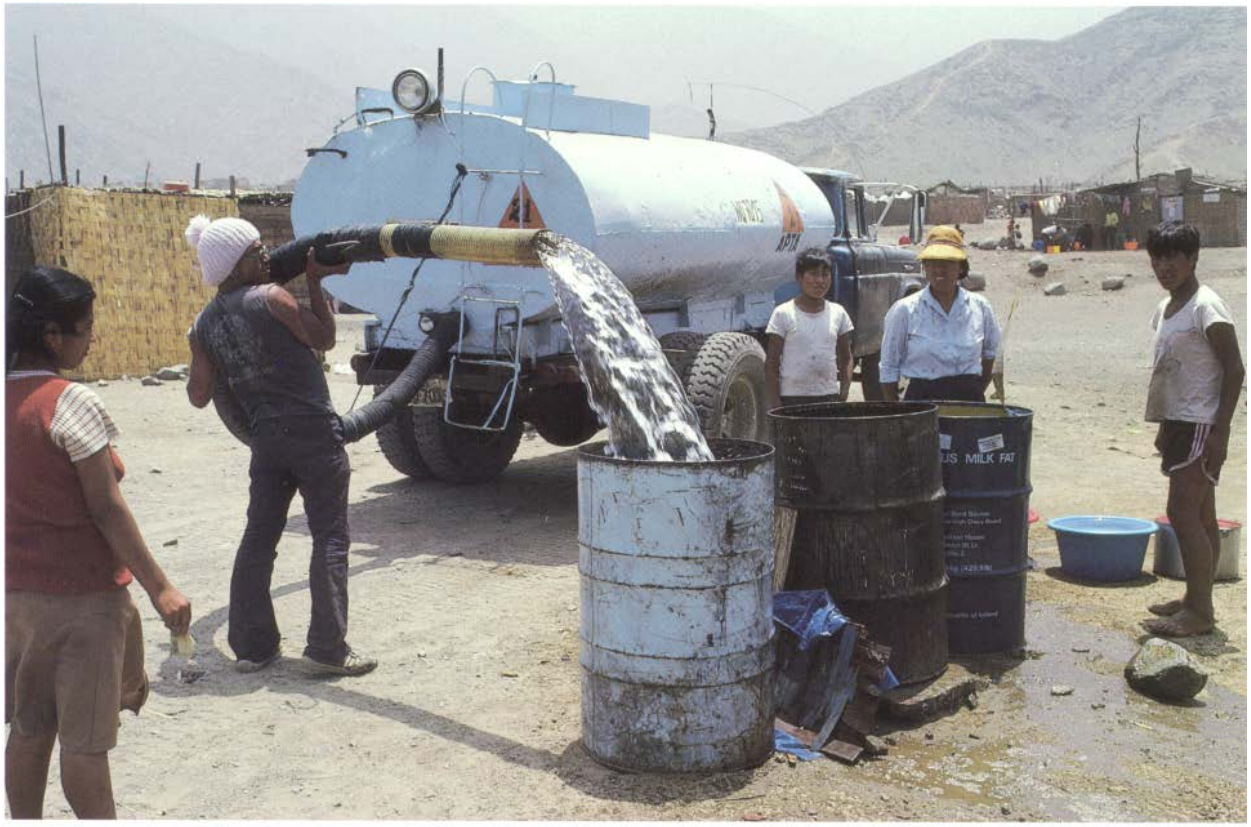
To prevent diseases like cholera, PAHO technical cooperation targets extending safe water and sanitation services to communities lacking them.



When cholera spread from Peru's coast to the tropical rain forest, diarrheal disease control efforts of the country, in collaboration with PAHO, paid off. Health promoters, who had learned to use oral rehydration salts, helped ward off the disease and save many of their neighbors' lives.



Disinfected water supplies are critical to preventing and controlling the spread of cholera. Since many communities receive their drinking water from tank trucks, the Pan American Center for Sanitary Engineering and Environmental Sciences in Lima, Peru, developed a cheap, simple, and locally produced technology called the "comparador"—a field tester that indicates the amount of chlorine in the water as a means of assuring that it is disinfected-and distributed thousands of them to people so they could directly determine the quality of their drinking water,



Providing technical information to deal with the disease became a top priority. PAHO staff translated WHO's Guidelines for Cholera Control; distributed modules on preventing and treating diarrheal diseases, including cholera; prepared a set of teaching slides on the epidemiologic and clinical characteristics of cholera, with a guide for their presentation; prepared information on environmental health measures; and offered information on laboratory and control procedures.

Declaring the situation an emergency, the Peruvian authorities appealed to the international community for some $US4 million to satisfy the most immediate medical attention needs: drugs, oral rehydration salts, intravenous solutions, disinfectants, hospital equipment, diagnostic laboratory equipment, and expert support. Then, while the Government attended to national and local needs, the PAHO Country Office played a critical role in coordinating external support-having gained considerable experience in recent years in managing large sums of resources to strengthen national and local health services.

The Office executed a $USl million project funded by IDB designed to promote health education, improve water quality, and support the local production of oral rehydration salts, as well as to provide essential hospital and laboratory supplies, and coordinated more than $USl million in emergency assistance from the Canadian International Development Agency, the European Economic Community, the Overseas Development Agency of the United Kingdom, the Netherlands, and Germany.

Peru used its national disaster program as the backbone of cholera management efforts. In support of those efforts, the PAHO Emergency Preparedness and Disaster Relief Program worked to facilitate intercountry and intersectoral cooperation and to assure emergency logistics and communication. The Program advised the Office of the United Nations Disaster Relief Coordinator of emergency needs, and that Office, in turn, sent out reports of Peru's needs to all United Nations Member Countries, thus guaranteeing the coordination of international assistance.

For its part, the PAHO Procurement Office was crucial from the outset in responding rapidly to the country's, and eventually the Region's, need for supplies.

The Pan American Center for Sanitary Engineering and Environmental Sciences worked with national entities, professionals, health promoters, and communities throughout the country in training on all environmental aspects of cholera from diagnostic techniques to the importance of personal hygiene; realized studies related to disinfectants and disinfection technologies, use of stabilization ponds to treat wastewater, and treatment of hospital wastes; and provided supplies, equipment, and technical and educational materials.

The PAHO Country Office launched a social communications project using television, the press, and radio to provide information about the importance of personal hygiene and sanitation measures in preventing and controlling cholera. Staff appeared regularly in spots about health on the Peruvian television program "Hablemos de Salud" ("Let's Talk About Health"). To the local newspaper *La República,* PAHO contributed information for a regular health supplement, *Vida*, that devoted many issues to cholera, the first of which was published within days of the outbreak. Radio spots in Spanish, Quechua, and Aymara assured people that "¡El remedio contra el cólera está en tus manos!" ("The solution to cholera is in your hands!") and exhorted them "¡Acaba con el cólera antes de que el cólera acabe contigo!" ("Finish off cholera before it finishes you off!")

To document the need for international donations in light of the epidemic, the PAHO Headquarters Video Unit prepared a film, *Cholera--The Seventh Pandemic,* that shows health and environmental conditions in Lima, the mountainous region near Cajamarca, the Amazon River region at Puerto Belén, and the tropical rain forest along the Marañon River.

Cholera struck Peru a devastating blow. Notwithstanding, the country's preparedness in the face of this disaster-forged in good measure from years of PAHO technical cooperation-unquestionably made a difference in reducing the number of cases and in saving lives.

Regional Outreach in the Face of an Epidemic

Entire communities were recruited to arrest the spread of cholera by learning how to prevent and control it.

The cholera outbreak in Peru served to warn other countries in the Americas of what could—and inexorably did—become a regional problem. More importantly, the Peruvian experience schooled those countries, and PAHO staff serving them, in how to prepare for the inevitable.

As cholera spread, the countries had to fully and accurately acknowledge its extent, in accordance with the International Health Regulations. Their compliance with this obligation prompted studies, with assistance from PAHO and the U.S. Centers for Disease Control, of the distribution of cholera and factors related to its spread, including environmental and food contamination, thus permitting the application of specific and effective control measures.

The second country to be affected was Ecuador, where preparations for the arrival of cholera were already under way. On 2 March 1991, the day after the first nine cases occurred, PAHO Country Office staff arrived in El Oro Province along with a team of national epidemiologists to initiate an investigation of the outbreak and set up laboratory services to examine and diagnose fecal samples. With PAHO support, the country formed a national committee to devise an emergency plan that comprised epidemiologic surveillance, preparation of audiovisual materials, conduct of environmental sanitation activities, distribution of oral rehydration salts, provision of adequate supplies of antibiotics and intravenous solutions, readying of hospital beds, and training of health personnel.

Some days later, on 10 March, Colombia detected its first case. Within weeks Brazil was registering cases of cholera, and the PAHO Country Office in Brasília immediately translated WHO's Guidelines for Cholera Control into Portuguese and began working with the Ministry of Health to prepare a prevention and control plan, to train workers at all levels, and to educate the community.

In April and May 1991, PAHO sponsored meetings of representatives from South and Central America and the English-speaking Caribbean to help them prepare integrated national plans for cholera surveillance, prevention, and control. In countries affected by cholera, PAHO staff support was immediate and far-reaching. Country Offices coordinated the mobilization of financial, material, and technical resources; offered technical assistance in performing field research, applying environmental and food protection measures, and managing cases; provided consultants; and published articles, documents, and books on cholera diagnosis, prevention, and control. In Central America, PAHO staff collaborated with national cholera committees set up in

PAHO stressed the importance of proper sewage and waste disposal in hospitals as well as communities.

the ministries of health, prepared drills for nationals to evaluate cholera management programs, and advised donor agencies as to the type of cooperation that countries needed. In the Caribbean, where no cases had been reported as of mid-year 1992, PAHO staff in the Caribbean Program Coordination, Country Offices, and the Caribbean Epidemiology Center supported national committees set up to prevent and control cholera, provided training in the management of cases, and conducted simulation exercises to prepare health workers in the event of an outbreak.

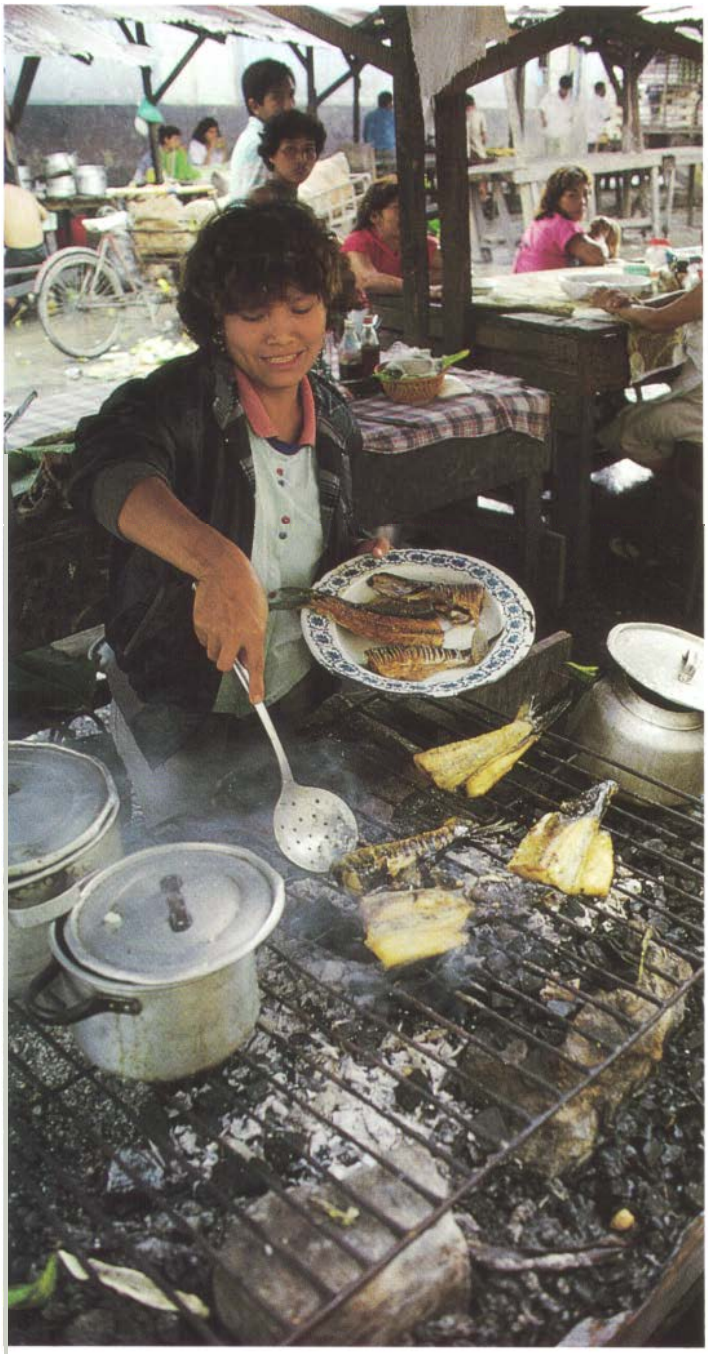
The PAHO Diarrheal Disease Control Program had been collaborating with countries of the Region since 1980 to strengthen national programs, giving courses and technical advice for the training of health personnel in the management of acute diarrheal disease cases. As a result, a critical mass of qualified health workers was ready to confront the cholera epidemic and proved instrumental in keeping the number of deaths low. The Program held a meeting of coordinators of national diarrheal disease control programs from 18 Latin American countries in Bolivia in June 1991 to review the status of programs and their role in cholera control. The Program also worked with representatives at the community level in developing interventions aimed at reducing the incidence of diarrhea and cholera.

The PAHO Environmental Health Program collaborated in efforts to identify the environmental factors contributing to the spread of cholera and promoted priority interventions to prevent it, especially water chlorination in piped systems and disinfection of house hold water supplies.

In collaboration with the IDB, PAHO organized and held a regional seminar for upgrading laboratory and environmental health capabilities in relation to cholera and food safety. For Central American countries, a special project targeted the purchase and distribution of household disinfection equipment, and another the development of household water containers to prevent the spread of cholera.

Food frequently acts as a secondary vehicle for the transmission of cholera after it has become contaminated by polluted water, during crop irrigation and food preparation and handling. The outbreak of cholera sensitized governments, industry, and the community about the importance of safe preparation and storage of foods.

Even though cholera is seldom transmitted by commercial food products, some countries took measures to restrict food imports from infected countries. To minimize any impact on exports, PAHO actively and successfully sought to have



PAHO distributed information throughout the Hemisphere on the risks of transmission of cholera by foods and worked with the countries to devise means that would assure that street vendors in the Region learned to sell food under hygienic conditions and with sanitary controls.

such restrictions removed and advised exporting countries regarding compliance with the requirements and procedures of importing countries.

PAHO, the U.N. Food and Agriculture Organization, the U.S. Food and Drug Administration, and the U.S. Agency for International Development jointly conducted subregional courses on microbiological analysis of *Vibrio cholerae* in foods that resulted in the training of some 80 food microbiologists from Latin America and the Caribbean in the use of standardized methodology for detection of vibrios and other microbiological contaminants in foods. Follow-up courses were planned at the national level.

In view of the cholera epidemic, PAHO convened a meeting of experts at the Pan American Institute for Food Protection and Zoonoses in Argentina to discuss food safety-production, consumption, and commercialization, trade barriers, and recommendations for national policy-and sponsored a workshop on the subject for airline caterers, representatives from the hotel and restaurant industries, and food protection officials in the Region.

Countries' ability to isolate and confirm the presence of *V. cholerae* is essential to all at risk of the disease. PAHO provided guidelines, reagents, and samples for the control of cholera to improve national laboratory capacities in this regard. Fellowship funds targeted the training of national personnel, and courses aimed at assuring that staff in central reference laboratories were adequately prepared. PAHO, the U.S. Centers for Disease Control, and the U.S. Food and Drug Administration began work

on developing standard laboratory procedures for isolation of *V. cholerae* from human, environmental, and food samples.

WHO and PAHO have recommended that the current commercial cholera vaccine composed of whole bacteria given parenterally should not be used in the fight against cholera. Experts participating in a May 1991 PAHO-sponsored meeting on cholera vaccines supported the Organization's recommendation and urged that two new cholera vaccines be further tested in the Region, under the general coordination of WHO and with the support of PAHO. PAHO is now assisting vaccine trials in Mexico, Colombia, Brazil, and Chile. If limited studies of the safety and immunogenicity of the vaccines prove successful, large trials of protective efficacy will be undertaken.

PAHO has collaborated in preparing radio, television, video, and educational materials on cholera prevention and control. PAHO Country Offices worked vigorously in assuring the rapid dissemination of information to health workers and the community. The Headquarters Public Information Office promptly prepared an information kit for use by countries in informing and educating the public about cholera. The PAHO Health Situation Trends Assessment Program and the Health and Biomedical Information Program mation on the history and epidemiologic aspects of cholera and indicated environmental health measures.

To aid the countries in educating the public about cholera prevention and control through use of the mass media, PAHO signed an agreement with the Government of the Netherlands in October 1991 that launched a two-year $US2.1 million social communications program.

The Organization has developed an emergency plan and a long-term plan for the prevention and control of cholera. The emergency plan-to be developed in the context of national plans and to be put in effect from 1992 to 1995, with a projected cost of $US610 million, almost 60% of which would come from the countries themselves-aims at overcoming the immediate consequences of cholera by improving management of cases, collection and dissemination of information, provision of safe drinking water, and social communication regarding waste disposal and proper food handling. The long-term investment plan—to last 12 years and cost an estimated $US200 billion-aims to improve essential water, sanitation, and health services and to extend them to currently unserved populations.

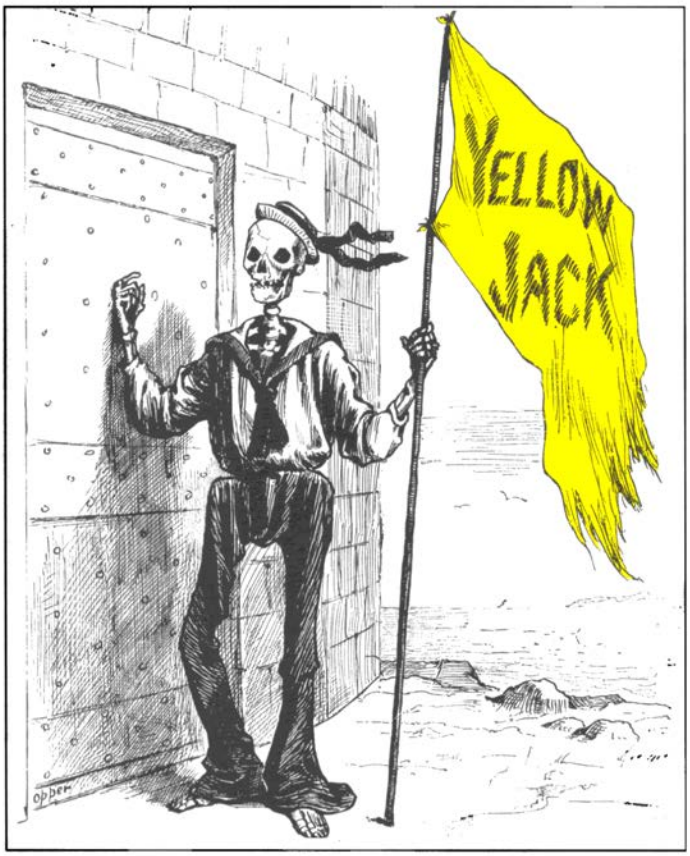
The efforts of the countries, together with PAHO, to limit the extent and impact of the epidemic have

had an effect that can be measured in terms of the decline in cholera cases, low death rates, and a reduction in other diarrheal illness in many countries. Notwithstanding, to control cholera the Region must strengthen the detection and reporting of cases, sup port basic diagnostic and laboratory services, assure prompt and efficient treatment of cholera in all age groups, undertake emergency measures to provide safe water and food handling, and treat sewage in selected high-risk locations. The eventual elimination of cholera, which must be the ultimate goal, can only be achieved by major investments to improve water, sanitation, and health services.

We must guarantee the commitment on the part of Governments and international donor agencies to do whatever is necessary to prevent cholera and other diarrheal diseases, which alone are responsiblefor the deaths of 300,000 children each year in the Americas. We must act quickly and with determination to alleviate the poverty and accumulated social debt to which the cholera epidemic so vividly bears witness. Meeting the challenge will require the coordinated efforts of leaders, Governments, and cooperation agencies, as well as the participation of the people. It must be a labor of all, and it must be done.-Dr. Carlyle Guerra de Macedo ❖

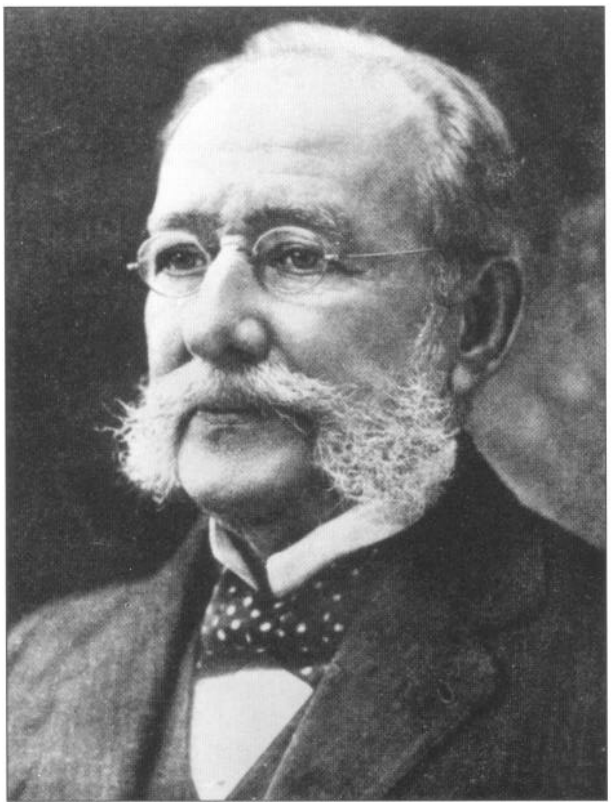
Through the Years

In the Beginning
1902-1920



A flying yellow flag—not uncommon in many cities at the beginning of this century—symbolized the presence of deadly yellow fever.

The seeds of what became the Pan American Health Organization were planted in the 19th century, when serious health concerns brought political leaders from throughout the world together at four international sanitary conferences-the first and second held in Paris in 1851 and 1859, the third in Constantinople in 1866, and the fourth in Vienna in 1874. For the countries of the Americas, however, these conferences proved disappointing. Since the venues and the participants were for the most part European, matters of European concern dominated the agenda. While cholera was a problem on both sides of the Atlantic, the other main scourge afflicting the Americas at that time—yellow fever—was of no interest at all in the Old World.



Carlos J. Finlay, a Cuban physician famous for his pioneering work on yellow fever, also played a founding role in the Pan American Sanitary Bureau.

In the 1870s, an epidemic of yellow fever spread from Brazil to Paraguay, Uruguay, and Argentina—causing more than 15,000 deaths in Buenos Aires alone. In 1878 it reached the United States through maritime contacts, triggering a major outbreak up and down the Mississippi River Valley that resulted in more than 100,000 cases and 20,000 deaths.

It was clear that something had to be done at the international level to combat this disease, and arrangements were made to hold the Fifth International Conference, this time in the Americas, "for the purpose of securing an international system of notification as to the actual sanitary situation of ports and places . ..." Participants in the Conference, which convened in Washington, D.C., in early 1881, included 10 delegates from the Western Hemisphere—mostly diplomats stationed in the United States—and "special delegates," experts in medical matters, from four countries.

Among the participants at that conference was Carlos J. Finlay, the special delegate for Spain representing Cuba and Puerto Rico. Finlay brought distinction to an otherwise administrative affair with the announcement, on 18 February 1881, of a major scientific theory: transmission of yellow fever required an intermediate agent. Shortly thereafter he singled out the mosquito *Aedes aegypti* (then called *Stegomyia fasciata)* as the insect vector of the disease. Finlay's work on the etiology and mode of spread of yellow fever made it possible for the countries of the Hemisphere, at the dawn of the 20th century, to take steps to control the disease. (See also the special feature in this publication on *Aedes aegypti.)*

Around this time, the movement toward inter-American cooperation was beginning to take shape. In 1890 the First International Conference of American States, held in Washington, D.C., had established the International Union of American Republics (today the Organization of American States) for the initial purpose of collecting and disseminating commercial information. The Second Conference, held in Mexico' City in October 1901, recommended that the International Union call a "general convention of representatives of the health organizations of the different American republics" to formulate "sanitary agreements and regulations" and to periodically hold health conventions. The general convention should also "designate a permanent executive board of not less than five members" to be known as the "International Sanitary Bureau" with headquarters in Washington, D.C. The convention's expenses would be apportioned among all the Governments

The New Willard Hotel, in Washington, D.C., site of the First International Sanitary Convention, held in 1902—a history-making event marked by a community of nations joining forces on a permanent basis to deal with health.

THE EVENING STAR
TUESDAY, DECEMBER 2, 1902

SANITARY CONVENTION

Delegates Represent the American Republics

TOPICS DISCUSSED

OPENING ADDRESS BY DR. WYMAN, PRESIDING OFFICER

Secretary Shaw and Assistant Secretary Hill Welcome the Visitors—Proceedings Today.

The first international sanitary conference of the American Republics convened at 10 o'clock this morning in the north hall of the New Willard, when the delegates from the South American republics and from the

of the countries on the same basis as those of the International Union of American Republics.

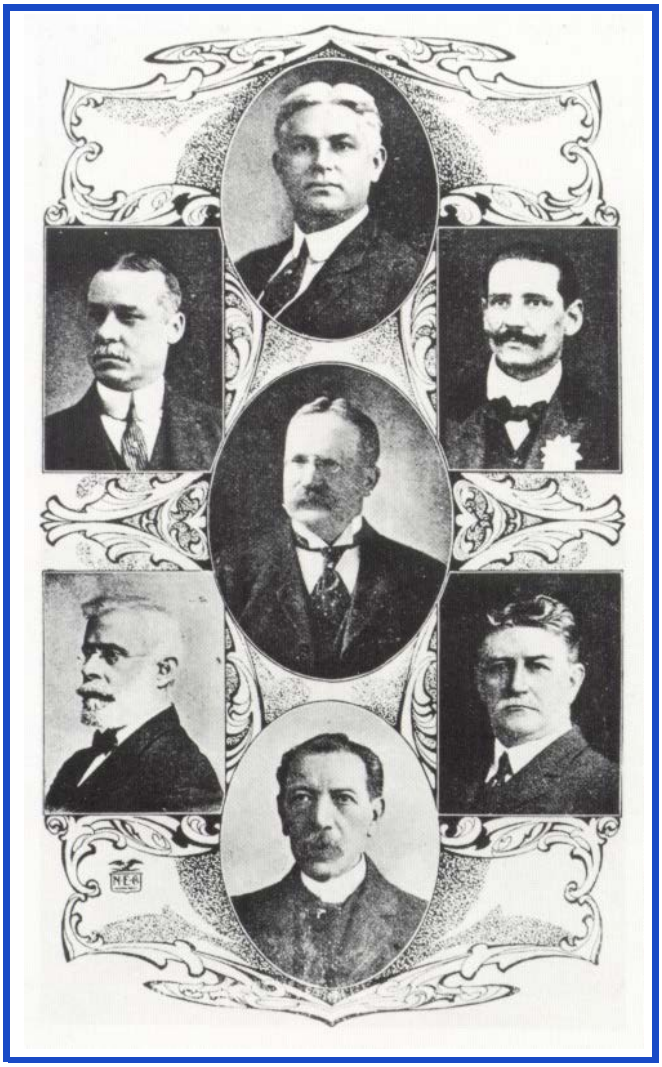
It followed that the First General International Sanitary Convention of the American Republics—whose purpose was to assure effective cooperation in promoting health in the Americas—was held in Washington, D.C., from 2 to 5 December 1902 with representatives of 11 countries present. Although this and subsequent meetings were initially labeled international conventions, they were always regional in scope and were eventually called conferences—this, then, being the first of a long series of Pan American Sanitary Conferences, generally being held every four years.

Under the banner "Sanitary Conference To-Day," *The Washington Post* informed its readers on that 2nd of December that:

> The sanitary conference of American republics will be called to order at 10 o'clock this morning at the New Willard by Dr. Walter Wyman, surgeon general Marine Hospital Service....Them will be a roll-call of the republics, with a short response from each. President [Theodore] Roosevelt will receive the delegates at noon Thursday.

The Convention appointed an organizing committee—Dr. Carlos Finlay of Cuba, Dr. Eduardo Moore of Chile, Dr. H.L.E Johnson and Dr. Glendower Owen of the United States, and Minister Felipe Carbo of Ecuador-which recommended that "the International Sanitary Bureau shall consist of five members, one of whom shall be the president of this conference." The Convention decided that there should be seven members, who were to be experts in the control of epidemic diseases and whose purpose was to receive reports on sanitary conditions in the ports and territories of the American Republics. Resources were scant: the Bureau had a budget of a mere $US5,OOO and no headquarters-probably, during these first few years, using the facilities of the United States Public Health Service.

At this First Convention, Finlay submitted a scientific report posing the question "Is the mosquito the only agent through which yellow fever is transmitted?" and answered his own question with an unequivocal "Yes." Nevertheless, other participants in the Convention, as elsewhere in the scientific community, continued to resist the proposition that yellow fever "is transmitted solely by the bite of the genus *Stegomyia."*



The first seven members of the Sanitary Bureau. From top to bottom—first column, Dr. A. H. Doty (United States), Dr. Juan Guiteras (Cuba); second column, Dr. Juan J. Ulloa (Costa Rica), Dr. Walter Wyman (United States), Dr. Eduardo Licéaga (Mexico); third column, Dr. Eduardo Moore (Chile) and Dr. Rhett Goode (United States).

The Second International Sanitary Convention, which took place in October 1905 again at the New Willard Hotel, continued to stress the importance of yellow fever, noting the success of control campaigns in Cuba, the Panama Canal Zone, and Mexico. Setting an important precedent, the convention resolved that, in the event of epidemics, national health authorities would be responsible for quarantine and disease control campaigns-that is, each country was to execute its own national measures. Interest in assuring the Bureau's continuity prompted this convention to establish regular operating procedures-to hold meetings of officially authorized delegates every two years and otherwise to operate as determined in the 1902 convention-and to recommend that the Board members be reelected.

It is worth noting that it was not until five years after the countries of the Americas had set up their International Sanitary Bureau that a group of predominantly European countries, at a meeting of the International Sanitary Conference in Rome, Italy, in 1907, signed an agreement to establish the Office International d'Hygiène Publique, with headquarters in Paris.

Thus, when representatives from the Americas met in Mexico City in December 1907 to celebrate the Third International Sanitary Convention, they authorized the Bureau to establish relations with the Office International d'Hygiène Publique and-with a touch of New World self-importance-explicitly suggested that the European countries adopt the Washington Sanitary Convention of 1905, so that their colonies in the Western Hemisphere would comply

At the First Sanitary Convention, a report on "Havana as a model City" detailed successful measures taken in Cuba to eliminate yellow fever.

The Second Sanitary Convention likewise noted the success of environmental sanitation efforts—such as shown above in Balboa, Panama—in effectively wiping out yellow fever.

During the 1910s Montevideo, Uruguay, hosted the Bureau's first field Office, housed on this Street (above), photographed some years later.

Delegates at the Fifth Conference—held in Santiago, Chile, in 1911—discussed health conditions in 14 countries in the Americas.

International cooperation in health eventually reduced the need to quarantine people, such as these emigrants being examined aboard ship.

The retreat of yellow fever enabled the Sanitary Conferences, beginning with the Fourth, meeting in San Jose, Costa Rica, in 1910—whose delegates are shown above, to the left—to consider a wider range of public health issues.

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.

(b) And to furnish said bureau every opportunity and aid for a thorough, careful, and scientific study and investigation of any outbreaks of pestilential disease which may occur within the territory of any of the said Republics.

(c) It is further resolved, That it shall be the duty of the International Sanitary Bureau to lend its best aid and experience toward the widest possible protection of the public health of each of the said Republics in order that disease may be eliminated and that commerce between said Republics may be facilitated.

(d) It is further resolved by this convention, That it shall be the duty of the International Sanitary Bureau to encourage and aid or enforce in all proper ways the sanitation of seaports, including the sanitary improvements of harbors, sewage, drainage of the soil, paving, elimination of infection from buildings, and the destruction of mosquitoes and other vermin.

(e) It is also recommended by this convention, That in order to carry out the above measures a fund of $5,000 shall be collected by the Bureau of American Republics in accordance with paragraph 7 of the resolutions of the Second International American Conference above referred to.

with resolutions adopted by the American republics for the control of yellow fever.

The Third Convention also urged that each of the countries set up a committee composed of three medical or health authorities to constitute, under the direction of the International Sanitary Bureau in Washington, "Sanitary Information Committees" whose purpose would be to collect and communicate data related to public health. It also arranged for the establishment in Montevideo of an International Sanitary Bureau to serve as a regional center for the Sanitary Information Committees of Argentina, Bolivia, Brazil, Chile, Uruguay, and Paraguay; all other countries would deal directly with the Washington office. Unfortunately, a lack of budget and other circumstances rendered the Montevideo office's existence precarious and short-lived; its creation, however, presaged the need, over much of the Bureau's life, for decentralized offices.

It was resolved that an office be provided in the International Bureau of the American Republics (later the Pan American Union and now the Organization of American States) for the use of the International Sanitary Bureau. (This was approved by the Fourth International Conference in 1910.) Finally, the Third Convention instructed that an employee be hired to handle administrative matters of the Bureau. (No action was taken until 1921, however, when the salary of an "executive clerk" appears for the first time in the budget.)

The Bureau gradually began to take shape at the same time as man's understanding of health and disease advanced, affecting in turn both national and international health developments. About this time, new revelations about the pathology and epidemiology of diseases such as cholera, plague, and yellow fever underscored the fundamental importance, for the solution of health problems, of well-organized health services in the countries. The emphasis thus gradually shifted from one of quarantine in the face of communicable diseases to active control of, and attack on, the source of epidemic outbreaks, based on organization of adequate health services and community health education.

At the Fourth International Sanitary Conference, held in San José, Costa Rica, from December 1909 to

The first Chairmen of the Bureau: Dr. Walter Wyman (left) served from 1902 to 1911, and Dr. Rupert Blue (right) from 1911 to 1920. The title was changed to "Director" in 1920.

January 1910, the "Convention" in the Governing Body's name was changed to "Conference." From this point on, one notes a marked shift in the nature of these meetings: no longer solely or even primarily interested in quarantine issues, they begin to consider the promotion of health as a whole, including such other health matters as a smallpox vaccine, malaria and tuberculosis campaigns, national health legislation, scientific study of tropical diseases with emphasis on parasitology and pathologic anatomy, laboratory research into tropical medicine, and general pathology.

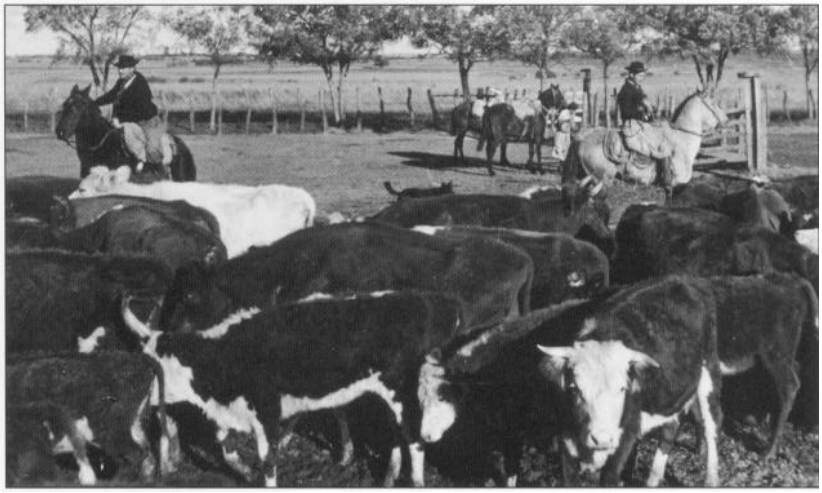
The Fifth International Sanitary Conference meeting in Santiago, Chile, in November 1911, recommended that delegates "shall be sanitary authorities in their own countries," remarked that interesting reports had again been presented from 14 countries, and approved 26 resolutions. So that their work would not be in vain, delegates urged that Conference decisions be given wider dissemination in the countries and that Sanitary Information Committees in the republics advise their respective governments of obligations imposed by the Sanitary Conference. Dr. Wyman, still Chairman of the Bureau, was unable to attend this Conference and died 10 days after its closure. He was succeeded as both U.S. Surgeon General and Chairman of the International Sanitary Conference by Dr. Rupert Blue, who, however, never actually chaired a meeting of the Conference, because the Sixth International Conference, scheduled for 1915, was postponed until 1920 due to the outbreak of World War I.

By the time the war ended, the stage had been set for a new era of cooperative progress in health in the Americas. Scientific knowledge about the cause and spread of many infectious diseases had advanced enough to begin to control them, and governments were aware of the urgency of setting up services to protect the public health. A regional arrangement, the International Sanitary Bureau—born with the century, yet untapped for almost a decade-was still in place and was soon to become the catalyst for renewed and intensified inter-American collaboration in health. ❖

THE BURGEONING BUREAU
1920-1946

For a quarter-century, Dr. John D. Long (center), the Bureau's first "Travelling Representative," crisscrossed the continent by plane, train, boat, car, mule, and on foot, promoting measures to improve public health in the Americas.

The Americas experienced a period of accelerated economic growth during the 192Os, as the result of a dramatic expansion of agriculture and industry. While Europe reeled from the ravages of "the war to end all wars," in the Western Hemisphere social and economic development spurred a boom in communication, maritime trade, railroad and highway construction, and aerial travel. Acknowledgment that labor was the indispensable tool for development prompted countries to become increasingly concerned with assuring the health of their work force. In the cultural vacuum left by a crippled Europe, the United States increasingly gained importance in the Region. That country's preeminent role in collaborative efforts to improve people's health was evidenced



Agriculture and industry fueled Latin America's economic boom in the 192Os, and that progress soon spilled over into the social sectors.

by the Rockefeller Foundation's stepped up biomedical research in Latin America, leading to communicable disease control and environmental sanitation campaigns throughout the Hemisphere.

At the start of the decade and during the entire interval between the two world wars, three international health entities coexisted: the Office International d'Hygiène Publique in Paris, the Health Section of the League of Nations established in London in 1920, and the Pan American Sanitary Bureau. As time would prove, only the Bureau would survive and grow.

First, however, the Bureau had to get back on track, get organized, and get going. To do so, the Sixth International Sanitary Conference of the American Republics met in Montevideo, Uruguay, from 12 to 20 December 1920, and elected the U.S. Surgeon General, Dr. Hugh S. Cumming, to head the Bureau, changing the title of his office from Chairman to Director. The Conference then set out to reorganize the Bureau, creating the first Executive Committee and establishing a Bureau-as distinct from the Conference itself (until this time they had been coterminous)—with seven members, including the Director, a Vice Director, and a Secretary. The Bureau was charged with preparing a plan to publish a monthly bulletin (a "Boletín Internacional de las Republicas Americanas"). The Conference also recommended that the Bureau's annual budget be quadrupled from $US5,000 to $20,000. Finally, delegates urged that continuous correspondence be established with officials of boards of health, health officers, and prominent physicians in the American republics, so that the Bureau could render the countries the most effective possible service.

It followed that in the very first annual report of the Director, for 1921, Dr. Cumming asserted that: "today the International Sanitary Bureau corresponds with all the important officials on health and medical boards in the various republics in order to cooperate with them in the progress of sanitary conditions in their ports and territories, in order to impede, where possible, the spread of infectious diseases." That report to the Governments about the work of the Bureau barely filled two pages. As the years passed, the reports would grow in

Over the decades, many great Latin Americans have graced the Pan American Sanitary Conferences. Carlos Chagas (at center of photo), who discovered American trypanosomiasis—more commonly known as Chagas' disease—early in this century while working in Brazilian backwaters, brought distinction to the Sixth Sanitary Conference, held in Montevideo in 1920, as delegate of Brazil.

volume, reflecting a corresponding growth in the Bureau's activities.

This fundamental role of the Bureau in information exchange with the countries of the Region explains the importance given to what was at first called the *Boletín Panamericano de Sanidud*, whose maiden issue appeared in May 1922. Referring to the Bureau as "this great enterprise in benefit of humanity," the opening, and timeless, article addresses the "importance of international cooperation in health," followed by a presentation on the diagnosis and "extirpation" of smallpox and a summary notification of infectious diseases worldwide. The press run of the first issue was 6,630 copies in Spanish and 2,000 copies in Portuguese; there after, 3,000 copies in Spanish were printed every month. (See also the special feature in this publication on the *Boletín de la oficina Sanitaria Panamericana.)*

The first issues of the *Boletín* included contributions by authors from throughout the Hemisphere—primarily North Americans, but also Mexicans, Colombians, and Brazilians, among which figured the famous Brazilian scientist, Carlos Chagas. The articles reveal from the outset the wide net that the Bureau cast: the first issues deal with leprosy, hookworm, "the importance of a good set of teeth," advances in sanitary engineering, diphtheria, water disinfection, yellow fever, syphilis, tuberculosis, industrial hygiene, malaria, and goiter. A regular feature was the summary of infectious diseases. And, beginning in 1924, the *Boletín* published resolutions of the Pan American Sanitary Conferences. When the names of the institution's official organs were changed in 1923 from International Sanitary Conference and International Sanitary Bureau to Pan American Sanitary Conference and Pan American Sanitary Bureau, the name of the monthly journal likewise changed to its current title of *Boletín de la Oficina Sanitaria Panamericana.*

During the Bureau's first two decades, its resources had been as scant as its scope of operations was narrow: the Conference and the Bureau were in effect one and the same body, there was no secretariat or personnel as such, and the most had been made of an annual appropriation of $US5,000. As the Bureau's activities grew, however, its need for additional resources increased proportionately.

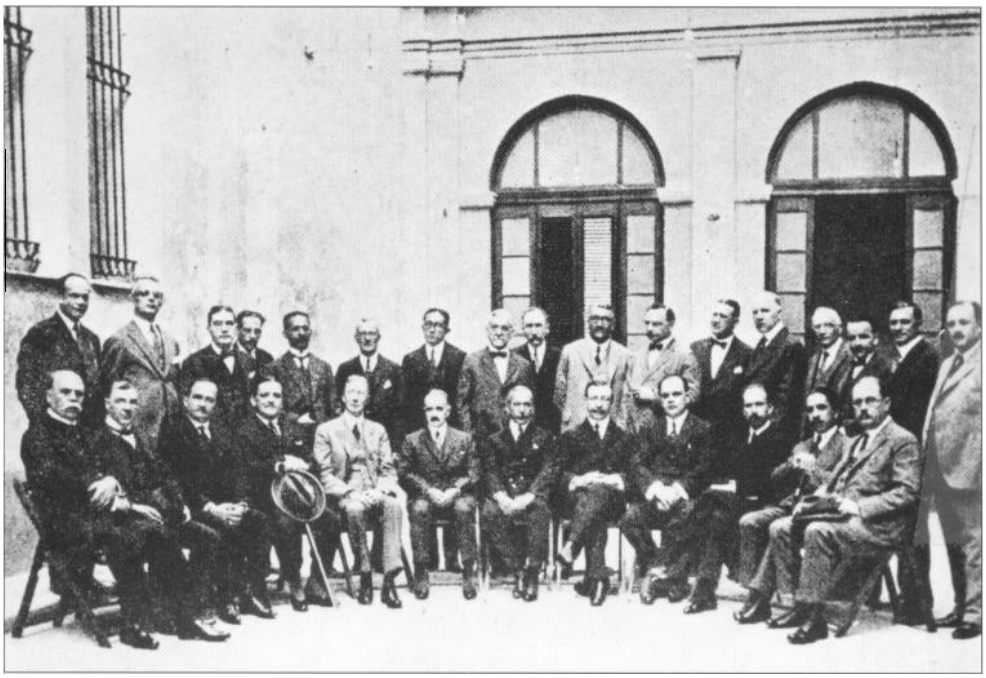
In the 1920s, the staff consisted of the Director, Dr. Cumming, the Assistant to the Director, Dr. Bolivar J. Lloyd, and the Scientific Editor of the *Boletín* and Chief Translator, Dr. Arístides A. Moll.

In addition, an "executive clerk," Mr. W. P. Montgomery, was hired and became the first employee to retire with a pension from an international organization in Washington, D.C. Around this time and in support of the work of the Bureau, the United States Public Health Service began to detail public health experts for field duty with the Bureau. In 1923, the first of these, Dr. John D. Long, Auxiliary Surgeon General of the USPHS and later Assistant Director of the Bureau, began working as the Bureau's "Travelling Representative," conducting missions to Chile, Bolivia, Peru, Ecuador, Panama, Cuba, and later throughout the continent to assess health conditions and formulate with national authorities a plan to "broaden the usefulness of the Bureau." His peripatetics were to become a main staple of the Bureau's activities over a quarter-century.

The Bureau's funding was even slimmer than its staff. The financial records for fiscal year 1921-1922 showed $2,830.79, including $4.67 for "travelling expenses" and $5.50 for "books." Staffing strengthened in 1923-1924 with contracts for an editorial assistant, a clerk, and a stenographer; and the budget for that year increased to a still slight $11,154.29.

Understandably, when the Seventh Pan Ameritan Sanitary Conference met in Havana, Cuba, in 1924, a much more substantial budget of $50,000—10 times the original funding—was approved. By this time, all 21 American republics had joined the Bureau, 18 of which sent delegates to the Conference. Acting on a resolution of the Fifth International Conference of Ameritan States, which had met in Santiago, Chile, in 1923, the Havana Conference drafted a Pan Ameritan Sanitary Code, which was eventually ratified as an international treaty by all 21 republics. Still in force today, the Code endowed the Pan Ameritan Sanitary Bureau with broad functions and duties and with a firm juridical basis. It also served, in years to come, as a bulwark against attempts to disestablish the Bureau.

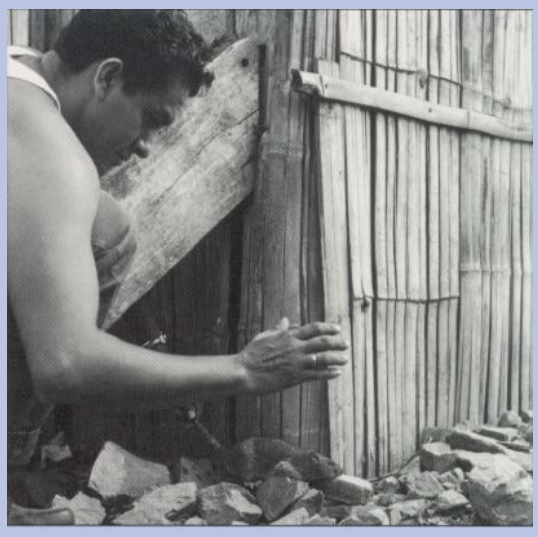
In keeping with the Bureau's quintessential role as clearinghouse of health information, the Director, beginning with his annual report in 1924, summarized the known health conditions in the countries. Two years later, his report informed the Govemments of the Bureau's efforts to set up a statistical service and promote the naming of epidemiologic assistants in the countries, so that they could collaborate with that service. "It is hoped that all the countries submit to the Pan American Sanitary Bureau reports on diseases and mortality and that those reports be broad and detailed so as to be of real worth to the



These gentlemen, meeting **in Havana in 1924, drafted the first treaty of any kind to be signed by all the American republics, the Pan American Sanitary Code, which continues in force today.**

FIGHTING PLAGUE IN THE AMERICAS

Over the centuries, plague had been responsible for epidemics that wiped out millions of people at a time.



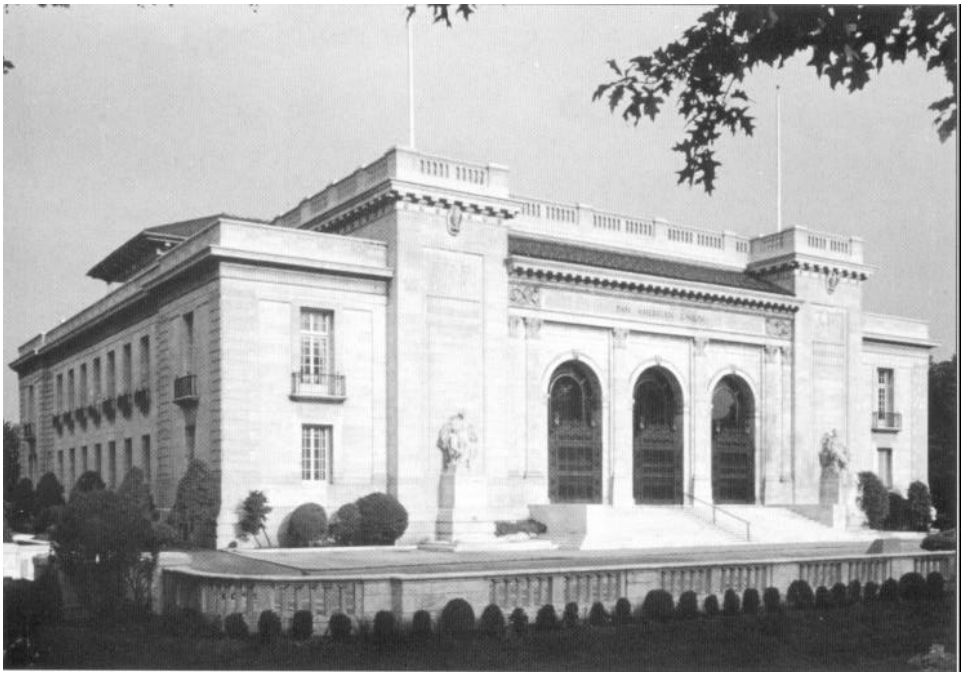
Primarily a disease of rats that can infect people who come into contact with the fleas of infected rodents, plague proved a major public health problem in the Americas during the first part of this century. In some areas, plague-infested rats from ships spread the disease among domestic rodents in ports, creating conditions favorable for outbreaks of human plague. The Pan American Sanitary Bureau worked with the countries of the Region to organize sanitary measures directed simultaneously against rodents and fleas—the most effective means of suppressing epidemic plague.

Countries went to great lengths to banish plague. In Argentina, 40 trained terriers waged a daily offensive against rats that infested the port of Buenos Aires, killing as many as 10,000 in the course of a month.

The Eighth Pan American Sanitary Conference recommended that all countries "name in all ports of entry a medical service whose duty it shall be officially to diagnose cases of contagious disease; that the Bureau recommend to shipbuilders and navigation companies…that they should in the future build ratproof vessels; that the American countries build ratproof wharves and … that the freight in warehouses be carefully elevated 1 foot above the floor and placed in separate sections in order to leave free spaces easily guarding against rodents…."

Dr. Long, following a mission to Argentina in September 1928, reported nine months later that "I made an inspection of the port and studied the construction of the warehouses used for storing grain and cereals, and also the methods employed to load and unload steamers. From January 1 to August 1, 1928, 6,000 rats had been examined, sixty of which (1%) were found infected. . . I participated in a conference of all port authorities. As a result of this conference an executive decree was promulgated in November 1928, requiring the methodical fumigation of all vessels both foreign and coastwise; the fending off from the wharf for a distance of 1 l/2 meters; a general use of rat-guards on all lines; and either the raising of the gang-plank or the use of brilliant lights at the gangway at night. It would seem that these measures have given good results, since in the year 1928 five vessels proceeding from Argentina arrived at foreign ports with plague on board, while this year, to date, no vessel from Argentina has been shown to carry plague."

For decades the second-floor, balconied window in the Pan American Union building, shown here to the upper right of the entrance, shed light on the single, increasingly cramped office of the Pan American Sanitary Bureau.



activities of the Bureau." Subsequently, in his report for 1929, the Director noted improvements in the reporting of information: "A telegraphic code was devised, printed, and distributed to all the Directors of Health. Monthly and sometimes weekly cables have been received reporting the presence of quarantinable diseases and the means to prevent their spread through international trade. When these cables have been sufficiently important, they have been transmitted immediately to the Directors of Health of the countries most directly interested. The information has also been transmitted by cable to the Office International d'Hygiène Publique and to the Health Section of the League of Nations."

The crescendo in health activity in the Region during this decade made it imperative for directors of health services to "meet from time to time for the mutual exchange of ideas and experiences." Thus, at the direction of the Fifth Conference of American States, meeting in 1923, the Bureau assumed in 1926 responsibility for a new periodic activity, namely arrangements for the Pan American Conferences of National Directors of Health of the American Republics. Taking place between Pan American Sanitary Conferences, six of these Conferences of National Directors were held between 1926 and 1948.

The Bureau's growth and the corresponding need to steer its direction are evident in the Director's convocation of the Eighth Pan American Sanitary Conference: "a major item, for frank and open discussion of the delegates, will be the future expansion and growth of the Pan American Sanitary Bureau. To assure the success of such an important matter, delegates to the Conference will be asked to make whatever indication or suggestion they consider opportune, in order to elaborate and define the future plan of action of the Sanitary Bureau, [which] aspires, above all, to help its members and to count on the cooperation of all of them."

It followed that the Eighth Conference, convening in Lima in 1927, established a Directing Council to meet every year to 18 months and to consist of officers and members of the Pan American Sanitary Conference. Council members would have their travelling expenses and living costs (10 gold dollars per day) reimbursed. Dr. Cumming informed the delegates that, during the International Sanitary Conference that had met in Paris in 1926, the Office International d'Hygiène Publique had asked that the Pan American Sanitary Bureau act as "regional organization" for the collection of health statistics and epidemiologic information from the Americas, to which the delegates at the Eighth Conference agreed. The distinction continued to be made, however,

The First Pan American Conference of National Directors of Health (1926) did not seem to do much more than study the Pan American Sanitary Code, but the debate was heated, as the following excerpts illustrate:

Delegate of Guatemala: … The first thing we should do is modify paragraph (d) of Article I of the Code [making notification obligatory].

Delegate of Cuba: With reference to paragraph (d), I believe that notification is obligatory, in the spirit of the other articles.

Delegate of Brazil: I don't think there's any need for us to vote on changes to the Code.

Delegate of Guatemala: … I am of the opinion that no word, no matter how insignificant, can be added to the Code, because we are not authorized to do so.…

Delegate of Ecuador: I would like the following to be omitted from the article: "or any other contagious disease of an epidemic nature."

Delegate of Cuba: I want "smallpox" to be added to the article.… In Cuba, everyone must be vaccinated against smallpox, but I still think smallpox should be put in the article.

Assistant to the Director: Do you not have vaccination societies [in Cuba]?

Delegate of Cuba: We couldn't care less about vaccination societies!

Delegate of Mexico: I have read something of this Code, which was approved in Havana and forwarded to the various American Republics with the strong recommendation of the Pan American Union that it be approved by the respective Governments. … It therefore seems absurd to me that we be discussing and trying to interpret the articles of the Code.… We are making a spectacle of ourselves.

Delegate of Venezuela: … I have come up with a proposal to amend the Code, which I have brought for your consideration this afternoon.…

Delegate of Honduras: I have listened to everything said here today and frankly I think we're wasting precious time.

Delegate of Mexico: I want to make a clarification.…

Delegate of Honduras: I want to make a counter-clarification.…

Delegate of Cuba: A port without sanitary means for exterminating rats is a port of no importance to me.

Delegate of Venezuela: As you all know, the ports of Venezuela are clean and they comply with all the requirements of the Sanitary Code. We have no yellow fever, no plague … no cholera, no poliomyelitis, no encephalitis- only leprosy, typhoid fever, and some smallpox. I am in favor of no port being subjected to these classifications.

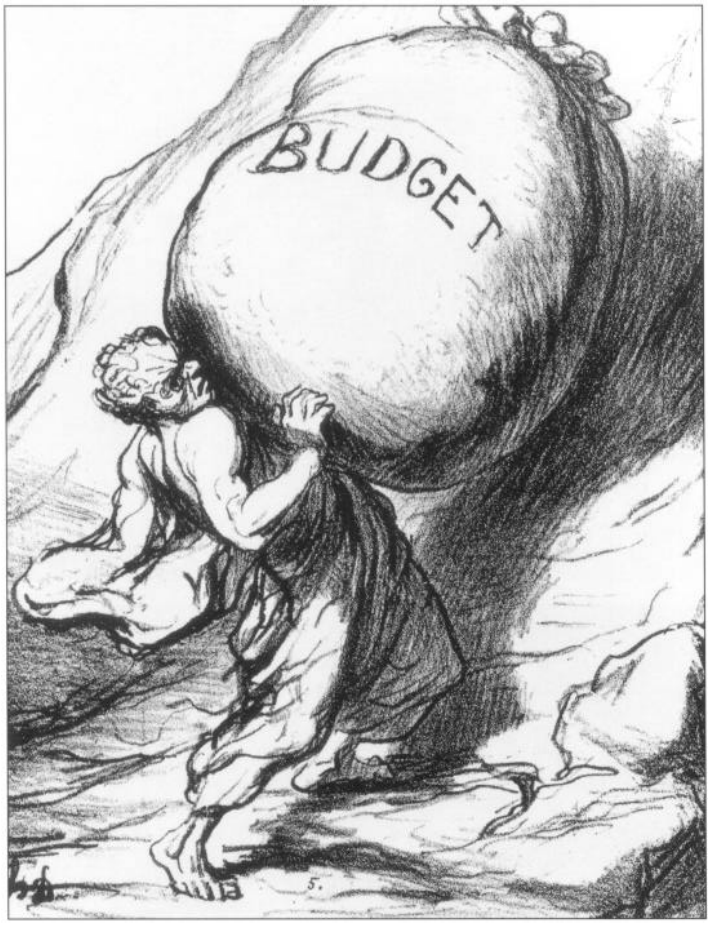
Evidence of the broadening scope of the Bureau's work was the Pan American Sanitary Conferences' concern for workers, such as these Bolivian tin miners, being exposed to occupational hazards.

between the relative effectiveness of the European- and American-based organizations. In his closing address to the Conference, Cumming told the delegates: "Most certainly the Bureau will attain such importance and prestige as you may desire. We find ourselves in the same fix as the bricklayer. If you do not furnish the bricks and mortar, it is not possible for us to construct the building. I have seen the Paris Bureau function in such a lethargic manner that now and then it was necessary to prick it with a pin to see if it were still alive. For some time this Bureau was in the same condition, but I believe that it has now undergone a change. We have the standing—and with it the responsibility, the obligation-to convert this Bureau into a useful organization for each and every one of us."

Gradually the interests of the countries and, consequently, of the Bureau multiplied. In the annual report of the Director for 1922, the Bureau's areas of activity had been limited to sanitary engineering, medical instruction conferences, smallpox vaccination, health education materials, ship fumigation, and solid waste incineration. In addition to those continuing themes, the Director's report for 1927 notes widening continental concerns: drug addiction, venereal disease, "sanitary" administration, tuberculosis, intestinal parasites, leprosy, trachoma, malaria, puericulture, climate and disease, and immigration.

The first Directing Council of the Bureau (actually a "Meeting of the Officers and Members of the Pan American Sanitary Bureau") met from 27 May to 9 June 1929. It drafted the "Constitution and Statutes of the Pan American Sanitary Bureau," which were approved in 1934 by the Ninth Pan American Sanitary Conference. At this point, the Bureau was still an "Executive Board," not an organization as such, with changing composition and elected members who continued to reside in their own countries. The Constitution stipulated that the Council would have nine "titular" members elected by the Pan American Sanitary Conference as well as ex officio members, most of whom were officers of the U.S. Public Health Service. The Council agreed that the annual budget should not be less than $50,000, provided by a levy of 21.5 gold US cents per 1,000 inhabitants or a scale of contributions of 215 gold US dollars per one million inhabitants.

The Council urged that the Second Pan American Conference of National Directors of Health be convened in 1931, that the Governments conduct nutri-



As did his successors, Dr. Cumming waged a relentless battle with the budget in an attempt to meet the demands of the Bureau with the never-sufficient resources at its disposal. Notwithstanding, over the years, as the Bureau's work expanded the budget likewise grew: $5,000 in 1902; $20,000 in 1920; $52,000 in 1934; $56,000 in 1936; $70,000 in 1937; $100,750 in 1938; and $107,550 in 1940.

tion studies and disseminate their findings, that the *Boletín* continue to publish articles on cancer, that plague control proceed in the six countries still infested with the disease, and that those countries which had not as yet ratified the Code do so as soon as possible. Delegates also applauded Brazil's continuing efforts to eradicate yellow fever.

The Bureau was beginning to make a difference and, with it, an impression among political leaders in the hemisphere. In his report for 1928—1929, the Director General of the Pan American Union noted that "The Pan American Sanitary Bureau expresses in a particularly happy and characteristic way the growing spirit of cooperation between the republics of America, and is a constant demonstration of the important service which these nations can render to one another through the constant interchange of information and experience."

The 1929 stock market crash brought a halt and a dramatic reversal to what had been the budding economies of Latin America. A social crisis ensued, with mass unemployment and a widening gulf between the few rich—owners of land and industry—and the increasingly poor majority. It was against this backdrop that hemispheric collaboration in health proceeded throughout the 1930s.

Health conditions at the outset of the decade, according to the report of the Director for 1930-1931, included plague in Ecuador, Peru, Argentina, and Chile; yellow fever, mostly in Brazil; typhus in Bolivia, Brazil, Chile, Mexico, and the United States; undulant fever in the United States; onchocerciasis in Guatemala and Mexico; malaria in many of the countries; tuberculosis and smallpox in practically all of them; measles and whooping cough in all the countries; and an increasing cancer death rate throughout the Region. The Bureau conducted epidemiologic studies on plague in South America in cooperation with national and local authorities. It improved the sections in the *Boletín* on disease prevalence in the countries-although with difficulty, as this information was spotty and often inadequate. A new publication, "Weekly Sanitary Reports," was launched using the latest telegraphed information.

The Second Pan American Conference of National Directors of Health, meeting in April 1931, considered a wide range of topics: urban and rural sanitation, safe water and milk supplies, notification of communicable diseases, venereal diseases, tuberculosis, intestinal parasitoses, smallpox, malaria,

Progress brought in its wake many new public health challenges. The advent of commercial air transportation meant that public health precautions had to be taken against the global spread of infection.

plague, industrial hygiene, maternal and child health, nutrition, habit-forming drugs, and onchocerciasis. It reviewed, and made changes to, **a draft** of proposed regulations designed to prevent the spread of quarantinable diseases by commercial aviation, which had been referred to the Bureau by the Office International d'Hygiène Publique. The OIHP subsequently accepted the Conference's changes.

Despite increased appropriations over the years, the budget could not keep up with demands on the Bureau, and Dr. Cumming reported in 1931 that: "The Bureau's expenditures have again exceeded its receipts, and its reserve funds have been drawn upon to cover this deficit." Expenditures reported included $15,695 for salaries; $15,074 for printing the *Boletín;* $156 for furniture; $303 for telegrams and cables; and a $529 contribution to the staff pension fund. Staff at this time consisted of a technical editor-translator, one clerical assistant, and four clerks (a stenographer and translators). All professionals continued to be on loan to the Bureau from the U.S. Public Health Service. The Bureau's physical accommodation was a single office in the Pan American Union.

Dr. Cumming continued to make the case of the Bureau's expansion, when he addressed the Ninth Pan American Sanitary Conference, meeting in Buenos Aires, Argentina, in November 1934:

"Fourteen years ago, when the Pan American Sanitary Conference did me the honor of electing me as Director of the Pan American Sanitary Bureau, it existed in name only." In his report for 1933-1934, the Director noted that: "The nature of the work of the Bureau itself is such as to render it capable of considerable expansion." Delegates from all of the 21 American republics attended the Ninth Conference, adopting 42 resolutions that covered practically every aspect of public health in the Americas, serving in turn as a major stimulus to strengthen national health services in the Region. Also attending the Conference for the Rockefeller Foundation and presenting a report on yellow fever, which was roundly applauded, was Dr. Fred L. Soper, who 13 years later would be elected Director of the Bureau.

The Bureau branched out in the early 1940s, establishing field offices in (shown clockwise) Lima, Panama City, Guatemala City, and El Paso.

At their Third Pan American Conference, meeting in Washington, D.C., in April 1936, the National Directors of Health debated a subject that was to have increasing importance in later years: local health systems. On the basis of their discussion of public health administration, they "recommended establishment of special technical services to study public health problems, technical unification of national health activities, and the creation of urban and rural health units staffed with trained full-time personnel." The Directors also approved a seven-point program on yellow fever control; discussed bubonic plague, brucellosis, malaria, trachoma, and onchocerciasis; and addressed industrial hygiene, maternal and child health, establishment of institutes to study conditions affecting human life at high altitudes, control of venereal disease and malaria, smallpox, typhoid and diphtheria vaccines, and continuation of experimental work in the use of BCG.

Beyond the health sector and throughout the continent, the work of the Bureau continued to gamer widespread and profound respect. At the Inter-American Conference for the Maintenance of Peace, in Buenos Aires in December 1936, participants took "note of the progress already made and the plans for future action of the Pan American Sanitary Bureau, particularly with regard to the betterment of the health and well-being of the American peoples, of their progress in municipal and rural hygiene, nutrition, housing, water supply and drainage services, and control of infectious and occupational diseases." They also recognized "that the work of effective cooperation between the American Nations in sanitary matters facilitates mutual and intelligent intercommunications and avoids delays and obstacles to international commerce, and that in this respect considerable results have already been obtained." Further evidence of the broadening import and autonomous character of the Bureau was the United States' decision to grant it postal franking privileges in 1938, following a law to that effect passed by the United States Congress.

Again, however, this expansion in work forced the Bureau to stretch to the limit its scarce resources. Somewhat frustrated, Dr. Cumming, at the Tenth Pan American Sanitary Conference, held in Bogota, Colombia, in September 1938, reported that the Bureau's activities could be "expanded almost indefinitely with advantage to all the people of all the American Republics," however, "I do not believe that it is worth the trouble to make suggestions, unless the Bureau receives more funds." His appeal fell on sympathetic ears, and the delegates approved a budget of not less than $100,000, with a corresponding increase in the scale of quota contributions. More office space was another critical need, as the now 11-strong staff, including the Director, continued to work out of one office of the Pan American Union; that problem, however, would not be solved for another decade. The Tenth Conference also decided that representation on the Directing Council, which was increased from nine to 11 members-the Director, Vice Director, two counselors, and seven voting members-should rotate, with the naming of representatives to be left to the discretion of the respective countries.

Toward the end of the decade, and despite the fact that the world was on the verge of yet another devastating war, international relations in health were extremely positive. Evidence of this spirit of cooperation was the declared interest of the League of Nations Health Section, in 1939, to explore "the possibility of establishing closer cooperation with the Pan American Sanitary Bureau. " While the League was about to fold, however, the Bureau was poised for take-off.

During these pm-war years, field work increased significantly. Among countries' requests for assistance were those to organize the new Social Security Hospital in Lima; to set up hospitals in El Salvador; to respond to a poliomyelitis outbreak in Colombia; to help plague control efforts in Ecuador, Peru, and Venezuela; to provide sanitary engineering advisory services in the Andean and Southern Cone countries; to offer training in sanitary engineering, mosquito control, water supply, rural sanitation, and malaria surveillance; to carry out epidemiologic studies; in sum, to cooperate in a wide spectrum of public health efforts in every country of Latin America.

Not surprisingly, by now the need to have Bureau specialists working in the countries had become patently clear. The Director's report for 1939-1940 mentions a "Caribbean Sanitary Zone," with provisional headquarters in Panama, staffed with a travelling representative and a sanitary engineer. Then, in 1942, the Bureau set up in El Paso, Texas, the still-serving United States-Mexico Field Office -a cooperative program for training, supplies, and public health education regarding the prevention and treatment of communicable diseases, and for general coordination of the respective national programs. There followed steps to organize field offices in Lima and Guatemala City.

In May 1940, the Fourth Conference of National Directors of Health was held in Washington, D.C., concurrently with the Directing Council, which, because of the war, did not meet again until 1946 (although, according to the Director's annual reports, views and opinions were exchanged among members in the interim). The Fourth Conference included representatives of Canada and Dutch Guiana (now Suriname) and addressed old issues as well as several new ones: aerial sanitation, appraisal methods for the evaluation of health work and trial of these methods in representative cities, the importance of preventive medicine in medical education programs, improvements in collecting and utilizing vital statistics for public health purposes; conservation of forested areas surrounding water basins to prevent the decrease of water supplies and their contamination; and standardization of methods for diagnosing, recording, and treating venereal diseases.

During the early 1940s, the Bureau continued to adapt to changing health conditions in the countries and to the growing public health needs of their populations. The decrease in incidence of cases and deaths due to quarantinable diseases continued; however, poliomyelitis was on the increase in practically all the countries; typhus and other rickettsial diseases were important problems in the Andean countries and Mexico; outbreaks of smallpox were being

Elected Director in 1920, Dr. Hugh S. Cumming served the Bureau for 26 years and was named Director Emeritus in 1947.

reported in Argentina, Colombia, Mexico, and Paraguay; Chagas' disease was a problem in most of the countries; two serious outbreaks of cerebrospinal meningitis had occurred in Chile and the United States in 1942; other problems included encephalomyelitis in Colombia, tick-borne relapsing fever in Bolivia, yaws in Ecuador, and measles in El Salvador and Nicaragua.

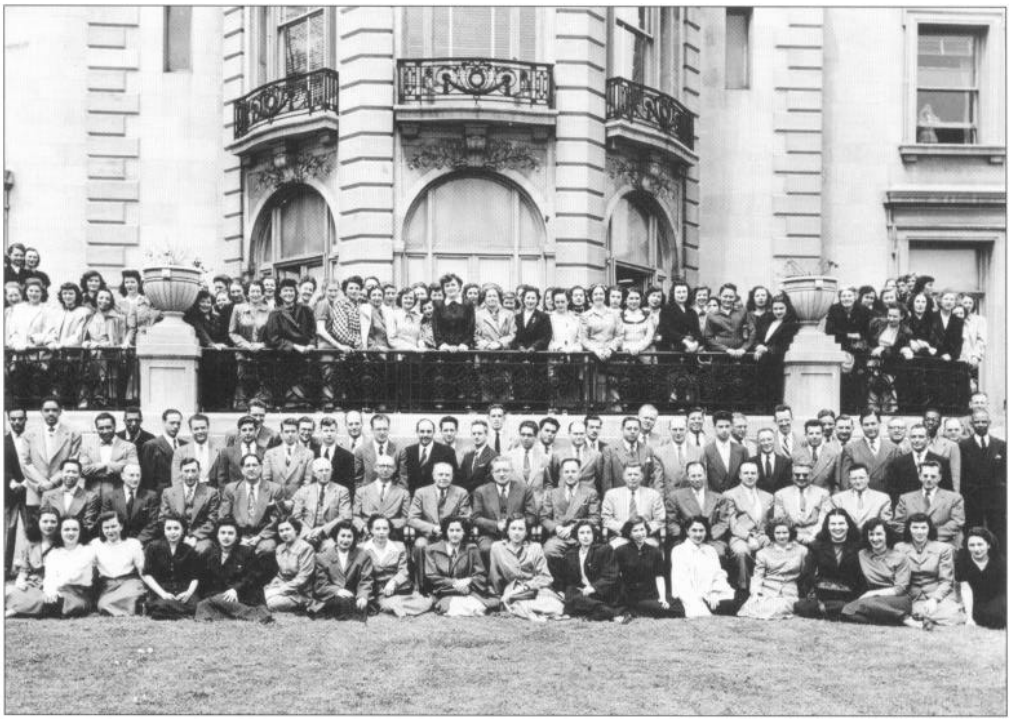
The emergence of other international agencies dealing with health prompted the Third Meeting of the Ministers of Foreign Affairs of the American Republics, held in Rio de Janeiro, Brazil, in January 1942, to adopt two telling resolutions. First, the Governments of the American Republics should take individually, or by complementary agreements between two or more of them, appropriate steps to deal with problems of public health and sanitation, by providing-in accordance with ability-raw materials, services, and funds. Second, to those ends, they should use the "technical aid and advice of the national health service of each country in coop eration with the Pan American Sanitary Bureau." This hemispheric recognition of the accomplishments of the Bureau presage the zeal, shown some years later when the World Health Organization was being created, with which the Governments of the Americas would defend the independence of the Bureau.

At the XI Pan American Sanitary Conference, held in Rio de Janeiro in September 1942, with delegates from all 21 of the American republics attending, Dr. Cumming was elected for the fifth and last time. In light of the fact that there were now 17 people on the Bureau staff, all still cramped in the Pan American Union building, the Director again stressed the problem of space. He also urged that countries rather than specific individuals be elected to the Directing Council. The Conference resolutions reflect the usual topics of concern-water sup plies, nutrition, housing, sanitation, disease control—but also the reality of World War II: the importance of taking inventory of and conserving public health resources and supplies in each country, the urgency of exchange of supplies for continental security, and the need for cooperation between military and civilian health services.

Ironically, the war had a very positive impact on the development of public health care in the Americas. Health services got organized, developing comprehensively and fast. Health workers were trained to play a major role in the military and civilian arenas in saving lives and reducing the effects of injury, hunger, and disease. And, as an offshoot of wartime research and development initiatives, new techniques and resources were applied in disease prevention. Countries' public health advances would in turn fortify the Bureau's resolve in the years following the war to become a major international force in assuring "the attainment by all peoples of the highest possible level of health." ❖

A REGIONAL CALL TO ARMS

1946-1958



From a lone "Travelling Representative" in the 1920s, by mid-century the Organization's staff comprised a team of physicians, nurses, sanitary engineers, statisticians, and many others at the service of public health in the Americas.

Once again, but this time more convincingly than ever, the sobering reality of war's death and destruction convinced the countries of the world that they should seek the means to ensure peace and build a better world. Toward that end, the delegates of 50 nations gathered in San Francisco in 1945 to set up the United Nations. At that United Nations Conference on International Organization, delegates of Brazil and China recommended that "a General Conference be convened within the next few months for the purpose of establishing an international health organization [and that] full consideration should be given to the relationship of such an organization and methods of associating it with other institutions, national as well as international, which already exist… in the field of health."

And so it came to pass, in February 1946, that the United Nations Economic and Social Council made arrangements for convening a Technical Preparatory Committee for the International Health Conference, the purpose of which would be to create the international health organization. That Committee, meeting in Paris in March-April 1946, consisted of 16 public health experts-distinguished private citizens rather than official representatives of any particular country-and representatives of four international health organizations. Among the latter were Drs. Hugh S. Cumming and Arístides A. Moll, attending as Director and Secretary of what they prematurely called the "Pan American Sanitary Organization," a name that would not be officially given to the Bureau until the following year. Participants discussed views concerning the future constitution of a single international health organization and proposed a definitive conference for June. They recommended that instead of "International Health Organization," the name unofficially used until then to refer to the new agency, that "World Health Organization" be adopted.

According to the précis of the meeting, Dr. Moll described the work and situation of the Bureau at that time and cautioned that it "might, of course, act as a regional office of the new Organization in the same way it had cooperated with other health organizations. It would be for the Governments maintaining it to decide whether it would become such an office." Dr. Cumming echoed that caveat: "The time now seemed ripe for establishing a single international health organization; but it would not be desirable to create a body with too marked a super-governmental character. Regional offices would be essential, and those already in existence should be maintained and developed, among them the Pan American Sanitary Bureau. Its importance had continually grown, and its action in defense of health was now exercised in all the countries of Latin America."

The Technical Committee recommended that the other three organizations represented at the meeting—the Office International d'Hygiène Publique, the Health Organization of the League of Nations, and the Health Division of the United Nations Relief and Rehabilitation Administration—be absorbed into the World Health Organization. The most ticklish question was the future role of regional organizations, of which the only viable one was the Pan American Sanitary Bureau.

Recognizing that that Bureau "had achieved so much," the Technical Committee deliberated at length as to whether "regional organizations should be integral parts of the central organization" or "a more flexible system" should be sought, allowing for "related autonomous [regional organizations], established by multilateral intergovernmental agreement and brought into relationship with the World Health Organization. … The sole present example of this type of regional health agency is the Pan American Sanitary Bureau." While the Bureau represented a thorn in the side of some of the globalists at the meeting, the Latin Americans present were supportive of it.

When the International Health Conference convened on 19 June 1946, Drs. Cumming, John R. Murdoch (Assistant Director), Moll (Secretary), and John D. Long (Travelling Representative) attended in representation of the Bureau. Again, according to the précis, "The primary issue which had to be settled by the Conference was that of determining the relationship of the new health organization to the Pan American Sanitary Bureau, the oldest and most important intergovernmental regional agency in existence." Delegates from the Western Hemisphere staunchly defended the Bureau. The United States delegation submitted a resolution advocating the principle of "dual allegiance" in the sense that "the Pan American Sanitary Bureau should not only promote regional health programs and undertakings among the American Republics in harmony with the general policies of WHO, but also serve when necessary as its regional committee in the Western Hemisphere." The delegate of Peru stressed the fact that "the PASB would require no reform, as its long record of satisfactory service to the American republics had shown that it was already well adapted to their needs." The delegate of Paraguay noted that: "Although, basically, the Latin American delegations, like other delegations, wished to see a fraternal cooperation of all nations in the health

field, the Pan American Sanitary Bureau should remain in their hands. It was intertwined in the happiness of a whole continent, and any change in the situation would profoundly affect the health of all the pan-American countries. An arbitrary termination of the Bureau would lead to all kinds of difficulties . ... An organization could not be brushed aside without due regard to the basis on which it had been created under international agreements."

In an attempt to conciliate the various viewpoints, the Conference set up a "harmonizing subcommittee" that worked out the following text, which later was approved by the full Conference and included as Article 54 of the WHO Constitution:

> The Pan American Sanitary Organization, represented by the Pan American Sanitary Bureau and the Pan American Sanitary Conferences, and all the other inter-governmental regional health organizations in existence prior to the date of signature of this Constitution, shall in due course be integrated with the Organization. This integration shall be effected as soon as practicable through common action based on mutual consent of the competent authorities expressed through the organization concerned.

On 22 July 1946, 61 states signed the Constitution of the World Health Organization. Encompassing a preamble and 19 chapters, with 82 articles, this basic charter of the Organization set forth its overall objective, enumerated its functions, established its central and regional structure, defined its legal status, and provided for cooperative relationships between it and the United Nations and other organizations, both governmental and private, concerned with health matters.

At the XII Pan American Sanitary Conference in 1947, Dr. Fred L. Soper was elected Director and Dr. Hugh S. Cumming Director Emeritus. In passing to his successor the baton of leadership, Dr. Cumming pointed out the Bureau's principal challenges: it had to be reorganized; financial resources had to be increased to meet program demands; headquarters space had to be sought; inter-American professional personnel had to be trained; relations had to be established with WHO; Governments had to be dissuaded from shunning the Pan American Sanitary Conferences when held in countries with which they had political disagreements; and a salary and tenure for the Director had to be established. Dr. Soper joined the staff in toasting Dr. Cumming's 26 years of service to the Bureau at his farewell party in December 1946.

Within months, delegates of 21 American republics met to celebrate the XII Pan American Sanitary Conference, held in Caracas, Venezuela, in January 1947. Although all of them had signed the WHO Constitution, they assertively drew attention to the fact that: "The continued progress made by the Pan American Sanitary Organization has been a decisive factor in the promotion of public health in the Americas." While they wanted to cooperate with and participate in the World Health Organization, they were not interested in "integrating" the Bureau into WHO-if that meant absorption-and much less in abandoning it altogether. The XII Conference decided to consolidate the Bureau's separate identity, reorganizing it as the Pan American Sanitary Organization (PASO), with four organs: the Pan American Sanitary Conference as the supreme governing body of the Organization; the Directing Council, with one representative from each of the Member Countries; the Executive Committee, with seven representatives elected by the Directing Council and serving for overlapping terms of three years; and the Pan American Sanitary Bureau, the Director and his staff, whose purpose would be to carry out the new program "covering the medico-sanitary aspects of preventive medicine, medical care, and social welfare." Thus, the Bureau was no longer an "executive board," as before, but the secretariat of the regional organization. The aim of this reorganization was to give Member Governments more direct and active control over the Bureau's policies and programs and to develop an organization that could work with WHO. In addition, the XII Conference unanimously elected Dr. Fred L. Soper to be the next Director of the PASO.

The Conference instructed the newly formed Executive Committee to draft a Constitution for the Pan American Sanitary Organization as outlined by the Conference and to convene, in agreement with the Director, a meeting of the Directing Council within nine months so that the Constitution could be deliberated and approved. These instructions were followed, the first meeting of the newly constituted Directing Council being held in Buenos Aires in September-October 1947. Comprised of representatives of all Member Countries, the Council adopted a Constitution for the Pan American Sanitary Organization that reflected the situation in the Americas at this historical juncture.

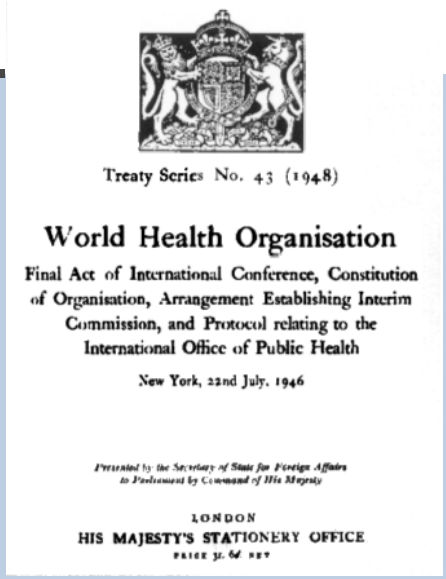
The war had permitted the economies of some of the countries of the Region to prosper, with the Latin American contribution to world trade now greater than 30%. All fields of human endeavor had registered great progress, and the achievements gained triggered the desire for further conquests. Throughout the Region, productivity levels rose, standards of living increased, and autonomy among territories blossomed. Reflecting the optimism of the Region in an era of growing prosperity, the preamble of the Constitution stated: "Progress in the sciences of public health and medicine together with new and wider concepts of the responsibilities of Governments in matters of health make it essential to broaden the scope of international health work in the Western Hemisphere and to develop and strengthen the Pan American Sanitary Bureau in order that it may be able to carry out fully the obligations imposed by this progress."

To establish a relationship between the regional and global health bodies, the First Directing Council authorized the Executive Committee to act "as Negotiator with the Negotiating SubCommittee of the World Health Organization," on condition that the "Pan American Sanitary Organization should continue to function as an independent entity for the solution of problems of a continental character." The Council drafted a proposed agreement with WHO that was submitted to the First World Health Assembly in Geneva in 1948, which approved it with the exception of one article. The draft was then studied by the Executive Board of WHO, and the text proposed by that body was presented to and approved by the Directing Council of the Pan American Sanitary Organization at its second meeting in Mexico in 1948.

Whereas the American republics readily signed and put into effect the Constitution of their regional organization, that of the World Health Organization was still pending ratification in 1947. Nevertheless, although the Bureau's foundation was in place, the edifice was vulnerable: the exchequer was empty, most

BIRTH OF A DOUBLE IDENTITY

After years of negotiations, the countries of the Hemisphere not only did not lose their Pan American Sanitary Bureau . . . they gained membership in, and a Regional Office for, the World Health Organization.



Treaty Series No. 43 (1948)

World Health Organisation

Final Act of International Conference, Constitution of Organisation, Arrangement Establishing Interim Commission, and Protocol relating to the International Office of Public Health

New York, 22nd July, 1946

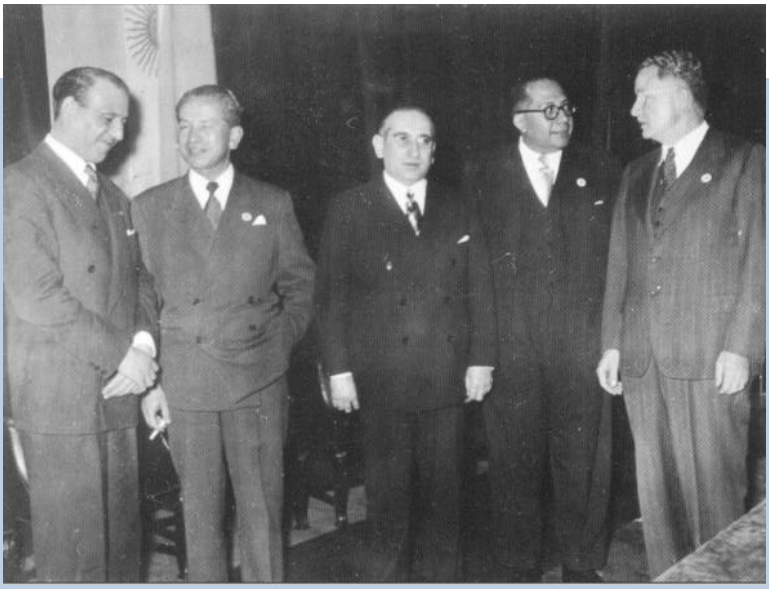
Presented by the Secretary of State for Foreign Affairs to Parliament by Command of His Majesty

LONDON
HIS MAJESTY'S STATIONERY OFFICE
PRICE 3*s.* 6*d.* NET

The Intemational Health Conference approved the Constitution of the World Health Organization on 22 July 1946.

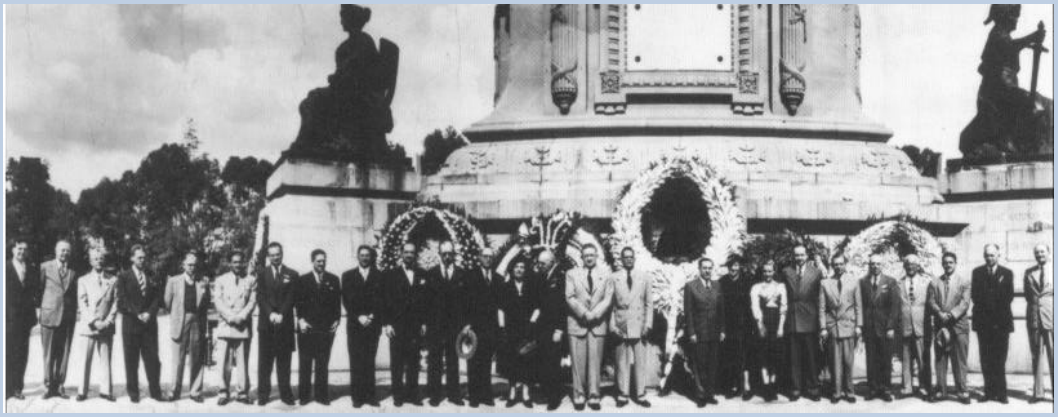
The WHO Constitution could not enter into force, however, until ratified by 26 of the then full United Nations membership of 61 Member States. That happened on 7 April 1948 —considered thereafter the Organization's birthday. An Interim Commission (shown in session at right) served as "midwife" to the as yet unborn World Health Organization.

In the meantime, the Pan American Sanitary Bureau acted fast to get its own house in order. The XII Pan American Sanitary Conference, meeting in Caracas in January 1947, elected Dr. Fred Lowe Soper, Director, and reorganized the Bureau as the Pan American Sanitary Organization. One of its newly formed organs, the Executive Committee, met for the first time in Washington, D.C., in April of that year and drafted a Constitution for the regional organization. Dr. Soper would serve as Director until 1958.



Five months later, that Constitution was adopted at the First Meeting of the Directing Council, held in Buenos Aires in September-October 1947 (some of the officers pictured, left), and immediately entered into force.

Successive meetings of the Governing Bodies of the Pan American and World Health Organizations negotiated the terms of agreement for the relationship between the two organizations, the final text of which was approved by the Directing Council at its second meeting in Mexico City in October 1948 (delegates pictured to the left).



THE EVENING STAR
Washington, D.C.
TUESDAY, MAY 24, 1949

Agreement to Make Bureau Hemisphere Health Office

The Pan American Sanitary Bureau today is expected to sign an agreement to become the "regional office" for this hemisphere of the World Health Organization, officials announced.

Dr. Brock Chisholm, WHO director general, is here for the ceremony, attending part of a week-long session of an interim executive committee of the Pan American Sanitary Conference, which meets once a year.

The bureau, representing 21 American republics, was set up shortly after the turn of the century to work on international aspects of public health, particularly affecting jurisdictions of more than one nation. Dr. Fred L Soper, director, will sign the WHO agreement on behalf of the bureau.

As part of the committee program today, members were to call on Leonard A. Scheele, surgeon general of the Public Health Service. The meeting is being held at the bureau headquarters,

Finally, on 24 May 1949, the Director-General of the World Health Organization, Dr. Brock Chisholm, and the Director of the Pan American Sanitary Bureau, Dr. Soper, penned the agreement that recognized the Pan American Sanitary Bureau as both an independent entity and as Regional Office of the World Health Organization for the Americas.

of the staff temporary, and the locale--still offices in the Pan American Union-borrowed. In his book, *Ventures in World Health,* Dr. Soper described the Organization he found on assuming its helm:

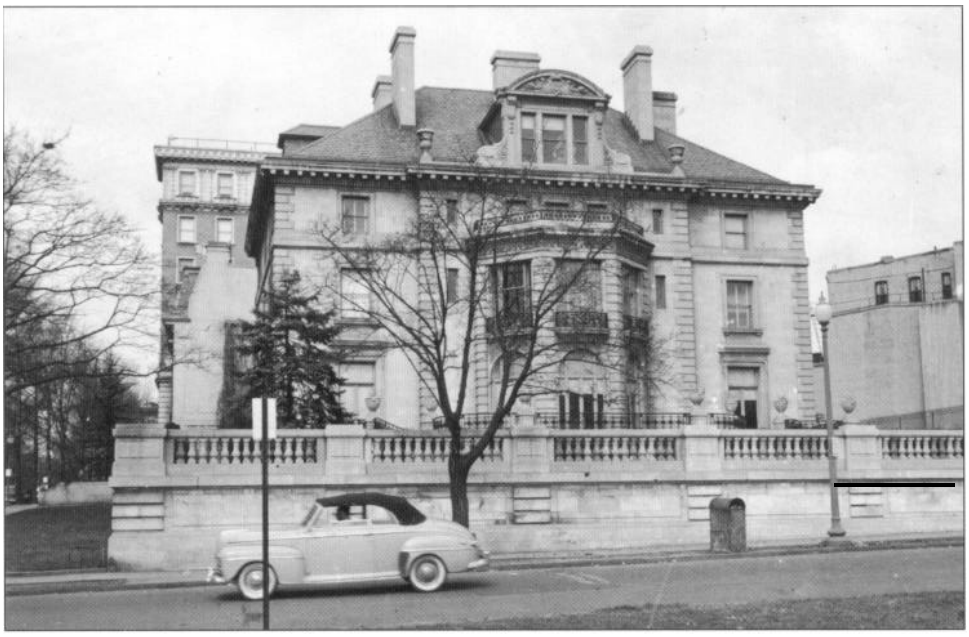
> During World War II the United States of America had funneled resources to the Bureau for certain special programs and fellowships. Thus it had a $600,000 program in 1946 pyramided from a $115,000 base. The U.S. Public Health Service now desired to discontinue its secondment of professional staff and to curtail fellowship funds. The Bureau had about $85,000 to meet estimated expenditures for 1947 of $175,000. At the XII Conference…while voting in favor of an increased program and new headquarters for PAHO, [the delegates took] no action to increase government quotas.
>
> Hopefully, I looked toward WHO for early relief in obtaining funds for the Bureau. This hope was obliterated when I attended the March 1947 meeting of the WHO Interim Commission in Geneva and learned that the Commission was itself operating on a very small budget and had no funds available for my Bureau.... Fundamentally, as Director of PASB, I was happy to find out that WHO was unable to bail out the Bureau immediately. Had WHO been well funded in 1947, PASB probably would have become simply its regional organization. In the fluid situation of 1947, it was obviously important to maintain the PASB activities and even to increase them before the WHO Constitution became operative.

Dr. Soper thus worked the budget crisis to the Bureau's advantage: hand out, he went from country to country seeking "voluntary contributions" from Member Governments. Thanks to the Director's persuasiveness, the $US85,000 fund of 1947 ballooned to an approved budget of $1,300,000 for 1948—$1 million of it the result of contributions, including $400,000 from Argentina, $260,000 from Brazil, and $200,000 from Mexico. Understandably pleased with the success of his entreaties, Dr. Soper reported that "The First World Health Assembly in 1948 found the PASB with a budget and a program which could not be integrated into the relatively small budget voted for WHO."

On 24 May 1949, the first Director-General of WHO, Dr. Brock Chisholm, and the Director of the Bureau, Dr. Soper, signed an agreement formally establishing the relationship between the two organizations. It was approved on 30 June and became effective on 1 July during the Second World Health Assembly. As a result, the Bureau was converted into the Regional Office of the World Health Organization, while at the same time maintaining its identity as the Pan American Sanitary Bureau. The Directing Council, and every fourth year the Pan American Sanitary Conference, and the Pan American Sanitary Bureau would "serve respectively as the Regional Committee and Regional Office" of WHO for the Americas. Moreover, "in deference to tradition, both organizations shall retain their respective names." Since the WHO Constitution provided for the Regional Director for the Americas to be appointed by the Executive Board in agreement with the Regional Committee, the Council, sitting as Regional Committee, could assure appointment of the Director of PASB as Regional Director. This agreement meant that the international health work of two organizations would be carried out under a single program. While there would be two sources of funds, the operating procedures, employment policies, staff rules and benefits, and fiscal arrangements were, practically speaking, the same. The dual PASB and WHO budgets meant a proportionately larger program for the Americas than for any other WHO Regional Office.

At this coalescing stage of the Bureau's evolution, organizational matters understandably prevailed over all others. Dr. Soper informed the delegates at the XIII Pan American Sanitary Conference, held in Ciudad Trujillo (now Santo Domingo), Dominican Republic, in 1950, that he was concentrating his efforts primarily "…on developing the professional and administrative mechanisms needed by the Bureau for the effective discharge of [its] mandate and in unifying the activities of the Bureau and of the World Health Organization for the Americas in a single program." The Conference, taking into consideration the Organization's current and potential growth, discussed the need for relocating its headquarters, with Mexico,

The quest for space proved more successful during Dr. Soper's administration, with the Organization moving from the Pan American Union building to new headquarters in Washington, D.C.—first to 2001 Connecticut Avenue (right) in 1947 and then to 1501 New Hampshire Avenue (below) in 1951.



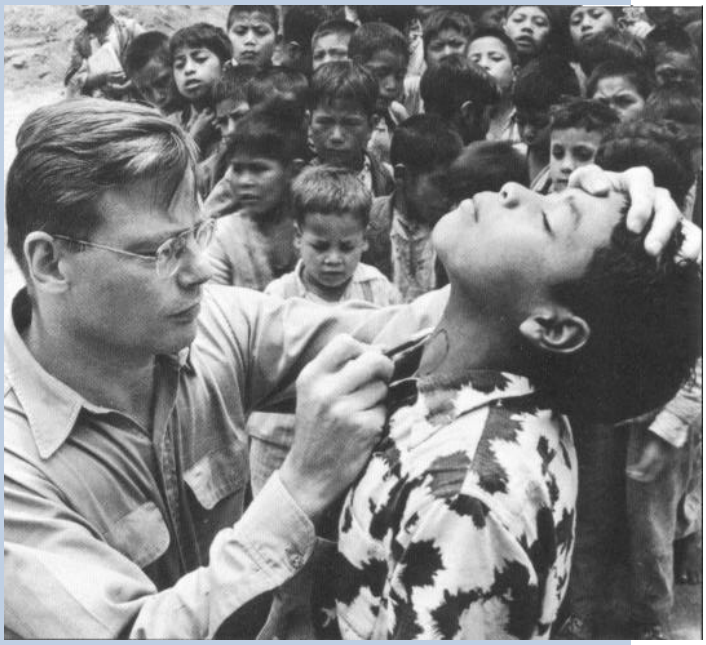
Panama, Peru, and the United States offering to serve as host country. In the end, the Conference chose the United States, but some time would pass before an acceptable site could be found. The Bureau had moved to offices on Connecticut Avenue in Washington, D.C., in 1947 and, in 1951, with the aid of interest-free loans from the W.K. Kellogg and Rockefeller Foundations, purchased interim headquarters in the city on New Hampshire Avenue.

The XIII Conference terminated the holding of the Pan American Conferences of National Directors of Health, six of which had convened between 1926 and 1948, now that the Directing Council would serve the same purpose of regular discussion of important public health issues each year. The Conference also took up discussion of a WHO recommendation that the Pan American Sanitary Code be abrogated to bring the Bureau more in line with worldwide regulations. In the Region, however, it was considered that the Code, signed in Havana in 1924 and ratified by 21 American republics, was the treaty based on which the Bureau and the Conference functioned. As a compromise, the Conference authorized the Director to negotiate this matter with WHO-negotiations that led to the elimination of certain technical articles in the Code.

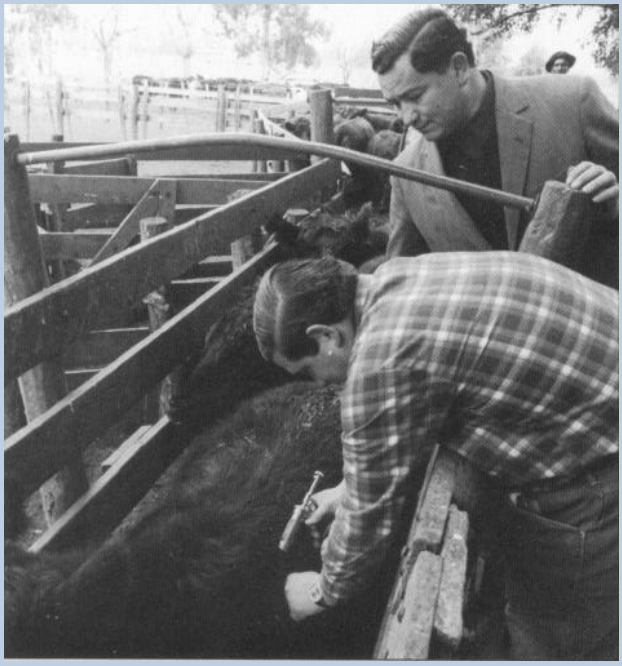
Yet another relationship, this time within the inter-American system, was due for an overhaul. To clarify their respective roles, the Pan American Health Organization and the Organization of American States signed an agreement in 1950 that established PAHO as a specialized inter-American organization; reaffirmed its autonomy; and defined the principles for mutual relationships, representation, and exchange of information-including a commitment by PAHO to take into account recommendations by the OAS council.

A New Concept: Pan American Centers

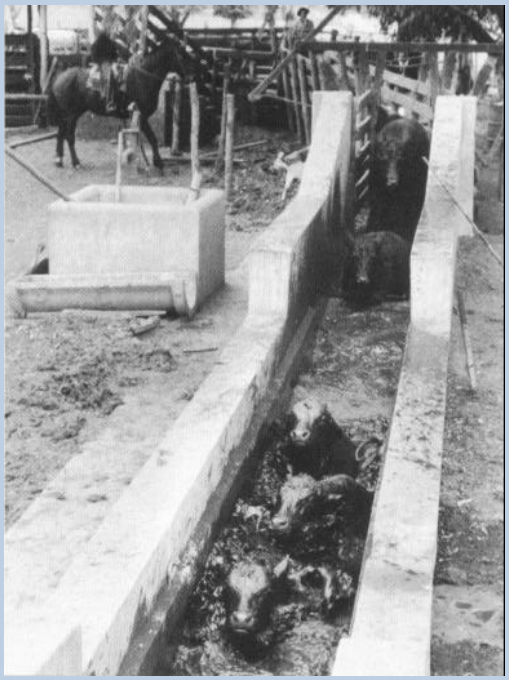
The need to organize Hemisphere-wide research and development programs in specific health-related areas spawned the Institute of Nutrition of Central America and Panama (INCAP) in Guatemala City in 1946; the Pan American Foot-and-Mouth Disease Center (PANAFTOSA) in Rio de Janeiro in 1951; and the Pan American Zoonoses Center (CEPANZO)—today the Pan American Institute for Food Protection and Zoonoses (INPPAZ)—which opened in Buenos Aires in 1956.



The Director of INCAP, Dr. Nevin S. Scrimshaw, participating in a survey if endemic goiter in Guatemala in 1954.



PANAFTOSA took the lead in vaccinating cattle against foot-and-mouth disease.



A herd bathing in disinfectant against zoonotic infection, an approach promoted by CEPANZO.

A major thrust of the Organization's assistance to the countries during the 1950s was environmental sanitation-especially the provision of water supply and waste disposal services.

The Organization's finances also begged for order, and in 1951 the Directing Council approved the Financial Regulations for the Organization (which, in subsequent meetings, were amended). Article 5.1 stipulated that the budget should be financed by contributions from new Member States "according to Article 60 of the Pan American Sanitary Code." Article 5.2 provided that the budget should be augmented by supplementary contributions, by contributions from new Member States, and from France, the Netherlands, and the United Kingdom in respect of their territories within the Region of the Americas, and by miscellaneous income. (Article 60 of the Pan American Sanitary Code provided that "for the purpose of discharging the functions and duties of the PASB a fund of not less than $50,000 shall be collected by the Pan American Union, apportioned among the Signatory Governments on the same basis as are the expenses of the Pan American Union.") Shortly thereafter, France, the Netherlands, and the United Kingdom began making quota contributions, thus allowing participation of their territories in the Western Hemisphere in full discussion of technical matters during the Organization's Governing Body meetings.

Having met head-on the organizational challenges of budget and finance, relationships with the World Health Organization and the Organization of American States, and headquarters accommodations, the Director set about building a Bureau that could effectively address health conditions in the Region at mid-century. Those conditions Dr. Soper summed up as follows: "The population in some countries still suffers such epidemic diseases as typhoid, smallpox, plague, malaria, and dysentery; child mortality is excessive, nutrition inadequate, modern hospitals practically nonexistent, and average life expectancy low.... Naturally the Bureau will concentrate its efforts where the need is greatest and in those fields in which we have expertise."

Administration To accomplish its work, the Bureau was organized to have an Office of the Director; a Division of Public Health, with a Health Promotion Branch, an Environmental Sanitation Branch, a Communicable Diseases Branch, and two special programs, one for the eradication of *Aedes aegypti* and the other for the eradication of malaria; a Division of Administration; and a Division of Education and Training.

Yaws—before and after one shot of penicillin.

COMBATTING YAWS IN HAITI

A former PAHO fellow from Haiti trained his countrymen to become inspectors in yaws eradication.

At mid-century, over half the rural population of Haiti had fallen victim to yaws, an unsightly and crippling disease. About that time, Dr. John D. Cutler, a front-line researcher in venereal diseases who later became Deputy-Director of the Bureau, visited Dr. Soper in Washington, D.C. His recollection of that visit is telling:

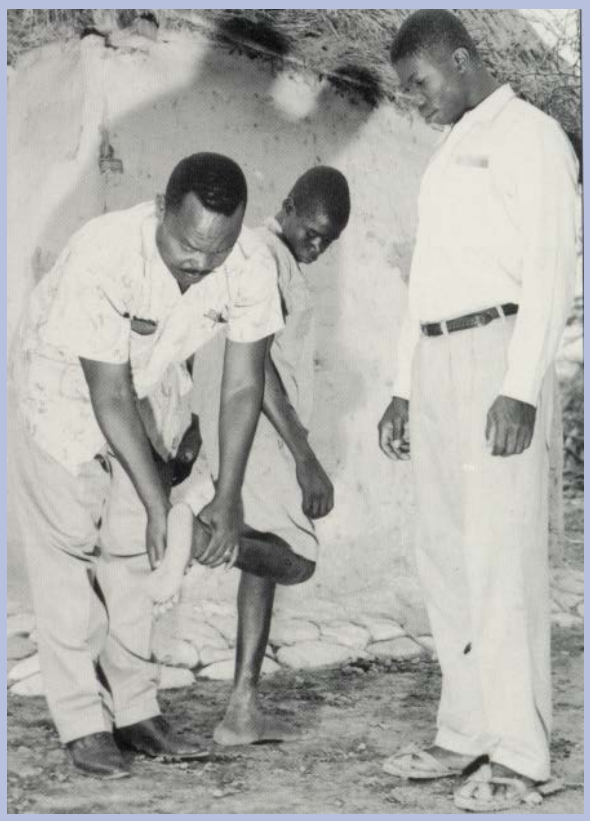
> You invited me to have dinner with you in Washington, … After you heard the reports of the apparent curative value of low doses of long-lasting penicillin in the incubating stages of syphilis you asked, "You think it would also work in yaws?" When I replied that I did, you then immediately set forth the concept of a mass-treatment program based upon complete coverage of the entire

All the employees of this coffee packaging plant were treated...

...as were all students in this school.

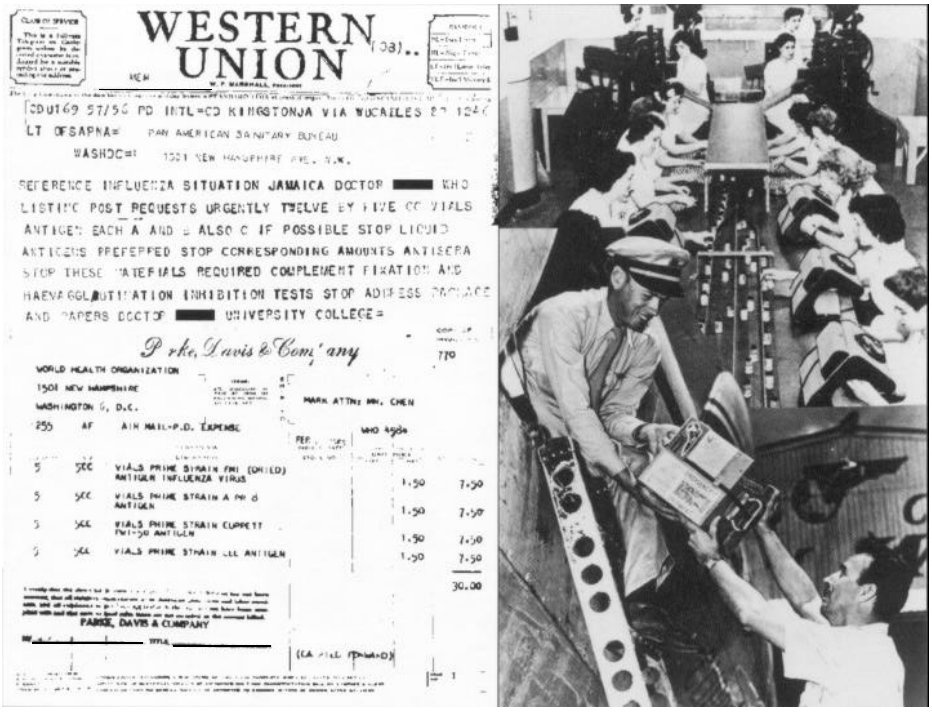
population so that there would be a cure not only of the clinical cases, but also of the incubating cases—without the need for extensive diagnostic studies. On the basis of existing evidence you then dared to move rapidly, without waiting for years of detailed clinical studies, to launch the yaws eradication program in Haiti, which set the pattern for the rest of the world

At the request of the Government of Haiti, PAHO, along with WHO and UNICEF, organized teams staffed by national and international technicians to go door to door giving a single penicillin injection to everyone with the disease and to all contacts (roughly 84% of the population). Shortly, yaws had been eliminated in Haiti.



"Show your feet," where signs of yaws are frequently found, became the order of the day in Haiti.

Set up in 1948, the Organization's Supply Office made it easier for the countries to obtain health and medical supplies and equipment.



WESTERN UNION

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To place the Bureau's resources closer to their sphere of action, six decentralized zones were set up—Zone I with Headquarters in Washington, D.C., covered the United States, Canada, and the non-self-governing territories and had field offices in Jamaica and El Paso; Zone II, in Mexico City, covered Cuba, the Dominican Republic, Haiti, and Mexico; Zone III, in Guatemala City, covered British Honduras (today Belize), Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama; Zone IV, in Lima, covered Bolivia, Colombia, Ecuador, Peru, and Venezuela; Zone V, in Rio de Janeiro, covered Brazil; and Zone VI, in Buenos Aires, covered Argentina, Chile, Paraguay, and Uruguay. Each Zone office—according to Dr. Soper, "a copy in miniature of what the Headquarters was before decentralization"—had a medical officer with a degree in public health, in some cases more medical officers, a sanitary engineer, a public health nurse, and other staff as program requirements indicated.

As "an experimental administrative undertaking involving the long-term supervision of intercountry cooperation in specific fields that are beyond the reach of individual countries," the Organization created several Pan American Centers during this period. The Institute of Nutrition of Central America and Panama (INCAP) was set up in Guatemala City in 1946. The Pan American Foot-and-Mouth Disease Center (PANAFTOSA) was established in Rio de Janeiro in 1951 as a hemispheric entity for cooperation in the fight against foot-and-mouth disease. The Pan American Zoonoses Center (CEPANZO) began operations in Buenos Aires in 1956 to promote and strengthen activities against zoonoses in the Americas.

Education and Training At this time the population of the Americas showed the highest rate of increase in the world, an increase that implied an urgent need for expanded health services, which in turn meant a demand for more trained health workers. To help overcome the countries' shortage of trained personnel, the Bureau organized seminars and special training courses and workshops, awarded fellowships, and helped schools expand their courses. These activities, in addition to building a cadre of educated health workers, linked countries through the exchange of information. The Bureau also provided materials, teaching personnel, and advisers on curricula and public health organization. A Medical Education Information Center, established in Washington, D.C., facilitated the exchange of information among a dozen important groups working to strengthen medical education in the Americas.

Under sponsorship of the United Nations, the Bureau, and the Government of Chile, a regional center for training health statisticians was set up in Santiago; the Bureau provided fellowships to the center and helped staff its faculty. Short-term courses were given on insect control, water works operations, health education and laboratory diagnosis of tuberculosis, venereal diseases, and brucellosis, and a training program for foot-and-mouth disease control was conducted at PANAFTOSA. The Bureau established basic standards for nurse education and assisted Governments in training graduate nurses and growing numbers of nurse auxiliaries.

Public Health Administration The Organization worked with national health departments, encouraging countries to improve public administration in general. It helped Governments set up model projects to demonstrate the value of integrated health services, assigning to them teams of experts and fellows. As a harbinger of the policy that, decades later, would target the strengthening of local health services, Dr. Soper explained that: "With the expansion of health programs, national and local health services-the bases for raising health levels throughout the hemisphere-are growing and developing proportionately. International health work is just an extension of domestic programs. It coordinates them into regional and continent-wide campaigns while promoting expansion of local health services. This, in essence, is the thrust of international health work in the Americas. Under the guidance of the Bureau… this work has been progressively achieving more and better results. The intimate association of professionals at the national and international levels has been the secret of its success."

Special projects on health administration, mental health, and alcoholism were developed. In the area of maternal and child health, the Bureau worked closely with UNICEF, especially in setting up immunization campaigns against diphtheria and whooping cough. In nutrition, the establishment of INCAP allowed that Institute to act as a technical center for research into nutrition problems in Central America, supported by the W.K. Kellogg Foundation, the Massachusetts Institute of Technology, the Rockefeller Foundation, the United Nations Food and Agriculture Organization, and UNICEF; the Bureau provided the Institute's director and accepted responsibility for administering INCAP. It also worked in goiter control in regions where iodine was scarce. Entering the field of veterinary public health, the Bureau provided advisory services to the countries on brucellosis, hydatidosis, and rabies. PAHO environmental engineers assisted authorities in the elaboration and execution of urban and rural sanitation programs for the provision of water, elimination of wastewater, insect and rodent control, food safety, modern solid waste disposal, and disaster relief. An area of special emphasis, hospital administration, included courses, exchanges about new techniques, hospital construction, administrative reorganization, and a regional census of hospitals. The Bureau set up a Supply Service in 1948 that facilitated the selection and acquisition of radioisotopes, drugs and other medical supplies, and equipment.

Although, as a means of establishing regional policy and directing programs, the countries in collaboration with the Organization had presented reports of health conditions in the Hemisphere as far back as the International Sanitary Conference of 1902, the systematic collection and distribution of health information began with a *Summary of Reports on the Health Conditions in the Americas, 1950-1953,* prepared for the XIV Pan American Sanitary Conference held in Santiago, Chile, in 1954. Thereafter, quadrennial reports have been prepared for each succeeding Conference to establish a reference of common information that facilitates the assessment of major health trends in the Region. This information has been utilized as well in preparing reports on the world health situation published by WHO.

Control of Communicable Diseases This period, while one of firsts in so many areas, was perhaps most significant for what Dr. Soper labeled a regional "call to arms" against communicable diseases. Experience in disease control gained during World War II and medical research, which accelerated in the early 1940s, endowed mankind with a new body of information on controlling epidemics and preventing disease. The hope stirred that many diseases

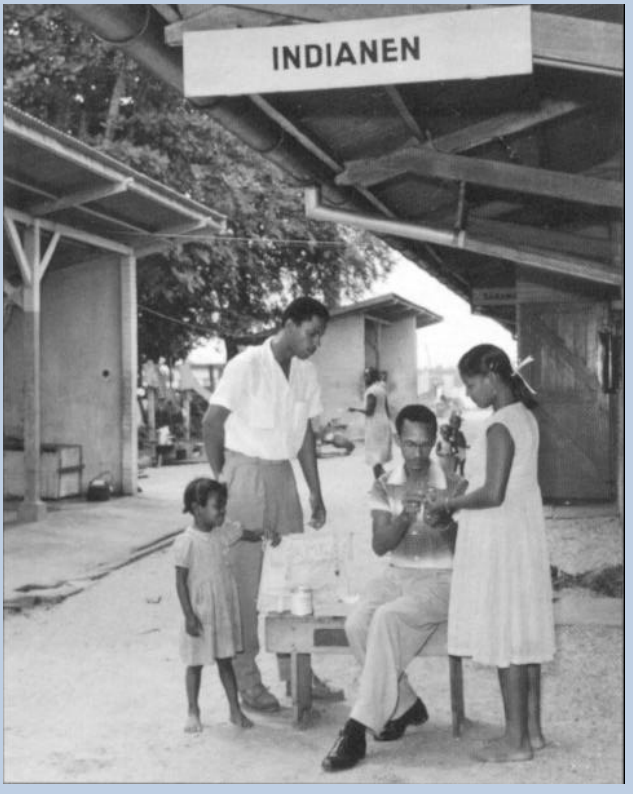
WAGING WAR AGAINST MALARIA

Together, the countries and the Organization undertook a malaria eradication campaign that Reached even the most remote corners of the continent.

In Mexico, men from the National Malaria Eradication Commission rode horseback to carry the attack into otherwise inaccessible mountain villages.

In Bolivia, villagers assembled at the arrival of workers from the National Malaria Eradication Service to give blood and, in the case of those with malaria fever, receive medicine.

In Brazil, National Malaria Service boats coursed the country's rivers to distribute salt treated with the antimalaria drug chloroquine, in an effort to interrupt malaria transmission in sparsely populated areas where systematic application of insecticides was unfeasible.



In Suriname, personnel of the Antimalaria Commission took blood samples for malaria diagnosis from everyone coming from the interior to depots around Paramarlbo.

In Costa Rica, the campaign recruited village volunteers and set up volunteer collaborator posts to collect blood smears for microscopic diagnosis.

In Venezuela, the School of the Division of Malariology in Maracay moved to the forefront of malaria research and came to serve as a training center for WHO-sponsored malariologists from around the world, such as these from India, Vietnam, France, and Italy.

In Colombia, medical professionals received specialized training in parasitology to equip them to fight the disease.

could be controlled more easily or eradicated altogether through organized health action. Medicine's "new dimension," eradication, gamed hold throughout the Hemisphere, and the Bureau acted on the countries' mandate to wipe out diseases altogether. In 1947, Brazil proposed that the Organization launch a campaign to eradicate *Aedes aegypti*. In 1949, Haiti proposed the eradication of yaws, and the Bureau and UNICEF launched a successful program toward that end based on universal application of a single penicillin shot. In 1950, Costa Rica proposed the eradication of smallpox, followed by PAHO's promotion of studies to perfect the dried smallpox vaccine for tropical climates. In 1950, the XIV Pan American Sanitary Conference declared the eradication of malaria a priority goal.

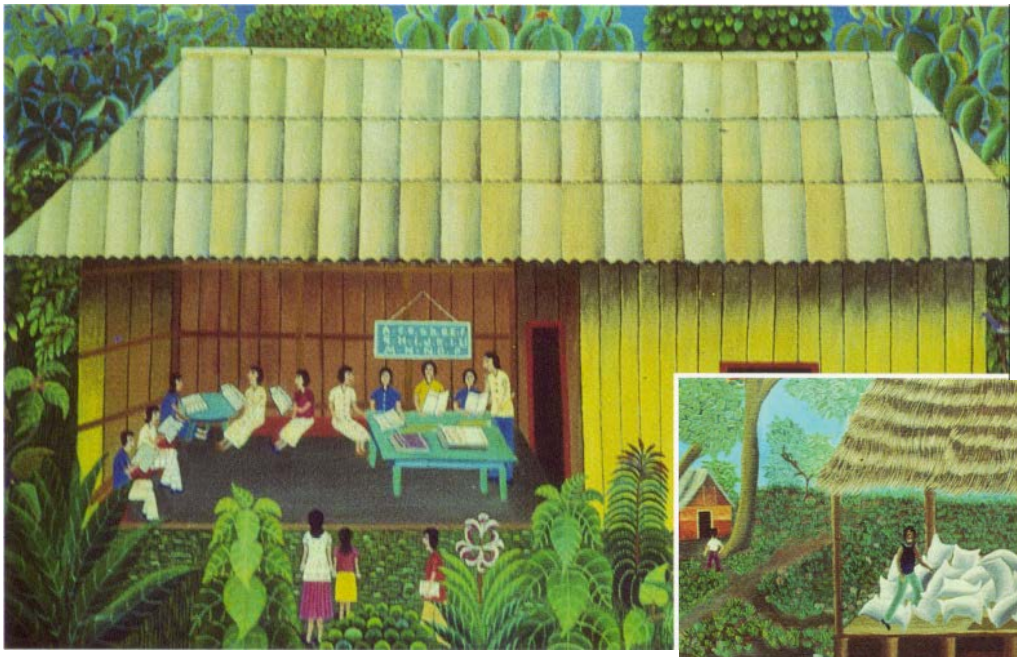
Whereas in the period from 1902 to 1946, the Bureau and the countries had sought to strike a balance between the threat of spread of infectious diseases and the interruption of international commerce, their focus was now no longer on preventing the passing of diseases from one country to another or on merely controlling them, but on eradicating diseases at their very source. Dr. Soper summed up the challenge this way: "As the sphere of cooperation expands, the links that unite humanity become stronger. Disease is the common enemy of the human species. In the fight against disease, it is essential that countries, like individuals, support each other mutually and without reservation. Only by putting health above national and institutional rivalries will all the benefits of international cooperation be achieved. … Every country, colony, department, province, and island in the Americas is within the Organization's orbit of coordinating action and we cannot allow there to be, anywhere in the hemisphere, a refuge for any disease, or disease vector, from which it can later reemerge."

In its work to "combat disease, lengthen life, and promote the physical and mental health of the people," the Bureau sought partners at every opportunity. The Directing Council, meeting in Mexico in 1948, offered the right to those territories "without their own government" to participate in discussions of the Organization's Governing Bodies. The agreement to collaborate for mutual benefit was reached with the Organization of American States in 1950. PAHO, likewise, struck agreements for mutual collaboration with the Inter-American Institute for the Protection of the Child for activities related to maternal and child health; with UNICEF for yaws eradication, typhus control, and immunization projects; with the Inter-American Affairs Institute in sanitary engineering, nursing, and the strengthening of national health services; with the United States Public Health Service on research into malaria, onchocerciasis, and venereal diseases; with the Brazilian National Yellow Fever Service and the Oswaldo Cruz Institute on *Aedes aegypti* eradication projects; with the Carlos Finlay Institute on yellow fever vaccine research; with the Rockefeller Foundation, which paid the salary of the Director in 1947 and supported regional nursing projects; and with the W.K. Kellogg Foundation for development of the Institute of Nutrition of Central America and Panama.

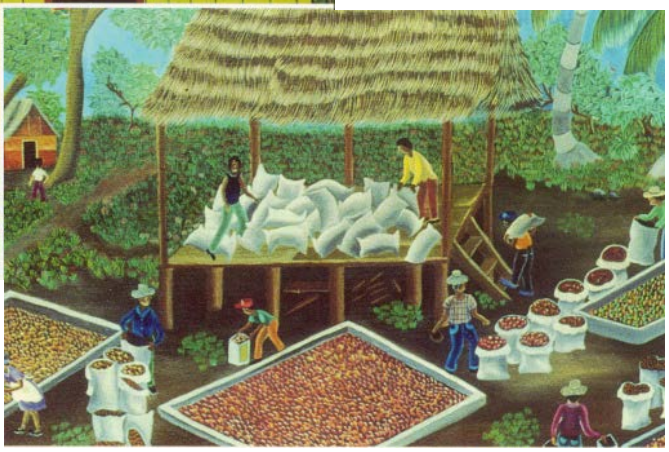
During the 12 years of his directorship, Dr. Soper acted as a veritable General for Health, marshalling every available resource in the war against disease. He transformed the Bureau from an entity whose accounting, personnel, and even correspondence had for decades been handled by the Pan American Union into a major international health force. The resources of the Bureau mushroomed during this period. From Dr. Soper's initial encounter in 1947 with "$85,000 to meet expenditures," the budget increased to about $10,000,000 in 1958. A staff of 88 in 1947 grew to 412 in 1954 and to 750 in 1958—more than two-thirds of whom were stationed in the countries. Gaining its additional role as Regional Office of the World Health Organization, the Bureau embarked on broad new campaigns against communicable diseases. Dr. Soper brought together groups which up to that time had been working in isolation. Physicians, nurses, veterinarians, dentists, sanitary engineers, and statisticians-all these and others as well-joined the international health team at work in the Region. The era of technical cooperation and exchange of specialists was under way, and the benefits of experience and progress were already in evidence throughout the Americas. ❖

THE RIGHT TO HEALTH

1958-1975



"To increase the ability to learn and produce by improving individual and public health" -goal of the Ten-Year Public Health Program for the Americas, 1961-1970.



Pan Americanism in health developed from the late 1950s to the mid-1970s against an international backdrop of sweeping political, technological, and social change. Politically, competing Soviet and U.S. commitments to world revolution and containment played out as a cold war between two blocs- Communist and Western-that for decades threatened to become a hot, nuclear one. The Third World for the most part resisted alignment with either bloc, asserting increasingly greater independence from the bipolar balance of power. The West Indies Federation came into force, a number of Caribbean islands gained their independence, and the countries of the Americas sought strength in unity by forging greater solidarity through institutions of the inter-American and United Nations systems.

Dr. Abraham Horwitz served as Director of the Bureau from 1958 to 1975—a period of great growth for the Organization's programs and influence.

Technologically, the period boasted countless innovations: man orbited space and landed on the moon, invented an artificial heart and transplanted a human one, deciphered the DNA double helix, and discovered new galaxies.

Socially-an era of the "hot line," "hippies," and "minis"-students rose up world-wide to protest social injustices; environmentalists warned of a "silent spring" wrought by the misused tools of agricultural development; guerrillas waged wars; computers unleashed an electronic revolution; and cigarettes were proven once and for all hazardous to health.

The Region experienced a general economic boom in the late 1950s and during the 1960s. The good times, however, eventually ran their course, and by the mid-1970s worldwide inflation triggered dramatic increases in the cost of food, fuel, and materials, bringing a halt to economic growth and widening the breach between rich and poor nations. Throughout this period, popular aspirations for social and economic change strengthened the resolve of the countries of the Americas to combat conditions that fostered ignorance, hunger, and disease-conditions that meant blighted lives, children with bellies bloated and brains stunted by malnutrition, their parents scavenging for food in garbage heaps.

The first Latin American Director of the Pan American Sanitary Bureau, Dr. Abraham Horwitz of Chile, elected to office in 1958 by the XV Pan American Sanitary Conference, drew attention to the mounting evidence of the relationship between health and wealth and, conversely, between sickness and poverty: "The great challenge to public health today lies in the social environment of most developing countries, where large numbers of people barely exist-their labor is unproductive; their food always scarce; their housing inadequate; their life expectancy short; and their physical, mental, and social health poor and precarious."

Regional Health Policy At the outset of the 1960s, the Governments of the Americas were gaining a clearer understanding that the problem of economic development was essentially one of rapidly assimilating the vast resources of modern technology to raise the living standards of the broad masses. In signing the Act of Bogota in 1960, the member countries of the Organization of American States fixed the concepts of health policies and programs, set up a Special Fund for Social Development, and agreed to cooperate in promoting accelerated economic and social development and in improving their people's living conditions.

These commitments were the basis for the Charter of Punta del Este, fruit of an Extraordinary Meeting of the Inter-American Economic and Social Council, held in Punta del Este, Uruguay, in 1961. The Charter affirmed the close interrelationship between natural and human resources on the one hand and progress and social and cultural changes on the other. It singled out the importance of planning as an approach to ordering problems according to their importance, their various means of solution, and their potential for

Through courses, research, and publications, the Organization strengthened national capabilities in the area of vital and health statistics as an important aspect of effective health services administration.

affecting well-being. The Charter set two general objectives: to increase life expectancy by a minimum of five years and to enhance the capacity to learn and produce by improving individual and collective health. Its specific objectives included water supply and sanitation, reduction in infant mortality, control of communicable diseases, improvements in nutrition, training and development of health personnel, strengthening of basic services, and intensification of scientific research, with knowledge being used to prevent and cure diseases. The Charter was coupled with the Ten-Year Public Health Program of the Alliance for Progress—a juridical instrument that was to serve as a framework for national development policies that intimately related health objectives and programs, goals, and action. (See also the chapter on health planning in this publication.)

The Pan American Health Organization convened a Task Force on Health at the Ministerial Level, held in Washington, D.C., in 1963, which described the mission it undertook as follows: "In light of the Charter of Punta del Este, we have considered health in the Americas in its technical, social, economic, juridical, and cultural aspects. We have recommended a number of practical measures for fulfilling the health objectives of the Charter. Their execution will mean greater well-being...." The Task Force concluded that the objectives of the Ten-Year Public Health Program were feasible, provided they were integrated with overall social and economic development objectives. In closing the meeting of the Task Force, Dr. Horwitz echoed that message: "Health contributes directly to economic and social development in that it prolongs life and increases productivity, or indirectly in that it facilitates the exploitation of natural resources by reducing or eliminating unfavorable environmental factors."

The political stage was thus set to realize the purposes of the Organization as-defined by its Constitution: "to combat disease, lengthen life, and promote the physical and mental health of the people." To achieve those purposes, the Organization centered its efforts on controlling or eradicating communicable diseases; attacking the environmental causes of disease—lack of water and basic sanitation, malnutrition, and ignorance; developing human resources; conducting research; and improving national health services. It also formed a partnership with the Inter-American Development Bank, which became what Dr. Horwitz labeled a "Bank of Health." Together, the two institutions devised a true health investment policy that enabled the countries of the Region to make significant health progress throughout the 1960s and 1970s.

The history of public health in the Hemisphere reached another milestone with the Declaration of the Presidents of America, signed in Punta del Este in 1967, and the "Program of Action" that they approved. The Governments again recognized health as a fundamental factor in regional economic and social development and stipulated that health considerations be taken into account in development projects from the preinvestment stage on. The Declaration addressed the need for industrialization, modernization of rural life, and consolidation of the scientific and cultural communities to attain an efficient economic community; moreover, it included a special chapter dedicated to health.

It followed that the Special Meeting of Ministers of Health of the Americas, held in Buenos Aires in 1968, stressed the fundamental importance of health to social and economic development-particularly in relation to production, reduction in risks to the environment, and exploitation of natural resources-and underlined the continuing value of individual and collective health to community well-being.

The new decade brought with it a collective determination to again chart the future, this time embodied in the Ten-Year Health Plan for the Americas, 1971-1980. In the words of the Director, "The Governments have decided to program the decade to achieve goals that will surely reflect the enormous wealth of experience, the spirit of progress, and the aspirations of the Americas." The Plan reevaluated health conditions and health infrastructures in light of environmental realities, the maternal and child health situation, food and nutrition, the availability of resources, and community participation-taking into account the experience gained from the preceding decade and the needs to increase the achievements made and take better advantage of future investments. It set goals for a program of services, the development of the infrastructure, and gains in life expectancy, and formulated recommendations for each area of the health field, likewise making recommendations for specific aspects of particular interest. Summing up, the drafters of the Ten-Year Plan clarified that: "The first priority is attending to the rights of the 120 million people who are today without access to even minimal care. Health services coverage is the means by which this humanitarian commitment is to be met."

Planning **The** Charter of Punta del Este had recommended that each country prepare a national plan for the 1960s as a long-range measure that would ensure the orderly development of activities for the protection, promotion, and restoration of health. The lack of experts in planning that could help countries devise health plans prompted PAHO and the Latin American Institute for Economic and Social Planning to initiate courses for the preparation of planners, with the objective "to train 100 experts in the next five years for Latin American countries."

At the same time, PAHO and the Center for Development and Social Studies of the University of Caracas undertook preparation of a detailed guide for the formulation of national and regional health programs that established an order of priorities among health problems, followed by alternative solutions for the investment of national resources, and relating the health plan to the general economic and social development plan.

To execute activities in this area, the Organization created an Office of Planning, and the Directing Council subsequently recommended establishment of a Pan American Center for Health Planning, which was set up in 1967 in Santiago, Chile.

Vital and Health Statistics By 1960, progress in health had translated into an average five-year increase in life expectancy over the preceding decade in the five countries-Argentina, Chile, El Salvador, Mexico, and Venezuela-for which comparative data were available. Death rates for infectious diseases were 41% lower in 1963 as compared to 1956; those for diseases of the digestive system, mainly gastroenteritis, decreased 35%; and those resulting from ill-defined causes dropped 35%.

Because a system of collection and analysis of basic data was critical to determining the magni-

Smallpox vaccination . . . no longer necessary. PAHO and the countries of the Americas redoubled their vaccination efforts in the 1960s, with the result that the last case in the Region was reported in 1971.

PAHO carried out field studies on vector-borne diseases, which continued to take their toll in human lives in many of the countries of the Region.

The Organization conducted field tests in the early 1960s that proved the effectiveness of the live attenuated poliovirus vaccine, following which millions of children were vaccinated in PAHO-sponsored programs in every country in Latin America.

Operators of a mobile antituberculosis unit in Mexico and priests in Colombia join the continental campaign to combat tuberculosis. From 1953 to 1973 deaths from the disease dropped by 90%.

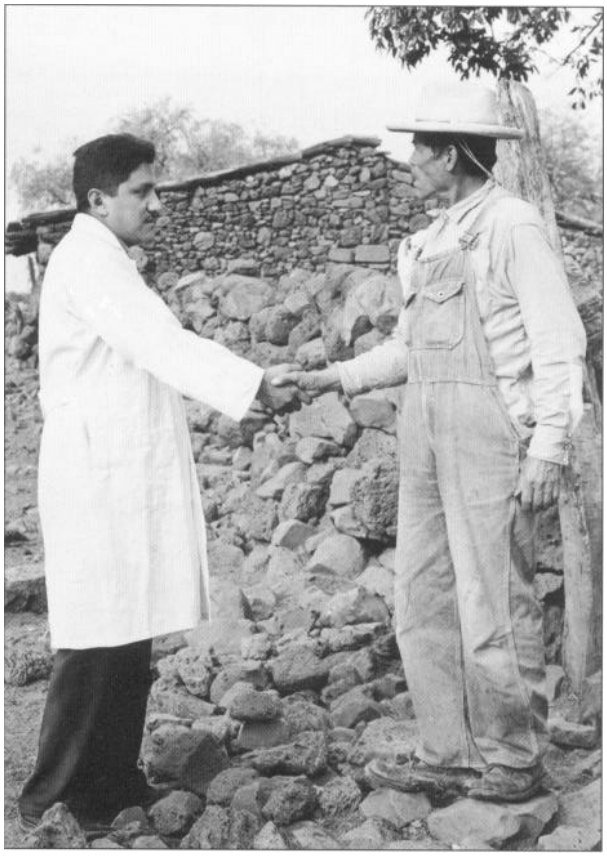
tude of health problems, their frequency, relative priority, and resources and manpower available to solve them, the Organization stressed the importance of setting up services for vital and health statistics. To that effect, it advised Governments in the areas of improving the quantity, accuracy, and prompt publication of data; international classification of diseases; education and training; and research.

In addition to continuing the publication of four-year reports on health conditions in the Americas, the Organization launched an Inter-American Investigation of Mortality, using 12 main collaborators working in 12 cities in 10 countries, to ascertain the differences in causes of death in urban areas on the basis of a thorough study of 43,298 deaths.

Communicable Diseases The Organization stressed efforts to prevent, control, and eradicate both those diseases preventable by vaccines as well as those requiring other methods of prevention and control. In respect to *malaria,* PAHO's efforts entailed research, training of professional and auxiliary workers, meetings of experts, and coordination of international agencies. While strides had been made in eliminating malaria—deaths caused by the disease had dropped from an annual average of 43,368 in the period 1950-1952 to 2,285 in 1964—many obstacles still hindered greater progress, among them administrative and financial constraints and growing mosquito resistance to insecticides.

Dr. Horwitz, convinced as early as 1960 that ***smallpox*** "can be eradicated from the Americas," orchestrated stepped up activities in the production of vaccine, training of technicians, provision of essential supplies, and organization of eradication programs in the countries. The Region's last autochthonous case was reported in April 1971, and in 1973 the XXII PAHO Directing Council declared the disease eradicated from the Hemisphere.

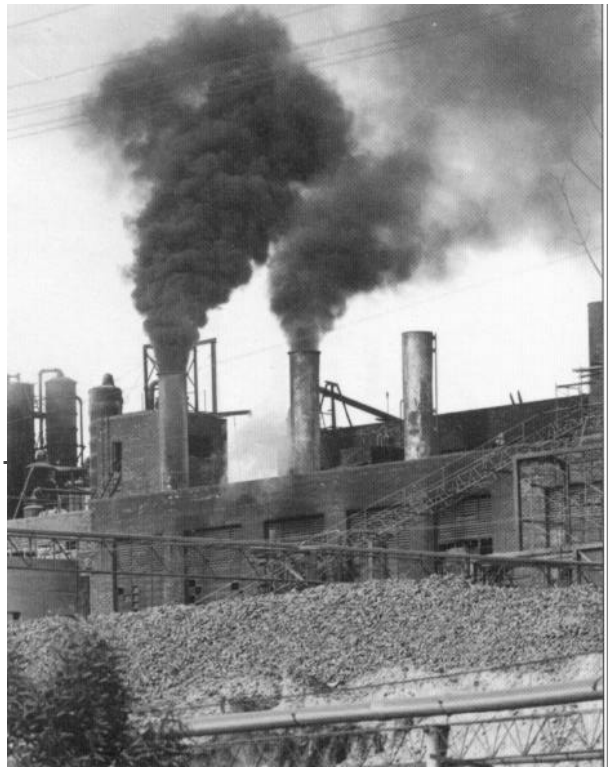
PAHO continued its efforts to eradicate ***Aedes aegypti,*** vector of both yellow fever and dengue. No case of urban yellow fever had been reported since 1954, but the Caribbean was experiencing outbreaks of dengue. The Organization initiated a *Dengue Newsletter* to keep countries apprised of the epidemiologic status of the disease. It also collaborated with Brazil and Colombia in production of a 17-D vaccine conferring immunity against jungle yellow fever.



Once the ultimate symbol of ostracism, leprosy victims began to return to the social fold in the 1960s, and PAHO urged the countries to integrate the detection and treatment of leprosy cases in general health services.

To combat ***poliomyelitis,*** PAHO collaborated on trials of live attenuated poliovirus vaccine; sponsored two international conferences in 1959 and 1960 for exchange of experience among researchers from throughout the world on biological, immunologic, and epidemiologic aspects of the disease; and assisted in organizing programs and making arrangements for the supply of vaccines and equipment. By the early 1970s, a marked decline in cases of poliomyelitis was being registered.

The Organization also prepared a continental



Increasing industrialization in the Region prompted the countries and PAHO to undertake studies of the effects of pollution on human health.

plan to combat *tuberculosis*, based on the training of specialists, particularly epidemiologists, to program the incorporation of tuberculosis control into local health services; formulation of standards for application of curative and preventive measures; and collection and analysis of information. In Latin America, mortality from tuberculosis by 1973 dropped to one-tenth of what it had been in 1953.

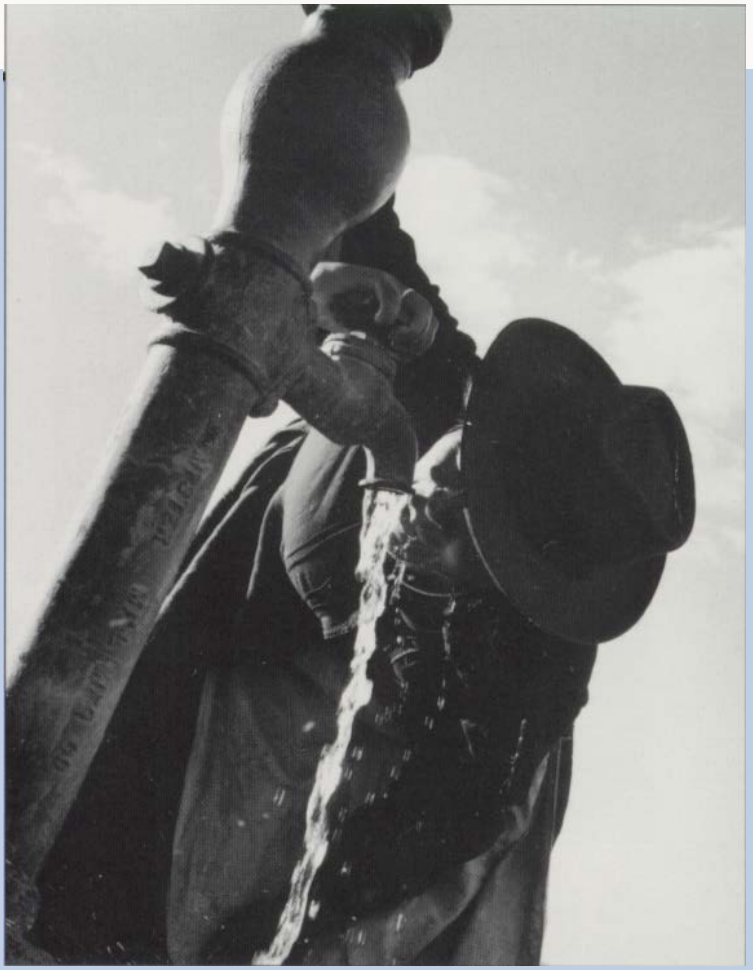
Another cause for concem, leprosy, prompted PAHO to work with the countries to intensify case detection and to hold courses in diagnosis and epidemiology of the disease. During this period, the number of cases fell significantly, and victims of the disease became more integrated into society. A major advance was the establishment of the Intemational Center for Training and Research in Leprosy and Related Diseases, in Caracas in 1972.

Also targets of the Organization's advisory services during these years were other diseases preventable by immunization— ***measles, whooping cough, tetanus, diphtheria,*** and ***typhoid fever***; the lingering problem of plague; and such parasitic afflictions as ***Chagas' disease*** and ***schistosomiasis.***

Environment and Health Both the Charter of Punta del Este and the Ten-Year Health Program singled out sanitation, especially the ***provision of water supplies and sewerage services,*** as a fundamental health activity, and during the 1960s and 1970s the Organization gave priority importance to environmental health. Activities in this field were enhanced by a Special Community Water Supply Fund, set up by the United States and Venezuela, and by the first long-term, low-interest loans executed by the Inter-Ameritan Development Bank (IDB), beginning in 1961. The IDB, citing PAHO as a "valuable collaborator whose technical assistance is well-known to all our member countries," supported 23 water and sewerage projects totalling $US127 million in 1962 alone that benefited 10 million persons in Latin America.

Providing abundant water for 111 million people was the major accomplishment of the 1960s; as a result, the Governments of the Americas, fortified by the Organization's sanitary engineering expertise, surpassed the urban water supply goals set by the Charter of Punta del Este.

During 1970-1973, $US2.1 billion were committed for water supply and sanitation projects that benefited over 33 million people, especially those in rural areas. The need to modemize and strengthen environmental health programs led to



Work renders results: water supply and sanitation projects executed from the early 1960s to the mid-1970s benefited more than 150 million people in Latin America.

From rural communities to sanitary engineering laboratories in graduate schools, PAHO collaborated in every aspect of providing a safe and adequate water supply to all the countries of the Region.

PAHO's establishment of an institutional development program with emphasis on sound managerial practices. To concentrate advisory services, research, education, and information in this area, the Pan American Center for Sanitary Engineering and Environmental Sciences was inaugurated in 1974. (See also the section in this publication on environmental health.)

A new focus, on the ecology, gained ascendancy in the mid-1960s. It addressed the subtle process of adaptation of living beings to the surrounding environment of which they were a part, particularly in light of growing industrialization, urbanization, internal migration, and the health consequences of those trends. Because of increased awareness of threats to the environment, the drafters of the Region's Ten-Year Health Plan for the 1970s noted that "It is incumbent upon us to think and act ecologically and to modify our value judgments and behavior if we wish to avoid or limit damage to the human environment." PAHO began active cooperation with the new United Nations Environment Program, an outgrowth of the U.N. Conference on the Human Environment, held in Stockholm, Sweden, in 1972.

The Organization created a Pan American Air Pollution Sampling Network, which by 1973 included 85 stations in 25 cities in 14 countries of the Americas. Its purpose was to provide information that could be used to promote legislation for the prevention and control of environmental risks. Noting that "we must be able to determine more precisely the essential limits of environmental quality so that we can set realistic standards that will not interrupt development on the one hand or compromise health on the other," Dr. Horwitz proposed to the Governing Bodies that a Pan American Center for Human Ecology and Health be created, and Mexico offered a site for this new entity.

Major natural disasters shook the Region during the early 1970s. Some 70,000 people were killed and 600,000 left homeless as the result of an earthquake in Peru in 1970. Two years later, another, in Managua, Nicaragua, killed 10,000 people and injured as many more. The Organization began to work with other agencies to respond to affected countries' needs and initiated activities in what the Director labeled the "epidemiology of ***disasters."***

The Organization also continued to work in the areas of ***solid waste disposal, housing, food protection,*** and ***occupational health.***

Health Services At the outset of his administration, Dr. Horwitz drew attention to the importance of organizing and administering health services to solve those problems of public concern that have the greatest social and economic importance. "The countries have now accumulated considerable experience in this respect, but efforts must be redoubled to organize all services—curative and preventive—of the countries under the aegis of an integrated administration, in which policy-making is centralized and operations are decentralized."

Increases in the countries' populations were outstripping the capacity of hospitals and health centers to provide services. The Organization stressed "the existence in every country of services having the widest possible coverage and the training of professionals and auxiliaries to carry out aims of individual programs and of the health plan as a whole." The computer was coming into wider use by health services, and PAHO urged the rational use of computerization in program budgeting, accounting and finance procedures, and personnel and resource management.

Still, the most begging problems continued to be the imbalance between needs and resources, poor utilization of services, and use of inappropriate technology. Moreover, the costs of services were rising: by the end of the 1960s, infrastructure costs represented over 80% of countries' health budgets.

Noting a clear Hemisphere-wide trend in the creation of "national health systems," the Organization promoted a functional structure that would concentrate all the available resources on existing health problems so that targets could be fixed and evaluated periodically. "The system would call for the formulation and implementation of a policy, the delivery of services, financing, and development of manpower resources operating in terms of the health plan."

A major feature of the Organization's thrust in the area of health services during this period was its *"rural strategy"*— targeting some 40% of the population-based on the combined efforts of "the motivated and active community, the empirical health worker trained to use simple scientific techniques, and the health auxiliary properly trained to prevent and treat and above all refer to his superiors that which he cannot or should not do."

Education and Training Inherent to the focus on health and development in the 1960s was recognition that the best possible use of available resources-a critical factor in development—depended on the preparation of professionals and the training of auxiliaries. Dr. Horwitz, calling education and training "the most important long-term investment for protecting and promoting health," described the situation as follows: "It is clear that there is a shortage of professional and auxiliary health workers in the Americas. Production has not kept pace with the growth of population; nor have the resources necessary to permit health workers to practice their professions increased proportionally. In addition, their distribution between urban and rural areas in each country is very uneven. It is thus important to plan the number of health workers required, to carefully define their responsibilities, and to establish attractive salary scales." So important was education and training that, between 1970 and 1973, 35-40% of the total PAHO budget was dedicated to educational activities conducted throughout the Organization.

In support of human resource development, the Organization promoted nurse education in both medical care and in health protection and promotion; increased substantially the number of fellowships awarded-with nearly 5,000 awarded in 1970-1973; emphasized preventive medicine in medical education; carried out projects to raise the standards of medical education; launched a study in Colombia aimed at devising a method for determining how many and what kind of personnel a country would need at a given moment and in the future; and sponsored a study of 130 medical schools in Central and South America. (See also the section in this publication on health workers.)

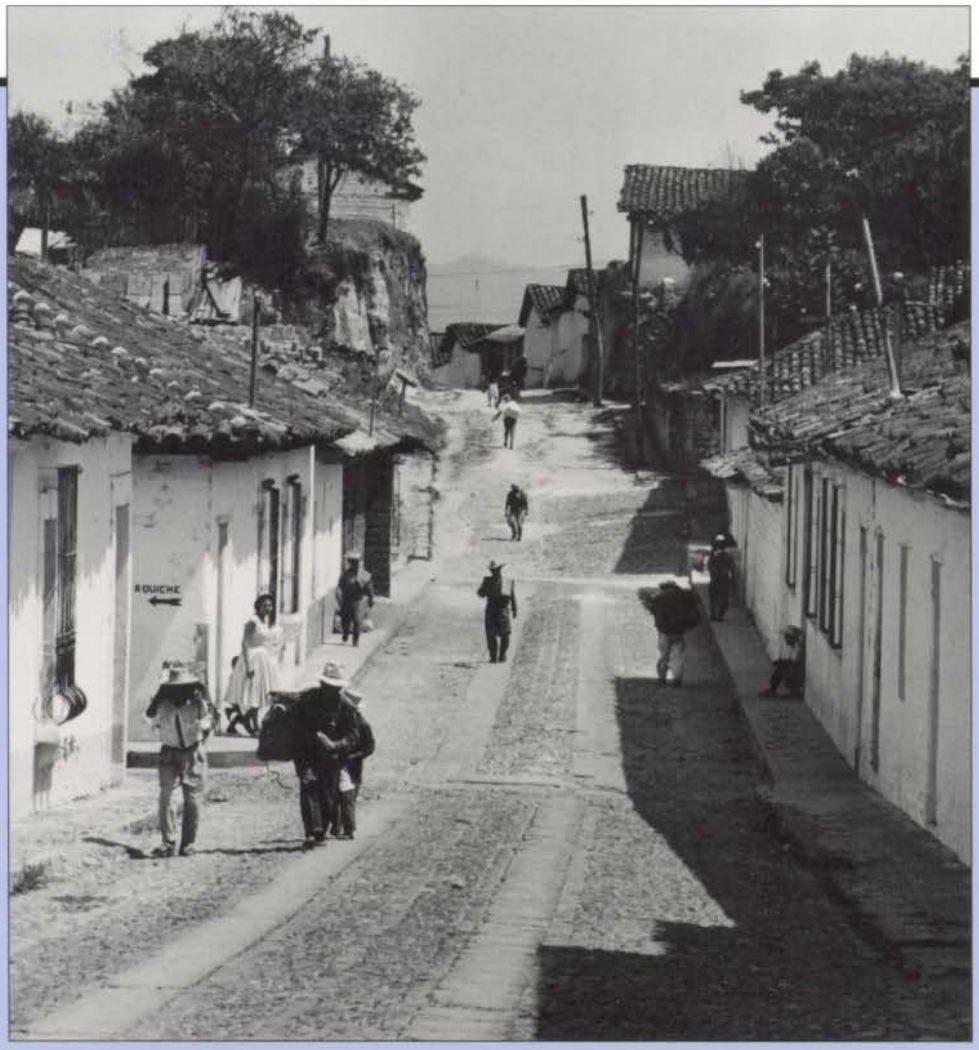
Concerned that "what is perhaps most serious is that the teaching process is not in keeping with the actual situation with which students will have to live when they graduate," PAHO sponsored "laboratories of human relations and medical teaching" in 15 countries of the Region to improve teaching methods, and to reorganize the teaching-learning process on the basis of health and medical problems rather than disciplines. The nurse education curriculum was similarly reoriented, and the training of auxiliaries intensified.

With the aim of adapting educational technology to the health policy and health system in each country, the Organization helped to establish a Latin American Center for Educational Technology in Rio de Janeiro in 1972 and another in Mexico City in 1973 to develop self-teaching and self-evaluation instruction methods for training physicians, dentists, and nurses.

The PAHO Textbook Program placed dozens of clinical textbooks, in Spanish and Portuguese, at the disposal of students of the health professions in the Region, at much lower than commercial prices. A parallel program made diagnostic instruments available to students of the health sciences.

To provide a forum on manpower development issues, in 1966 the Organization launched a quarterly journal for health professionals in the Americas, *Educación médica y salud.* It also published the seminal study, *La educución médica en la América Latina,* in 1972. The focus on information dissemination led to establishment in São Paulo in 1967 of the Regional Library of Medicine and Health Sciences, which developed a Pan American network of biomedical and health information that incorporated the United States National Library of Medicine's MEDLINE, a computerized database of scientific abstracts.

Maternal and Child Care By the early 1970s, women of childbearing age and children made up two-thirds of the population of Latin America and the Caribbean. In light of the Governments' indication that the Organization should concen-



PAHO's "rural strategy" targeted bringing public health and medical care services to people with no access to those services—approximately 40% of the population in Latin America and the Caribbean.

To reach the goals of service coverage set forth in hemispheric health plans for the 1960s and 1970s, the Organization recognized the critical role of nurses and nurse auxiliaries, who—in remote rural areas, villages, and city hospitals—devotedly served the health needs of young and old, of families and communities.

The Organization supported nutrition services, education, and research throughout the Region.

trate on health rather than demographic objectives, family planning activities-carried out in coordination with the new United Nations Fund for Population Activities-assisted in ensuring that every household was properly informed and could make its own decision as to the number of children it wanted.

PAHO published the results of the Inter-American Investigation of Mortality in Childhood—information on the multiple causes of some 35,000 deaths-which indicated that the single most serious factor in those deaths was malnutrition.

In support of maternal and child health, immunization programs were stepped up, breastfeeding stressed, education of mothers promoted, safe water supply in or near the home urged, and prenatal and perinatal health services emphasized. The Latin American Center for Perinatology and Human Development was established in 1970 in Montevideo with a focus on investigation and application of new methods related to care during the last months of pregnancy, delivery, and the puerperium, and in the first 30 days of life.

Food and Nutrition The relationship between malnutrition and excessive child mortality and mental retardation underlay the Organization's expanded efforts in the area of nutrition during this period. The Institute of Nutrition for **Central** America and Panama was becoming one of the most outstanding centers in the world for nutrition studies. INCAP research targeted devel-

The Pan American Zoonoses Center collaborated on serologic studies on animals suspected of having zoonoses, and the Pan American Foot-and-Mouth Disease Center undertook research to develop improved vaccines against foot-and-mouth disease.

opment of a vegetable protein mixture that would be high in nutritive value and inexpensive. The result was INCAPARINA—as nutritious as milk but costing one-fourth less-which began to be mass produced in Central America in the 1960s.

Toward the end of the decade, a consensus among the Governments of the Region urged the formulation of a food and nutrition policy "principally concerned with feeding the population." The Organization's activities in this area were strengthened by the establishment of the Caribbean Food and Nutrition Institute (CFNI) in Kingston, Jamaica, in 1967. At the beginning of the following decade, the Ten-Year Health Plan set targets aimed at substantially reducing malnutrition and totally eliminating it in its severe form. The Organization's thrust in the area of nutrition ranged from efforts to stem the loss of animal protein through control of diseases in beef cattle, pigs, and sheep; preparation of highly nutritive vegetable protein mixtures; fortification of food—e.g., sugar with vitamin A, salt with iodine, water with fluoride; and enlistment of food and nutrition concerns in disease control and prevention campaigns.

Animal Health The significance of foot-and-mouth disease and the zoonoses in the Americas derived in large measure from their high economic costs and their effect of reducing available animal proteins, which in turn directly related to malnutrition and infant mortality. The Pan American Foot-and-Mouth Disease Center in Rio de Janeiro worked on development of vaccines against the disease that would be of greater and longer-lasting effect. The Pan American Zoonoses Center in Buenos Aires offered advisory services and assistance in education, training, and research to control rabies, brucellosis, bovine tuberculosis, anthrax, hydatidosis, and leptospirosis in the countries.

Research In 1961, the Director recognized that "It is now evident that a long-range research program coordinated by the Pan American Health Organization is needed." That same year, the

United States Public Health Service gave PAHO a grant to set up an Office for Research Coordination, whose charge it would be to carry out projects that investigated medical and social problems characteristic of the Americas.

The PAHO Advisory Committee on Medical Research indicated that the immediate purpose of the Organization's support of scientific research in Latin America should be the solution of problems with a view to promoting human welfare. In the course of these years, the Committee dealt with, among other concerns, tuberculosis, environmental determinants of community well-being, and deprivation in psychobiological development. PAHO promoted exchanges among researchers in the Western Hemisphere to target strengthening what the Director referred to as an "intellectual common market."

Throughout the 1960s and early 1970s, the Organization developed a growing and varied program of research projects in biology, medicine, and the social sciences. Those projects spanned a full range of public health concerns: acute infections, nutritional states, and sanitation as factors conditioning infant mortality; the role of Simuliidae as vectors of onchocerciasis; as mentioned above, the preparation of vegetable protein mixtures; trials of new drugs for treatment of malaria; use of live attenuated poliovirus vaccine; production of a live attenuated virus vaccine against foot-and-mouth disease; search for a simplified technique for iodizing salt to prevent endemic goiter; and the zoonoses and their prevention.

Health Promotion A number of initiatives were launched in the area of health promotion during this period. The Organization framed a long-term program for incorporating mental ***health*** activities into basic health services. It cooperated with national health services to encourage them to adopt international standards for ***radiation protection,*** promoted teaching of radiation protection in medical, dental, veterinary, and other professional schools; fostered use of

Laying the foundation for a headquarters for health in the Hemisphere. In 1965 PAHO moved to its new home on the corner of Virginia Avenue and 23rd Street in Washington, D.C.

radioisotopes for diagnosis, treatment, and research; and provided advisory services in the use of X rays and radioisotopes and the organization of radiation protection in health departments. In the area of ***dental health,*** it promoted a redoubling of efforts to fluoridate water supplies. It began to look into the prevention of *traffic accidents,* which in some countries were among the top 10 causes of death. And it stressed the importance of ***health education*** in support of community participation, a growing trend in the Americas during the 1960s and 1970s.

Administration Reelected three times, Dr. Horwitz stewarded the Organization through a 16-year period characterized by great growth in its budget, programs, and influence—one of intensified advisory services, educational outreach, research development, and information exchange in every area of public health throughout the Hemisphere.

From 1958 to 1961, the budget increased 40%; from 1962 to 1965 it increased yet another 25%; and by 1973 it reached $US45 million. The staff grew from 725 in 1958 to 1,300 by 1972—900 of which were stationed in the field.

As of the early 1960s, the Administration was structured in three levels: headquarters, zones, and-for the first time-countries. The country representative was considered the "coordinator of all projects in a country."

A number of countries joined the Organization during this period: Jamaica in 1962, Trinidad and Tobago in 1963, Barbados and Guyana in 1967, Canada in 1971, and the Bahamas in 1974.

The problem of permanent space was finally solved in 1965, when the Bureau moved to its current headquarters on 23rd Street in Washington, D.C. That move was made possible when the W.K. Kellogg Foundation provided the $US5 million required for the building, stipulating that it be treated as an interest-free mortgage, to be repaid over 20 years, not to the Foundation but as a supplementary $250,000 assessment on the Member Countries annually to be used for additional field programs. The land for the building was donated by the United States Government. A Region-wide competition resulted in award of the design of the building to Uruguayan architect, Román Fresnedo Siri.

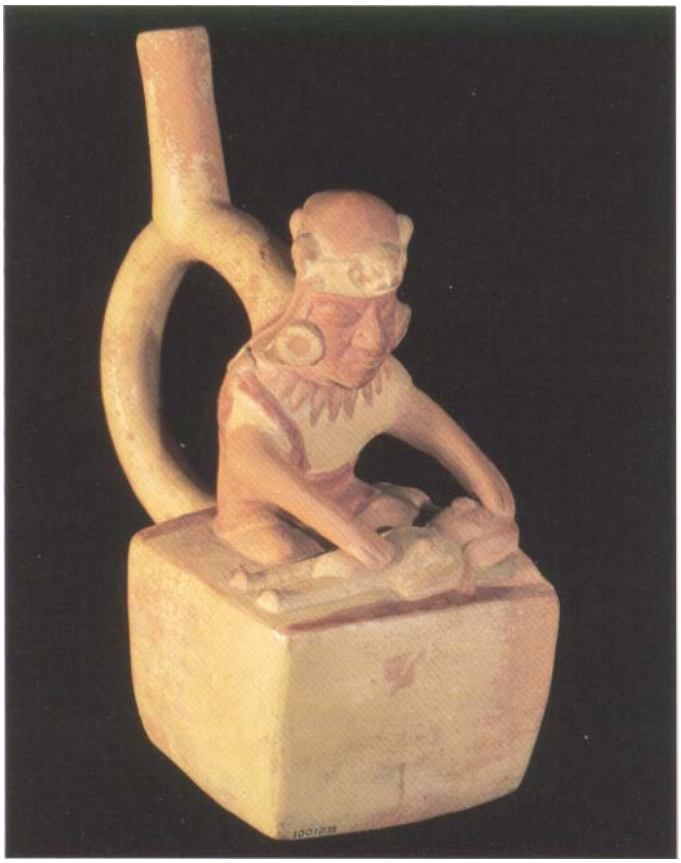
The period during which the Organization concentrated mainly on disease campaigns thus ended with a great victory-the eradication of smallpox from the Americas in the early 1970s. The period to follow would target primary health care to improve both health conditions and the local health services set up to deal with them. Consequently, the Organization's health programs became less vertical and more integrated. They focused more on programming aspects than on direct execution. They targeted the training of human resources, the production of biologicals and control of their quality, the incorporation of control or eradication measures into the appropriate health system programs; the development of antigens for correct etiologic diagnosis; the supply of drugs, equipment, and instruments; and the intensification of epidemiologic surveillance.

The central focus of the Organization, however, was on cooperating in the provision of health care for every single inhabitant of the Hemisphere, with special emphasis on the needs of those—approximately two of every five persons-who received no care of any kind, people who lived in dispersed rural communities or who crowded around the peripheries of major cities, who had a disproportionately large share of high morbidity and mortality rates, were susceptible to both communicable and chronic diseases, were illiterate, and lacked basic sanitation.

In describing the Organization's role and, by implication, his own during this period, Dr. Horwitz summarized: "We have given priority throughout our work in the Americas to assuring coverage for all those who are now without access to minimum health services. We do not accept any discrimination or any compassion in health, for we regard it as a right." That work, in effect, heralded the end of acceptance of a reality best characterized as "health for some" and the beginning of a commitment, the length and breadth of the Hemisphere, to what would soon come to be known as "health for all." ❖

TOWARD HEALTH FOR ALL

1975-1983



Primary health care—"bringing care as close as possible to where people live and work"—has long been a tradition in the communities of the Americas.

Health and health care services in the Americas developed in the midst of vertiginous political, economic, and social change from the mid-1970s to the early 1980s. The course of political progress in Latin America proved tortuous. One country after another suffered military coups that thwarted the cause of democracy. Yet a number of countries in the Region-Dominica, Saint Lucia, Saint Vincent and the Grenadines, Belize, Antigua and Barbuda-gained their independence and joined the community of nations, as well as the Pan American Health Organization.

Primary health care... education concerning prevailing health problems and the methods of preventing and controlling them.

The oil crisis that began in 1973 triggered continuing inflation and affected economies throughout the Hemisphere—proving a boon to a few oil-exporting countries but a catastrophe for the overall development of many oil-dependent ones. One president urged his citizens to respond to the crisis by declaring "the moral equivalent of war" against oil consumption. Most countries had to severely cut back on public spending, threatening far-reaching consequences for social programs, including health services, where the ill effects of the crisis were exacerbated by steeply rising costs.

Social changes during this period were wide-ranging. New environmental concerns about ozone damage and acid rain emerged. An international conference in Mexico City adopted a 10-year plan whose overriding goal was to improve women's lot. And the "home" or "personal" computer-the PC-hit the global market.

The march of science accelerated. Spacecraft penetrated ever farther into the outer reaches of the solar system. A functional synthetic gene was produced, and the first "test-tube" babies were born. For the first time, researchers successfully treated with a drug a deadly viral infection, herpes encephalitis. Eight years after the Americas had wiped out smallpox, the World Health Organization announced the global eradication of the disease in 1979. No sooner had one disease been vanquished, however, than another—one that would prove devastating beyond calculation—appeared: in 1981, scientists identified a new threat to human health-acquired immunodeficiency syndrome (AIDS).

The XIX Pan American Sanitary Conference, meeting in September 1974, elected Dr. Hector R. Acuña, of Mexico, to serve as Director of the Organization. In his inaugural speech, Dr. Acuña declared that "our purpose is to create a climate that makes it possible, through reason and study, to introduce changes in keeping with the times in

which we live, changes that reduce morbidity and mortality from enteric infections, that reinforce the Ten-Year Health Plan, and that, if possible, will help solve age-old problems related to water supply, environmental sanitation, vector control, and food production, management, distribution, and consumption." The Organization proceeded to reorient its work to adapt to the sociopolitical changes that the Region was experiencing and, especially, to the implications of those changes for health conditions in the Americas.

Policy Initiatives The World Health Assembly that convened in 1977 resolved that the main social target of Governments and the Organization for the remainder of the century would be "the 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." That same year, at the IV Special Meeting of Ministers of Health of the Americas, held in Washington, D.C., the Governments committed to step up efforts to extend health service coverage to the entire population. To achieve that purpose, they adopted a regional policy with ***primary health care*** and ***community participation*** as the principal strategies. One year later, the International Conference on Primary Health Care, held in Alma-Ata, USSR, issued a declaration that primary health care was the key to attaining universal health as part of overall development and in the spirit of social justice. In the years that followed, the Organization worked to translate the health-for-all aspiration into a reality through specific health programs.

The XX Pan American Sanitary Conference, held in St. George's, Grenada, in 1978, reelected Dr. Acuña and passed resolutions, among others, regarding adoption of a biennial program and budget (to bring PAHO into line with other United Nations agencies) and attainment of universal coverage and incorporation of primary

Primary health care. promotion of food supply and proper nutrition.

Primary health care… an adequate supply of safe water and basic sanitation.

health care into general health services.

Toward the close of the decade, an evaluation of the Ten-Year Health Plan pointed up a number of shortcomings in the areas of immunization services, epidemiologic surveillance systems, maternal and child health care, food and nutrition policies, rural water supply, and solid waste disposal. The main problem was that the population was growing at a faster pace than services could be extended. It was deemed that, to close the gap, the health sector would have to both strengthen relations within the sector and broach new ones outside it.

While the ultimate aim of health policies and programs was primary health care, intermediate aims consisted of strengthening health service systems, developing human resources, and increasing effective use of financial resources. The principal strategies for accomplishing these aims were adoption of a multidisciplinary approach to health problems that promoted development of health systems within the context of overall development in each country; community participation, where individuals and groups helped themselves and worked to solve their special health problems; and national and regional self-reliance, where countries dealt with their own needs in a socially relevant context, giving rise to what would come to be known as technical cooperation among developing countries, or TCDC.

As they had at the beginning of the 1960s and the 1970s, the Governments of the Americas, at the outset of the 1980s, charted the future course of collective health action-this time in pursuit of health for all-by formulating national and regional strategies. Together two documents, *Health for All by the Year 2000: Strategies* (1980) and the *Plan of Action for Health for All by the Year 2000* (1982), served as a framework for the Organization's and the countries' health programs for the remainder of the century. (See also the chapter on health planning in this publication.)

Health Services To achieve the extension of services, regional health leaders stressed the importance of formulating and adjusting ***health policies,*** improving planning and administration to strengthen the ***health system,*** and developing ***human resources.*** The Organization designed methods for analyzing, on the one hand, sources of financing health programs as well as, on the other, the cost-effectiveness of existing programs. Technical discussions were held on coordination between social security and public health systems, following which the Directing Council resolved that Governments should establish mechanisms to coordinate the provision of health services. PAHO collaborated in establishing health care levels, improving the installed capacity of 13,000 hospitals in Latin America and the Caribbean, and recruiting hospitals to join a network of health services. Since nurses were seen as critical to extending services to rural and urban areas, nursing standards were established in most of the countries, and plans were drawn up to strengthen their education and training.

The Organization stressed the development of ***information systems,*** so that national health programs could have timely and reliable data to plan, program, administer, and evaluate their programs and projects, as well as ***management systems*** to achieve greater equity in access to health services by efficiently administering resources. PAHO carried out activities aimed at incorporating two strategies-health education and community participation-into school curricula, inter-agency coordination, and training workshops.

The PAHO Advisory Committee on Medical Research established a subcommittee on ***health services research*** to promote that field, considered to comprise three principal areas-social, operational, and epidemiologic-and to be "the systematic study of the measures through which biomedical knowledge and other relevant knowledge are applied or are brought to bear on the health of individuals and communities, under a given group of conditions or circumstances."

The Organization undertook a relatively new area of work, ***rehabilitation services,*** with the aim of improving services for the disabled, using self-help materials and a manual on training of the disabled, together with research to develop simpler prosthetics and orthotics.

Family Health To solve the health problems of families, PAHO used a multidisciplinary approach that coordinated activities in ***maternal and child cure, nutrition, mental health, dental health,*** and ***family education.*** Many mothers and children in periurban and rural areas in the Hemisphere were still beyond the reach of health services. To redress that situation, the Organization carried out epidemiologic activities to detect and prevent risks to mothers and children; coordinated programs of nutrition, mental health, health education, and community participation; gave courses for midwives, nurse auxiliaries, and community health workers; promoted adolescent health services; and conducted research on health indicators and family welfare. PAHO also served as executing agency for several projects financed by the United Nations Fund for Population Activities targeting maternal and child care and family planning.

The Latin American Center for Perinatology and Human Development carried out perinatal research, developing appropriate technologies for perinatal and newborn care and management of prematurity. More than 15 countries accepted and began using that Center's perinatal clinical history, and 50 maternity clinics in another 12 countries applied the Center's methodology for identifying perinatal risk factors.

Together with the World Food Program, PAHO collaborated with the Governments in formulating, executing, and evaluating food assistance projects. The Organization also established nutrition surveillance systems to detect, prevent, and treat the principal nutritional deficiencies; promoted intersectoral food and nutrition planning; urged integration of nutrition activities in health services; and fostered food enrichment technologies to prevent and control specific nutritional deficiencies.

The Institute of Nutrition of Central America

Primary health care… maternal and child health care, including family planning.

and Panama and the Caribbean Food and Nutrition Institute carried out basic collaborative functions-teaching, research, information exchange, and direct technical cooperation-with the objectives of eliminating malnutrition, reducing anemia, controlling diabetes, developing institutions, and formulating policies, strategies, and action plans.

Communicable Disease Control The Organization continued to provide technical cooperation aimed at diminishing the sickness, death, and disability produced by diseases that could be prevented or controlled, promoting the inclusion of disease control activities into general health and especially primary care services.

The development in earlier decades of vaccines that prevented the more common and destructive communicable diseases had led to vigorous mass ***vaccination*** campaigns. Those campaigns withered, however, as complacency set in when it appeared that the diseases had been overcome. By the mid-1970s, a number of those communicable diseases were in fact resurging in many places. In response to this situation, the World Health Organization launched the Expanded Program on Immunization (EPI) in 1977 to provide immunization services for all children in the world by 1990 against diphtheria, tetanus, whooping cough, poliomyelitis, measles, and tuberculosis. The program was directed toward high-risk infants and pregnant women and rested on integrating immunization activities in general health services. PAHO's EPI involved activities in five areas-training, operation of a revolving fund for purchasing vaccines and related supplies, developing and testing cold chain equipment, information systems and program operation evaluation, and information dissemination.

Epidemiologic surveillance became a major part of the Organization's work with the countries. Its aim was to improve both epidemiologic information and the reporting of cases and deaths.

To coordinate surveillance activities and promote studies on the incidence and frequency of diseases, PAHO established the Caribbean Epidemiology Center in 1975, which supported health laboratories, provided training in epidemiology, and conducted applied research in that part of the Region.

This period witnessed major advances in the control of ***diarrheal diseases,*** the principal cause of death among infants and children under 5 in more than half of the countries of Latin America and the Caribbean. In 1975 a system was set up for reporting diarrheal symptoms. Subsequently, PAHO launched a hemispheric program with five strategies: early treatment of acute diarrheal episodes through oral rehydration and suitable dietary management; improved child care practices, including breast-feeding, proper weaning, and personal hygiene; health education; improved water supply, environmental sanitation, and food hygiene; and epidemiologic surveillance.

Tuberculosis was not declining as fast as it should have been and still represented a major problem in almost all the countries in the Region, despite its being susceptible to available control measures. The Organization collaborated in the integration of tuberculosis control activities in general health services; issued information and produced several scientific publications on the subject of tuberculosis control; accelerated BCG vaccination coverage; and carried out training activities.

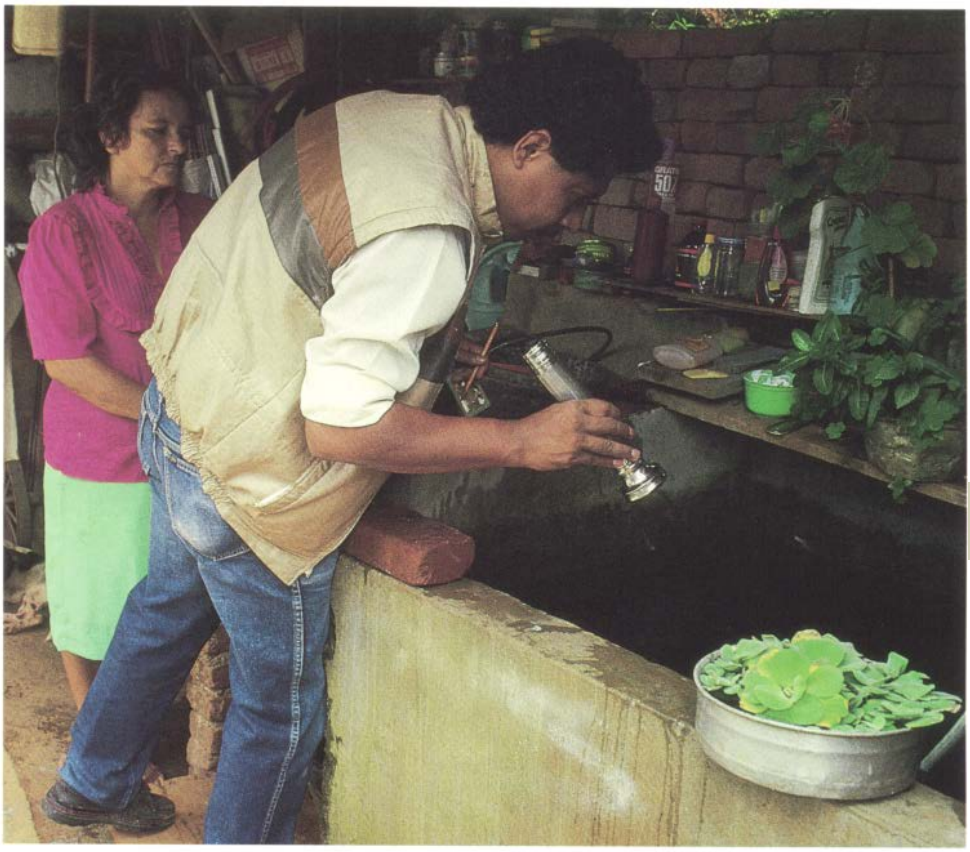
Acute respiratory infections continued to be responsible for high mortality in children and ranked among the top three causes of death in those under 1 year of age in 23 countries. Also a major cause of morbidity, these infections placed a heavy burden on health services. To foster measures to prevent these infections, PAHO disseminated information, conducted epidemiologic and operations research, and sponsored meetings and training workshops.

Work on ***leprosy*** received impetus as a result

Primary health care... immunization against major infectious diseases.

On 9 December 1979, WHO certified the global eradication of smallpox.

Primary health care... prevention and control of locally endemic diseases.



of the launching of the WHO Special Program for Research and Training in Tropical Diseases. Advances ensued on use of a new drug, rifampicin, and the integration of case-finding and treatment in primary care services. PAHO sponsored international training through courses given with the Pan American Center for Research and Training in Leprosy and Tropical Diseases (CEPIALET), a Venezuelan institute associated with PAHO since 1976.

Progress toward eradicating ***malaria*** halted as a result of technical and operational problems. The situation worsened steadily during the 1970s, with a rise in cases from 465,000 in 1978 to 593,000 in 1981. In 1980 the Governments drew up a hemispheric plan to support national medium-term malaria programs, and PAHO helped countries review their malaria situation and programming activities.

The Organization continued to work with the countries to control emergencies arising from the presence of ***Aedes aegypti*** and to limit the spread of dengue epidemics that occurred in the Caribbean and northern South America, particularly in 1977. The Directing Council reiterated its resolve to eradicate the vector from the Hemisphere, but the campaign encountered serious financial and administrative difficulties. The failure of DDT to accomplish eradication plus newer health priorities resulted in project decline and ***A.*** *aegypti* reinfestation. PAHO concentrated on case reporting, monitoring insecticide resistance in *A. aegypti*, and upgrading the technical and professional competence of health workers in the countries.

In the area of ***animal health,*** specifically the ***zoonoses*** and ***foot-and-mouth disease,*** the Organization cooperated in strengthening laboratory infrastructures and control programs. The Pan American Foot-and-Mouth Disease Center cooperated with disease prevention and control programs under way in all South American countries

and worked on production of vaccines and the systematic vaccination of cattle. The Pan American Zoonoses Center established regional surveillance systems for canine rabies, equine encephalitis, leptospirosis, and brucellosis. A major problem was the lack of enough veterinary biologicals to cover demand, and PAHO supported centers in Mexico, Brazil, and Venezuela for the stepped-up production of quality-controlled biologicals to cover domestic and regional needs.

Similarly, PAHO cooperated with the countries through training, epidemiologic surveillance, and research to prevent and control ***other communicable diseases*** afflicting the Americas during this period: cutaneous and systemic mycoses; bacterial diseases such as plague, meningococcal meningitis, and typhoid fever; sexually transmitted diseases, which were so widespread that it was estimated that one Latin American adult in 50 became infected with at least one sexually transmitted disease each year; rickettsial diseases such as tickborne typhus, Q fever, and spotted fever; influenza, which was monitored by 18 national centers as part of WHO's global influenza surveillance program; hepatitis, especially the A and B forms; and jungle yellow fever and dengue. In addition, in light of the fact that postsurgical infections were estimated to occur in as many as half of all operations, PAHO in 1978 began to promote and evaluate organized efforts to control hospital-acquired infections.

Noncommunicable Disease Control Chronic diseases were causing growing health problems in both developing and developed countries as their populations aged, lifestyles became more sedentary, eating habits changed (with the consumption of more fats and sugars), obesity became prevalent, and other risk factors conducive to ***cardiovascular*** and ***chronic respiratory diseases*** increased. PAHO cooperated with the countries by promoting knowledge of noncommunicable diseases; designing programs to control and prevent them, taking into account local conditions, resources, and health care structures; providing training and current information; and arranging extrabudgetary financing to carry out multinational projects to standardize criteria and coordinate activities to control and prevent these diseases.

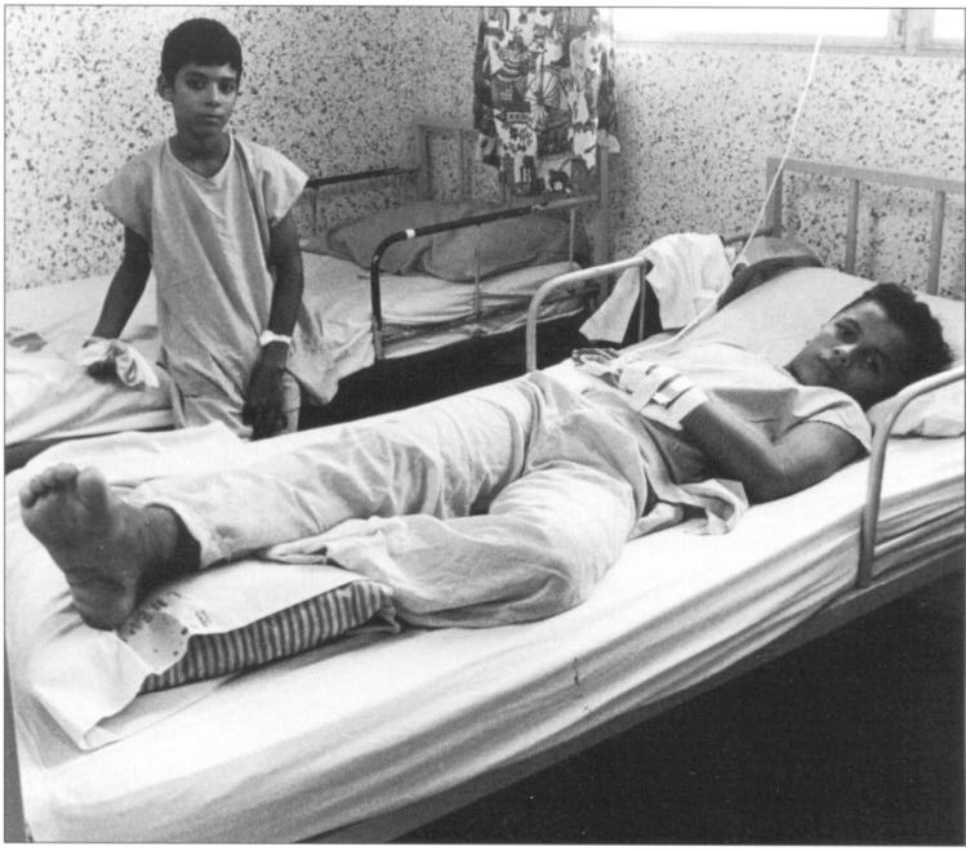
Cooperation intensified in ***cardiovascular diseases, cancer, diabetes,*** and ***chronic rheumatic diseases.*** In 1975, the Organization and 16 centers in seven countries undertook a study on prevention of rheumatic fever and rheumatic heart disease; it concluded with a recommendation that diagnostic and preventive procedures be put in place at all service levels. The control of hypertension was organized along similar lines. The Latin American Cancer Research Information Project (LACRIP) was set up in 1975 with the assistance of the United States National Cancer Institute. A cancer chemotherapy program was initiated in 1977 with the cooperation of cancer centers in six countries.

Although the ***prevention of blindness*** was not as serious a problem in the Americas as it was elsewhere, and two-thirds of all cases were preventable, PAHO organized an expert group that prepared a comprehensive report on blindness prevention, recommending integration of prevention activities in general health services, especially at the primary care level.

The Organization also helped several countries set up national programs for ***traffic accident prevention and control,*** which was becoming an increasingly serious problem in the countries of the Region.

Environmental Health In an effort to extend urban, periurban, and rural ***water supply*** and ***sanitation*** services, the Organization helped in conducting feasibility studies and worked with national planners and financial institutions—the Inter-American Development Bank, the World Bank, the Canadian International Development Agency, and the United Nations Development Program. From 1974 to 1977, $US1.36 billion—roughly half in the form of international loans and half from national funds—was invested in water and sewerage systems. National investments in these systems from 1977 to 1981 exceeded $3.9 bil-

Primary health care... appropriate treatment of common diseases and injuries.



lion; the IDB lent $672.6 million to such efforts, and the World Bank $1.04 billion.

In preparation for the International Drinking Water Supply and Sanitation Decade (1981-1990), PAHO stressed operations and maintenance aimed at improving the quality of water supplies, gave training courses, disseminated information, helped develop institutions and manpower, promoted appropriate technology, and supported research. The Organization helped countries set up Decade Action Committees and reorient sector planning. A special project with IDB aimed at improving water agencies' operation and maintenance activities. The Pan American Center for Sanitary Engineering and Environmental Sciences developed an information program in sanitary engineering and environmental sciences (REPIDISCA), and cooperated with the Governments in establishing information exchanges as a basis for technology transfer.

PAHO's work in the area of improving national environmental health agencies' operational and financial management capabilities had as its objective extending ***basic sanitation, solid waste disposal,*** and ***pollution control*** services. The growth of the population and of industry brought in their wake increasing air, water, and land pollution problems. The building of major highways and the development of river basins and water resources were triggering significant changes in the ecology, with serious effects on the health of surrounding communities. The Pan American Centers for Human Ecology and Health and for Sanitary Engineering and Environmental Sciences cooperated with the countries in identifying critical situations and major threats to environmental health. The Pan Ameritan Air Pollution Sampling Network continued to expand and became affiliated with the WHO Global Air Quality Monitoring Network.

The Organization's ***occuputionul health*** activities bolstered Governments' efforts to develop

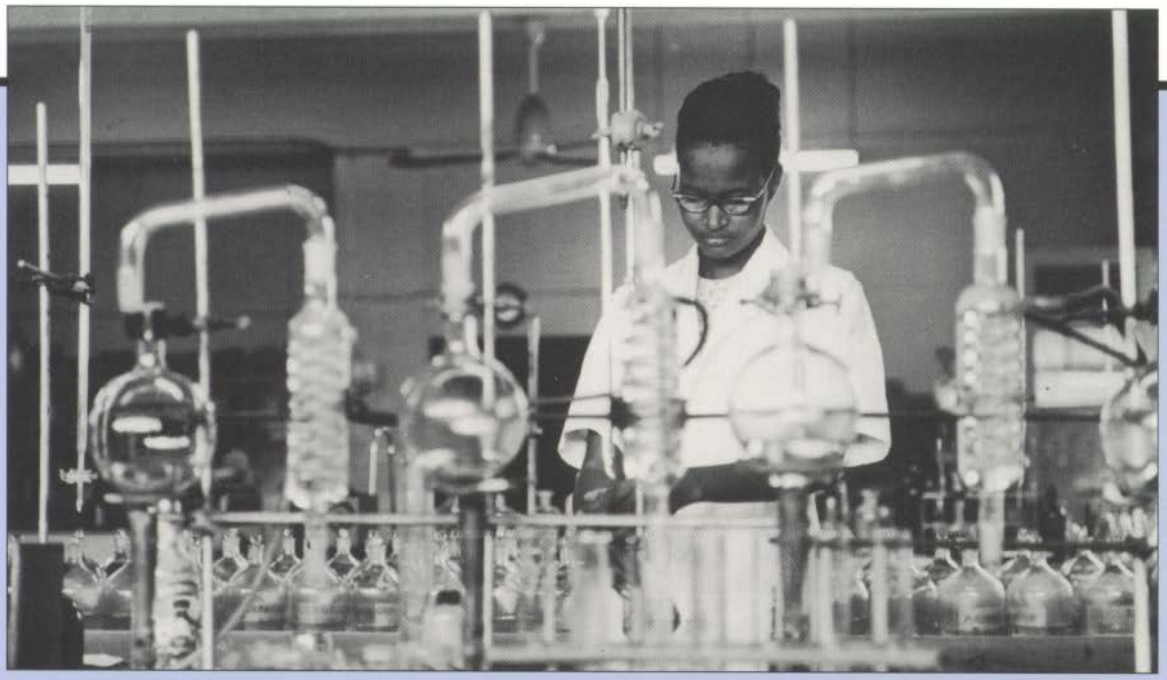
preventive measures, emphasizing the reduction of accidents and the prevention of chemical intoxication, especially among farm workers.

PAHO also helped countries develop ***radiation medicine*** services, including simple, low-cost radiology units; produced a manual on radiology and primary care; and promoted the organization of training centers and the preparation of reference materials for radiotherapy technicians.

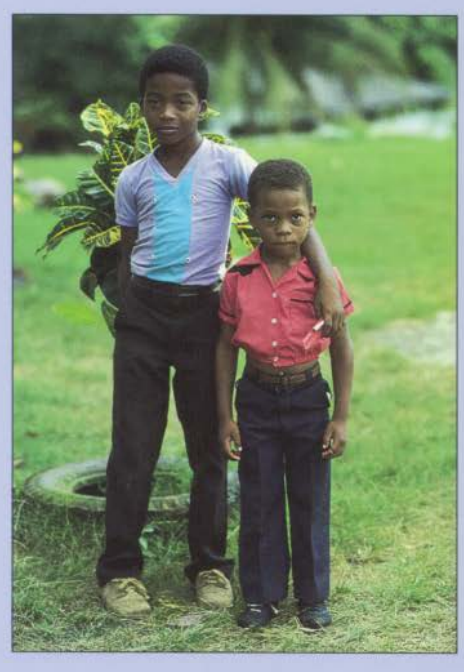
During this period and in the wake of Hurricane Fifi, which killed 8,000 in Honduras and left many homeless, an earthquake in Guatemala, drought in Haiti, and Hurricane Liza in Mexico, the Organization established an Emergency Preparedness and Disaster Relief Coordination to help countries develop national ***disaster preparedness*** programs with material and technical assistance, damage assessment, disease surveillance, and health infrastructure recovery. It was recognized that the frequency and strength of earthquakes and hurricanes would not change. Nevertheless, the mounting population density, progressive settlement of vulnerable areas, and continuing construction of health facilities and housing without proper engineering precautions were expected to increase the effect of disasters on public health. PAHO developed disaster simulations as a substitute for first-hand experience; in 1980 began publication of a quarterly newsletter, *Disaster Preparedness in the Americas;* and issued a number of scientific publications on the subject.

Human Resources and Research Since health workers were critical to the extension of services, the Organization emphasized the importance of relating the ***education and training*** of various levels and categories of health personnel to the requirements of health services and the needs of the community, by coordinating the work of service and training institutions and enhancing resource planning. The main targets of the human resource development program

Primary health care… provision of essential drugs.



A number of Caribbean countries joined the Organization's forces during this period: Grenada in 1977, Saint Lucia in 1980, Dominica in 1981, Saint Vincent and the Grenadines in 1981, and Antigua and Barbuda in 1982.



included: intensified training of technical and auxiliary personnel; continuing education of health personnel; integrated teaching-service programs; and reorientation of nursing education toward community health and primary care. (See also the section in this publication on health workers.)

The Advisory Committee on Medical Research was reorganized and reoriented to cover the priority fields of the Ten-Year Health Plan and the priority goal of extending health service coverage. The Committee held subregional meetings to encourage countries to develop ***health research*** policies. PAHO surveyed research resources in each country as a basis for TCDC, and promoted research in general through grants, meetings, courses, seminars, and information exchange.

Administration During this period, an Office of Administration was set up to differentiate administrative functions from those of the technical programs, and technical cooperation was structured in four divisions: comprehensive health services, disease prevention and control, environmental health protection, and human resources and research. PAHO established a Caribbean Program Coordinator's Office in Bridgetown, Barbados, and began evaluating the work of the 10 Pan American Centers.

As part of a global undertaking, the Governing Bodies evaluated PAHO's structure in light of its functions concluding that: the goal of health for all was realistic; PAHO should concentrate on the "technical" aspects of health; Country Offices should be strengthened and national entities more widely used; country contributions to hemispheric and global policies should be enhanced through subregional groups, governing bodies, and task forces; and PAHO should play a greater role in the in-service training of key nationals.

Zone Offices became Area Offices during this period, and responsibility for program delivery was yet further decentralized to the country level. To bring a multidisciplinary approach to problems with which the Organization dealt, a Headquarters Programming Committee was established.

Dr. Héctor R. Acuña, served as Director from 1975 to 1983.

The budget increased from $45 million in 1973 to $70.4 million in 1977. The total for 1974-1977 was $98.5 million more than for 1970-1973—more than half of the increase due to extrabudgetary funding. The total for 1978-1981 increased $40,772,771 or 40.5% over the previous quadrennium, with extrabudgetary funds again increasing significantly.

Staff declined by 6% over these years, dropping from 1,313 at the end of 1977 to 1,234 at the end of 1981—with two-thirds of all personnel assigned to work in Member Countries.

The American Region Programming and Evaluation System (AMPES) began operations in 1978 as an administrative instrument to formulate, execute, monitor, and evaluate the PAHO technical cooperation program. It facilitated an objective dialogue between PAHO and the Governments regarding the countries' health programs and goals, the most efficient allocation of resources, and the most effective service the Organization could provide to the countries. ❖

HEALTH IN DEVELOPMENT

1983-1992

Health is a bridge connecting the peoples of the world in the common effort to attain peace, understanding, tolerance, and justice. PAHO led a campaign to vaccinate hundreds of thousands of children and mothers in El Salvador, during a ceasefire between the Government and guerrillas in the late 1980s.

Over the past decade, the international scene has witnessed an unending parade of profound and wide-ranging political, economic, scientific, and social changes. Seemingly overnight, the cold war thawed and then dissolved altogether, with a rapid succession of radical geopolitical events: "glasnost," "perestroika," the fall of the Berlin wall, the independence of the erstwhile satellite countries of eastern Europe, the reunification of Germany, and the break-up of the Union of Soviet Socialist Republics into sovereign States. These changes enabled the

transition from the largest peacetime arms build-up in history to a major disarmament among First World powers-and the hope that defense cuts worldwide would make possible greater investments in social sectors. Closer to home, one country after another in the Western Hemisphere replaced the authoritarian, military regimes of the 1970s with elected governments, so that by 1992 most of the nations of the Region had returned to representative, civilian democracies.

Those democratic governments, however, assumed power during a regional economic crisis that stymied their efforts to achieve the social equality so central to the democratic way of life. The countries of Latin America and the Caribbean ran balance-of-payment deficits, and the net transfer abroad of a huge amount of funds occurred. Countries' investment and operating capacity dropped, stunting their future productive potential. All these factors contributed to internal economic maladjustments, high rates of inflation and unemployment, reduction of income and deterioration of its distribution, and fiscal deficits that seriously compromised standards of living. As a result of the crisis, Governments were forced to submit to adjustments imposed by international financial institutions and external creditors. By 1990, income per capita in Latin America and the Caribbean had fallen by almost l0%, and the number of people living in poverty had increased to more than 200 million, or almost half of the total population.

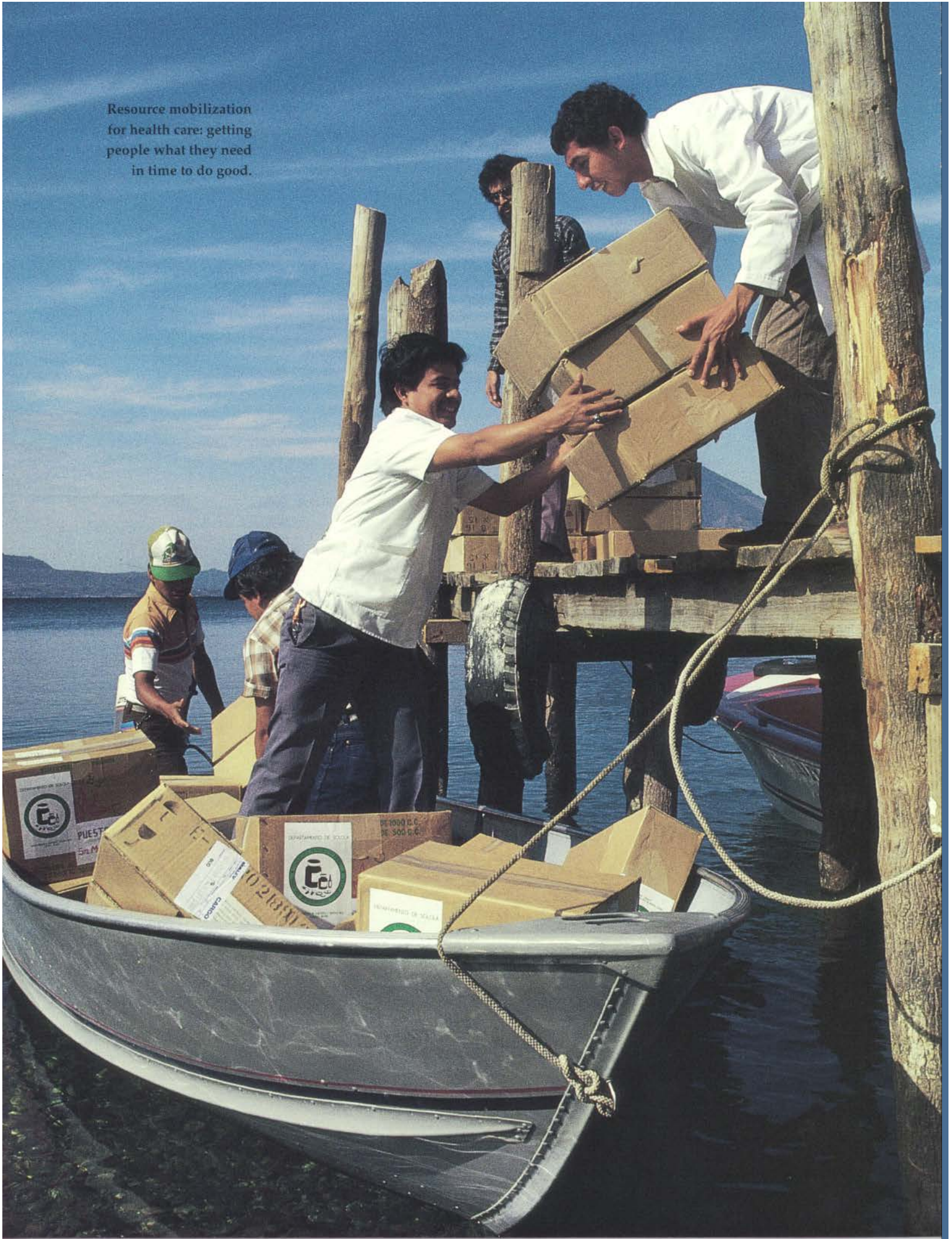
Governments were forced to curtail activities and programs directed to meeting social needs, and insufficient funds made it impossible to satisfy a growing population's increasing demands or even to keep existing health services functioning adequately. Countries had to limit their purchases of critical drugs, supplies, and equipment, which in turn constrained health care delivery. Reduced capital investment boded ill for infrastructure maintenance and development, and slashed public spending on social services translated into health care sacrifices and the withdrawal of benefits, especially from those people who were least able to take care of themselves.

Fortunately, the new decade brought decidedly improved economic prospects for the countries: they resumed their positive patterns of growth in 1991, with that year's regional growth rate more than doubling the average annual rate of the previous decade. That growth triggered a reduction in the rate of inflation, significant relief of the external debt burden, and the entry of capital resulting from lower international interest rates. The countries' improved economies are expected to result in greater investment in their national development, much of which can be expected to go toward health and sanitation.

Worldwide scientific and technological progress during these 10 years was Promethean. Researchers created the first artificially made chromosome, grafting it onto yeast cells; the space shuttle made its maiden flight; and the first transatlantic optic fiber telephone cable entered service. Computer technology continued to advance at a dizzying pace, launching the compact disc, the microcomputer cum mouse, the silicon microchip, a "transputer" that enabled computers to parallel process information, and a portable computer weighing less than two pounds.

The health field likewise registered many firsts. United States and French teams independently discovered the AIDS virus; surgeons used lasers to clean out clogged arteries; and medical researchers achieved the first triple-heart, lung, and liver-transplant, implanted the first plutonium-powered pacemaker, performed the first brain-cell transplant, and administered the first gene therapy to a human being.

But nature continued to mock the progress wrought by man, unleashing a succession of major disasters during these years. In 1985, an earthquake in Mexico City killed more than 10,000 people, and a volcanic eruption in Colombia wiped out the town of Armero, resulting in more than 23,000 lives lost. The following year, the world's worst nuclear accident, at Chernobyl, USSR, sent clouds of fallout over much of Europe and galvanized nuclear disaster prevention programs worldwide. In 1988, Hurricane Gilbert, the strongest ever recorded in the Western Hemi-



Resource mobilization for health care: getting people what they need in time to do good.

sphere, killed hundreds in the Caribbean and Mexico. And, when 1989 turned out to be the warmest year on record, concern for the "greenhouse effect" prompted a major international agreement to stop production of chlorofluorocarbons. The environment became a main concern and the principal condition for sustained development.

The United Nations estimated in 1988 that the world population was growing by 220,000 a day and, in 1990, predicted that it would rise from 5 billion to 14.2 billion in 2100. The population of the Americas reached 735 million in 1991 and was estimated to top 835 million in the year 2000, despite the sharp reduction of fertility rates. Almost three-fourths of the population is now living in urban areas, and the urbanization trend will continue: it is estimated that by the century's close some 100 cities in Latin America will have 1 million or more inhabitants, and 15 cities will have more than 4 million. Migrations-resulting from the quest for greater economic opportunity or, in the case of some Central American countries, the escape from armed conflict-became an important demographic phenomenon. One aspect of migratory movements in the Region was refugees: between 1985 and 1990 their number grew from 360,000 to 1,200,000.

This rapid increase of the population and the massive growth of major cities created serious problems of infrastructure shortages, pollution, unemployment, violence, insecurity, and marginality-bringing with them greater demands for health services. In general, health conditions reflected poverty-related problems, including communicable diseases and malnutrition, accompanied by an increase in degenerative problems and in risks. Health service systems encountered serious operating capacity difficulties, which were compounded by waste in the utilization of resources. The work of a multiplicity of health care delivery institutions was generally not well coordinated, trained personnel were short in supply and misused, and health care coverage was insufficient—30%-40% of the population had no access to basic health services. To cope with this situation the countries sought to adjust and strengthen planning and administration to improve the sector's ability to mobilize, organize, and utilize resources in harmony with those of other development sectors.

POLICY DIRECTIONS

In 1982, the XXI Pan American Sanitary Conference elected a new Director, Dr. Carlyle Guerra de Macedo, of Brazil, and in 1986 and 1990 the XXII and XXIII Conferences reelected him, the last time unanimously. Under Dr. Macedo's leadership, the Organization has been guided by the principles that every citizen has a fundamental right to health care, that the ultimate purpose of national development policies is to ensure the well-being of those citizens, and that health is not only an outcome of socioeconomic progress-it is a necessary condition for attaining that progress.

In light of the challenges posed by changing political, economic, and social conditions in the Region over this lo-year period, the Organization set out to reorient the thrust of its work. It adopted a series of policies aimed at improving people's health, transforming health service infrastructures, and furthering the relationship between health and development.

In 1983, a **Managerial Strategy for the Optimum Use of PAHO/WHO Resources in Direct Support of Member Countries** targeted improving the Organization's technical cooperation in carrying out the Regional Strategies and the Plan of Action for Health for All. The managerial strategy encompassed five basic principles: the country constitutes the basic unit for the production of cooperative activities in health; the Governments are participants in the administration of PAHO cooperation; that cooperation should be flexible and capable of adapting to the changing conditions of the countries and the Region; technical cooperation among countries should be promoted and used to the utmost; and, finally, linkages between the Organization and other national and international agencies should be intensified.

Health is the one area where everyone can agree, the one goal that overrides ideological differences, the one field where there is an impressive tradition in the countries of cooperation, and the one sector where a common, long-term ideal—health for all by the year 2000—already is shared.

In 1986, the XXII Pan American Sanitary Conference endorsed a new quadrennial framework for action in the **Orientation and Program Priorities for PAHO during the Quadrennium 1987-1990.** That policy underscored the need, dictated by health and development problems in the Region, to transform the countries' health service systems. That transformation, in turn, involved three general, interrelated areas: development of the health service infrastructure, with emphasis on primary health care; provision of responses to priority health problems present in vulnerable groups, with specific programs implemented through the health service system; and management of knowledge.

As the latest quadrennial cycle approached, the XXIII Pan American Sanitary Conference again charted the course of its future work by adopting, in 1990, **Strategic Orientations and Program Priorities for PAHO during 1991-1994.** This current expression of policy reflects a logical consistency with, and represents a fine-tuned evolution of, earlier policies, all of which share in common and are sustained by certain basic principles.

Overarching all other policy considerations during the course of these 10 years has been the focus on ***health in development.*** In a world marked by profound differences and beset by social, economic, and political conflicts, health—as an area of human endeavor—can and should be used as a bridge connecting all peoples in the common effort to attain peace, understanding, tolerance, and justice. It is recognized that, in order for health services to support those values, the way health is integrated into socioeconomic development has to be revised. Health can and must change its role and image as the "nonproductive" sector, tolerated and given resources for pragmatic political reasons, for reasons of charity or philanthropy, or as a result of trade union pressures. Instead, it has to be shown what positive social, economic, and political repercussions improved health conditions could bring.

The Organization considered it indispensable that health services be organized and administered in accordance with the principles and values of health for all and primary care: ***equity, universal coverage, participation,*** and ***efficiency.*** Extreme poverty and the disparities in access to health services among different social groups had to be reduced. Health services should be reoriented to allow each individual to live a socially and economically productive life. Efficiency demands that waste be brought to a halt in the health systems of Latin America and the Caribbean, which is estimated at $US10 billion.

Comprehensive health care requires that the countries overhaul their health systems. In response to those systems' excessive centralization, which hinders the expansion of health services delivery, the Governing Bodies endorsed the concept of ***decentralization*** through the development and strengthening of ***local health systems*** in an effort to establish authority, responsibility, and accountability at the local level—where health services can directly respond to people's health needs. Given that ***social participation*** is critical for decentralization to work, democratization is both a key to the success and a by-product of this approach. The need for community participation in health goes beyond the use of community members in health campaigns and programs, to involve the community in decision-making and control of activities.

A keystone to the transformation of health systems is the ***management of knowledge,*** and the Organization encouraged stimulation of the cycle of production, collection, critical analysis, and application of knowledge. At the same time, ***social communication*** —with health information provided through mass media, schools, and community forums—enables an informed public to seek individual and collective health and to support local health services.

Critical to carrying out many of these strategies and priorities for technical cooperation is an enhancement of the role of ***women in health and development.*** The Organization committed to improving the health and health care of women throughout their lives and to integrating them in the work of the sector at all levels.

Strengthening local health systems will make it possible to transfer authority, responsibility, and accountability to those services that directly respond to people's health needs.

The emphasis on ***health promotion*** recognizes that well-being is the product not just of one sector but of society as a whole, and that healthy lifestyles influence health, can prevent disease, and improve the quality of life.

With the focus on ***countries as the basic unit for action in health,*** the Organization stepped up the ***mobilization of resources*** to target national needs in a timely fashion and to achieve a better allocation of resources already assigned to the sector by instituting organizational and administrative improvements to increase the efficiency of their use. PAHO urged that resources be concentrated in priority areas of greatest impact and prepared guidelines for the mobilization of external financial resources.

One of the most useful means of promoting the coordination of national and international efforts proved to be the strategy of ***technical cooperation*** among ***countries,*** aimed at ensuring that countries benefit from each other's experiences in handling common problems. That cooperation concentrated on promoting health research and technology development, designing systems to ensure the availability of critical supplies, coordinating interventions for health problems common to the countries, and developing joint education and training projects. To bolster technical cooperation among countries, PAHO analyzed national priority areas and potential recipients and providers of this type of cooperation. Relations were strengthened with key institutions working in the sector: international financial institutions, other United Nations agencies, and bilateral organizations.

To enhance technical cooperation among countries, PAHO promoted a number of ***subregional initiatives.*** A Plan for Priority Health Needs in Central America and Panama was adopted by the Ministers of Health of that subregion in March 1984 with two overriding objectives: to satisfy basic health needs which had

been long neglected in those countries and which had become exacerbated by the economic, social, and political crises affecting the subregion; and to capitalize on the consensus in matters of health to promote understanding and cooperation among countries, peoples, and governments in the interest of peace. The seven priority areas of the Plan consisted of strengthening health services, developing human resources, essential drugs, food and nutrition, control of tropical diseases, water and sanitation, and child survival. To examine opportunities for external cooperation in these priority areas, PAHO and the Government of Spain cosponsored three Madrid Conferences in 1985, 1988, and 1991, which were attended by representatives of the European countries, Canada, the United States, Japan, and the Holy See. In 1989 PAHO and the Government of Italy cosponsored a Ministerial Conference on Italian Cooperation in Health in Latin America and the Caribbean.

Similarly, a Caribbean Cooperation in Health initiative—undertaken by the Organization, the English-speaking Caribbean countries, and the Caribbean Community (CARICOM), and adopted by Governments in that subregion—had as its objective to identify priority areas for initial operations, mobilize and utilize national resources, and promote intercountry cooperation. A Joint Plan of Action for the Andean Subregion, designed by the Organization and the Hipólito Unanue Agreement, emphasized the mobilization of resources for priority health areas in that part of the Hemisphere.

Subregional economic integration processes throughout the Americas gathered momentum at the start of the 1990s, as pacts and agreements among countries in the Region proliferated. Progress in subregional integration went beyond the purely economic and commercial arenas. In addition to the various ongoing projects of technical cooperation on shared health problems in neighboring countries, work began in areas in

which common guidelines and standards for production and marketing could be established. In 1991, the Ministers of Health of Argentina, Brazil, Paraguay, and Uruguay—the MERCOSUR group—signed an agreement to deal with health and environmental problems related to the flow of goods and services. The Andean Pact and the MERCOSUR group met to propose a "convergence project" targeting regional integration in the development of health technology. The Central American countries developed various integration projects, many of them as part of a second phase—"Health and Peace toward Development and Democracy"—of the Plan for Priority Health Needs in that subregion.

PROGRAM ACTION

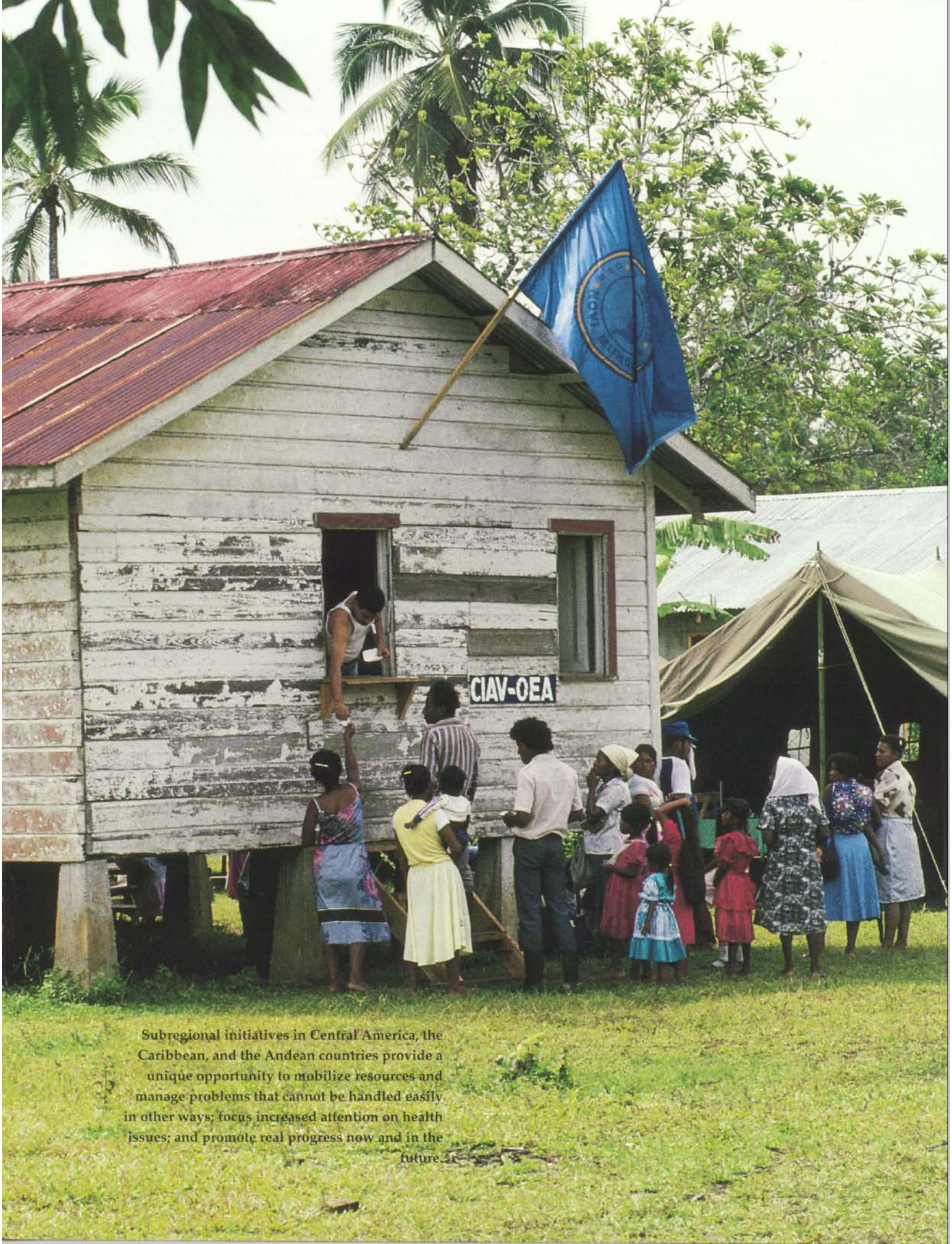
Health Situation and Trend Assessment A major regional meeting of epidemiologists, health administrators, and planners, held in Buenos Aires in 1983, reviewed the uses and prospects for the practice of epidemiology and concluded that countries continued to need encouragement to assess the population's health status, its determinants, and trends and that national capabilities for evaluating the effectiveness and impact of health service systems and programs for health promotion and disease prevention still required urgent attention. In 1986 PAHO set up a new program, health situation and trend assessment, that promoted 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-changes that would in turn influence the allocation of resources for health and decisions on health policies and programs. Countries progressed in the complex task of establishing epidemiologic profiles on which to base preventive interventions and develop local health systems. The Organization gave the countries direct technical cooperation for strengthening the practice of epidemiology in their health services, stimulated and supported epidemiologic research, conducted training, and widely disseminated information in the field, including one of the most important publications ever issued by the Organization, *The Challenge of Epidemiology*.

Health Policies Development Health policies became a new area of PAHO activity during this period. It emphasized strengthening of the capacity of national health sectors to interact with other sectors that have a bearing on health policies; making health planning consonant with national development policies; enhancing the effectiveness of national legislation regarding the rights and duties of the State, individuals, and private institutions in promoting, protecting, and restoring health; analyzing the economic and financial aspects of health problems and services; and supporting health technology development.

Although all the countries had national health policies and strategies that were coherent and consistent with the strategy of primary care and the goal of health for all, execution of those policies and strategies was limited by financial, human, and material constraints. In most of the countries, strategies were insufficient to meet the challenge of integrating health in national development.

To redress that situation and promote greater recognition of health in the overall development process, the Organization launched a ***democracy and health*** project in 1990. It began with the sponsorship of four subregional meetings of parliamentarians to promote inclusion of health on the agenda of the countries' legislatures and to forge a consensus among multipartisan policy-makers regarding the importance of health to national development. Meetings held the following year with subregional and regional legislative associations likewise sought to form cooperative ties, with the aim of furthering, at the political level, the cause of health.

Given the severe economic and budgetary constraints facing the health sector during this period, the Organization explored with debtor and creditor countries the possibility of ***debt conversion*** as a means of providing additional health resources while at the same time offering Governments relief from their debt burden.



Subregional initiatives in Central America, the Caribbean, and the Andean countries provide a unique opportunity to mobilize resources and manage problems that cannot be handled easily in other ways; focus increased attention on health issues; and promote real progress now and in the future.

Health Services Transformation The protracted economic crisis forced the Region's health ministries to concentrate much of their effort on reorienting the deployment of resources in order to maximize ***coverage of services.*** An estimated 170 million people lacked services, to which number 150 million were expected to be added by the year 2000. Priorities included the need to quantify the problem of underserved and unserved populations and to establish common and comparable indicators to measure the availability and utilization of health services. PAHO sponsored a meeting of representatives of 35 countries in the Region, held in Santiago, Chile, in 1985, on the primary care strategy in the transformation of health service systems that confirmed the problems of coverage and the shortfallings of service organization and administration, as well as the urgent need to determine characteristics of the supply and utilization of services at all levels of the system.

In 1988, the PAHO Directing Council recognized "the urgent need to accelerate the transformation of national health systems" and adopted a strategy for developing and strengthening ***local health systems*** aimed at decentralizing services by providing primary care to attain the goal of health for all through increased coverage and the extension of services to those previously unreached. PAHO worked to promote and support national efforts to establish networks of local health systems that could respond to the specific needs of the communities they served. Recent years saw the countries' adoption of legal instruments and standards for decentralized management, indicating the political importance attached to local systems.

The Organization cooperated with the Governments in restructuring and expanding their health systems by developing appropriate strategies, approaches, and techniques in the areas of planning, institutional administration and development, intersectoral linkage, legislation, project formulation, and evaluation. Despite widespread resource constraints, Governments managed to improve the organization and expand the coverage of their health systems by seeking appropriate means for extending their service networks, increasing the operating capacity of their health service systems, and linking their efforts with those of other sectors whose actions influence health conditions.

Progress was made in forging ***intrasectoral and intersectoral linkages*** to ensure efficient use of health resources, especially between health ministries and social security institutes. Several health ministries established operational agreements with social security institutes to reduce the duplication of services and provide coverage where neither had done so before. Trends ranged from delimiting the areas of responsibility of the sector's components and defining public and private sector financing policies to determining the degree of real coverage in the provision of services. PAHO and the Latin American and Caribbean Institute for Economic and Social Planning worked together to develop conceptual, technical, and methodological bases for including the health component and its intersectoral linkages in mechanisms for reaching decisions on governmental operations in the countries.

Because travel was projected to be the leading branch of the world's economy by the year 2000, and tourism would thus have a growing impact on countries' revenues and therefore development, PAHO began to explore the relationship between ***health*** and ***tourism*** and its potential as a mechanism for strengthening both the health sector and its interaction with other sectors.

Improving the availability, quality, and utilization of ***essential drugs and vaccines*** was the subject of concerted and coordinated efforts. PAHO and a number of countries struck an agreement to formulate and implement an intercountry program for producing and marketing raw materials and finished products by linking production facilities, achieving national self-sufficiency in production where possible, and using combined bargaining power in purchasing raw materials and finished products. An essential drugs revolving sales fund for Central America made it possible to import these products at favorable prices. National drug programs were strengthened in the

The participation of women in health, both as active beneficiaries of health care and as agents and promoters of health services, must be seen in the larger context of the development process.

areas of pharmaceutical policies, regulations, quality control, and drug production and supply systems.

Cooperation in ***radiological technology*** for health services encompassed activities related to diagnostic imaging, radiation therapy, nuclear medicine, and radiation protection. The Organization promoted use of the PAHO/WHO Basic Radiological System, which could cover more than 80% of all needs for radiological examinations.

The objective of activities in support of ***health of the disabled*** was to promote the adoption of policies and the development of programs necessary for better understanding problems relating to disability, its prevention, and the treatment of disabled persons. A number of countries applied a community-based rehabilitation approach, which produced information that permitted greater understanding of the prevalence of disabilities and of the importance of integrating rehabilitation into the general health services. PAHO encouraged studies to shed additional light on certain epidemiologic and genetic aspects of disability as well as on risk factors. During this period, well over half the countries in the Region incorporated rehabilitation in their health programs.

Human Resource Development The adequate supply and effective distribution of well-trained manpower is the most important determinant of the success of health programs. While PAHO continued to direct its efforts to educating and training health personnel in every category, the utilization of human resources became an increasingly important strategy. Thus, the two main areas of concentration in this field involved: management of human resource development, targeting formulation of policies and plans, information, research, and utilization of personnel; and education and training of personnel, with emphasis on the undergraduate and postgraduate education of professionals, training of technical and auxiliary personnel, and continuing education.

The Organization reviewed the status of health manpower in the Region and elaborated personnel requirement profiles. Training programs focused on developing the cadre of health care workers needed to make possible universal access to decentralized primary care services. Special recent, efforts targeted promoting and preparing leaders in the health sector who could deal with the new challenges posed by the greater integration of health in development.

Environmental Health Socioeconomic changes occurring throughout the Region drew into focus the close relationship that exists between health and environmental conditions. Poverty belts ringing major cities grew denser in Latin America during this period, resulting in large masses with no basic services and living in unthinkable squalor. The health sector had to deal with the consequences of this poverty: low infant birthweights, abandoned children, environmental hazards, drug abuse, malnutrition, and a host of other deleterious health conditions. Shortcomings in the fulfillment of basic sanitary needs meant that diarrheal and parasitic diseases continued to be leading causes of high mortality and morbidity in some countries, especially among children but, with the return of cholera to the Region, among adults as well. At the same time, industrialization and urban development in these countries elevated health risks by exposing the population to toxic chemicals that contaminate the air, water, soil, and food.

To address those problems, and in response to the 1991-1992 cholera epidemic, the Organization initiated a regional plan for investment in the environment and health that targets the mobilization of $US200 billion in support of the sector. In addition, PAHO activities for the ***development of the environmental health infrastructure*** concentrated on strengthening its managerial, operational, and technical capabilities and coordinating its work with cooperating agencies. The Organization participated in the United Nations Conference on Environment and Development, held in Rio de Janeiro in June 1992, which adopted "Program 21" that encompassed provisions for protection of health, the atmosphere, the quality and supply of water, and for ecologically rational

management of toxic chemicals and hazardous and solid wastes.

In ***water supply and sanitation,*** within the reference of the International Drinking Water Supply and Sanitation Decade, PAHO directed its efforts at consolidating and accelerating coverage by making optimal use of the limited financial resources available, with preference given to underserved populations in major cities and rural areas in order to improve their living conditions. The Organization emphasized linkage of water and sanitation agencies with agencies in other sectors involved in this work, utilization of existing community participation mechanisms, rehabilitation of services, strengthening of system operations, maintenance, and rehabilitation to reduce high leakage rates, development of low-cost technologies to extend coverage, and institution of preventive and treatment methods to protect water from biological and chemical contaminants.

In water supply the coverages rose to 87% of the urban population and 62% of the rural population by 1990. In the same year, the coverage of sewage and excreta disposal services increased to 79% of the urban population and 37% of the rural population. Research at the Pan American Center for Sanitary Engineering and Environmental Sciences (CEPIS) was reoriented toward the development of viable, low-cost technologies, preferably for the benefit of underserved population groups and others at greatest risk. Many more centers were included in the CEPIS Pan American Sanitary Engineering and Environmental Sciences Information and Documentation Network (REPIDISCA), raising the total to more than 267 centers active in 22 countries.

PAHO collaboration in ***solid waste management*** was directed to formulation of national plans and programs, identification and preparation of projects for metropolitan areas and cities, preparation of technical guides and criteria, sanitary management of solid wastes within the primary health care strategy, safe handling of special and hazardous wastes, promotion of community participation, and intersectoral coordination.

The aim of PAHO's ***program to prevent and control environmental pollution*** was to assist national authorities in carrying out health risk assessments regarding chemical hazards and in developing programs in this area. The Organization gave increasing attention to the traditional problems of environmental pollution arising from the inadequate disposal of human wastes and of chemical pollutants from industry, mining, and agriculture. The Pan American Center for Human Ecology and Health (ECO) gave priority to research, information dissemination, and technical cooperation on chemical contaminants and spearheaded a study of chemical safety in the countries as a step toward formulating a medium-term regional control program. Support also targeted regional projects for monitoring toxic discharges into surface and subterranean sources of drinking water, for monitoring water and air quality, and for managing the coastal waters of Caribbean islands.

Dr. Carlyle Guerra de Macedo, current Director of the Pan American Sanitary Bureau, assumed office in 1983.

The Organization also promoted sanitary improvements in ***housing,*** establishment of intersec-

toral and interagency linkages, formulation of guidelines on minimal sanitation features, application of appropriate technology to hygienic improvements in housing, and training of national personnel in this respect.

PAHO reviewed national ***occupational health*** policies and legislation; promoted occupational health services and expansion of coverage as part of primary health care; encouraged extending preventive occupational health care among the most vulnerable segments of the economically active population; and offered training to personnel in occupational health measures. In addition, the Organization supported the development of epidemiologic research on workers' health as an essential tool for gaining better knowledge of conditions in each country and improving programming. Specific projects targeted the study of workers' exposure to asbestos, occupational health in mining, health problems of workers in different occupational sectors, operational models for occupational health programs consistent with conditions prevailing in the countries, and specific labor problems of, among others, children, women, migrants, the disabled, and workers exposed to chemical risks. In 1992, the "Year of Workers' Health," PAHO launched a regional plan of action that had as its centerpiece the development of national plans for workers' health.

Emergency Preparedness and Disaster Relief Having pioneered disaster preparedness in the world since the mid-1970s, PAHO set up a center at its Headquarters to streamline emergency response activities. During this period, hurricanes swept across the Caribbean, Mexico, and Central America; recurrent floods in South America had serious health consequences; and earthquakes and volcanos cost thousands of lives. Rural-to-urban population shifts and the growing threat of technological disasters heightened the Region's vulnerability. All the countries established a health sector disaster coordinator or focal point, and many countries set up national programs in this field. Activities in the Caribbean were integrated into multiagency preparedness and disaster prevention. Other PAHO cooperation involved seeking the participation of key sectors in disaster preparedness, working to increase awareness of health priorities and solutions during emergencies, training health personnel in emergency response procedures, and assisting in rapid assessment of health needs following disasters.

Disease Control This area became progressively more proactive over these 10 years, as the Organization committed to attacking the communicable diseases that threatened human health, with the aim of eradicating some and eliminating others. In 1985, in order to speed up measures for the eradication of ***poliomyelitis,*** the Director proposed a plan of action to halt transmission of the wild poliomyelitis virus in the Americas. The Region's last poliomyelitis case was reported in August 1991, and that progress prompted the PAHO Governing Bodies, in 1992, to request the Director to initiate a plan for certifying eradication of the disease from the Americas. The rapid decrease in the incidence of neonatal tetanus led the Governments to agree to a strategy for eliminating that disease during this decade, and a number of countries proposed eliminating ***measles*** as well by the end of the century. Recognizing that ***rabies,*** a deadly disease, could be prevented, the Governments of the Region launched a program to eliminate rabies in large urban areas of Latin America. More recently, in 1992 the PAHO Governing Bodies adopted a regional plan to eliminate leprosy continent-wide by promoting multidrug therapies, improving case surveillance, and incorporating prevention and control of the disease into general health services.

In working to prevent and control communicable diseases, the Organization's main thrust was to integrate those activities in general health services, and for the most part the traditional focus on vertical programs became a practice of the past. PAHO cooperated with the countries in establishing and maintaining programs to control malaria, leishmaniasis, schistosomiasis, Chagas' disease, filariases, dengue, yellow fever, tuberculosis, viral hepatitis, Argentine hemorrhagic fever, leptospirosis, plague,

In forwarding its goal of safeguarding the health of the population and obtaining universal, equitable access to services, the health sector is simultaneously contributing toward the larger purpose of national development.

The explosion of AIDS in the Americas has galvanized regional and national efforts to mitigate its impact and protect special population groups.

rickettsioses, taeniasis/cysticercosis, and helminthiases. That cooperation centered on furthering epidemiologic knowledge of these diseases, supporting national services aimed at controlling them, and mobilizing resources. An exciting collective effort launched by Argentina, Bolivia, Brazil, Chile, Paraguay, and Uruguay targets the elimination of vectorial and blood transmission of Chagas' disease. In addition, the elimination of onchocerciasis appears to be within reach.

Malaria continued to cause great and growing concern, as the number of new cases increased year by year, exceeding 1 million in 1990. PAHO promoted active case detection, epidemiologic mapping of relative incidence and risk factors on which to base malaria control activities, research, and training.

The Governing Bodies reaffirmed the ***Aedes aegypti*** control policy and recommended intensifying programs for the control of dengue and jungle yellow fever, in light of the fact that a number of countries continued to report cases of those diseases throughout this period. A new integrated strategy for vector control was initiated.

In the mid-1980s, the technology for preventing, diagnosing, and treating ***tuberculosis*** had reduced the problem by nearly 10% per year in some countries and by 5% per year for the Region as a whole. By 1990, however, some countries were registering increases in incidence of the disease, which was complicated by its close relationship with HIV infection. PAHO continued an active managers' training program, supported the national programs with technical information documents, participated in a cooperative program of research in tuberculosis bacteriology including protocols on the quality of smear examination, prevalence of resistance to drugs of *Mycobacterium tuberculosis*, and prevalence of atypical mycobacterium.

Acquired Immunodeficiency Syndrome

The spread of the AIDS epidemic in the Americas led to formal creation, in 1987, of a program to prevent and control the disease. Notwithstanding PAHO's and the countries' efforts in this area, by 1992 the situation was serious and worsening. Of the 430,000 cases of AIDS reported to WHO up through December 1991, 250,000—58% of the total-were from the Americas. Conservative estimates were that more than 2 million people in the Region were infected with the human immunodeficiency virus (HIV): 1 million in the United States, 750,000 in Brazil, and 370,000 in the rest of the countries.

Cooperation was based on establishing laboratory networks, supporting laboratory operations, and monitoring and improving national and regional case surveillance. PAHO provided the countries technical guidelines for AIDS prevention and helped emerging national prevention and control programs.

As evidence mounted that healthy changes in behavior were possible, specific interventions targeted groups at greatest risk. A PAHO AIDS information, education, and communication unit bolstered health education in preventing the disease, and regional teleconferences were broadcast to provide health care workers current information.

Resource mobilization efforts resulted in millions of dollars being pledged to combat AIDS in the Region, and PAHO entered into a $US5 million, five-year AIDS research agreement with the United States National Institute of Allergy and Infectious Diseases.

In 1992 the PAHO Governing Bodies adopted updated strategies and priorities to combat AIDS, with special emphasis on its effects on the female, adolescent, and child populations; greater emphasis on the health care of persons with HIV/AIDS; and better integration with other programs for health, social well-being, and economic development in the countries of the Americas.

PAHO collaborated in the review of national control programs for ***sexually transmitted diseases*** and helped mobilize resources to improve them. The public health challenge posed by AIDS provided an opportunity to use awareness of the devastating consequences of sexually transmitted diseases to implement and strengthen strategies to control them.

The countries of the Americas face the challenge of beginning a new development process—one that does not repeat the failures of the past and that is guided by the principle of equity, enlisting the economy to serve the welfare of everyone, which in turn requires that democratic participation become a way of life.

Maternal and Child Health Most of the countries integrated family planning into their maternal and child health programs and adopted the risk approach in health promotion and disease control operations to determine the appropriate allocation of resources and efforts to meet the basic health needs of mothers and children, giving more attention to those in greatest need. The Organization's activities centered on monitoring the ***growth and development of children*** up to 5 years of age, ***control of diarrheal diseases*** and ***acute respiratory infections, complete immunization*** of all infants during the first year of life, and ***promotion of breastfeeding, provision of food supplements, family planning, pregnancy, childbirth, and postpartum examinations, and care of the newborn.*** PAHO's Governing Bodies urged countries to set national goals for ***reducing maternal mortality*** by 50% of prevailing rates by the year 2000.

PAHO participated in newly formed interagency committees for vaccination, diarrheal disease control, and acute respiratory infection programs. Of particular note was the Organization's involvement in the Interagency Coordination Committee set up to support fulfillment of the agreements of the World Summit for Children.

Maternal and child research proved wide-ranging, encompassing: development of vaccines against rotaviruses, use of household oral rehydration solutions, epidemiologic and operational aspects of perinatology, and studies of child development, adolescent health, and causes of maternal and infant mortality. Support of the maternal and child health program was evidenced by its ability, in a period of economic crisis, to mobilize hundreds of millions of dollars in extrabudgetary funding.

Over the decade, PAHO's cooperation with the countries in this field contributed significantly to reducing infant and maternal mortality rates, assessing perinatal care, increasing vaccination coverage, setting up and evaluating diarrheal disease control programs, and developing national programs to deal with acute respiratory diseases. The cholera epidemic of 1991-1992 may actually have resulted in a reduction of infant mortality, as compared to other years, as a result of the diarrheal disease prevention and control measures that PAHO promoted and the affected countries instituted.

The Expanded Program on Immunization (EPI) increased ***vaccination coverage,*** a major accomplishment in an era of cost-cutting in public sector programs. In 1978 only a small proportion of children below age 1 (10%) lived in countries where the EPI was being implemented, and only 50% of this group was covered under the program. By 1992, vaccination coverage for the EPI diseases reached 80%.

By the year 2000, ***adolescents and young adults,*** who today represent roughly 25% of the population, will number approximately 110 million in Latin America and the Caribbean. To address the current and future health needs of this age group, PAHO activities aimed at encouraging an intersectoral approach to young people's problems-especially drug abuse, abortion, and teenage pregnancy. In 1992, the PAHO Governing Bodies approved a regional plan of action to promote the health of youth.

Women, Health, and Development To improve the social and health status of women, PAHO worked with the countries to integrate activities targeting the welfare and development of women in national health plans and to develop the corresponding work programs, proposed legal reforms, and made efforts to include the participation of women's organizations in elaborating national health plans and executing primary care programs. Focal points were established in ministries of health or in women's bureaus in 33 countries in the Region, and all the countries set up multisectoral national commissions on women, health, and development, the purpose of which was to mobilize resources and promote action in this respect. At seminars sponsored by the Organization, discussion focused on experiences in implementing women in health and development activities, research priorities, and strategies for increasing support for female providers of health care.

PAHO has reminded the wielders and regulators of technology—especially new technology—of the overriding need to safeguard health in order to truly serve the public good.

Food and Nutrition Recognition of the persistence of serious food and nutrition problems in the Region led the Directing Council to urge Governments to strengthen multisectoral policies and strategies for improving nutritional status, particularly among low-income populations as well as groups at high biological risk. Although recent information on nutritional status shows a slight reduction in the prevalence of malnutrition, approximately 7 million children under 5 years of age are still moderately or seriously malnourished. The Organization emphasized planning, executing, and evaluating food and nutrition strategies; creating and strengthening food and nutrition surveillance systems, especially in the Central American countries; food distribution; and the control of iodine, iron, and vitamin A deficiencies. In 1992, the Governing Bodies agreed on a plan of action for the elimination of vitamin A deficiency from the Americas by the year 2000.

Health Promotion The Organization focused on an integrated approach to preventing and treating cancer, cardiovascular diseases, diabetes, and other noncommunicable diseases by promoting healthy lifestyles, strengthening health services for adults and the elderly, and identifying the most effective interventions. PAHO stressed the importance of linking hypertension control with general health services, gave cooperation to countries in the formulation of arterial hypertension control programs, sponsored a study on prevention and ***control of chronic cardiovascular diseases*** designed to measure the effect of dietary changes on the natural history of cardiovascular diseases, promoted the formulation of programs and standards for control of ***rheumatic fever,*** and urged integrating activities for the prevention and control of chronic diseases and for promoting avoidance of such risk factors as smoking, obesity, diet, and sedentary habits in the general health services within the primary care strategy. Antismoking activities, in particular, became a top priority.

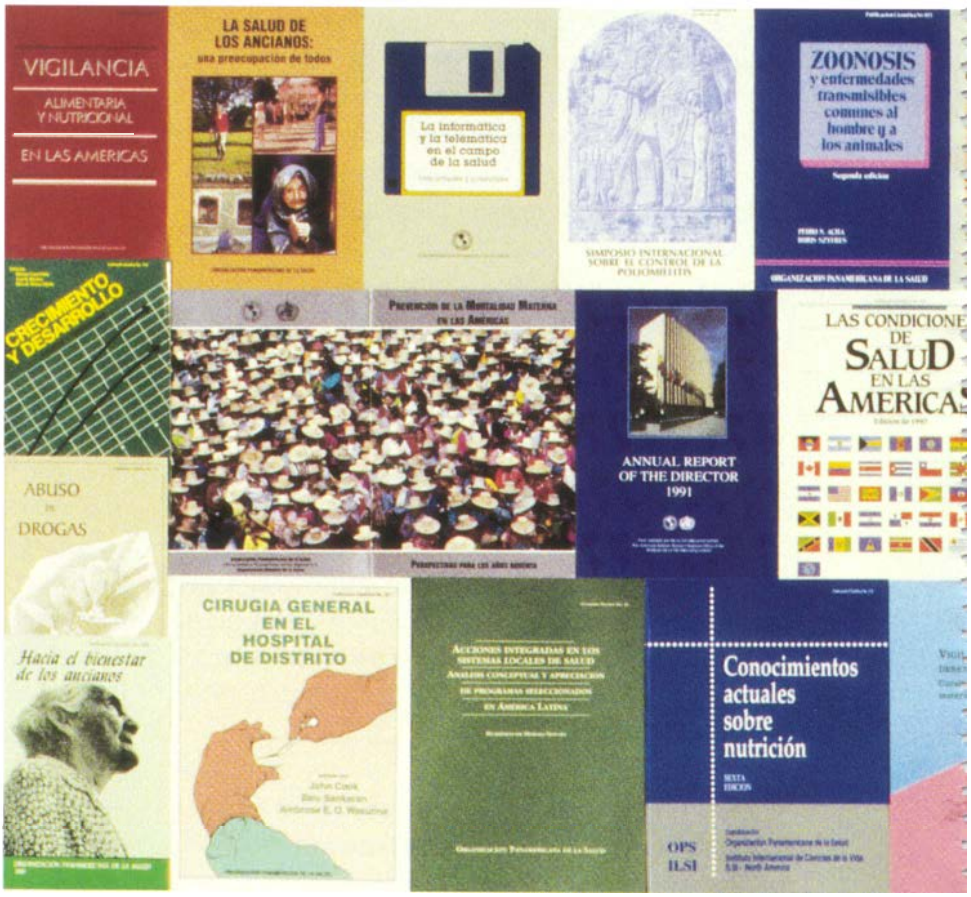
In respect to ***cancer,*** PAHO helped the countries establish cancer registries, sponsored workshops on cancer epidemiology and cancer research, and expanded programs for early detection of cervico-uterine cancer. The Latin American Cancer Research Information Project (LACRIP) continued to collect and disseminate, through its international computerized network, up-to-date information on cancer.

Efforts in the area of ***mental health*** encompassed modernization of psychiatric care, prevention and control of mental and neurological disorders and of problems related to alcoholism and drug dependency, and control of psychosocial factors that influence somatic and mental pathologies. Many of the countries committed to reorienting their mental health plans toward alternative approaches to traditional psychiatric care, including health promotion and community prevention. PAHO channeled work through a network of collaborating centers for research and training in mental health, the neurological sciences, and prevention of alcohol abuse and drug dependency.

Drugs became an increasingly serious problem during these 10 years. Gang warfare broke out between Colombian cocaine traffickers, who went so far as to murder one of the country's presidential candidates. Crack, a cocaine derivative, became increasingly common in the cities of the United States. The Governing Bodies resolved to wage a hemispheric fight against drug addiction, drug abuse, and drug trafficking, by integrating ***drug abuse control*** into health plans and programs as part of an intersectoral approach that includes the private sector; strengthening administrative and legislative measures in support of the program; and performing epidemiologic evaluations of the problem.

Health services prepared to deal with a population in which the proportion of elderly persons was increasing each year. To improve the ***health of the elderly,*** PAHO focused on inclusion of the health sector within the wider context of improving the quality of life for the elderly; promoted the independence of the elderly and the avoidance of their placement in long-term institutions whenever possible; and fostered family and community participation, home care, and principles of self-care for the elderly. The Organization held semi-

The PAHO Publications Program has been going strong for 75 years, earning in the course of that time a well deserved reputation in the field of biomedical and health information. In addition to periodicals and official documents, the Program has issued over 550 scientific and technical titles on every aspect of public health in the Americas. Seen as an optimal means of making known experiences and advances occurring in the field, the Program has gained momentum over the past 10 years and has come to be seen as an essential component of technical cooperation with the countries. Today more than 300,000 copies of PAHO publications are distributed annually. Moreover, improvements in publishing technology have enabled PAHO technical programs and Pan American Centers to disseminate specialized information in their respective fields.



nars on policies concerning care of the elderly in the interest of devising a multidisciplinary approach to this problem, conducted a survey on the needs of the elderly in 13 countries, and established a gerontology data bank to keep health professionals up to date on developments in care of the elderly and to promote dissemination of literature in this field.

Because the number of traffic accident deaths as well as the number of motor vehicles was increasing in many of the countries, PAHO worked with the countries in accident ***prevention and control***, helping to assess the situation regarding traffic accidents and to design an effective plan of action for their prevention.

PAHO worked with newly established WHO Collaborating Centers in ***blindness prevention in*** the Americas, helped start eye care programs in some countries, and supported existing ones in others.

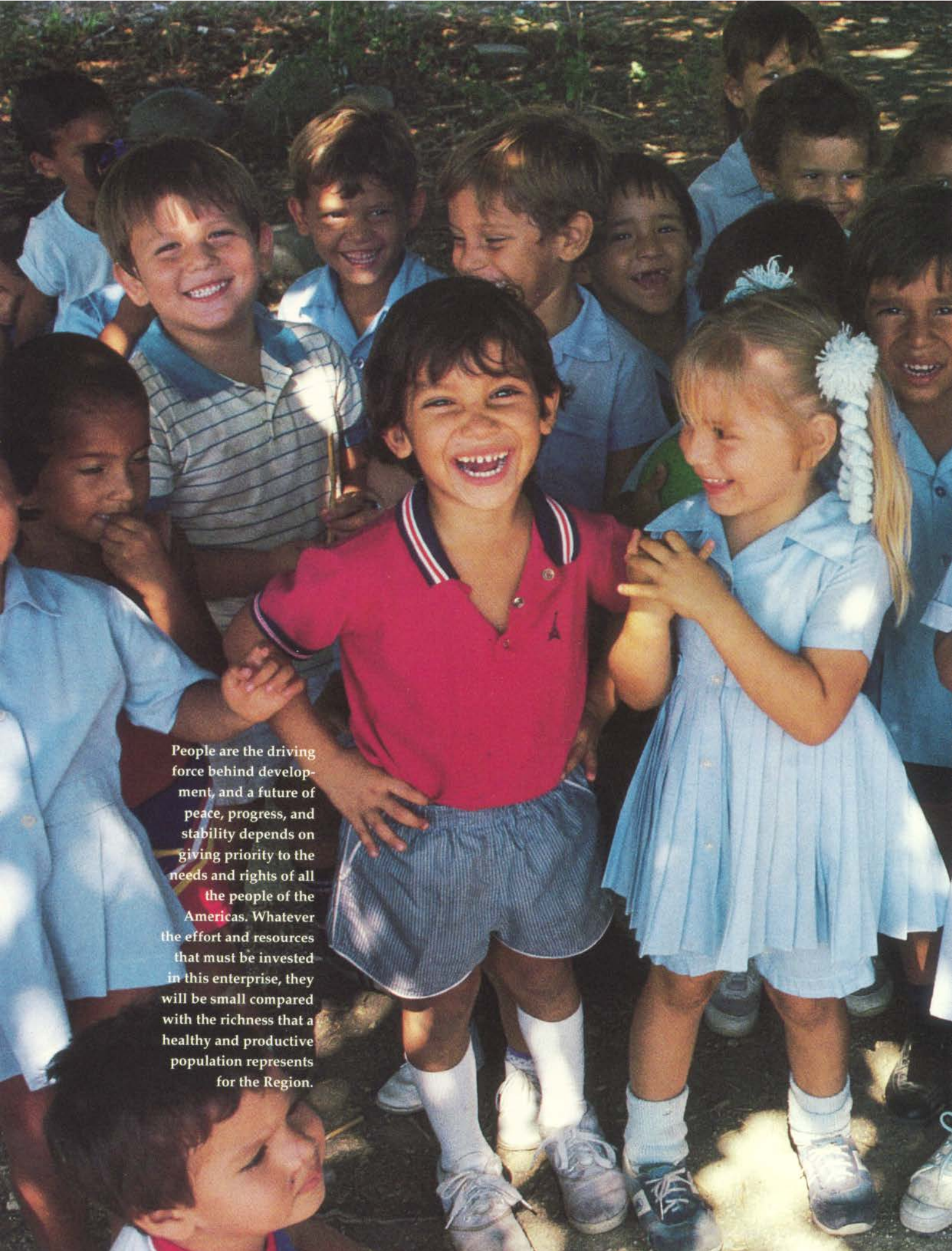
Veterinary Public Health and Food Protection

The Organization developed a more effective technology for rabies vaccine production in suckling mouse brain; developed and transferred to the countries the technology for production of oil-adjuvanted foot-and-mouth disease vaccine; sponsored a continental plan for control of urban rabies, with the effect that 15 capital cities in Latin America rid themselves of canine rabies; carried out a regional program for training in animal health; strengthened the Regional Primate Center in Peru to protect endangered species of nonhuman primates (which serve as invaluable models for understanding such important human diseases as hepatitis, malaria, and AIDS); applied the technology for immunodiagnosis of hydatidosis in humans; established laboratories and a continental surveillance system for foot-and-mouth disease and other vesicular diseases; and helped improve food protection services by promoting a

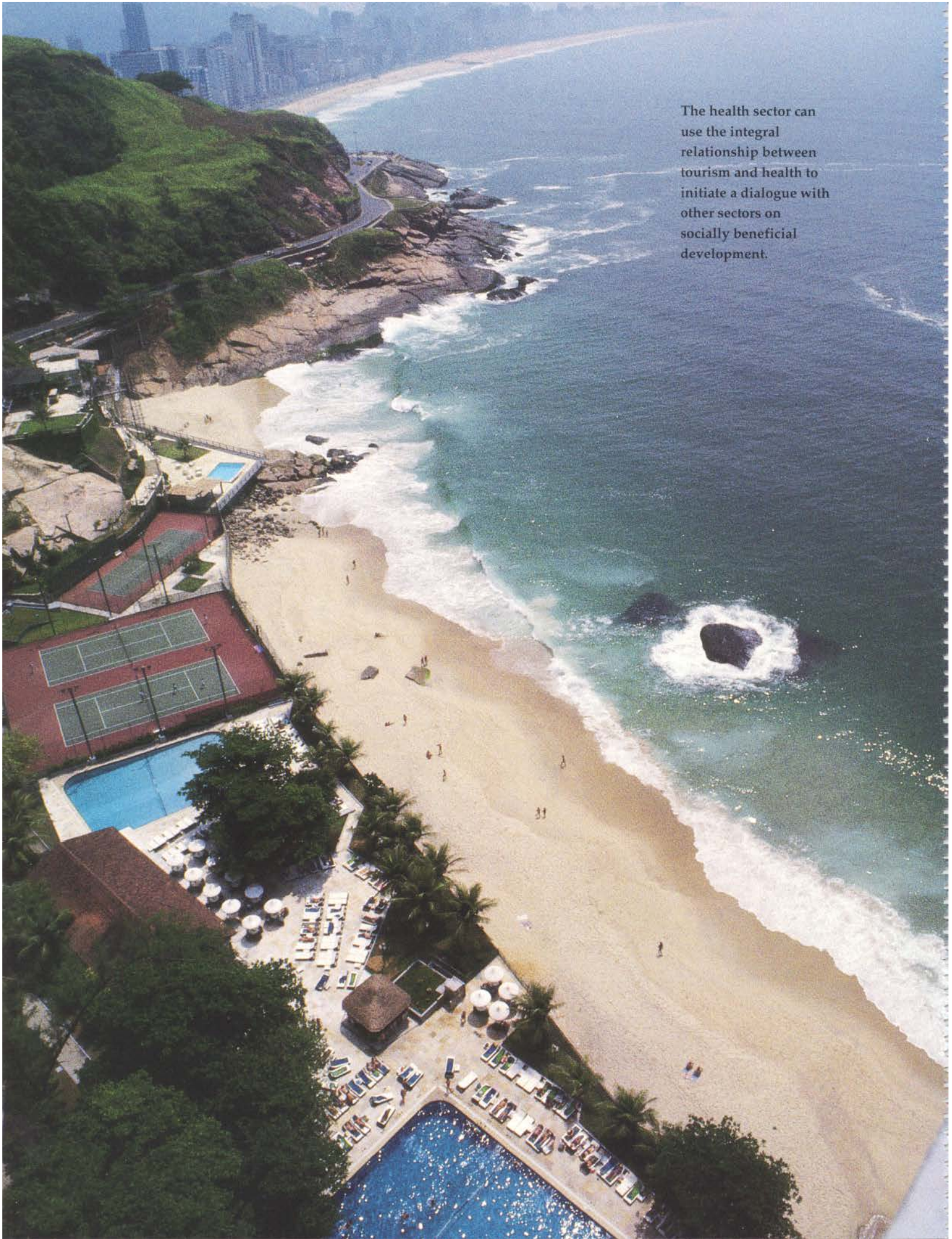
clear political decision to establish and strengthen national food safety programs.

With the closing of the Pan American Zoonoses Center, PAHO and the Government of Argentina struck an agreement in 1991 to establish the Pan American Institute for Food Protection and Zoonoses (INPPAZ). The absence of cases of foot-and-mouth disease in Uruguay as well as in several Argentine provinces and Brazilian states made it possible to foresee attaining the goal of eradicating that disease within the next 10 years.

Health Research and Technology PAHO aimed to find ways, through research, to attain the most effective, economical, and durable impact on health by developing tools and approaches appropriate to national and local needs, within the framework of the strategies to achieve health for all. In 1984, the PAHO Advisory Committee for Medical Research became the Advisory Committee on Health Research, and the change reflected the Organization's need for a broader scope of work and research to address the Region's health problems and brought the focus of the Committee more in line with PAHO's own definition of health. The Organization's research grants targeted projects in priority areas: health situation analysis (health profiles, technological development, health policies, labor market, utilization and accessibility of health services, financing of the sector, and utilization, accessibility, and efficiency of environmental sanitation services) and health problems of specific population groups (child survival, chronic diseases of adults, health problems of workers, and health problems of the aged). The trends in health service research were studied in 15 countries; a directory of study topics, researchers, and institutions was compiled; and priority areas for technical cooperation in health research were identified.



People are the driving force behind development, and a future of peace, progress, and stability depends on giving priority to the needs and rights of all the people of the Americas. Whatever the effort and resources that must be invested in this enterprise, they will be small compared with the richness that a healthy and productive population represents for the Region.



The health sector can use the integral relationship between tourism and health to initiate a dialogue with other sectors on socially beneficial development.

The Organization worked with the countries to strengthen their mechanisms for selecting and improving technology and for increasing national capacities for its generation and use. Subregional meetings resulted in agreement to conduct analyses of the selection, cost, allocation, dissemination, and utilization of technology, and a technological information network was organized. PAHO focused its efforts on building a body of knowledge on technological development in health in Latin America and the Caribbean that was to include policies on technology in health, supply of technology, demand for and use of technologies, and effects of technology on society. PAHO-sponsored meetings provided a forum for analyzing the exportation and importation of health technology in the Region. Emphasis was given to the identification and analysis of legislation relating to health technology, including regulations pertaining to medical equipment, procedures, and drugs.

Scientific and Technical **Health Information** The Organization attributed priority importance to developing scientific and technical information-promoting its production, broad dissemination, incorporation, and rational use-as a basic means of supporting the strategic orientation of managing knowledge. In addition to strengthening its own publishing efforts, PAHO placed special emphasis on direct technical cooperation with those countries that expressed interest in improving their national publications. In the area of information exchange, the Latin American and Caribbean Center on Health Sciences Information (BIREME) helped further develop national information and documentation systems as well as international networks.

Administration To realize its mission, PAHO set in motion the managerial ***strategy for optimal use of the Organization's resources in support of Member Countries*** to ensure their equitable, efficient, and effective application. In 1984, a plan to decentralize administration was launched: Area Offices ceased to function as such and were replaced by Country Offices, to which increasing authority was delegated. A new financial management system installed in field offices provided better information on, and control over, funds. Joint Government-PAHO reviews of health poli-

cies and programs were conducted annually, which resulted in definitions of national priorities and requirements for PAHO cooperation and in mobilization of external financial resources.

The Organization worked effectively throughout these 10 years to increase administrative flexibility and reduce operating costs. A general mod***ernization of administrative processes*** entailed the installation of new systems for the budget operation and control function, the overall accounting and payments system, the procurement system, and various personnel systems. The addition of machine translation, better communication services, and text and data processing systems helped greatly cut Secretariat costs.

PAHO's pioneering in the area of ***machine translation*** of health information merits special mention among the Organization's recent contributions. The project-which entailed the building of a suite of software programs that would yield English drafts of texts originally written in Spanish (SPANAM™), followed by development of a parallel system from English to Spanish (ENGSPAN™)—began in the mid-1970s and greatly advanced in the last 10 years. Cited by the U.S. Congress in 1990 as a successful example of innovative technology, PAHO's two systems were downsized for microcomputers in 1992, in order to make the benefits of this new tool available throughout the Region.

The Organization maintained a sound ***budgetary and financial*** footing, making it possible to protect its program activities and strategic orientations during the resource-strapped 1980s and into the 1990s—despite the economic and political environment, which imposed a real reduction of the Organization's regular budget of approximately 30% between the 1982-1983 and 1992-1993 bienniums. The total income for PAHO/WHO programs during the 1982-1985 quadrennium was $US450 million and during 1986-1989 $US613 million. For 1990-1991 the combined PAHO and WHO regular budget was $US195 million and extrabudgetary funding amounted to $US194 million-or almost half of the total budget for that biennium. The Organization's extraordinary ability to attract sizable external funding, coupled with a careful husbanding of its resources, enabled PAHO not only to maintain but even increase its technical cooperation program, while facing a significant decrease, in real terms, in the regular budget. In that regard, one indicator of greater operational efficiency was the continuing reduction of overhead, which fell to 7.4% of the Organization's total funding in 1992-1993.

At the beginning of 1992, the Organization had a core international ***staff*** strength of 1,096 as compared to 1,512 at the beginning of 1983—a reduction of 28%. The need to mobilize national resources led to the contracting in some duty stations of national professionals with specific expertise and first-hand knowledge of local conditions and needs. By 1992 approximately 2,000 national staff had been added to the core staff—resulting in almost a tripling of personnel mobilized to provide technical cooperation in health to the countries. To optimize their performance, the Administration emphasized the quest for technical excellence through a myriad of personnel management initiatives and staff development and training opportunities.

The Organization recognized that the societies of Latin America and the Caribbean face an enormous challenge if they want to approach the goals of health for all by the century's end-if they want to raise their health standards and reduce existing inequities among and within countries. The health sector is not alone in confronting this challenge, particularly since many existing problems cannot be lessened-much less solved-without the combined efforts of most of the State's sectors and the total support of all society.

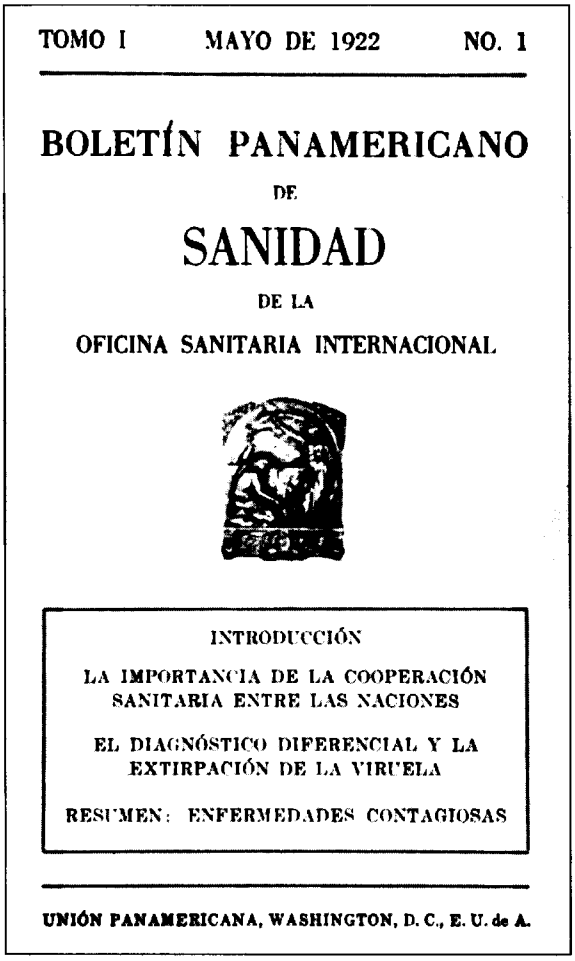
In light of that recognition, PAHO worked to effect changes directed toward achieving equity and eliminating wide disparities in health care. It sought greater efficiency to ensure optimal use of the scant resources available and promoted wider participation of all sectors of society to effect a union of wills and action that would eventually ensure a future of health for all. ❖

Throughout this period, the Organization's basic message has been, in the words of the Director, that "Health is the concern of everyone: health is not the last car in the train…it is the locomotive that can lead us effectively on the track to development."

Through Programs and Orientations

BOLETIN DE LA OSP:

FORUM FOR HEALTH



TOMO I MAYO DE 1922 NO. 1

BOLETÍN PANAMERICANO

DE

SANIDAD

DE LA

OFICINA SANITARIA INTERNACIONAL

INTRODUCCIÓN

LA IMPORTANCIA DE LA COOPERACIÓN SANITARIA ENTRE LAS NACIONES

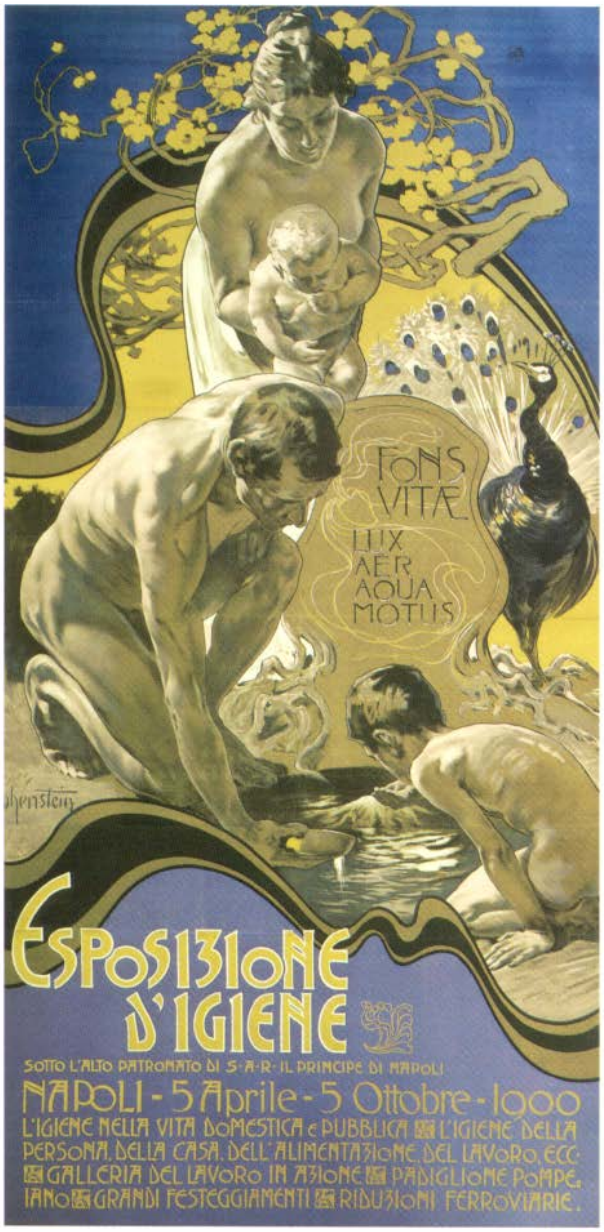
EL DIAGNÓSTICO DIFERENCIAL Y LA EXTIRPACIÓN DE LA VIRUELA

RESUMEN: ENFERMEDADES CONTAGIOSAS

UNIÓN PANAMERICANA, WASHINGTON, D. C., E. U. de A.

The first issue of the *Boletín* proved prophetic, signaling the importance of international cooperation in health and the promise of eradication of smallpox.

The 846 issues of the *Boletín de la Oficina Sanitaria Panamericana* that have come off the press during the Pan American Sanitary Bureau's 90-year history represent not only 70 years of uninterrupted monthly publication but also a long trajectory of direct influence over the course of public health in the Americas. In the yellowed pages of the volumes from the early years, the histories of the *Boletín* and the Bureau converge. A perusal of those issues reveals the multiple



The fountain-of-life medallion struck to commemorate the VI International Sanitary Conference (above) reflected an early twentieth century understanding of the requisites of good health-light, air, water, and exercise-and served for many years as the logo of the *Boletín de la Oficina Sanitaria Panamericana.*

roles that both the Bureau and the *Boletín* have played through the years, providing a flexible and timely response to bridge the gaps created by the countries' changing health conditions and needs.

The founding of the *Boletín* and its inextricable link with the history of the Bureau date back to the VI International Sanitary Conference, held in Montevideo shortly before Christmas in 1920. Among the resolutions relating to the reorganization of the Bureau, one called for the establishment of a bulletin, a "monthly report on Pan American health from the International Sanitary Bureau," to be issued in English and Spanish, which would be published by means of a credit of $US20,000, to be prorated among the Member Governments. The report for fiscal year 1920-1921 indicates that the Bureau was reorganized in May 1922, and under the leadership of the Assistant Director, Dr. J. H. White, work began on the preparation of two special editions of a *Boletín Panamericano de Sanidad* (6,636 copies in Spanish and 2,000 in Portuguese), with articles written by distinguished specialists from the United States. The Bureau had decided to waive the privilege of publishing the bulletin in English and to print a Portuguese issue instead. The desire for regular scientific communication among health officials in the Americas assured the immediate success of the *Boletín*, which figured prominently in the annual reports of the Director during that period.

The first issue of the *Boletín*, which came out in May 1922, included two articles that proved to contain an almost prophetic vision of the future. In one article, on the importance of cooperation between nations in health matters, J. H. White warned that it would be impossible to obtain satisfactory results in health campaigns unless the resolutions of the conferences were adopted as

law in the various countries. Another article, on differential diagnosis and the eradication of smallpox by B. J. Lloyd, foreshadowed what many decades later would become an historic triumph. The same issue contained a list of cases and deaths from communicable diseases (cholera, bubonic plague, smallpox, exanthematous typhus, and yellow fever) reported by the Surgeon General of the United States. Such reports were a regular feature of the *Boletín* for many years.

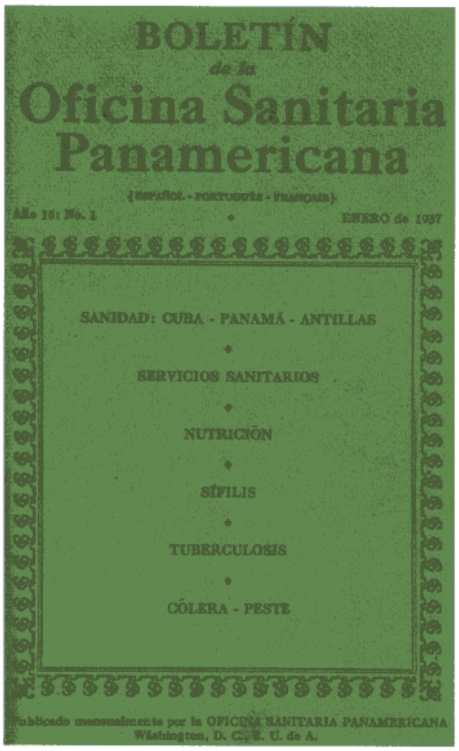
Beginning in July 1923, the journal was given its current name under a resolution of the V International Conference of American States, which also decided that the International Sanitary Bureau would thenceforth be known as the Pan American Sanitary Bureau. That year was noteworthy for the publication in Portuguese of special issues on syphilis, tuberculosis, leprosy, smallpox, diphtheria, dental care, mucocutaneous leishmaniasis (buba), and other subjects.

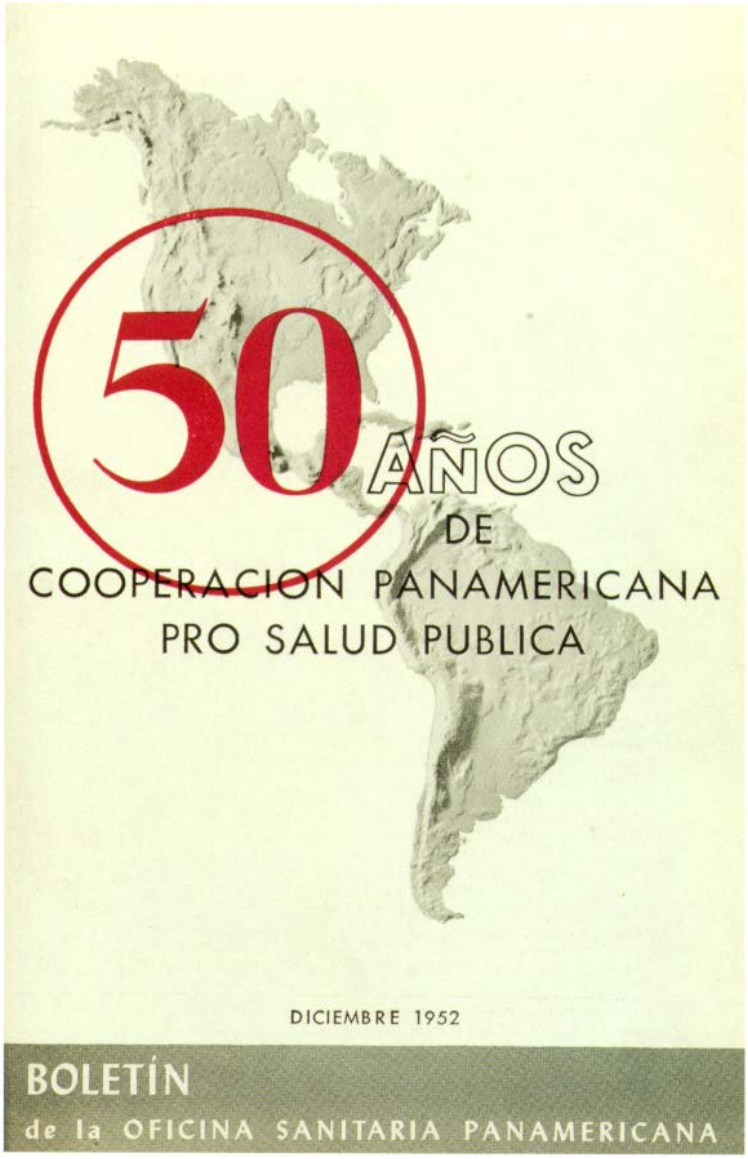
Even in its modest initial format, the *Boletín* already contained all the elements that 30 years later would justify its being called "the most well-known and widely distributed monthly journal on health and medicine in Latin America." Since the publication consisted of only 26 pages, long articles were published as series that spanned several issues. These were generally written by experts from the United States with ties to the Bureau or were translations of articles from prestigious biomedical journals, although toward the end of the 1920s the *Boletín* began to carry more original contributions by Latin American authors. A section on advances in sanitary engineering appeared regularly; it was later replaced by a section of "notes and reviews" that was similar to the current section "Instantáneas" and contained summaries of texts on sanitation and disease control. Another short section featured book reviews. The *Boletín* also began to carry reports on the health systems in the countries, starting with those of Venezuela and Mexico.

It soon became necessary to expand the publication's scope to provide space for documents of critical importance to the countries: model laws on foods and drugs, texts of the Pan American Sanitary Code and updates on its ratification, circulars on seaport quarantines, water purity standards, proceedings of conferences, and the first translations of *Control of Communicable Diseases in Man.* The texts were embellished with photographs, tables, and drawings. Articles that were applicable to specific situations were reprinted and distributed to national directors of health and newspapers. The *Boletín* also began to carry editorials, which, in addition to reflecting major public health concerns and problems in the Americas and other places around the world, would have a marked impact on national health policies.

The official documents of the Organization make clear the importance of the *Boletín.* A resolution adopted by the first administrative session of the Directing Council of PASB, requested the Bureau to continue giving special attention in the *Boletín* to the publication of facts and discoveries that might be of use in preventing tuberculosis and cancer. In his report for 1927, the Director, Dr. Hugh S. Cumming, drew attention to the articles on public health administration in the Americas, calling for completion of the series on that topic. He also expressed his satisfaction with the success of articles on ideal methods of health administration for cities of 100,000 inhabitants and on the control of communicable diseases.

In each period of its history, the *Boletín* has reflected a realistic picture of the health situation. During its first decade, it focused on the ravages of communicable diseases, including not only the notifiable ones but others such as tuberculosis, leprosy, and diphtheria. It also took up concerns that would eventually become major public health problems, including sexually transmitted diseases and alcoholism. In addition, articles published in the *Boletín* at that time provided a glimpse of the problems that would give rise to important actions many years later. For example, several of them anticipated the need to promote preventive health measures among specific population groups. A 1923 issue contained a list of recommendations for tuberculosis patients, and one in 1928 included articles with advice for mothers on

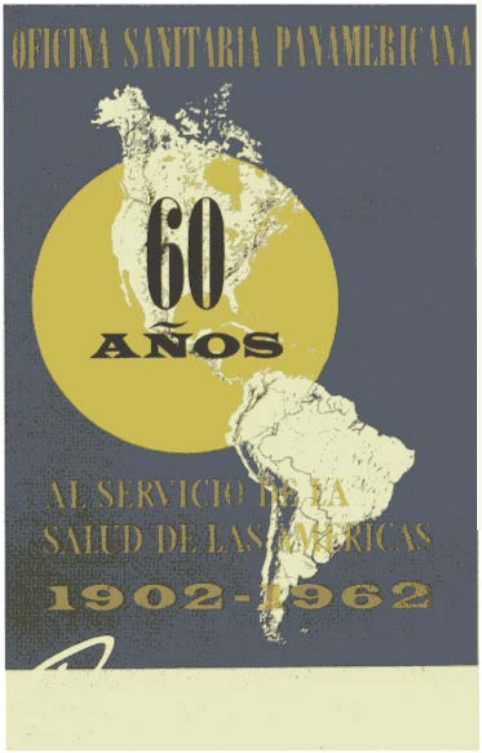




oral health and other matters. This new selection of material aimed at the general reader was, according to the Director, "intended to increase the dissemination of reliable data on sanitation, hygiene, and disease." These early issues also reveal the growing importance of topics like industrial hygiene, the specific health needs of women, and the influence of lifestyle factors, such as weight and sexual behavior, on health.

By the early 1930s the *Boletín* was firmly established. Dr. Arístides A. Moll, former Editor-in-Chief of the Spanish edition of the Journal of the *American Medical Association*, had joined the Bureau as scientific editor of the *Boletín* and Chief of Translations. He later took on the additional responsibilities of Secretary of PASB. The *Boletín* documented, step by step, the development of a "health consciousness" in Latin America, publishing reports that described improvements in legislative provisions and health systems. Articles were included in French and Portuguese, as were an increasing number of informative features on different diseases. Changes in format made it possible to systematize the presentation of statistics from the countries in a section entitled "Demographía." The report on communicable diseases was shifted to a new publication, the *Weekly Epidemiological Report*.

One of the *Boletín's* most valued functions was to answer requests for information on various health problems. In 1937, for example, it responded to inquiries about fumigation, disinfection,



poliomyelitis, legislation, medical assistance to industry, and other concerns. Among the most noteworthy documents published in the *Boletín* during these years were the translations of the *United States Pharmacopeia* and the *International Nomenclature of Causes of Death.* The *Boletín* served the additional function of communicating the decisions of the Pan American Sanitary Conference and disseminating data to aid the countries in putting the Conference's recommendations into effect. A section on the prevalence of diseases led to improved data collection in the countries, which had not always been meeting their obligation to provide adequate and timely reports. Although during the 1930s yellow fever was a primary focus of the *Boletín*, especially following the discovery of a jungle form of the disease, the journal began to devote increasing attention to the problems of tuberculosis and nutrition, including good dietary habits. Each year one of the first issues contained a review of the most important health developments that had taken place in the countries during the preceding 12 months. Thus, the *Boletín* established itself not only as a primary source of reliable public health information but also as an organ of the Bureau that the Member Countries could rightfully claim as their own.

Not surprisingly, the number of subscribers grew steadily, reaching a total of 8,900 in 1938. The Bureau's library was receiving some 300 journals a month, many of them in exchange for the

Boletín. One of the Bureau's targets was to deliver the publication throughout Latin America to all communities of more than 2,000 inhabitants and to increase circulation in the United States. The journal's popularity is revealed by a repeated warning to subscribers to keep the Bureau apprised of any changes of name or address, since extra copies of each edition of the *Boletín* were in short supply.

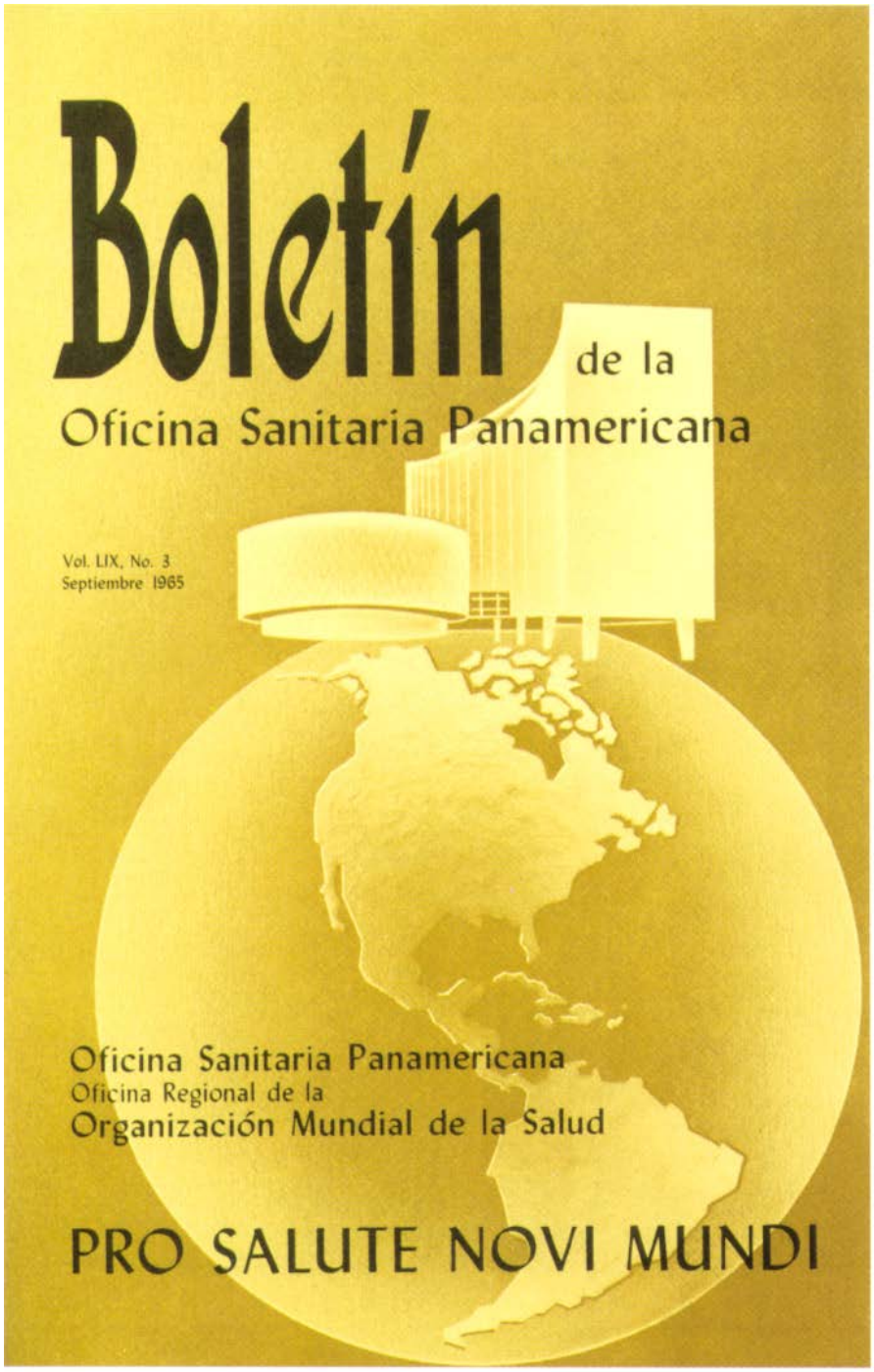
The 1940s brought major changes to the Bureau. The *Boletín* chronicled the important events of these years: the rapid development of public health and medicine during World War II; the XII Pan American Sanitary Conference of 1947, which adopted a new Constitution and reorganized the Bureau into its current form; the early years of Dr. Fred Lowe Soper's term as Director; the agreement whereby PASB became the Regional Office of the World Health Organization for the Americas; administrative decentralization and the creation of zone offices; the coordination of health programs along the Mexico-United States border; and the transfer of the Bureau to a new location. Among the new topics included in the journal were information on WHO, workers' health, accident prevention, zoonoses, medical education, and nuclear medicine, and a new section covered improvements in nursing services.

In 1948 the Organization began to charge a fee for annual subscriptions to the *Boletín*, although free distribution was continued to departments of health and official institutions in the countries. Issues from July 1949 onward contained instructions on the preparation of articles for publication, which undoubtedly provided an impetus for scientific research in the Americas by giving contributors the opportunity to submit unsolicited papers to be considered for publication. In many cases, these papers reflected a first-hand view of the health situation in the countries.

The editorial written for the May 1952 issue of the *Boletín* briefly recounted the journal's 30-year history, pointing out that it had collected and brought together ideas and knowledge about health "in a single body of information that had helped unite health workers throughout the Hemisphere, regardless of the distances separating them, for a common purpose." The last issue of the year was devoted exclusively to the history of the Bureau, which on 2 December marked its 50th anniversary.

During the 1950s the *Boletín* published articles in the four official languages of PAHO (English, French, Spanish, and Portuguese)-although, in deference to the composition of its readership, the bulk of them had appeared in Spanish or Portuguese. However, every article was generally accompanied by a summary in English, and later in the four official languages, in keeping with the aim of reaching all sectors of the inter-American community through the *Boletín.* The editorial service responsible for putting out the journal had also taken on publication of a Spanish edition of the *Chronicle of the World Health Organization* as well as translations of various technical works. By this time, the *Boletín* had expanded far beyond its initial length of 26 pages and was publishing many more articles based on original research. In 1951 it served as the vehicle for a survey on health education, and in 1953 a new section was added on the subject. The ideas explored in this section coincided to a large extent with new developments in the quest for health that were being discussed at major international congresses. The *Boletín* gave increasing attention to statistics, environmental health, and the health needs of the elderly, and it began to publish essentially monographic issues devoted almost exclusively to specific subjects, including poliomyelitis, malaria, nursing, and medical education, among others. In 1953, 1955, and 1959 supplements were published that included scientific material from the Institute of Nutrition of Central America and Panama. A forerunner of the current section on biomedical communication was Selma Debakey's piece on the preparation of medical articles (October 1955).

During his tenure as Director of the Bureau, Dr. Abraham Horwitz became a frequent contributor of incisive articles and editorials. At that time, the *Boletín* was reporting monthly on


Boletín
de la
Oficina Sanitaria Panamericana
Vol. LIX, No. 3
Septiembre 1965
Oficina Sanitaria Panamericana
Oficina Regional de la
Organización Mundial de la Salud
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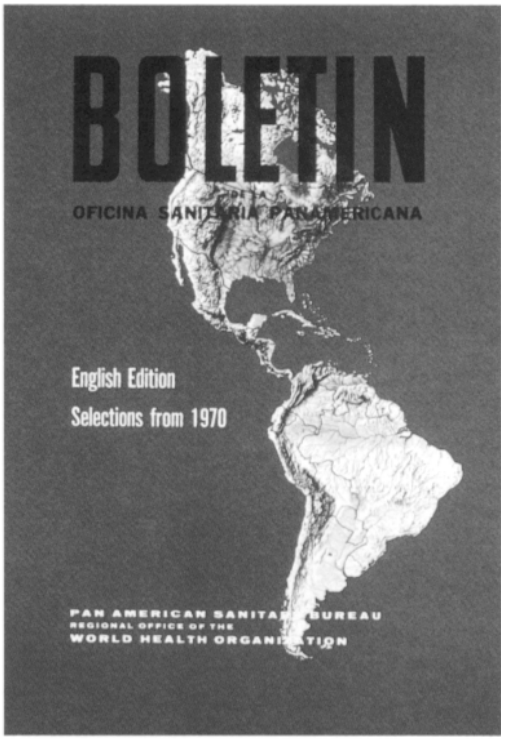
BOLETIN
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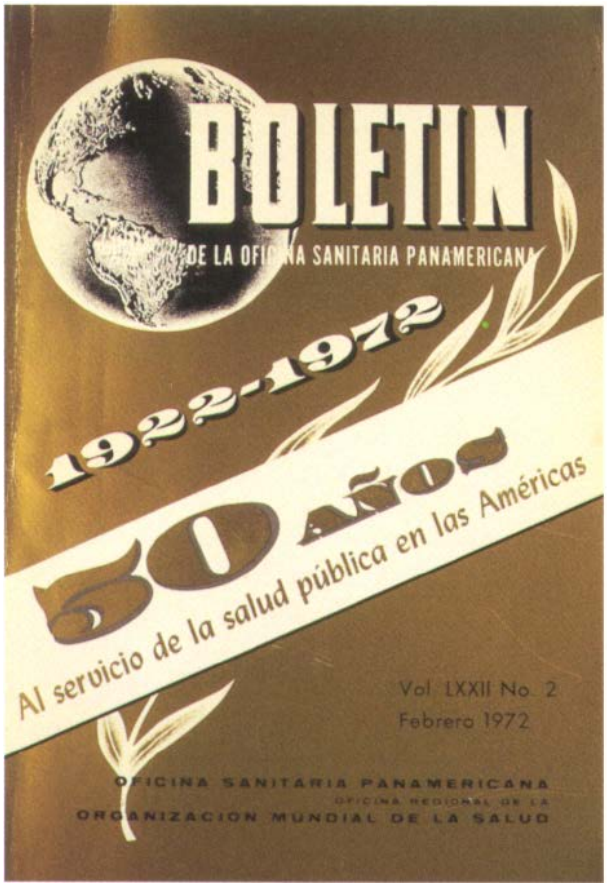
English Edition
Selections from 1970
PAN AMERICAN SANITARY BUREAU
REGIONAL OFFICE OF THE
WORLD HEALTH ORGANIZATION



progress toward the eradication of *Aedes aegypti* and had begun to publish the first articles on the new topic of economics and health. It was also carrying a growing number of articles on scientific research from Latin American countries, as well as material from the *Bulletin of the World Health Organization.* The dynamic events of the famous meeting of Punta del Este in 1961, and PAHO's role in that gathering, led to a new emphasis on health as a component of development-an idea that continues to be an important focus under the present Director, Dr. Carlyle Guerra de Macedo.

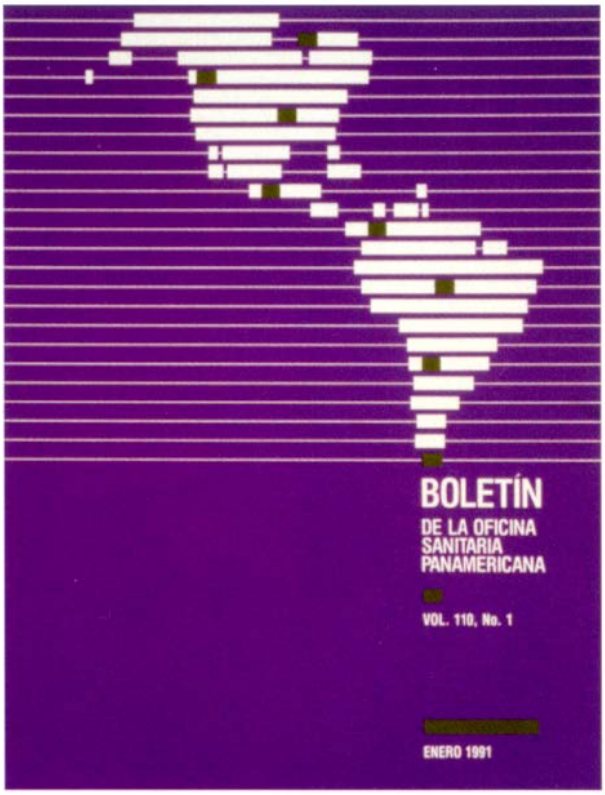
By 1966, the need to publish a greater number of articles in English was recognized, and the Bul*letin of the Pan American Health Organization* was created. Up to 1970 it came out once a year and featured selections from the *Boletín.* Three issues were published in 1972, and in 1973 the current quarterly publication schedule was adopted. Today the *Bulletin* is aimed mainly at English-speaking readers interested in public health developments in the Region, and the articles are selected with that criterion in mind, independently of the articles published in the *Boletín.*

In 1972 the *Boletín* celebrated its 58th anniversary, and the occasion was marked by the publication of an historical account in the May issue. With characteristic foresight, during the previous year the *Boletín* had carried several articles on cholera with a view to preparing the countries of Latin America for the possibility of a seventh pandemic. An article by Albert Sabin on the elimination of poliomyelitis had also been published. In 1973 the *Boletín* announced the most dramatic news in its history: smallpox had been eradicated from the Americas. A few years later, in 1978, it published the monumental Declaration of Alma-Ata.

During Dr. Acuña's tenure as Director, responsibility for production of several publications, including the *Boletín,* was transferred to a new PAHO Publications Service in Mexico, although the journal's technical content continued to be decided by the Office of Health and Biomedical Publications at Headquarters. In 1982, as the result of a cost-benefit study, the decision was made to return those publication activities to Headquarters.

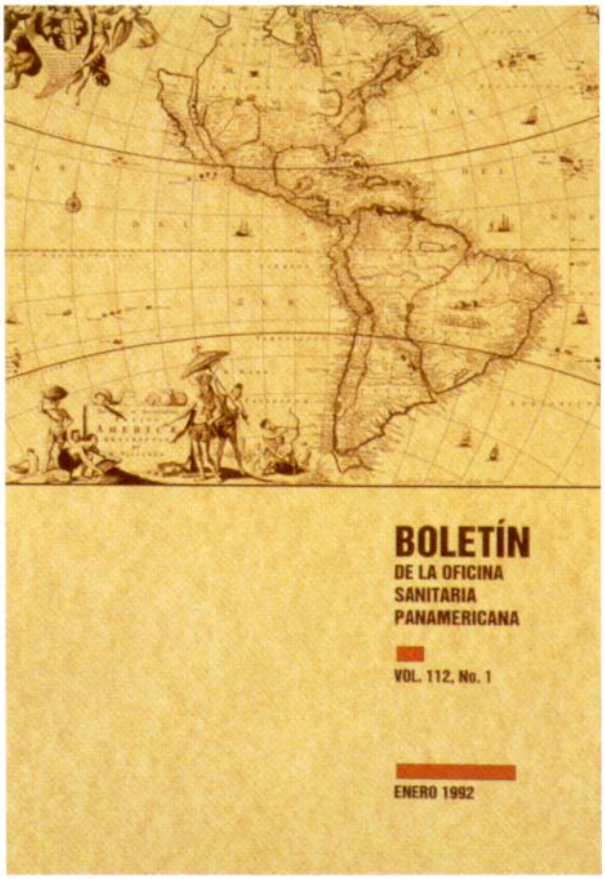
In the last decade, the *Bolefin's* focus has shifted away from general information toward more specific priority subjects. A new quarterly section on drug information was inaugurated in 1980 and today provides ongoing support to the national agencies responsible for drug regulation. With the creation of new specialized periodicals such as the *Epidemiologic Bulletin, Educación médica* y *salud,* and the *EPI Newsletter,* as well as the publication of periodicals by the various Pan American Centers, the *Boletín* has gradually been relieved of responsibility for disseminating the type of information carried by those publications and has been able to turn its attention to bridging information gaps in other areas.

While in earlier days articles were reviewed by the technical programs of the Organization through an Advisory Committee, since the 1980s this function has been carried out through a



system of peer review, in keeping with the practices of other international biomedical journals. As a result, the quality of the papers selected for publication has steadily improved. Since 1989, a section on biomedical communication provides technical criteria for research and for the preparation of papers and endeavors to increase readers' ability to critically evaluate the medical literature. The book section reviews more than 100 books a year and letters from the readers provide a forum for them to share their points of view. The *Boletín* has a pressrun of 16,500, is listed in various indexes and electronic data bases, and receives between 350 and 500 articles each year, 15% to 20% of which are eventually published. Lengthy special issues of the *Boletín* have examined some of the major concerns of our time, including mental health, economics and health, AIDS, drug abuse, and bioethics. Each issue now opens with an editorial by the Director aimed at fostering regional solidarity and furthering the quest for health equity as part of development.

Over the past 70 years, the Boletín has pace with the unprecedented evolution of knowledge and applications in the health sciences, from the development of new antibiotics and vaccines to spectacular advances in biotechnology. As a depository and an organ for the communication of knowledge, and through its support for scientific research, the *Boletín* has made an undeniable contribution to the development of public health in the Western Hemisphere. As the voice of the Organization, it has also guided the Member Governments in the application of collectively approved health policies and activities. Above all, the *Boletín* has helped to nurture thinking about public health and cooperation among countries in the Americas. Its pages will continue to reflect the forward-looking concerns of those who have devoted their lives to the fight against poverty and disease. As it has for seven decades, the *Boletín* will chronicle both the failures and setbacks encountered and the milestones reached in the ongoing journey toward health for all the peoples of the Americas. ❖



HEALTH AND THE ENVIRONMENT

Crystal-clear water —the source of life— continues to flow from this centuries-old Inca ceremonial fountain in Tambo Machay, Peru.

Contemporary concern about the environment echoes a millennia-old understanding of the relationship between human health and man's physical surroundings. Water and sanitation, in particular, are basic human necessities, and services that provide safe water and adequate sanitation can directly prevent disease, benefit health, and enhance people's social and economic well-being. In recognition of this relationship, the Pan American Health Organization has cooperated closely with the countries of the Americas over the decades to develop services for meeting the population's basic environmental health needs in urban and rural areas.

At the beginning of this century a number of countries in the Americas that had posed serious environmental health risks undertook comprehensive sanitation measures-thus advancing both national development and their citizens' health.

The critical importance of environmental sanitation was evident from the very beginnings of the Pan American Sanitary Bureau. In 1902, the First General International Sanitary Convention—which set forth responsibilities for individual countries, for the collective countries, and for what was initially called the International Sanitary Bureau—specified that the countries should adopt measures to dispose of garbage and other wastes to prevent the spread of diseases and to disinfect the discharges of all typhoid and cholera patients. For its part, the Bureau was to elicit from the countries information regarding the sanitary conditions in their ports and territories and 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.

The climate for these pioneering international initiatives was favorable. The beginning of this century witnessed a major push on the part of a number of Governments to rid their environments of insalubrious conditions. Cuba, Mexico, and Panama, among other countries, made great progress in this respect during the years prior to World War I. Advances in sanitation were wrought largely from the development of national public health services. Those services, in turn, were strengthened through cooperation of the Pan American Sanitary Bureau and the Rockefeller Foundation, which provided for the transfer of technology, technical assistance, and hundreds of fellowships.

Throughout the 1920s and 1930s, a number of the countries of Latin America set up sanitary engineering divisions within their ministries of health with responsibility for assuring water supply and sewerage services, food protection, and vector control. The Bureau's Governing Body meetings continued to stress the prevailing importance of these issues. The Second and Third Pan American Conferences of National Directors of Health, in 1931 and 1936, focused discussions on the priority topics of urban and rural sanita-

tion, safe water and milk supplies, and industrial hygiene. It followed that the Bureau's program and budget reflected policy-makers' focus on environmental sanitation. The first, and very small, Bureau field staff in the 1930s included four sanitary engineers who traveled the length and breadth of the continent, advising Governments regarding water supply, rural sanitation, mosquito control, milk supply, plague control, mine sanitation, and the establishment of national sanitary engineering divisions.

The X Pan American Sanitary Conference, held in Bogota in 1938, passed a resolution that urged the convening of a conference of sanitary engineers to exchange experiences and approaches and thereby promote improvements in sanitary engineering divisions throughout the Americas. Although initially delayed because of the outbreak of World War II, the Conference for Sanitary Defense of the Hemisphere was eventually held in Rio de Janeiro in 1942; following its recommendation, a Permanent Sanitary Engineering Committee was set up within the Pan American Sanitary Conference. That Committee organized international courses and regional conferences, thereby serving to unite members of the profession. Their solidarity made possible the creation, in 1948, of the Inter-American Association of Sanitary Engineering (AIDIS).

That Association, in turn, proved instrumental in creating what would become PAHO's Pan American Center for Sanitary Engineering and Environmental Sciences (CEPIS). AIDIS became, and today continues to be, a major vehicle for the exchange of new ideas, experiences, and technologies among the approximately 20,000 members in its ranks. The close relationship with PAHO likewise continues, with AIDIS Congresses held every two years and preceded by PAHO symposia on areas of great importance to environmental health, the reports of which are then considered by the Congresses and distributed widely.

The Sanitary Engineering Committee worked closely with a new, independent agency, the Institute of Inter-American Affairs, which was created in 1942 by the United States President and Congress, as part of the "Good Neighbor Policy," to aid and improve the health and general welfare of the people of the Hemisphere in collaboration with their Governments. That Institute, which later became the Point IV Program and eventually the U.S. Agency for International Development, had a Health and Sanitation Division which established bilateral agreements with almost all the Latin American republics allowing for the creation of the Inter-American Cooperative Services, widely known as "the *Servicios."* From 1942 to 1948, these special public health services benefited an estimated 23 million people by extending potable water supply and sanitation in the Region and training hundreds of Latin American sanitary engineers. Most of those engineers became professional leaders in their own countries. A number of them were eventually recruited by PAHO, and in time the Organization took over the development of many of the environmental health projects started by the *Servicios.*

Water Supply and Sanitation Notwithstanding the gains made in environmental sanitation over the first half of the century, toward the end of the 1950s less than 60% of people living in urban areas had access to water services and less than 8% in rural areas did; sewerage was available to only 28% of those living in cities, and to practically no one in rural areas. A growing political awareness of the relationship between poor water supply and excreta disposal systems on the one hand and disease on the other rekindled interest in developing better systems. As a result, in 1958, PAHO's newly formed Advisory Committee on Environmental Sanitation recommended a program to extend and improve existing water supply systems and to construct new systems to furnish water of good quality and abundant quantity through house connections, as the best method of reducing disease, accelerating economic development, increasing tourism, and encouraging the construction of new housing. These recommendations foreshadowed the emphasis placed, in the 1961 Charter of Punta de1

In 1961, the Inter-American Development Bank began a long and fruitful relationship with the Pan American Health Organization, by making its first loan to a PAHO project aimed at expanding water supply and sewage disposal systems in Arequipa, Peru.

People in countries throughout the Americas pitched in to make water supply a reality in their communities (facing page).

Este, on adequate water supply and sewage disposal as well as the global interest in providing these services, proclaimed over a decade later in a series of United Nations conferences.

In 1959, the Directing Council requested the Director "to establish a special account for the purpose of providing assistance to the Governments in planning, preparing for, and obtaining other technical assistance in the development of community water supply." With funding primarily from the United States and Venezuela, PAHO set up a Special Community Water Supply Fund that grew to over $US2 million. The Fund targeted helping Governments meet the goals of the Charter of Punta de1 Este by financing the assignment of sanitary engineers to community water supply programs throughout the Region and by supporting the training and education of countless others.

The 1961 American Governments' Charter of Punta de1 Este envisioned extending, over a 10-year period, water supply and excreta disposal services to 70% of the urban and 50% of the rural populations. Providing these services became one of the Organization's top priorities, as indicated by the fact that community water supply and sanitation were the subject of Governing Body resolutions every year throughout the 1960s.

Whereas before water and sanitation services had been largely local in nature, in the early 1960s, Governments, with PAHO cooperation, began to create national or centralized agencies with administrative and financial autonomy. These agencies provided a receptive platform for a major new development-namely, the international financing of water supply and sanitation programs in Latin America. The Inter-American Development Bank initiated this lending, with a loan to Arequipa, Peru, for drinking water and sanitation services. Later the World Bank, too, contributed substantial lending. Both these banks, and other loan sources as well, required that Governments prepare feasibility and engineering studies. Consequently, many countries requested PAHO cooperation in project preparation, as well as in training national personnel for eventually approved projects to improve existing systems and build new ones.

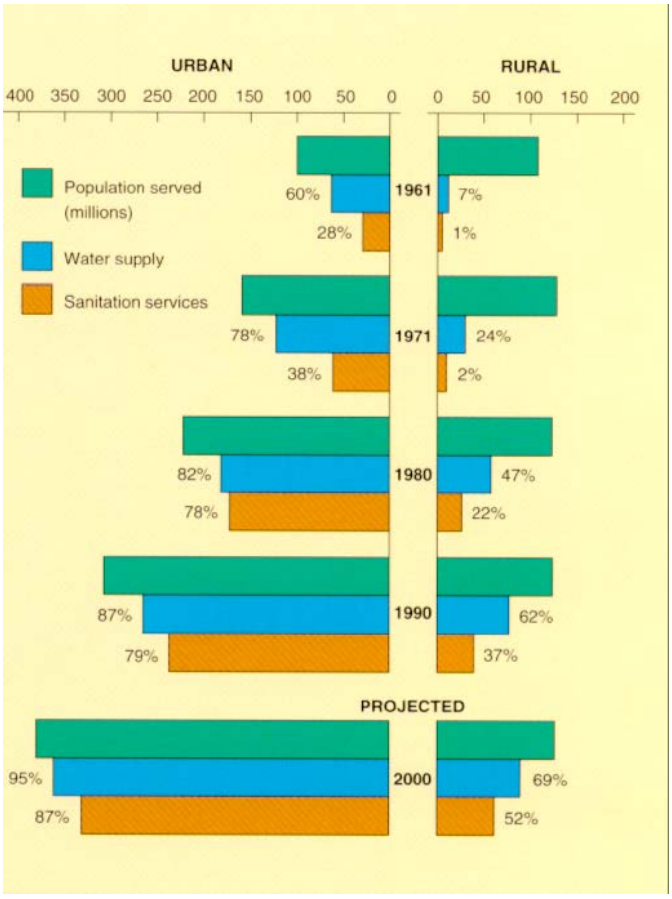
In 1968, PAHO established the Pan American Center for Sanitary Engineering and Environmental Sciences (CEPIS), with headquarters in Lima, to help Member Countries solve problems related

to protecting and enhancing the physical environment. Since its inception, the Center has collaborated in the preparation of educational materials, presentation of intensive training courses, conduct of applied research programs, and exchange of information among professionals and entities throughout the Americas and worldwide. Over the years, CEPIS projects have encompassed air pollution, which included the development of REDPANAIRE; wastewater treatment and stabilization ponds; water treatment systems; solid waste collection and treatment, including sanitary landfills; a network, REPIDISCA, for information on sanitary engineering and environmental sciences that has enabled the exchange of documentation from Latin America and the Caribbean and of selected worldwide literature among 267 collaborating centers in 22 countries; technological development of water and sewerage systems; industrial hygiene; educational materials; and a network, PRELAB, of water laboratories for water sampling.

By 1971, much progress had been made toward meeting the decennial targets set in the Charter of Punta de1 Este. Although the rural goal for water supply fell short, with an extension of services to 24% of the population, the urban goal was surpassed, with 78% receiving access to water through either house connections or public standpipes. The gains in excreta disposal service were less spectacular, with 38% of urban dwellers having access.

The Third Special Meeting of Ministers of Health in 1972 took up where Punta de1 Este left off. As part of the Ten-Year Health Plan for the Americas, the Ministers set new goals: providing water through house connections to 80% and sewerage service to 70% of the urban population and

Despite the population explosion, over the past three decades the countries of the Americas, with PAHO's significant and sustained technical cooperation, have progressively extended water supply and sanitation services to their urban and rural populations.



extending water supply and excreta disposal services to 50% of the rural population. Ten years later, actual coverage was: urban water supply, 82%; urban sewerage, 78%; rural water supply, 47%; and rural excreta disposal, 22%.

At a 1974 PAHO-sponsored symposium on the environment, 160 participating environmentalists from 23 countries in the Region voiced a collective recognition of the close relationship between environment, health, and development and recommended that countries take that relationship into account in formulating national development plans. Whereas before the main concern was increasing the extension of services, by the mid-1970s water quality and system operation and maintenance, as means of protecting both health and investments in the sector, had grown in importance. Widespread water losses and water contamination led to greater interest in improving the administrative, technical, and operational aspects of water agencies.

A decade after PAHO Member Countries had established goals for water supply and sanitation, an official, global consensus setting goals for the extension of these services was declared in a series of United Nations Conferences—on the Human Environment (Stockholm, Sweden, 1972), on Human Settlements (Vancouver, Canada, 1976), and on Water Resources (Mar del Plata, Argentina, 1977)—with recommendations that drinking water and sanitation services be provided to the largest possible number of people by 1990, especially the poor in slums and underserved rural areas. Subsequently, the International Conference on Primary Health Care, held at Alma-Ata in 1978, recognized safe water and adequate sanitation as a principal component of primary health care. With the launching of the International Drinking Water Supply and Sanitation Decade (1981-1990), a number of international agencies, including PAHO, intensified a wide variety of programs to provide safe water and sanitation to as many people as possible.

To prepare for the International Decade, PAHO held technical discussions in 1979 related to strategies for extending and improving potable water supply and excreta disposal services. That same year, the conclusions of those discussions were brought before the Directing Council, which resolved that Governments should include extension of water supplies and sanitation services, particularly in underserved areas, among the priority programs for national development; should stress active community participation in decision-making, implementation, and operation and maintenance of water supply and sanitation projects; should adopt appropriate technologies and

explore the feasibility of local manufacture of supplies and equipment for water supply and sanitation facilities; should seek funding for institutional development, training, and education; and should explore new sources of financing for program development.

In recent years; PAHO has collaborated with Governments to further the regional strategies for universal water supply by assisting in the rapid assessment of existing national programs, preparing national plans, identifying and developing specific projects, and obtaining international financial support. The Organization has carried out sector studies and collected pertinent data to assist countries in identifying projects for financial support; held training courses in project proposal preparation; contributed to the development of low-cost technology and institutions, including the establishment of surveillance and correction mechanisms; encouraged identification of projects related to system operation and maintenance for support by lending and donor agencies; prepared guidelines, manuals, and models for various components of institutional development; reviewed and published international drinking water guidelines; developed manpower at all levels, through fellowships and courses; and exchanged information with emphasis on assisting countries in establishing their own systems as part of a network of collaborating institutions.

In light of the pressing need to strengthen the countries' institutions by upgrading the technical and managerial expertise of their professional staff, CEPIS began a young professional residency program in 1985, inviting nationals to the Center to undertake activities in their areas of expertise and related to applied research, problem solving, scientific and practical upgrading, computer modeling and programming, and computerized information systems.

PAHO translated into Spanish the WHO *Guidelines for Drinking Water Qualify* and, in working with the countries to adopt those guidelines, discovered that 75% or more of water supply systems in the Region do not disinfect at all or have serious operational problems that interfere with effective disinfection. An estimated 60% of the population of Latin America and the Caribbean are at risk of exposure to unsafe water, because people either do not have access to water, have to store it in conditions that are unsafe, or have intermittent supply. The presence of human wastes in drinking water causes high mortality and morbidity due to widespread diarrheal diseases and gastroenteritis. Chemical contaminants, such as pesticides, are responsible for many acute and chronic illnesses.

The recent return of cholera to the Americas underscores the consequences of unsafe water and inadequate sanitation: by the end of 1991, 15 countries in the Americas had reported 391,200 cases, accounting for 70% of the cases reported for that year worldwide; during the first half of 1992, four new countries had been infected, for a total of 19, and 203,600 cases had been reported, or 89% of the worldwide total.

In the face of these problems, countries are taking into greater account the economic, environmental, health, and social factors affecting water resources, making institutional arrangements to deal with water management, and promoting health education about the safe use of water. Since ensuring the supply of safe drinking water-both to those who already have services and to those who will receive services-is one of the greatest challenges that most of the countries will have to face in coming years, PAHO technical cooperation in this area will concentrate on promoting water quality.

Solid Waste Management The explosive growth of cities has yielded a proportionate increase in the solid wastes generated by their residents-in some cities posing major health and economic problems. Most solid waste management services, which until recently were largely the responsibility of municipalities, proved unequal to the task of dealing with disposal needs; although many cities in Latin America match the solid waste collection technology available in developed countries, upgrading disposal methods will require major efforts.

Many Governments have become interested in improving solid waste management services, assigning national responsibility for that improvement to environmental bureaus within the ministries of health, and recruiting PAHO's technical advice and training expertise in the area of urban sanitation.

Environmental Pollution The growth of cities, advances in industry, and the mechanization of agriculture have translated into greatly increased pollution of the air, water, and soil over the past few decades. Dam construction, large irrigation projects, large-scale deforestation, major urban settlements, acid rain, and global warming can cause serious damage to water sources and in turn favor transmission of various types of vector-borne diseases, displacement of native populations, loss of employment, and violence resulting from increasing competition for water among users.

In 1965 the Directing Council decided that the Organization should address the growing problems of air and water pollution. That decision led to the establishment, two years later, of the Pan American Network for Normalized Sampling of Air Pollution, commonly known as RED-PANAIRE. The Network, coordinated from CEPIS, comprised sampling stations in Buenos Aires, Rio de Janeiro, Porto Alegre, Bogota, Havana, Santiago, Kingston, Mexico City, Lima, Montevideo, and Caracas. Each of these stations used normalized methods that measured the level of certain contaminants, making it possible to compare and monitor air quality in those cities.

In 1968, the Directing Council asked that the

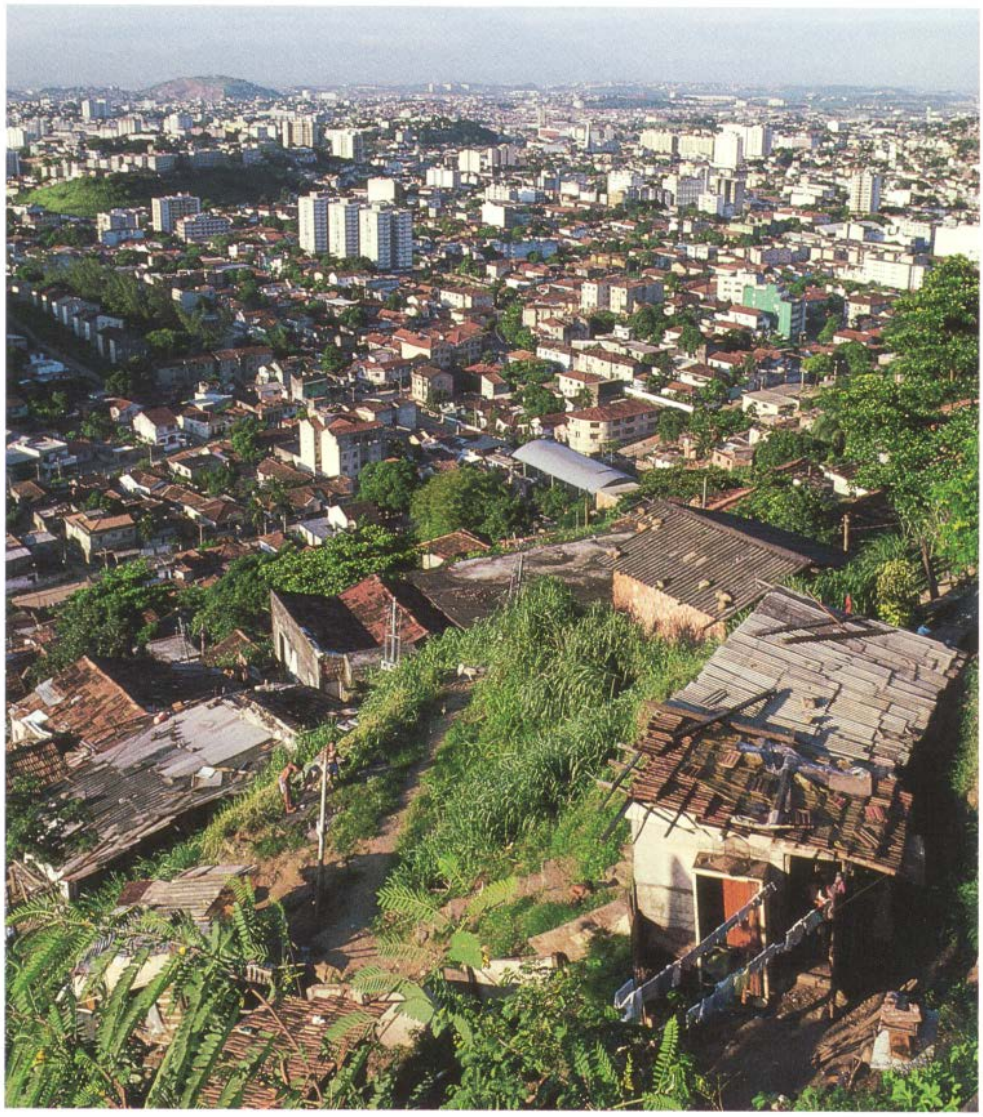
Smog-a term coined from a contraction of "smoke" and "fog"—has become a critical health problem in urban areas throughout Latin America.

To concentrate technical cooperation in environmental health, the Organization established the Pan American Center for Sanitary Engineering and Environmental Sciences in Lima (left) in 1968 and the Pan American Center for Human Ecology and Health in Mexico City in 1975 (shown below at the site in Metepec, Mexico, to which it moved in 1980).

Organization and the Governments bear in mind the health implications of developing river basins. With the aim of minimizing the adverse effects of socioeconomic development and still favoring its progress, PAHO, in the late 1960s and throughout the 1970s, pioneered the river basin development approach. In such areas as Santa Lucia, Uruguay, Guanabara Bay and Paraiba River in Brazil, and Cauca Valley in Colombia, PAHO participated in evaluating the damage caused by wastes discharged into waterways.

With funding from the United Nations Development Program (UNDP) and with PAHO as executing agency, several projects starting in the late 1960s helped create an infrastructure for air and water pollution control. The focus was strengthening such agencies as the State Company for Environmental Technology and Basic Sanitation in the State of São Paulo (CETESB) and the State Federation for Environmental Health Engineering in Rio de Janeiro (FEEMA), with emphasis on three main areas of action-technology transfer, human resource development, and research-all related to control of environmental pollution. Another UNDP-funded and PAHO-executed project in Mexico, working with the Subsecretariat of the Environment, targeted the problem of air pollution. In Venezuela, PAHO and UNDP collaborated in strengthening environmental engineering in three universities in that country.

Governments' concern over environmental contamination led to a recommendation in the Ten-Year Health Plan for the Americas (1971-1980) that cities with more than 500,000 inhabitants establish policies and programs to control pollution. Although many of the countries passed laws to protect their natural resources, these were for the most part poorly enforced. In



Every day thousands of ramshackle dwellings of recent arrivals from the countryside spring up around the periphery of major cities in Latin America—posing critical environmental health hazards,

1971, the Directing Council resolved "To request that the Director explore means for the establishment of a center for human ecology and health sciences... that will serve as a prototype in a global network for the study of human ecology."

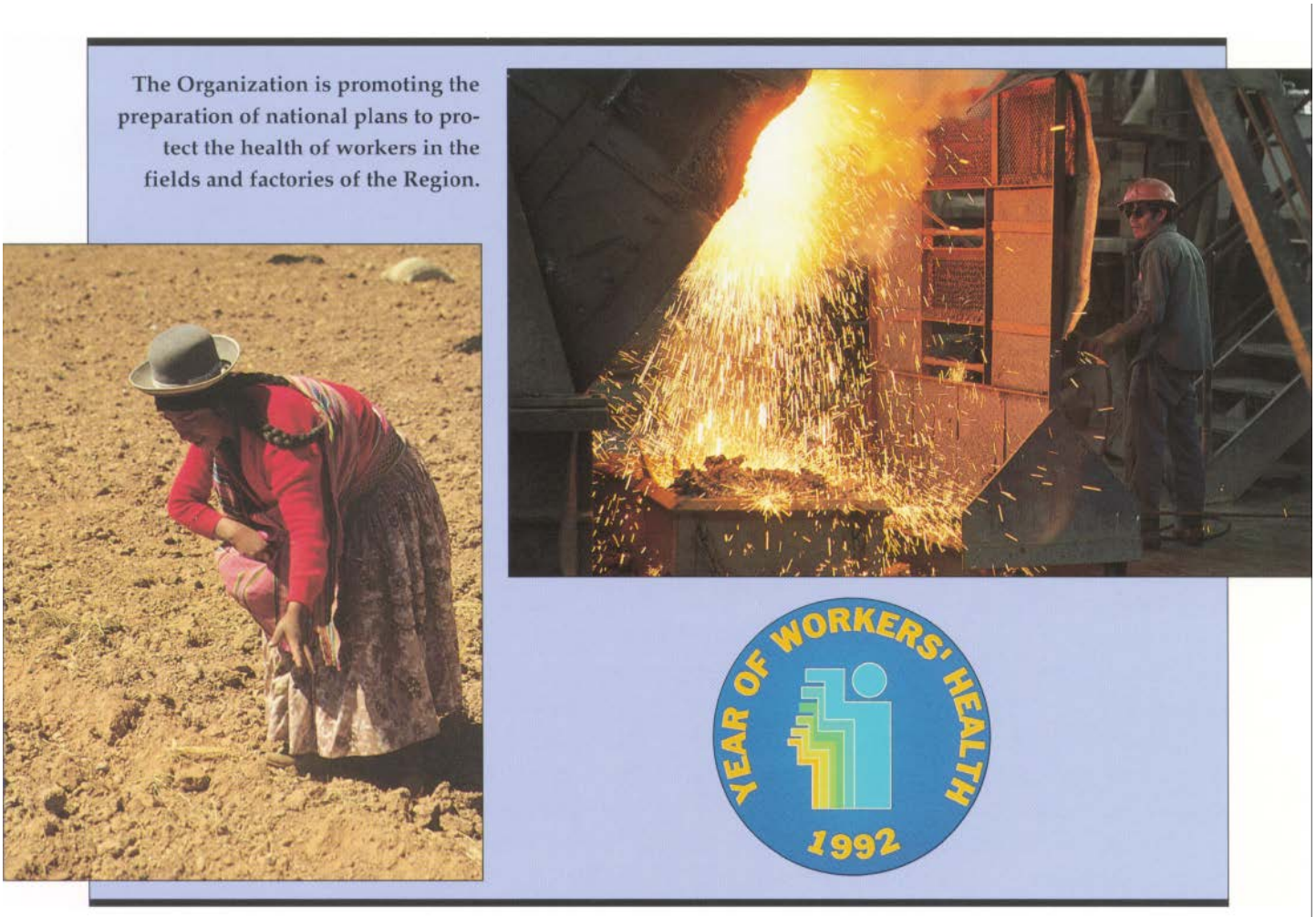
It followed that the Pan American Center for Human Ecology and Health (ECO) was established in Mexico City in 1975 as a result of concern about the impact of industrial development, as well as the need for an international center to coordinate the evaluation of development projects, such as dams, and to provide a biomedical complement to CEPIS's engineering solutions to environmental health problems. In this vein as well, in the 1970s PAHO sent multidisciplinary teams to major development projects to determine how the health of project workers and communities in the respective areas might be affected. In 1980, EC0 moved to Metepec, Mexico, and today the Center collaborates with the countries on epidemiologic and toxicologic aspects of the effects of chemical pollutants on human health and on supporting a network of collaborating centers in the Region to further training, information exchange, and research on human ecology and health.

Workers' Health As early as 1927, delegates at the Eighth Pan American Sanitary Conference had declared that: "The health and welfare of the laboring class is intimately related to the public

health and to the economic development of a country, and... losses sustained in industry cause serious harm to the nation, diminish the present output of labor, and particularly the future yield of the population, by undermining its health, for which reason the Conference recommends to the different countries of America the necessity of establishing special agencies within departments of health which shall have charge of everything relating to labor and sanitation in industry in order to place laborers in the best possible conditions of life..." PAHO staff in subsequent years were instrumental in the creation of occupational health institutes in Chile, Peru, and Bolivia, among other countries.

In the 1970s, the Ten-Year Health Plan set the goal of protecting 70% of the working population in countries with occupational health programs and 50% of that population in countries still without such programs. Although those goals were not met, occupational health became a political concern among most of the countries. Toward the end of the decade and increasingly during the 1980s, the focus on primary health care as a strategy for attaining health for all prompted Governments to assign priority to the working population, occupational diseases, and industrial hygiene.

Today, 300 million people in the Region, or some 42% of the population, work. Children are part of the work force in many of the countries, and in some they represent as much as 20% of all workers. Women, who in 1960 comprised 18% of the economically active population, today represent 26%, and by the century's end will increase to 27.5%. In Latin America and the Caribbean, 26% of the work force is employed in agriculture, 20% in services, 16% in manufacturing, 15% in trade, 7% in

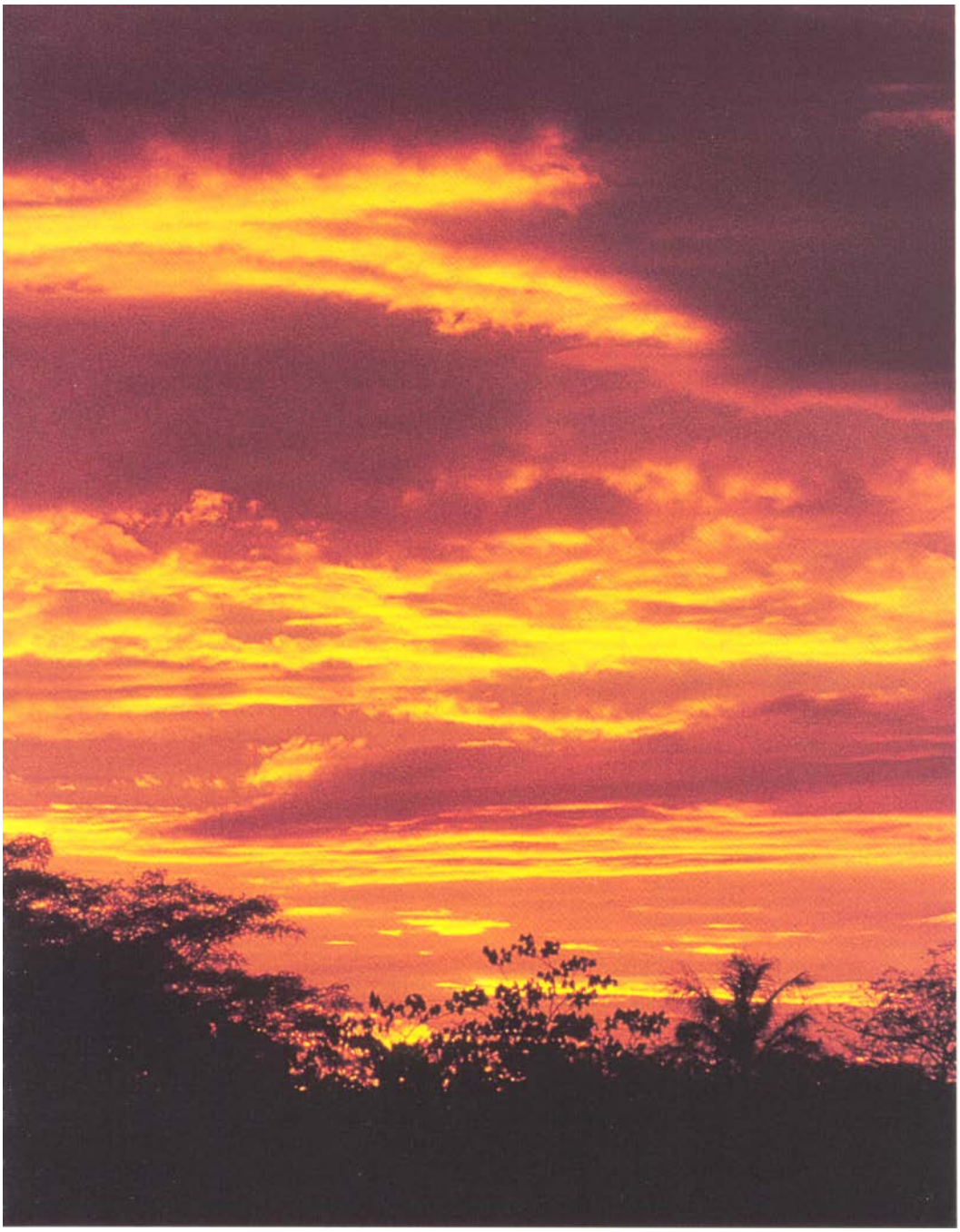


construction, 4% in transportation and communication, and the remaining 12% in miscellaneous activities. Less than 10% of these workers have access to occupational health services.

In most of the countries, ministries of health, ministries of labor, and social security institutes are responsible for developing occupational health programs and preparing national workers' health plans. Thus far, eight countries have prepared and begun executing their plans. To multiply the number of people trained in workers' health, PAHO has sponsored numerous courses and other instructional activities over the last 10 years.

The Organization's recent policy framework, "Strategic Orientations and Program Priorities for 1991-1994," poses two challenges for the countries, namely, to formulate workers' health policies and programs with the aim of increasing service coverage and to concentrate effective international resources in the interest of protecting against damages and risks to occupational health. The countries are moving further in that direction in response to the initiative "1992: Year of Workers' Health."

Today, the Governments of the Americas realize that, in addition to continued attention to more traditional environmental health programs, they

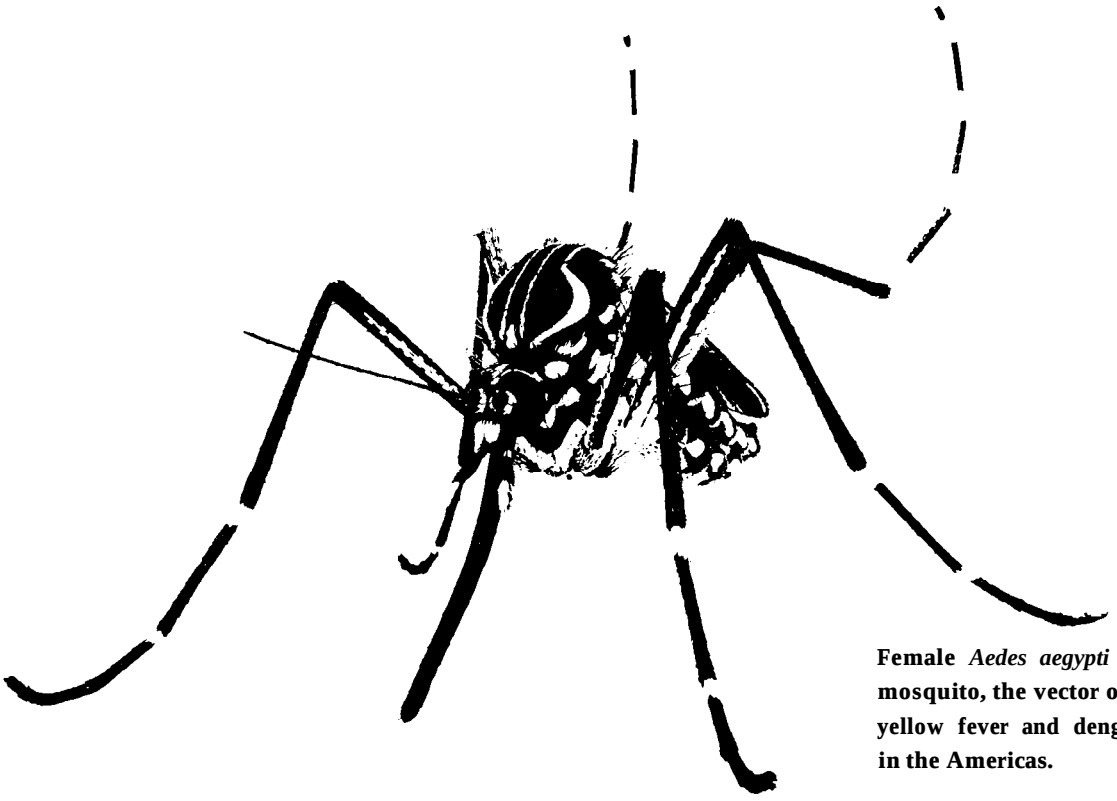


"During recent decades, the pursuit of social and economic development has produced significant changes in the environment, which have had both positive and negative impacts on human health. While gains in well-being brought about by development are noteworthy, wastefulness, pollution, and too little regard for scarce natural resources have wrought an environmental crisis, one that truly unites our planet, in the sense that environmental problems respect no national or regional boundaries. Likewise, in our response to that crisis, we must unite and learn to think in global terms, while at the same time striving to solve common problems, beginning at the local level. For surely the seeds of change sown in one place will produce a harvest that is reaped worldwide."
—Dr. Carlyle Guerra de Macedo

must take action in a broader area that encompasses the relationship between environmental factors and their comprehensive effect on the health and welfare of the population; support for and fostering of the countries' sustained development; monitoring of environmental quality to safeguard the health of the most needy population groups; greater attention to protection of natural resources, such as water, air, and soil, which play important roles in disease transmission and influence other health problems; and attention to worldwide concerns, such as depletion of the ozone layer, acid rain, global warming, and other environmental problems that may substantially affect the health of people in the Region.

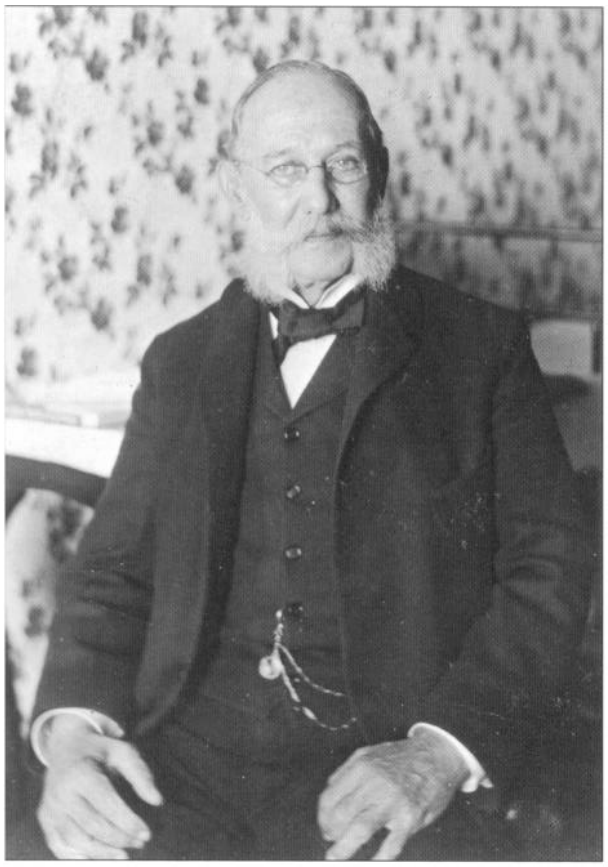
In line with the United Nations Conference on the Environment and Development, held in Rio de Janeiro in 1992, PAHO is widening its environmental health scope, no longer just focusing on the management of natural resources, such as water, but broadening the emphasis to include health protection, health promotion, and management of the environment with the aim—ultimately—of protecting the human species and assuring people's quality of life.❖

THE FIGHT AGAINST *AEDES AEGYPTI*



Female *Aedes aegypti* mosquito, the vector of yellow fever and dengue in the Americas.

Yellow fever is known to have appeared in the Yucatan Peninsula before Columbus's arrival in the New World. The first written account of the disease dates back to 1495, when an epidemic struck the island of Hispaniola. Two centuries later yellow fever hit other Caribbean islands, and in 1685, Brazil experienced its first epidemic, in Recife. Epidemics devastated areas of the Americas in the 18th and 19th centuries, including particularly serious ones in Cartagena, Colombia, in 1741, in Cuba in 1762, and in Santo Domingo in 1803. The United States registered its first epidemic in New York in 1668. The city of Philadelphia and the Mississippi River Valley suffered major outbreaks in 1669 and 1878. The last urban victim of an epidemic in the United States was the city of New Orleans in 1905. By the turn



Carlos J. Finlay (1833-1915), the Cuban physician who devoted his life to the study of yellow fever, pioneered the idea that the infection was transmitted from person to person through the bite of a mosquito. Based on this suspicion, he advocated various measures that made it possible to control epidemics and almost eradicate urban yellow fever.

of the century, yellow fever continued to take its toll throughout South and Central America and Mexico.

Toward the end of the 19th century, something clearly had to be done at the international level to halt the spread of yellow fever. In 1880, the United States Congress authorized the President to convene the Fifth International Sanitary Conference, which was held the following year in Washington, D.C. This gathering was given the task of creating an international disease notification system. At the meeting, Carlos J. Finlay presented his ideas about the spread of yellow fever, asserting that transmission could occur only during a certain period of the illness and required the presence of a susceptible person and an agent capable of transmitting the infection from a diseased individual to a healthy one. Another 20 years elapsed before Finlay's theory was proven true and it was demonstrated that the *Aedes* aegypti mosquito (then known as *Stegomyia fasciata)* is the vector of yellow fever. Acceptance of his ideas set in motion the first yellow fever control programs.

Several events reaffirmed the validity of Finlay's theory and laid the foundation for future vector control campaigns, among them: the success of the Yellow Fever Commission, an arm of the National Board of Health of the United States; the achievements of William Crawford Gorgas in Havana (1898-1902); the application of vector control measures during construction of the Panama Canal; success in quelling the 1905 outbreak in New Orleans; and the elimination of yellow fever from Rio de Janeiro in 1908, following Oswaldo Cruz's campaign against *A. aegypti.*

Throughout its 90-year history, the Pan American Health Organization has collaborated with the countries of the Region to control and eliminate yellow fever, with emphasis on: constant monitoring of the changes undergone by the vector and the consequences of those changes in the Region; ongoing efforts to increase the application of attack measures and the dissemination of new information regarding the disease; and the quest for new ways of financing cost-effective plans of action and eradication alternatives.

The Bureau's first resolutions regarding yellow fever were adopted by the First General International Sanitary Convention of the American Republics, held in Washington, D.C., in 1902. At that meeting, Finlay, attending as Cuba's head of public health, presented a study titled "Is the Mosquito the Only Vector of Yellow Fever?," and

The efforts of the Yellow Fever Commission of the United States National Board of Health, seen here gathered at the Hotel San Carlos in Havana, were instrumental in validating Finlay's theory and in laying the foundation for vector campaigns in the future.

Major General William C. Gorgas (1854-1920) of the United States Army, used his exceptional administrative talent to orchestrate many yellow fever campaigns in Cuba, Panama, and the United States. During the construction of the Panama Canal (below), his efforts minimized the number of deaths among persons susceptible to yellow fever.

his compatriot Dr. Juan Guiteras spoke of yellow fever eradication in the city of Havana. These two presentations constituted the theoretical foundation that later led to effective measures to control the disease.

The Second International Sanitary Convention, held in Washington, D.C., in 1905, adopted several health measures relating to ships infected with yellow fever. In many areas, the sole factor required to complete the cycle of disease transmission was the arrival of infected persons. The constant transit of susceptible persons through the port of Havana during the 19th century, for example, had resulted in numerous outbreaks of yellow fever on the island.

The Third International Sanitary Convention, held in Mexico City in 1907, issued a call to health institutions to immediately report any occurrence of yellow fever to the consular or diplomatic representatives of the countries participating in the convention. During the meeting, delegates also recommended that European countries with colonies in the Americas adopt the Washington Sanitary Convention of 1905, particularly those provisions relating to yellow fever.

The Fourth International Sanitary Conference, held in San Jose, Costa Rica, in 1910, urged that all available means be deployed to ensure effective sanitation in port areas so as to prevent the spread of yellow fever in the Region. Delegates recommended that the Fifth Conference set criteria for determining when a subject could be considered immune to infection; agreed that the requirement for declaring an area free of infestation would be official confirmation that there had been no deaths from or new cases of the disease for 18 days following the isolation, death, or recovery of the last case; yet insisted that Governments reserve the right to extend that period for countries that were not observing mosquito isolation, disinfection, and extermination measures.

The Fifth International Sanitary Conference, held in Santiago, Chile, in 1911, debated various definitions of yellow fever immunity. According to the criteria eventually adopted, an individual was considered immune when he or she had suffered a confirmed attack of the disease or had remained in an endemic area for more than 10 consecutive years, even if he or she had not been proven to have had the disease.

Following World War I, the Bureau resumed efforts to break the cycle of transmission, as reflected in the resolutions adopted by the Sixth International Sanitary Conference, held in Montevideo, in 1920, which reiterated that both the surveillance of ports and the campaign against mosquitoes and other possible vectors should be stepped up. In light of the success of the yellow fever campaign in Cuba, representatives of that country were commended at the Seventh Conference, held in Havana in 1924, for their progress toward eradicating the disease.

During the 1920s and 1930s, work centered on developing an effective vaccine, a need that became all the more imperative when Dr. Fred L. Soper and his colleagues demonstrated the existence of yellow fever's jungle cycle. The research conducted by Soper, who was later to become Director of the Pan American Sanitary Bureau, changed epidemiologic thinking about the disease. As he explained in presenting the results of his work to the Ninth Pan American Sanitary Conference, held in Buenos Aires in 1934, the presence of yellow fever in rural, fluvial, and tropical areas free of ***A.*** *aegypti* threatened to reinfest urban areas where the vector had been eliminated.

Among the various immunogenic substances under consideration for production of the vaccine, the 17D virus was deemed the best candidate. By 1937, tests had proven the efficacy, safety, and stability of the 17D vaccine--developed in New York by Theiller, Smith, Sawyer, and others-and, with PAHO's cooperation, large-scale production began in Rio de Janeiro and Bogota.

During the two decades following the Organization's 1947 formal launching of a Regionwide campaign to eradicate ***A.*** *aegypti*, numerous countries declared themselves to be free of the vector. In 1961, the Directing Council had set the goal of eradicating ***A.*** *aegypti* by 1966, and by 1962, the

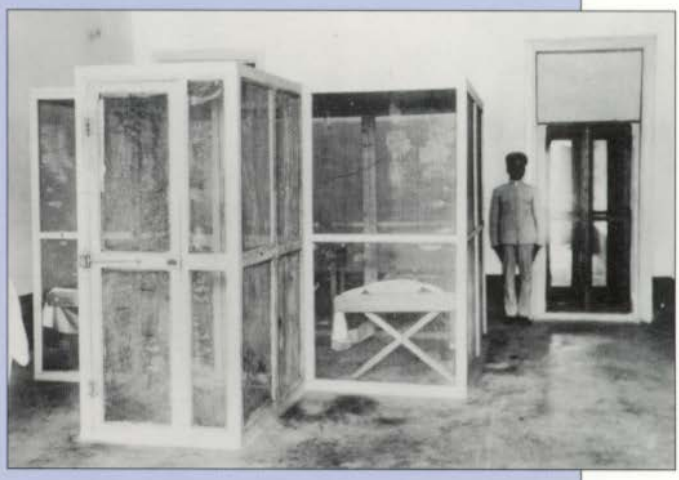
A sanitary squad (above) readies for disinfection work in Panama City. Walter Reed, a United States Army physician, led a group of experts whose intensive experiments in Havana would validate Carlos Finlay's theory on the vector's transmission.

achievements already were remarkable: Mexico, all the countries of Central America, and most South American countries had eliminated the vector.

Notwithstanding, during the 1960s administrative and economic obstacles hindered eradication campaigns in several countries, and the threat of reinfestation of the vector in countries that had eliminated it loomed large. PAHO provided technical advisory services to the countries with a view to eliminating existing *A. aegypti* colonies and ensuring continued application of the approved measures. In 1966, the Governing Bodies adopted a set of requirements for eradication, and in 1969 approved safety standards recommended by a working group on the establishment, operation, and inspection of laboratory colonies of *A. aegypti* and urged that cost-benefit studies be conducted of programs to prevent *A. aegypti* -borne disease. Year after year, the Governing Bodies underscored the need for countries that had succeeded in eliminating the vector, and then been reinfested, to adopt the appropriate measures.

During the 1970s and 1980s, several countries that had eliminated the vector became reinfested—among them Mexico, Colombia, and most of the Central American countries-representing the risk of the urbanization of yellow fever, the spread of dengue, and the introduction of dengue hemorrhagic fever in the Americas. Consequently, at the 1975 meeting of the Directing Council, the Director agreed to expand the Scientific Advisory Committee on Dengue to include experts on yellow fever and *A. aegypti.* On the basis of the report presented by that Committee, in 1977 the Directing Council resolved that the Organization should step up its support to the countries; the countries should not only continue measures applied up to that time but should promote epidemiologic surveillance and vaccination; and the Director should take steps to ensure the availability of

The attack against the spread of the disease was multifaceted: houses harboring yellow fever cases were covered in canvas and fumigated to kill the mosquito (left), and screened cages with a vestibule were used at army stations in Cuba to keep mosquitoes away from fever cases.



high-quality vaccines, insecticides, and equipment for their application.

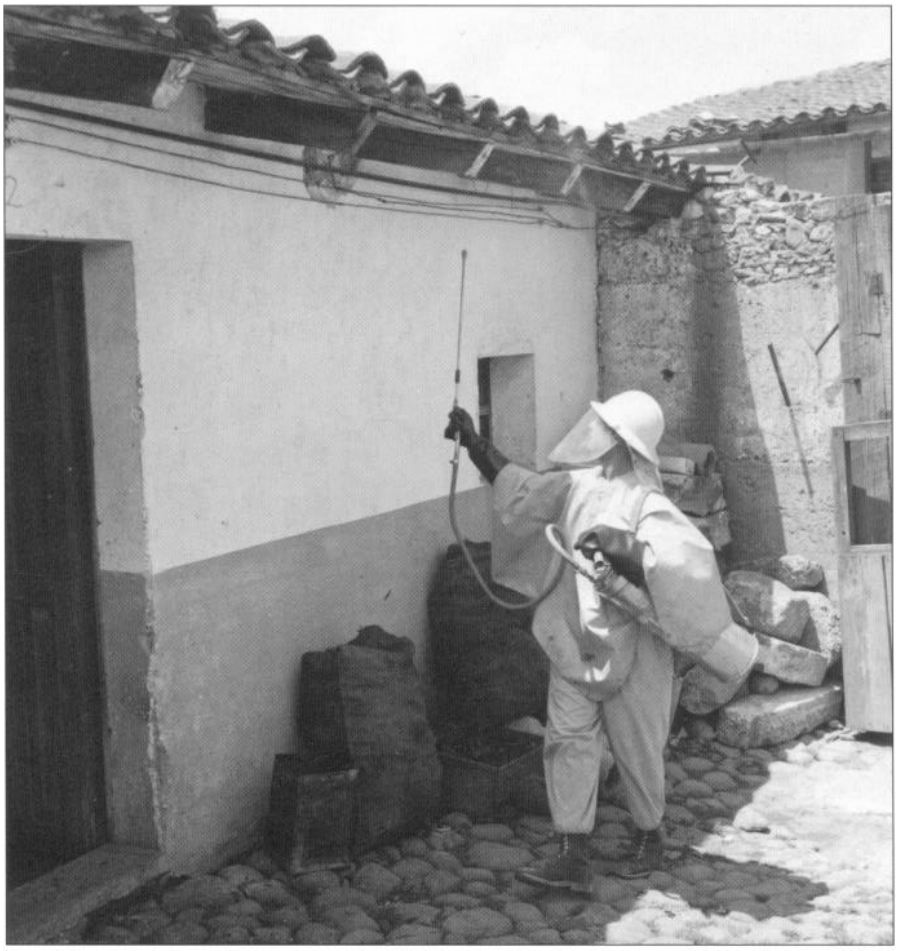
During the late 1970s and early 1980s the Governing Bodies sounded repeated warnings. Reinfestation, insecticide resistance, aggravation of the dengue situation, and economic difficulties were posing-and continue to pose-a threat of urbanization of jungle yellow fever.

PAHO sponsored a meeting of experts, held in Mérida, Mexico, in 1982, in an attempt to solve the *A. aegypti* problem and to identify alternatives to eradicating the vector and preventing the urbanization of yellow fever. That same year, the XXI Pan American Sanitary Conference confirmed the *A. aegypti* eradication policy and recommended that the countries assist each other directly or through the Bureau, through bilateral loans and grants, the provision of equipment, and technical advisory services. In a major reversal, however, the Directing Council in 1985 adopted a resolution calling for control and eradication of *A. aegypti,* thus dropping the firm vector eradication policy that had been established by the Organization in 1947.

In 1987 the Executive Committee of PAHO urged the countries to conduct initial surveys and establish surveillance systems to determine the presence, distribution, breeding habitats, and insecticide susceptibility of this species, as well as to report periodically to the Director on any infestations. The Organization supported country efforts through training in biology and vector control and the preparation of manuals for identifying, monitoring, and controlling the vector.

In recent years PAHO has coordinated a project aimed at modernizing yellow fever vaccine production laboratories in Rio de Janeiro and Bogota with the financial and technical cooperation of the Government of Canada and the International Development Research Center. ❖

THE FRONTAL STRUGGLE AGAINST MALARIA



A worker in Veracruz, Mexico, wears protective gear while spraying with dieldrin during a malaria eradication campaign in the 1950s. Today, strict guidelines protect both fumigators and the environment: protective equipment must be worn while spraying and insecticides are no longer used in the open, and are only employed in those areas where the mosquito has been demonstrated to be still susceptible to the chemical.

Eliminating malaria and its consequences from the Americas has been a priority for the Pan American Sanitary Bureau since the early years of this century To achieve that aim, campaigns have been mounted to eliminate all mosquitoes of the genus *Anopheles* that are infected with either *Plasmodium vivax* or *Plasmodium falciparum*—agents that cause the infection in humans—and to stem the disease's spread by preventing those mosquitoes from feeding on the blood of plasmodia-infected individuals. The probability of being infected, becoming ill, or dying of

malaria depends on people's risk of being bitten by the insect. Reducing that risk calls for interventions that will be effective under special circumstances, such as when new areas are opened up for mining and farming or when migration or contraband occur.

The distribution of malaria in the Americas has changed dramatically over the last 100 years, during which time it has been eliminated or has disappeared from most temperate and neotropical zones. Since the colonial era, malaria has been an important disease in the area stretching from the southern United States to Argentina. The first official documents on the disease date back to the early 20th century. Before that time, malaria was considered more a process of acclimatization than a disease, often being confused with other febrile illnesses. Malaria fevers were long one of the major causes of disability and death, and up until the 20th century quinine extract was the only control measure available.

It was the work of William Crawford Gorgas in Panama in the early part of the century that demonstrated the feasibility of controlling anopheline mosquitoes and awakened interest in malaria as an economic and health problem. Drainage operations and the application of oil larvicides to control mosquito breeding sites helped reduce the number of cases in cities and seaports throughout the Hemisphere. The success of those measures led to the establishment of well-financed surveillance and control projects, and, as a result, malaria declined considerably during the 1930s. The 1940s saw the organization of community education programs, continued application of measures to control larvae and adult mosquito populations, and establishment of central and regional diagnostic laboratories.

Agricultural development; livestock husbandry; and improved housing, environmental conditions, and water levels in irrigation projects have been decisive factors in controlling mosquito vectors in some developing areas. During the 1940s, surveys and efficient malaria campaigns coincided with the integration of municipal, state, and federal resources, as well as the involvement of all sectors of society, the armed forces, and various foundations. One of the first malaria-campaign achievements was the eradication of *Anopheles gumbiae* from Brazil in 1942. Once again, coordinated efforts—in this case, those of the Government of Brazil, the Pan American Health Organization, and the Rockefeller Foundation—yielded fruit.

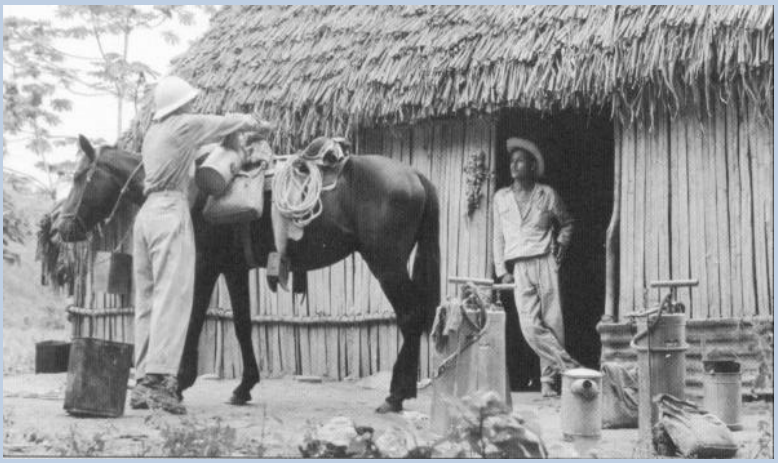
Five years later, the XII Pan American Sanitary Conference focused on the insecticide dichloro-diphenyl-trichloroethane (DDT), which would become instrumental in efforts to break the transmission cycle. In the years following the appearance of DDT, the Organization promoted widespread use of this insecticide. It recommended that national control programs concentrate on increasing the use of DDT and, in particular, on documenting its effectiveness. The remarkable reduction in the number of cases in many countries of the world as a result of using DDT led the XIV Pan American Sanitary Conference, in 1954, to recommend that Governments convert their national control programs into eradication campaigns within the shortest possible time-an urgency dictated by concern that the anopheline mosquito would develop a resistance to DDT. To cover the cost of needed activities, the Director of the Bureau was authorized to raise funds from public and private organizations, both national and international.

In 1955, the World Health Assembly adopted a resolution calling for the global eradication of malaria, underscoring that international collaboration was a *sine qua non* for success in that endeavor. With the goal of eradication in mind, in 1957 the PAHO Directing Council urged that malaria be declared a notifiable disease.

In 1960, the WHO Expert Committee on Malaria set criteria for establishing malaria eradication programs, stressing the need to develop effective rural health services in order to sustain the maintenance phase once it was reached. The Expert Committee's introduction of the concept of health infrastructure added a new dimension to malaria control programs-a recognition of the need to gradually integrate malaria control activi-

Throughout the century, PAHO has urged its Member Governments to broaden the reach of public information campaigns on malaria eradication; as early as the 1940s, community education programs for schoolchildren such as these became part of the armament to combat malaria.

In 1958, PAHO and the State of São Paulo, Brazil, entered into an agreement to eradicate malaria from that state; Dr. Fred L. Soper, seated left, and Professor Carlos Gamma, Secretary of Public Health for the State of São Paulo, seated right, signed the document.



Spraying efforts endeavored to reach even the most remote areas. Inaccessible sites, such as this wooden hut located within a thick tropical forest, were sprayed with dieldrin, a stronger and longer-acting chemical than DDT,

ties into the basic functions of local-level health services. Those activities needed to be simple and clearly defined so that auxiliary personnel in the malaria services could effectively carry them out. It also became important for health centers to gather experience with malaria control activities as quickly as possible.

The scarcity of resources in the Region's developing countries threatened to jeopardize malaria campaigns. In 1962, the PAHO Directing Council underscored the urgent need for Governments to try to obtain financial assistance in order to overcome obstacles in the efforts to halt the disease's transmission.

Several factors conspired to increase the incidence of malaria, such as: environmental conditions that fostered a proliferation of *Anopheles;* greater exposure to infection in the nonimmune human population; and poverty, which heightened the chances that certain groups would become ill or die of malaria.

The Organization's growing involvement in research on the disease-through meetings of experts and funding for studies-highlighted the importance of existing technical problems and the fact that much research remained to be done. Diagnostic methods had to be improved and studies carried out on aspects of transmission related to the genetic characteristics of the vector and the host, the epidemiologic significance of mosquito resistance to insecticides and plasmodia resistance to drugs, effectiveness and tolerance to new malaria drugs, the impact of human migrations and other social factors on incidence of the disease, and its association with agricultural and mining activities.

During the 1960s, studies conducted to better understand the biomedical problems hindering malaria eradication campaigns demonstrated that eradication would not be possible in areas where the only control measure was household spraying with residual insecticides. As a result, in 1966 the XVII Pan American Sanitary Conference recommended increasing coordination between local health services and eradication programs.

The Organization faced a difficult challenge: on the one hand, control programs needed to be financed and coordinated with general health services; on the other, questions raised by research regarding the biology of plasmodia and the malaria vector had to be answered. Accordingly, in 1967 the Directing Council recommended that Governments reorient their malaria strategies, intensifying and channeling control and eradication efforts specifically toward problem areas.

In the 1970s the Organization sought material and financial resources, intensified technical and general support for national control programs, and urged that those programs be incorporated into national development plans. In 1971, in light of the serious financial difficulties hampering control efforts in most of the countries, the Directing Council recommended that Governments reexamine their eradication programs, continue the production of DDT, and strengthen basic health services in those areas where malaria was most prevalent.

Insufficient funds and inadequate health services, mosquito resistance to insecticides, plasmodia resistance to drugs, and lack of coordination between national control programs and health services resulted in a deterioration in malaria indicators-annual parasite incidence, rate of household-spraying, annual blood examination rate-in some areas of the Region. These problems were aired at the June 1976 meeting of the Executive Committee, which recommended that the Organization promote new measures—including technical, economic, and administrative feasibility studies of the malaria programs—and that it ask international financial institutions to provide government loans to strengthen their malaria control programs.

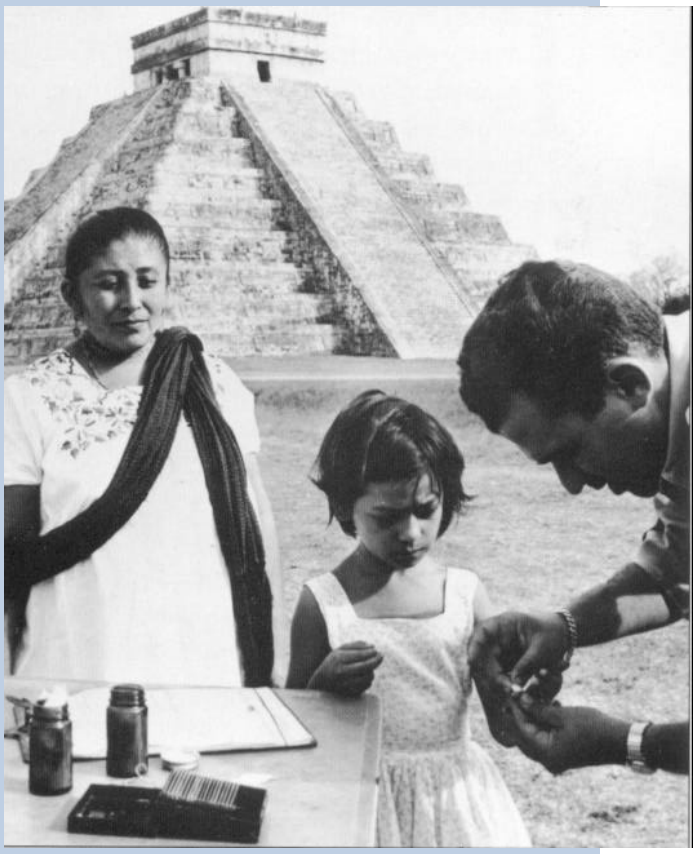
In 1977, the Executive Committee asked the Director to budget for training in application of a new malaria control strategy, one that gave priority to primary health care to ensure coverage of the rural population. That strategy implied overhauling the basic structure of malaria control services and programs.

A year later, the XX Pan American Sanitary

Conference reaffirmed eradication as the ultimate goal of malaria programs and declared 1980 the "Year of Frontal Struggle with Malaria in the Americas." The III Meeting of Directors of National Malaria Eradication Services in the Americas, held in Oaxtepec, Mexico, in 1979, laid the foundation for developing a Region-wide plan of action to combat malaria. Throughout the years, the Organization repeatedly insisted on the need to make malaria control a top priority and pressed for strengthening education and training for malaria program personnel. Attainment of those ends hinged on the expansion of the areas covered by the programs and the promotion of research on methods to control transmission of the disease.

The IV Meeting of Directors of National Malaria Eradication Services, held in Brasíla in **1983,** recommended that Governments redefine the objectives of their programs, based on available epidemiologic data, in terms of a malaria stratification strategy that comprised three headings: final (eradication of the disease), intermediate (reduction of endemicity, mortality, and morbidity in the areas where eradication is not feasible), and immediate (reduction of transmission levels in epidemic areas and prevention of transmission in disease-free areas, as well as increased socioeconomic development in affected areas).

By the mid-1980s, major challenges included how to administer the correct specific treatment to plasmodia-infected persons and how to evaluate the effectiveness of treatment in the population. The success of antimalarial chemotherapy was contingent on discovering a solution to *P. falciparum* resistance to chloroquine and other alternative drugs. Success also depended on regulations and



An effective evaluation of malaria eradication campaigns requires that the widest possible net be cast to search for cases (above). With PAHO's technical support, antimalarial drugs were administered free-of-charge at community volunteer posts. Since blood samples for microscopic diagnosis must be taken from every suspicious case of fever, critical components to the success of this effort were the community volunteers trained by Malaria Eradication Services instructors in simple techniques for collecting blood smears for microscopic diagnosis (right).

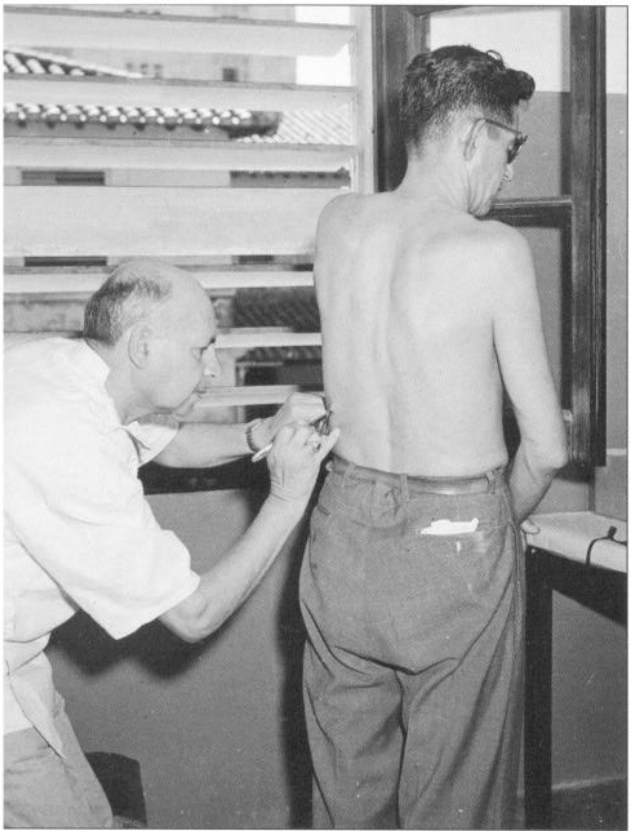
The malaria situation deteriorated markedly over the past decade. *Anopheles*, seen above drawing blood from a human host, had developed a resistance to insecticides, and plasmodium had developed a resistance to chloroquine. By the close of the 1980s, 21 of the Region's countries reported a combined total of one million new cases of malaria each year. In response, the Organization adopted a new approach-stratification. Relying on ongoing research, diagnosis (left), analysis, and interpretation of information, stratification has made it possible to target geographic and ecological areas and population groups at high risk for malaria.

policies governing the importation, production, distribution, marketing, and administration of antimalarial drugs.

The malaria situation grew markedly worse: between 1985 and 1990, 21 of 37 countries in the Region reported a combined total of one million new cases of malaria each year. Of these, two-thirds were microscopically confirmed P. *vivax* infections, and the remaining third were P. *falciparum* infections. This situation forced the Organization to rethink and modify the prevention and control strategies it had been advocating and to promote stratification as a useful approach for epidemiologic diagnosis and as a basis for prevention and planning. Stratification-using ongoing research, diagnosis, analysis, and interpretation of information-has made it possible to classify geographic and ecologic areas and population groups in terms of the risk of malaria. Basically, malaria stratification involves studying the annual parasite incidence and its trends, in order to identify priority areas; identifying and measuring the risk factors in these areas; constructing strata based on ranking the risk factors identified; selecting interventions to reduce or eliminate the most important risk factors; transforming health services to carry out the interventions selected; and identifying indicators of structure, process, and impact in order to measure the reduced risk of becoming ill or dying of malaria and to evaluate the interventions that have been applied. Knowledge of the profile of these risk factors is extremely helpful in selecting interventions to prevent and control the disease.

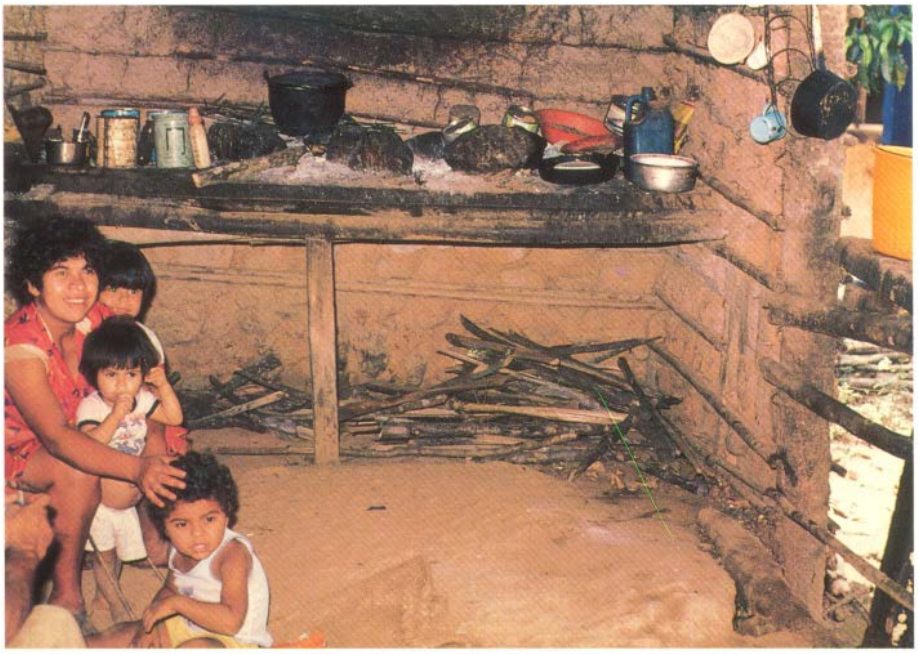
This disease exemplifies, perhaps better than any other, the threats to, and importance of, health in development. The seriousness of its consequences explains the Organization's determination to continue cooperating with the countries in every effort to control malaria. ❖

COMBATTING COMMUNICABLE DISEASES



PAHO's Governing Bodies have long recognized leprosy's threat to the Member Countries. Today, despite the fact that the disease remains endemic in the Region, the counties have vowed to eliminate it from the Americas through a multifaceted effort that rests on early detection and the use of multidrug therapy. A physician from Paraguay's Leprosy Control Service is shown here making a biopsy.

Leprosy, Chagas' disease, nonvenereal treponematoses, tuberculosis, onchocerciasis, and other communicable diseases have long afflicted the people of the Americas. Over the decades, preventing, controlling, and-in some cases-working to eliminate these diseases has been a major thrust of the Pan American Health Organization's program of technical cooperation with the countries of the Region. That cooperation has focused on epidemiologic surveillance, training, research, information dissemination, and health education.



In 1971, the Directing Council called for the elimination of one of the vectors of Chagas' disease, *Triatoma infestans* (below), from the Southern Cone countries. **Because the disease is intimately tied to the population's socioeconomic development, particularly to housing conditions, an important aspect of the Organization's battle contemplates a concerted effort to improve living standards.**

During the 1940s and 195Os, the PAHO Governing Bodies acknowledged that ***leprosy*** was a growing public health problem in the Region and urged that national control programs be reviewed in light of new ideas regarding diagnosis, treatment, and prevention of the disease. In 1979, the Directing Council stressed the need to obtain extrabudgetary funds in order to improve the diagnosis and control of leprosy and to increase research in that area.

Today, leprosy remains endemic in the Region. Nevertheless, as the countries have proposed, it is feasible to eliminate the disease in the Americas through vaccination of the susceptible segment of the population with BCG, application of early detection programs, use of multidrug therapy, and prevention and treatment of the complications of leprosy. The Organization is therefore stepping up control efforts with a view to reducing the disease's prevalence to below 1 case per 10,000 population.

American trypanosomiasis, or *Chagas'* ***disease,*** is, as are other zoonoses, tied to the population's economic and social development. To reduce the threat of this disease in rural areas, the XII Pan American Sanitary Conference recommended in 1947 the construction of a new type of rural dwelling that would fulfill minimum health standards, taking into consideration the habits and economic condition of the population.

Experts believe that Chagas' disease will persist as long as people reside in substandard dwellings and until the trend toward migration and rapid urbanization experienced by most of the Latin American countries stops. Consequently, in recent years the Organization's technical cooperation has aimed at bringing about changes in lifestyle and improving the living and health conditions of the population. PAHO, on its own and in collaboration with the World Bank and other health and financial agencies, has

As part of a research project on schistosomiasis control in Brazil, snails were collected from marsh grass prior to the application of a molluscocide. PAHO's efforts to combat schistosomiasis include research cooperation and the granting of fellowships.

intensified efforts to strengthen research into the biology and control of the Triatomidae and in modes of transmission of the disease, as well as to identify immunizing agents and therapeutic alternatives and improved methods of clinical and laboratory diagnosis. In 1971, the Directing Council emphasized the importance of eliminating American trypanosomiasis transmitted by blood transfusion and eliminating *Triatoma infestans* from the Southern Cone countries.

The epidemiologic status in the Region of the group of diseases known as *nonvenereal treponematoses* has not been precisely determined. However, yaws has been reported sporadically in the northern part of South America, while pinta appears to be limited to Central America, Colombia, and certain southern regions of Mexico. Following mass penicillin treatment campaigns during the 1950s and 1960s, the prevalence of pinta declined considerably in these countries. However, epidemiologic surveillance activities have not been maintained and not enough human resources have been trained to detect the residual foci.

Given this situation, in the early 1990s the Organization set out to learn more about these foci and to work with the countries in treating them. These undertakings will be accompanied by the training of personnel in control programs so that they will be able to assume the responsibility for clinical confirmation, treatment, and epidemiologic surveillance.

The early 20th century witnessed an increase in epidemic tuberculosis, as colonialism and servitude gave way to the employment of large numbers of people in mines and factories and as families congregated in the shantytowns that sprang up around burgeoning cities. Consequently, the first Pan American Sanitary Conferences emphasized tuberculosis as a cause of death and disease. Although only limited information is available from that time, it is estimated that yearly mortality from tuberculosis exceeded 300-500 deaths per 100,000 population and that 1% of the population in most of the countries in the Region suffered from the disease.

The IV International Sanitary Conference

(1909) proposed the formation of a permanent commission on tuberculosis, and the IX Pan American Sanitary Conference (1934) characterized the disease as one of the most serious health problems in the Region, both because of its high rate of contagion and its social implications. The Bureau worked diligently in a campaign against tuberculosis, promoting the creation of national tuberculosis control commissions in the 1930s, establishing a special section to obtain statistical information on the disease, disseminating information and preparing recommendations on patient isolation and treatment, and promoting the application of BCG and the use of X rays. Those activities continue to be the epidemiologic foundation for current tuberculosis control programs, buttressed by the use of appropriate technology, the strategy of primary health care, and the decentralization of health systems to the local level. Although tuberculosis still represents a serious public health problem—one that has been recently complicated by its association with the acquired immunodeficiency syndrome (AIDS)—

Schoolgirls queue up for BCG vaccination in Costa Rica, and a young Ecuadorian boy is first in line for X-ray screening for tuberculosis. Although many of these efforts to fight the disease were established as early as the 1930s, they continue to be relied upon today.

A health worker removes a fibrous nodule, one of the signs of onchocerciasis, from a patient who is blind due to the disease. PAHO actively collaborates with its Member Countries in developing programs to prevent the disease and to eliminate it from the Region.

significant advances have been made, and it is conceivable that the disease can be controlled in the not-too-distant future.

Onchocerciasis —or Robles disease, as it also is known in the Americas from its first description in the Region by Dr. Rodolfo Robles in 1915—has been a serious health concern in several countries, among them Brazil, Colombia, Ecuador, Mexico, and Venezuela. If the disease is not diagnosed and treated in time, the sequelae of the ocular lesions it produces result in blindness.

Although activities aimed at controlling this disease-medical treatment for patients and efforts to control the insect vector *(Simulium sp.)* of the filaria—were initiated in Mexico in 1930, it was not until the 1970s that onchocerciasis and other related parasitic diseases were taken up as a special concern by the Governing Bodies of the Organization. The XIX Pan American Sanitary Conference, in 1974, recognized that parasitic diseases were a serious threat to the health and life of the peoples of the Americas and urged health authorities in the countries to promote applied research as a way to improve the control of these diseases. From that point onward, PAHO stepped up its collaboration with its Member Countries, particularly targeting the training of epidemiologists in parasitic diseases-not just onchocerciasis but also other zoonoses such as taeniasis (or cysticercosis) and leishmaniasis—in order to enhance epidemiologic surveillance and control of these diseases.

In 1991, the PAHO Directing Council urged the Governments to seek collaboration between the public and private sectors in order to develop and strengthen plans of action for eliminating various diseases, including onchocerciasis. As a result of that resolution, the Organization is directing its efforts toward promoting epidemiologic surveillance, greater social participation within a multisectoral framework, and mass communication.

PAHO has proposed to substantially reduce the incidence of these diseases in the Americas and to eliminate, by the year 2000, one of the most frequent causes of blindness-that produced by *Onchocerca volvulus,* the causative agent of onchocerciasis. ❖

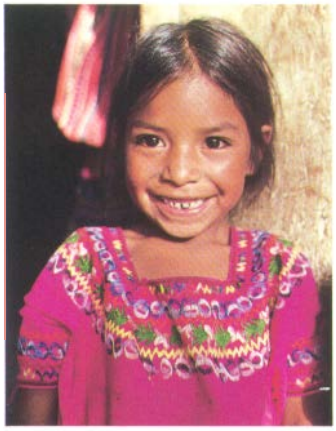
IMPROVING PEOPLE'S HEALTH THROUGH PLANNING

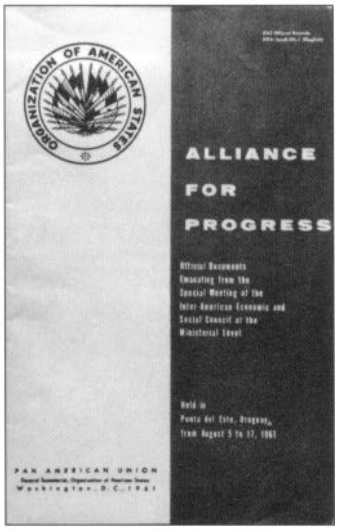
In 1963, then-President of the United States, John F. Kennedy, in his welcoming message to the members of the Americas Task Force on Health, accompanied by the Director of the Pan American Sanitary Bureau, Dr. Abraham Horwitz (at the extreme left), observed: 'The Charter of Punta de1 Este contains objectives which are quite specific and no less important to the future health of our peoples than the current campaigns under the Pan American Health Organization against malaria and smallpox. The Hemisphere looks to you to specify the means by which these objectives may be reached."

Planning, the critical underpinning for developing health services, aims to assure that those services are appropriate, efficient, and effective. The goal of planning in the context of health, however, is-first, foremost, and ultimately—to enhance the well-being of people. From 1961 onwards, PAHO has been a prime mover in the setting of regional health plans, each of which has served as a blueprint for hemispheric and national action and a foundation of technical cooperation policies for the Organization. Those regional plans, in turn, reflect the cultural evolution of the Americas—

the major social, political, and economic movements that have characterized the Region over the last 30 years. In that context, each of the plans described below represents a landmark in the long journey toward social justice in the Americas.

1961





CHARTER OF PUNTA DEL ESTE: THE TEN-YEAR PUBLIC HEALTH PROGRAM

With the Charter of Punta de1 Este, and especially the Ten-Year Public Health Program of the Alliance for Progress, health transcends the sphere of specialized agencies to become a concern of chiefs 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.

The Ten-Year Public Health Program sets forth the goal "to increase life expectancy at birth by a minimum of five years, and to increase the ability to learn and produce, by improving individual and public health." Attaining this goal will require, among other measures:

> To provide adequate potable water supply and sewage disposal to not less than 70% of the urban and 50% of the rural populations;
> To reduce the mortality rate of children less than five years of age by at least one-half;
> To control the more serious communicable diseases, according to their importance as a cause of sickness, disability, and death;
> To eradicate those illnesses, especially malaria, for which effective techniques are known;
> To improve nutrition;
> To train medical and health personnel to meet at least minimum requirements;
> To improve basic health services at national and local levels; and
> To intensify scientific research and apply its results more fully and effectively to the prevention and cure of illness.

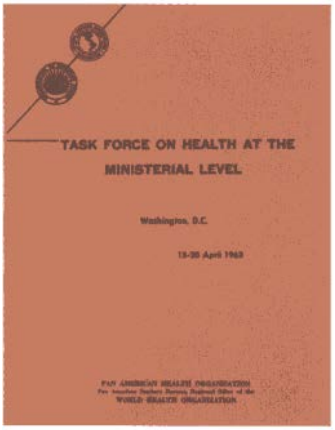
The Charter charges the Pan American Sanitary Bureau with programming and steering efforts to solve regional health problems. In response, in 1961 PAHO set up a headquarters office to program activities in planning—an area that had previously been paid very little attention.

1963

TASK FORCE ON HEALTH AT THE MINISTERIAL LEVEL

In a period marked by what then-Director, Dr. Abraham Horwitz, called "a spirit of renewal, of transforming expectations and hopes into the reality of well-being," PAHO convenes the first of what became, over a 15-year period, a series of four special meetings of Ministers of Health.

In response to the Charter of Punta del Este's mandate that integrated socioeconomic development plans be formulated to meet the demands of projected external investment, PAHO and the Center for Development and Social Studies (CENDES) in Venezuela work together to devise what comes to be known as the CENDES/PAHO method of normative planning. Ascribing to the State responsibility for planning, this method entails a rational, deterministic, linear treatment of health situations, problems, and solutions. It singles out the importance of efficiency



in the use of resources and promotes programming devices such as five-year plans to project and evaluate the direct relationship between resources and results.

In that context, the Task Force on Health defines the current health situation in the Americas, forecasts its future, and examines those areas to which efforts should be directed to achieve the goals of the Alliance for Progress and, more specifically, to put into practice the Ten-Year Public Health Program.

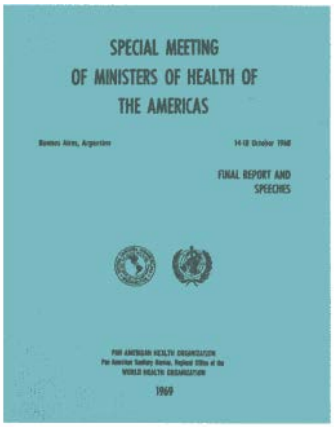
The Organization urges the countries to prepare national health plans to facilitate the allocation of domestic and external resources to achieve the goals proposed by the Charter of Punta de1 Este; to provide technicians working for the social development and economic progress of each country with a common language that would promote mutual understanding; and to confer to the sector its own role within the overall plan.

In its summation, the Task Force declares that: "The Ten-Year Public Health Program recommends the preparation of national plans...for the prevention of disease and the promotion and restoration of health. This will require taking a series of steps, launching a continuous process that begins with the formulation of a general health policy within the framework of a national development plan. This general formulation should be followed by a study of the problems and their quantification, an analysis of the physical and human resources available, assignment of priorities, establishment of goals, selection of the most suitable techniques, and development of methods of reporting and evaluation for the purpose of periodically readjusting the objectives to conform to experience."

1968

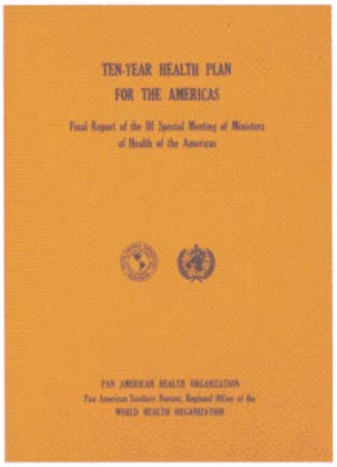
Special Meeting of Ministers of Health of the Americas

The Presidents of most of the American States, meeting again in Punta del Este in 1967, proclaim their abiding commitment to achieve to the fullest measure the social order demanded by the peoples of the Hemisphere through, among other measures, the expansion of programs for the improvement of health. To that end, they collectively call upon PAHO to cooperate with their Governments in drawing up those plans.



The Ministers of Health, at their second Special Meeting, held in Buenos Aires in 1968, emphasize the importance of planning in the development of health policies. They note that, although progress has been made in health planning within the Ministries of Health, the aim to incorporate health plans into national development plans has failed. The Ministers urge that, in those countries where planning has not been instituted, Governments should formulate and implement national health plans geared to economic and social development, clarifying that "...planning is a means, not an end; a process, not an endpoint; a path of action, not a terminus." Around this time, health planning begins to incorporate, as critical approaches, the coordination of health services and the extension of their coverage.

1972



III Special Meeting of the Ministers of Health of the Americas: The Ten-Year Health Plan for the Americas

At this meeting the Ministers, taking up where the Charter of Punta del Este left off, devise a new Ten-Year Health Plan for the Americas that dominates health planning and programming in the Hemisphere throughout the 1970s. They review progress made in light of the Charter of Punta de1 Este and the Ten-Year Public Health Program for the 1960s, as well as persisting health problems. Experience has revealed the shortcomings inherent in the CENDES/PAHO method, particularly that the lack of explicit policies for developing health systems has weakened planning as an instrument that gives order to the administration of services.

The Ministers declare health a universal right, recognize the importance of social participation in decision-making, and set as the principal new goal the extension of health services to unserved 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"—thus adumbrating what would become the global aspiration of health for all. To achieve that end, they recommend that health policies and strategies be improved and incorporated into economic and social development and that planning be incorporated into the administration of the health service system at all levels.

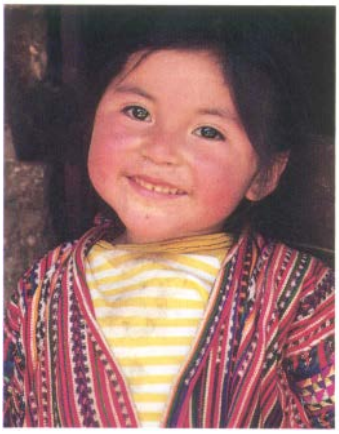
As an important outcome of these deliberations, in 1975 the Pan American Center for Health Planning in Santiago, Chile, publishes a landmark study on the formulation of health policies. That study situates health planning in the political sphere and visualizes a planning process that originates with a diagnosis of the health situation, then specifies objectives and strategies, in order, finally, to formulate a plan.

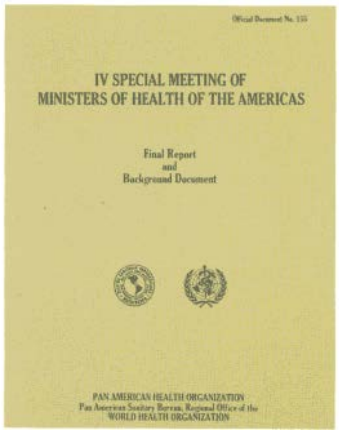
1977

IV Special Meeting of Ministers of Health of the Americas

Geopolitical realities in the Americas are changing, with greater stress on the self-reliance of developing countries. The shift is from technical assistance—seen as the patronizing by industrialized nations of developing nations-to technical cooperation in which developing countries determine their own direction and work together with, rather than at the behest of, the developed world. This shift leads to a new set of approaches from "technical cooperation among developing countries," which aims at their learning to help and share amongst themselves rather than always seeking support from the First World; "appropriate technology" that is right for the countries and preferably obtained locally rather than technology that is almost always imported and often inappropriate; "extension of service coverage" through "primary health care"; and "community participation" in improving people's individual and collective health.

At the Thirtieth World Health Assembly, in 1977, the WHO Member States resolve that the Governments' and WHO's main social target for what remains of the century 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"—shortened thereafter as "Health for All by the Year 2000."





At their fourth meeting, the Ministers of the Region endorse the goal of health for all, declaring their intention to redouble efforts to mobilize the resources required for accelerating the extension of health service coverage to the entire population of their countries. To achieve that purpose they adopt a regional policy that defines primary health care as a strategy for extending services to everyone—not just as a program to cover the minimal needs of the poor.

The following year, in 1978, the WHO/UNICEF-sponsored International Conference on Primary Health Care, held in Alma-Ata, U.S.S.R., produces the "Declaration of Alma-Ata," subsequently adopted by the World Health Assembly in 1979. In formulating global strategies to achieve health for all, the Declaration asserts that the most critical one is primary health care. Following this declaration of commitment, it remains for the Regions to devise more detailed strategies and a plan of action to attain the goal.

greater control of communicable diseases in many countries, declines in general mortality, and a one-third decrease in infant mortality. Shortfalls are noted in the extension of water supply and sanitation services as compared to population increases, insufficient organization of the health sector given the increased installed capacity; lack of impact of sector reorganization on the administration of national health care systems; and poor or nonexistent coordination between health and other development sectors.

Toward the end of the 1970s, the strategic approach to health planning comes to the fore. This approach, which has several different variations, focuses on situational planning centered on problems and the operations that should be developed to confront them. It implies that there is more than one way of understanding reality, that each way has its proponents, and that they in turn have their own set of interests. In order to conciliate opposing forces and get them to act consensually, planning must devise strategies that encompass all contingencies and situations.

In this context, by 1980, most of the countries have defined or confirmed their national strategies to achieve the goal of health for all. Those national strategies become the basis for formulating regional strategies for the Americas, which incorporate long-range national health plans to provide universal health coverage, with primary care a strategy for the rich as well as the poor, based on efficient, efficacious, and equitable health services. The Regional Strategies, presented and approved by the Directing

1980

HEALTH FOR ALL BY THE YEAR 2000: STRATEGIES

As they had at the outset of the previous two decades, at the beginning of the 1980s the countries of the Region set out to evaluate gains and shortfalls in realizing past health plans for the Americas and to cast a new plan in light of intervening experience. Gains include an increase in life expectancy at birth,

Council in 1980, spell out the targets essential to achieving the goal of health for all by the year 2000:

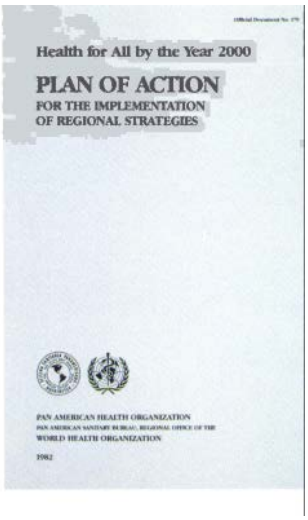
> No country in the Region will have a life expectancy at birth of less than 70 years.
> No country in the Region will have an infant mortality rate of more than 30 deaths per 1,000 live births.
> No country in the Region will have a mortality rate higher than 2.4 deaths per 1,000 children aged l-4.
> Immunization services will be provided by 1990 to 100% of children under 1 year of age against the major childhood diseases, and that coverage will be maintained during the first decade of the century.
> Access to safe drinking water and sewage disposal will be extended to 100% of the population.
> Access to health services will be extended to 100% of the population.

1981

HEALTH FOR ALL BY THE YEAR 2000: PLAN OF ACTION FOR THE IMPLEMENTATION OF REGIONAL STRATEGIES

PAHO prepares and officially adopts a Plan of Action-seen as "the intermediate stage between the formulation of regional objectives, goals, and strategies, and their translation into specific programs"-with the central goal of ensuring that the entire population attain access to health services and stressing the importance of the principles of equity, solidarity, social justice, and community participation.

The Plan gives priority to children, women of child-bearing age, the elderly, and the disabled. It notes that, for its part in reducing social and economic inequalities, the health sector should reorder its priorities: "First, health services must be restructured and expanded to contribute to greater equity, more efficiency, and increased effectiveness. Second,



the implications of economic policies and projects for the health of people must be understood and additional linkages forged between health and other sectors. Finally, regional and interregional cooperation must be promoted in harmony with the goals of Health for All."

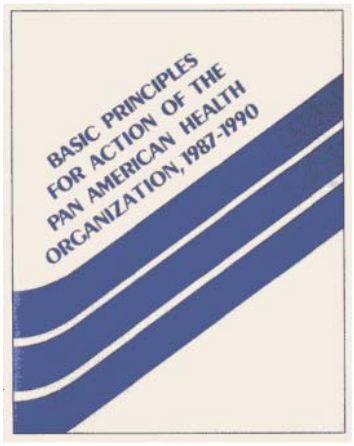
Together the Regional Strategies and this Plan of Action serve as national and hemispheric guidelines in health planning and programming throughout the 1980s and beyond.

1986

ORIENTATION AND PROGRAM PRIORITIES FOR PAHO DURING THE QUADRENNIUM 1987-1990

The XXII Pan American Sanitary Conference voices the need to "renew and reorient the efforts and resources of the health sector as well as those of other sectors to progress toward the goal of health for all." The Conference considers that PAHO technical cooperation should concentrate resources on priority areas of major impact in national health development as part of the countries' general development. To transform national health systems, the Organization is to channel its efforts toward three general, interrelated areas:

> Development of the health services infrastructure, with emphasis on primary health care;



Attention to health problems of vulnerable groups; and
Management of knowledge.

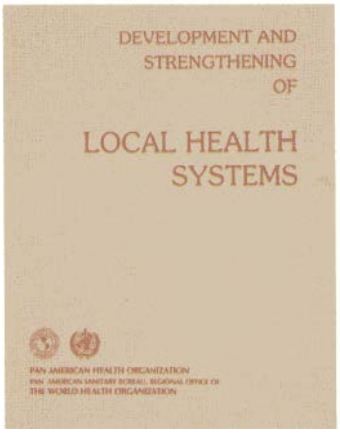
In recognition of the importance of health service systems in carrying out priority health programs, the Conference resolves that the Organization should give special attention to:

Strengthening health services infrastructures;
Developing the health sector's financial analysis and resource management capabilities;
Improving national health information systems; and
Defining the roles of health workers, recognizing the importance of community participation, and integrating health manpower education and training.

1988

DEVELOPMENT AND STRENGTHENING OF LOCAL HEALTH SYSTEMS IN THE TRANSFORMATION OF NATIONAL HEALTH SYSTEMS

The lack of access to health services by a great proportion of the population in many countries of the Americas-a problem seriously aggravated by the Region's economic crisis in the 1980s—accentuates the need to make the most efficient use of health sector resources and, in effect, to transform national health systems. Against this backdrop, in 1988 the PAHO Directing Council adopts a resolution aimed at developing and strengthening local health systems as part of the transformation of national health



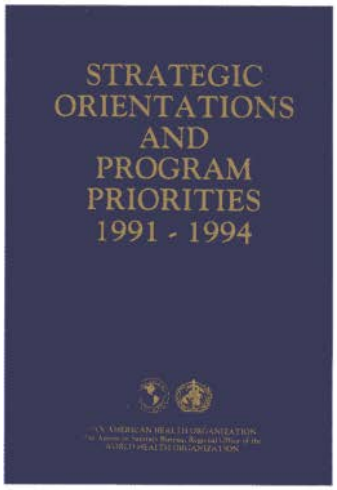
systems. In summarizing the import of this resolution, the Director of PAHO notes that: "The local health system can promote a more active participation of the population in health promotion and in the delivery of services, and it also assures the social and administrative accountability that is so essential for achieving efficient and effective services."

1991

STRATEGIC ORIENTATIONS AND PROGRAM PRIORITIES, 1991-1994

The XXIII Pan American Sanitary Conference, meeting in 1990, establishes guidelines for the work of the Organization and the countries for the current quadrennium, taking into account the general state of, and prospects for, overall development in the Americas and-within that context-the prevailing health situation of the Region and challenges to assuring the future transformation of the health sector to meet people's health needs.

The Conference approves such strategic orientations as the role of health in development, reorganizing the health sector, focusing action on high-



risk groups, promoting health, using social communication in health, integrating women in health and development, managing knowledge, mobilizing resources, and furthering cooperation among countries.

At the same time, it specifies priorities in the area of health services infrastructure-analyzing sector and resource allocations, financing the sector, managing local health systems and local programming, developing technology, and preparing human resources-and in the area of health programs—the environment, food and nutrition, lifestyles and risk factors, control and eradication of preventable diseases, maternal and child health, workers' health, drug addiction, and AIDS.

Dr. Macedo explains the significance of the Strategic Orientations and Program Priorities for the work of the Organization:

> International organizations in general need to accept the fact that they confront fundamental demands for change. At PAHO major efforts to explore the prospects for such change are under way, including implementation of a series of new approaches for the 1990s. Among other things, these approaches suggest priorities for both the PAHO Secretariat and PAHO Member Countries, encourage subregional initiatives by groups of countries, favor closer relations between national priorities and initiatives and the Organization's technical cooperation programs, emphasize the key role of the individual country in technical cooperation efforts, press for realizing the full potential of available national resources, support decentralization and regionalization of national health systems, and favor concentrating efforts on the most critical areas of need. Beyond that, we are also pressing for acknowledgment of the major impact that political decisions have on health activities, for application of the "health for all" principles and primary care strategy, for integration of health into the socioeconomic process, and for better application of science and technology to meet people's basic needs. The aim of all this is to consolidate some changes already started and make others that will help meet the serious challenges we face. We do not expect any of these changes in our advisory and cooperative efforts to be easy, but we see them as three things: our responsibility, a step forward, and PAHO's best response to the health needs of the Region. ❖

NATIONAL AND LOCAL HEALTH SYSTEMS

Communities, such as this one in the Dominican Republic, strongly support their "SILOS"—their local health systems.

In the opening years of the 20th century, about the time the Pan American Sanitary Bureau was just getting off the ground, new revelations about the pathology and epidemiology of diseases such as cholera, plague, and yellow fever underscored the fundamental importance of well-organized national health services for the solution of health problems. Those services, together with community health education, were seen as critical to controlling epidemic outbreaks and attacking them at the source.

In the 1920s, what were known as "travelling representatives"—the Bureau's first field staff-visited the countries of the Region, and, at the behest of the respective Governments, conducted studies of national public health administrations. During that same

Working with nationals, PAHO staff, such as these serving in the Dominican Republic in the mid-1950s, helped set up integrated public health programs throughout the Hemisphere.

decade, issues of the newly launched *Boletín de la Oficina Sanitaria Panamericana* carried articles by public health leaders from throughout the Hemisphere on the state of their respective national health services. The then-Director of the Bureau, Dr. Hugh S. Cumming, in his report to the VIII Pan American Sanitary Conference, in 1927, noted that: "We are making every effort to obtain original articles penned by the highest authorities in the Americas on topics of interest related to matters of public health. I draw your attention especially to the articles on public health administration in the American Republics."

During the 1930s, biomedical research and epidemiology were gradually becoming officially institutionalized as a result of State efforts to protect and promote people's health. Whereas in the early decades of the century the principal public health practices entailed quarantine, notification of diseases, and management of certain communicable and parasitic diseases, by the 1930s, the development of health services began to be the focus. Health directorates, ministries of health, and institutes designed to promote and conduct research were established-among them, the Fundação Oswaldo Cruz in Brazil, the Instituto Izquieta Perez in Ecuador, the Instituto de Higiene Experimental in Uruguay, the Instituto Finlay and the Instituto Samper y Martinez in Colombia, the Instituto Biológico and the Instituto de Salubridad y Enfermedades Tropicales in Mexico, the Instituto Algodonal in Venezuela, and the Instituto National in Chile. These institutes made it possible for the countries to develop the technical and physical infrastructure necessary to carry out research, both biological and epidemiologic.

These advances, in turn, contributed significantly to the development of health services. Correspondingly, from about the mid-1930s on, the Bureau's thrust increasingly shifted from an emphasis on exclusively quarantinable diseases toward cooperation in organizing health services. The Third Conference of National Directors of Health, in 1936, debated the question of public health administration and recommended 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.

In 1942, the XI Pan American Sanitary Conference, meeting in the midst of World War II, rec-

Efforts to extend health services occasionally bogged down.

ommended that an inventory be made of supplies available and needed in each country, that resources and supplies be conserved or sought to preserve the public health, that supplies be exchanged for continental security, and that military and civilian health services cooperate amongst themselves. In fact, overall, the war had a very positive influence on the development of public health in the Americas: services became rapidly better organized; trained public health workers came to play a major role, in both the military and civilian arenas, in saving people's lives and reducing the effects of injury, hunger, and disease; and new techniques and resources in disease prevention were developed.

After the war's end, health services development became increasingly critical. In 1947, the XII Pan American Sanitary Conference debated, among its principal issues, the organization of national health services and relations between public health and social security agencies. The First Inter-American Congress on Public Health, held in 1952 to celebrate the Pan American Sanitary Bureau's 50th anniversary, devoted special attention to the importance of organizing and integrating public health services. The following year, the Directing Council of PAHO approved long-range Bureau health programs "based on continuous survey and evaluation of the needs and the resources of the Member Countries," which would serve to strengthen basic health services and, thereby, to promote and preserve health.

The Charter of Punta de1 Este, in 1961, indicated that the goal of better health required, among other measures, that the Governments "improve basic health services at national and local levels." The Charter set forth a plan that, with great prescience, laid the foundation for the goal of providing comprehensive health care to all peoples-a goal that eventually evolved into today's aspiration of health for all by the year 2000. The corresponding Ten-Year Public Health Program recommended that the Governments:

> Improve the organization and administration of national and local health services by combining the functions of prevention and cure; obtain a better return from **medical services** and create the necessary services gradually; and ensure financial

The road to health can be tortuous...

accessibility to therapeutic agents and means for the prevention of disease.

Take measures for giving increasingly better medical care to a larger number of patients, by improving the organization and administration of hospitals and other centers for the care and protection of health.

In 1963, PAHO convened a Task Force on Health comprised of Ministers of Health of the Americas, whose charge it was to steer the Organization in pursuit of the health goals of the Charter of Punta de1 Este. The Task Force recommended, as primary among other actions, a study of existing health programs; incorporation of all levels of health service within a general framework; rational distribution and utilization of resources; integration of preventive and curative services; and regionalization of services.

At their II Special Meeting, held in 1968, the Ministers of Health noted that: "There are still extensive areas in the countries of the Americas whose population is without basic health services. At the same time, there is wastage and defective utilization of available resources." The Ministers therefore recommended that "systems should be set up in each country without delay for the effective coordination of the health services of ministries of health with those of social security institutions, universities, and other private and public bodies."

When advances and shortcomings in health progress during the 1960s were evaluated at the beginning of the following decade, it was estimated that health services covered 63% of the

…but the benefits are great.

population with at least "minimal" health services—emergency care, maternal and child care, immunization, basic environmental sanitation, recording of basic statistical data, and patient referral to more complex services available in the system-although smaller communities tended to have less extensive coverage. In effect, more than one in three people in the Region had no access whatsoever to health care.

In that context, the III Special Meeting of Ministers of Health drafted a Ten-Year Health Plan for the Americas, 1971-1980, which declared: "We recognize the grave problems of our communities without or with a token of medical care services. In light of this fact, we are committed particularly to the less privileged groups and through them to the whole Hemisphere." They set as a goal the total coverage of the population by the health services systems in all the countries of the Region and indicated that that coverage should be achieved by: defining in each country a policy for developing health service systems; increasing the productivity of the systems; conducting research on technologies and approaches consistent with countries' conditions; regulating the sector; and regionalizing services as a means of decentralization.

During the decade of the 1970s, PAHO cooperation in health services development focused on establishing a decentralized system of services with three levels of care and resources, which together formed a health care pyramid: the basic, local, or primary level consisting of integrated, broad-coverage community health services in which users participate actively; the intermediate, or regional, level involving integrated prevention,

The health care pyramid: local centers form the base, regional hospitals serve the intermediate level, and —at the apex—national hospital centers offer highly specialized care.

cure, and rehabilitation services within hospital establishments; and, at the apex of the pyramid, the national level comprising highly developed medical centers and scientific research institutes. In the context of this pyramid, PAHO cooperated in developing institutional resources and widening the availability of services; improving the accessibility and quality of care; stimulating ambulatory care and emergency medical services; and strengthening coordination between health ministries and social security agencies.

At the beginning of the following decade, the pressing issues in public health consisted of: *extending health service coverage* by carrying out investment programs for the construction of new facilities, improving existing ones, training health workers to staff them, making changes in the organization and administration of health sector agencies, including intersectoral approaches and intrasectoral coordination; *increasing and strengthening operating capacity* by overcoming the shortage of centers and the lack of equipment, deficien-

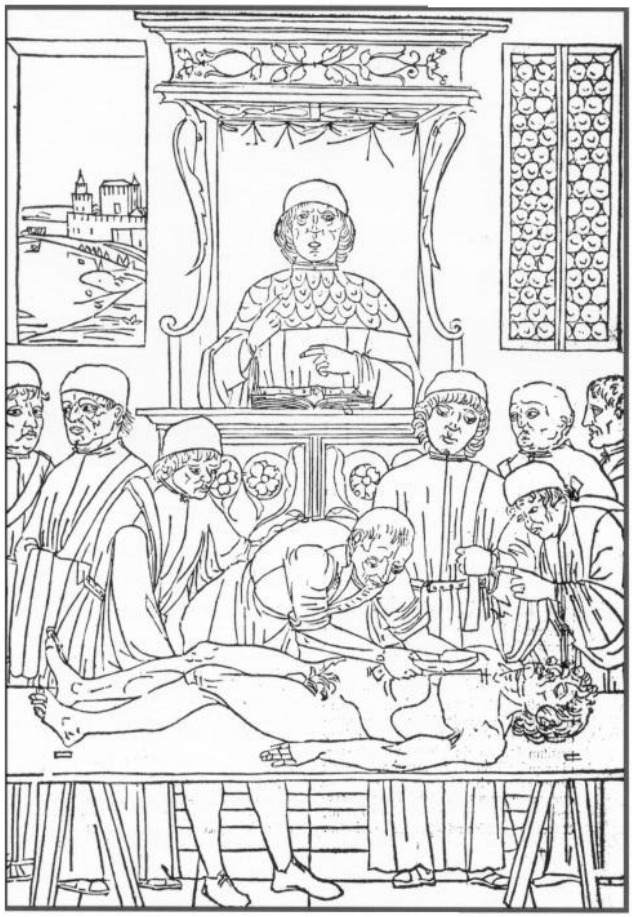
Health care is a personal right and a community blessing.

cies in the necessary types of health workers, lack of funding, and the insufficient development of appropriate technology; *planning and evaluation* to assure a relationship between the efficiency of health services, the effectiveness of their programs, and the ongoing evaluation of their work to assure adjustment to emerging needs over time; and information systems to determine the health status and conditions in the countries and to enable sound decisions to be made regarding health service development.

In 1981, the PAHO Directing Council adopted a Plan of Action for the Implementation of Regional Strategies, to attain health for all by the year 2000, which set as the top priority that "health services must be restructured and expanded to contribute to greater equity, more efficiency, and increased effectiveness." Notwithstanding, in the years to follow vast segments of the population in many countries of the Americas continued to have no regular access to health services-a situation aggravated during the 1980s by an economic crisis that further constrained resources available to the health system.

Nothing short of a transformation of national health systems could redress this situation, and—to accomplish it—the PAHO Directing Council in 1988 recommended that the countries develop and strengthen their local health systems. To bolster countries' efforts to transform national health systems by strengthening local ones, the Organization is mobilizing political, technical, and financial resources in the areas of planning, information systems, administration, community participation, sector leadership, and personnel training. It is encouraging exchanges of experiences and information among countries, and is promoting coordination of all health-related agencies within countries. It is expected that this focus on the development and strengthening of local health systems will, in the years to come, help the Governments of the Region respond to the changing and growing health needs of the peoples of the Americas. ❖

THE CRITICAL RESOURCE:
HEALTH WORKERS



Not until the 20th century did countries focus on educating and training all levels of health workers.

Although health care is, and has always been, only as good as the people who provide it, comprehensive development of the human resource component of health services-generally taken for granted in the past-only became a concern relatively recently. In the Americas it was not until the late 19th century that the need to strengthen the training of medical professionals was recognized, and not until much later, with gradual institutionalization of the health sector, did development of the full spectrum of health care professionals become an issue. As an area of concern,

The health of individuals, families, and entire communities depends on well-prepared health workers.

human resource development covered primarily education and training of personnel, until recent recognition of the complexity of policy and planning, utilization and administration, and permanent training of human resources led to a broader scope of activities. The 20th century story of preparing people to staff health services in the Hemisphere parallels the evolution of the Pan American Health Organization and, indeed, largely reflects PAHO's efforts to improve health by developing the most critical of resources: health workers.

Initial Steps Since the early years of the Pan American Sanitary Bureau, political leaders have recognized that if countries are to solve their health problems they must first train health workers. In 1911, the Fifth International Sanitary Conference recommended that the Governments of the Americas set up courses "of a practical nature in hygiene and sanitation." Decades later, in 1946, world leaders would spell out, in the Constitution of the World Health Organization, a main function of WHO: "To promote improved standards of teaching and training in health, medical, and related professions."

At mid-century, the Organization embarked on a program to strengthen the preparation of health personnel. While already promoting the training of public health specialists through its incipient fellowships program, PAHO took some major preliminary steps to study human resource needs and delineate a plan of action to meet them, the aims of which were to stress prevention in medical education and to raise the standards of health workers' training. It followed **that** in 1953 the PAHO Directing Council approved a long-term plan to train health service professionals and technical personnel and to develop local and regional resources for that purpose. So important was the realization of this policy that one of the three main Secretariat divisions then established was that of Education and Training.

In pursuing that plan, and to clarify the issues and approaches involved, PAHO sponsored two path-breaking seminars on preventive medicine, in Viña del Mar, Chile, in 1955 and in Tehuacán, Mexico, in 1956, at which representatives of medical schools from all over the Hemisphere endorsed the teaching of preventive and social medicine throughout the course of medical studies. The decade closed with yet another important initiative, PAHO's convening of the First Conference of Schools of Public Health, in

Over the years, PAHO has facilitated the training of more than 250,000 health care workers—professionals, mid-level technicians, and auxiliaries—to staff health services in the countries of the Americas.

San Miguel Regla, Mexico, in 1959, which—like subsequent conferences held biennially—enabled school representatives to exchange experiences and information that over the years permitted the sharing of systematic approaches to the teaching of such public health disciplines as statistics, epidemiology, health administration, and environmental health, among many others.

Two important departments of preventive and social medicine were being developed in Ribeirão Preto, Brazil, and Cali, Colombia, to which, for promotion of preventive and social medicine in medical education, PAHO sponsored a series of travelling seminars and "human relations laboratories," emphasizing the importance of the teaching and learning process in changing professional education.

Planning and Education It was not until 1961, however, as part of the Ten-Year Public Health Program of the Charter of Punta de1 Este, that a comprehensive mandate was approved, which—recognizing the importance of educating and training personnel for improved health services—recommended: that a study be done of existing human resources in health, as well as of future needs; that ministries of health and education and universities work together on matters related to undergraduate and graduate education; and that hospitals and health centers be equipped to function as "training laboratories." These recommendations reflected problems prevailing at the outset of the 1960s—a general shortage of physicians, their poor distribution in many countries, and the "brain drain" of qualified Latin American professionals—and underscored the importance of planning for human resources in health.

Following those proposals PAHO, together with the Milbank Memorial Fund, sponsored two major initiatives: a study of human resources and medical education, using a methodology that correlated quantitative health care needs and the qualitative orientation in medical education; and a study of medical education and preventive and social medicine, whose findings were published in 1972 in the PAHO Scientific Publications Series *(La educación médica en la América Latina* by Juan César Garcia). The first was fully developed in Colombia and was also used in Argentina, while the second covered all countries of Latin America and greatly influenced understanding of the relationship between medical education, the social structure, and the process of economic production.

During this period Latin America was experiencing tremendous economic growth coupled with increasing awareness of the inadequacy of the Region's health services, its lack of professional resources, and pent-up demand for higher education. Combined, these conditions produced an explosion in health sciences education. From the mid-1960s to the mid-1970s the institutional capacity in Latin America to train physicians, nurses, and dentists doubled.

PAHO collaborated with numerous well-established and emerging institutions in promoting new organizational and educational approaches, and helped create national associations of medical schools as well as the Pan American Federation of Associations of Medical Schools. In addition, the Organization further emphasized fellowships; launched the first journal in the field, *Educación médica y salud,* which has been published on a quarterly basis since 1966; established the Regional Library of Medicine in São Paulo, Brazil; and set up the Textbook and Instructional Materials Program, offering appropriate texts—selected by representatives of educational institutions on the basis of evaluations of health profession curricula—at approximately half their commercial price.

As a reflection of the Organization's broadened scope in this area, what had been its Education and Training Division became a Human Resources Development Department that dealt with planning, education and training, and utilization of health personnel. PAHO collaboration in this area was, however, not limited to that department's activities; rather, it involved extensive interaction between universities, research centers, and all of the Organization's technical programs, as well as direct training of professional personnel at the Pan American Centers.

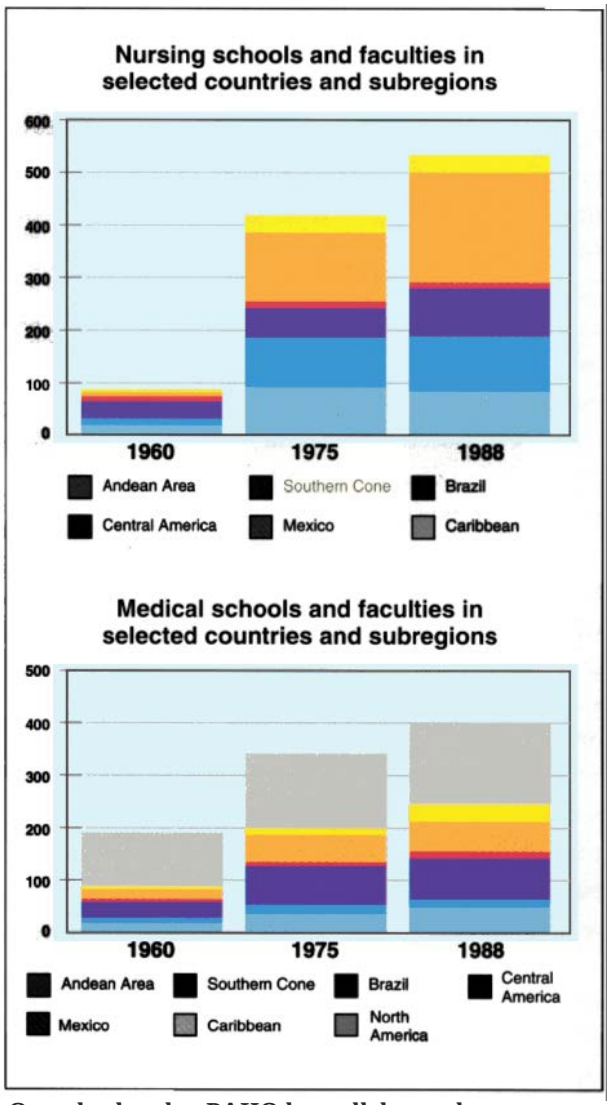
Autochthonous Development At the beginning of the 1970s the Organization responded to the need to systematize the preparation of specialized personnel, capable of dealing comprehensively with all facets

"One of the most valuable health resources in any community is the nurse, and it is my hope that the education of nurses can be intensified in all the countries of the Americas" —Eleanor Roosevelt in a letter to the Director of the Pan American Sanitary Bureau, Dr. Fred L. Soper, 1948.

of human resource development, by holding, yearly throughout the decade, **short** courses to provide advanced training to deans, department heads of professional schools, and personnel managers in the ministries of health This period corresponds to a push for autochthonous development with greater emphasis on countries' self-reliance, leading to some reduction in the award of fellowships abroad, more local initiatives for advanced training, and support for institutional development. The aim was to upgrade the skills of professors and health care providers, develop educational technology, create and strengthen a network of biomedical information, promote social sciences applied to medicine, and encourage biomedical and socioepidemiologic research.

A number of important initiatives resulted from this new focus on national and regional self-reliance. In Brazil and Mexico, the creation of two Latin American Centers of Educational Technology for Health (CLATES) helped to train more than 10,000 teaching staff and to develop 22 other national centers along similar lines. PAHO helped establish three programs oriented toward comprehensive development of health personnel with emphasis on primary health care: the Program for Strategic Training of Health Personnel (PPREPS) in Brazil, set up with a trust fund from the Government; the Health Training Program for Central America and Panama (PASCAP), in Costa Rica, established with funding from the United Nations Development Program (UNDP); and the Program for Training Allied Health Personnel in the English Caribbean, in Barbados, likewise with UNDP funding. PAHO and the W. K. Kellogg Foundation undertook as joint ventures two regional, multicenter projects: one based in several national nuclei of education and research (NIDES-PLADES) to explore innovative approaches to developing human resources; and the other to promote advanced training in health management (PROASA) through the interaction of 10 programs in health units or **schools** in Latin America with pub**lic** and business **administration** education programs.

By the mid-1970s the boom in new medical schools began to be questioned as the ineffectiveness of health manpower plans formulated in the previous decade became increasingly evident. Normative planning climaxed with the Pan American Conference on Planning Human Resources in Health, held in Ottawa, Canada, in 1973, since then giving way to efforts to curtail the expansion in the number of schools and to introduce regulatory policies. Two important meetings—held in Caracas, Venezuela, in 1976 and Bahia, Brazil, in 1977—dealt, respectively, with basic principles for development of medical education and requirements for the creation of new schools.



Over the decades, PAHO has collaborated directly with the increasing number of institutions established in Latin America and the Caribbean to educate nurses and physicians.

Another important milestone was the second meeting, in 1974, of the Committee on the Teaching of Preventive and Social Medicine, which reviewed the progress made using the preventive orientation and introduced a new approach that recognized that the structure of medical care is the predominant influence on the process of human resource development. This view led to a recognition that medicine as a whole and the integration of teaching and learning could not be the responsibility of preventive medicine units, rather it involved the entire school; it stressed, moreover, the study of society and trends in medical practice and health conditions, using the tools of social science.

In response to this trend, PAHO promoted studies on the dynamics of the health labor market and utilization of the work force. Research was centered around the issues of employment and unemployment, manpower shortages and excesses, labor conditions, and performance evaluation.

In light of the lack of intermediate-level personnel, the Organization launched a large-scale training program to upgrade nurse auxiliaries and supported schemes to train technicians, promoting as well policies in these two areas.

Finally, in the interest of strengthening performance and the quality of services to support primary health care in the extension of health services coverage, the Organization spearheaded a program to provide continuing education to health workers. That program, funded by the Canadian International Development Agency, aimed at changing the educational orientation from a discipline-based approach (e.g., obstetrics, pediatrics) to a program-based approach (e.g., maternal and child care) and entailed a network scheme involving most of the countries of Latin America and the Caribbean.

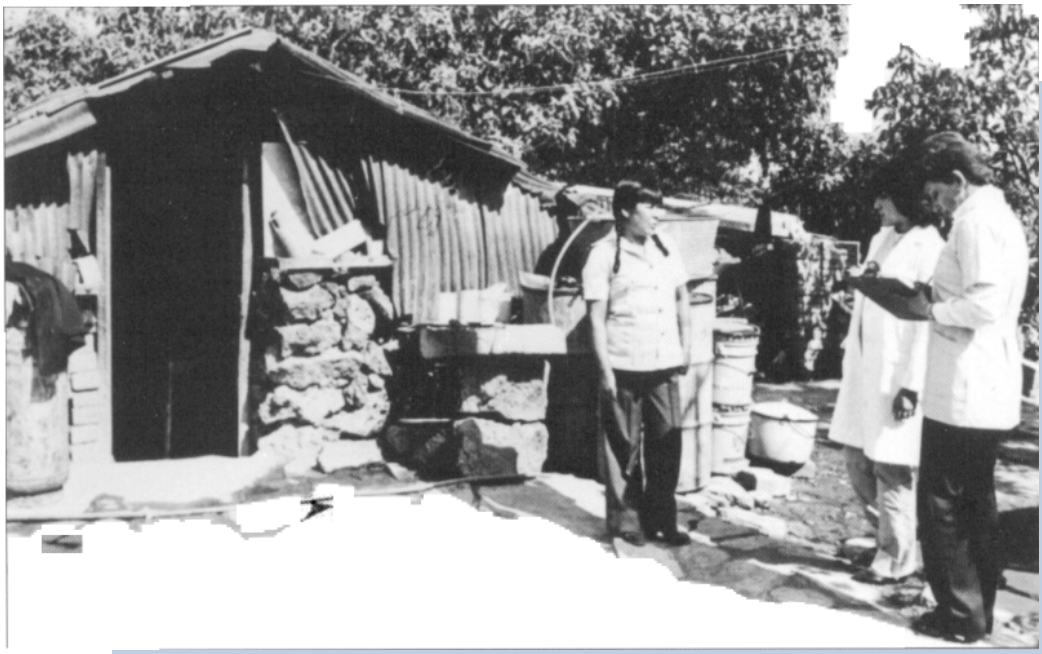
Stressing Services During the 1980s, the economic crisis and the adjustment policies formulated to deal with it severely crippled the Region's social sectors, particularly health and education. Marked reduction of public expenditures on nonproductive activities brought to a standstill employment expansion and salary adjustments, further aggravating the health sector "brain drain." Funding for education and training dropped, educators' salaries fell, motivation declined, and laboratories and libraries deteriorated.

PAHO, to both redress these problems and link its human resource development thrust with efforts to transform the health sector through decentralization and strengthening of local health services, reoriented its approach to health sciences education using an innovative methodology, "prospective analysis." Basically, that methodology consisted of institutional and program development studies centered in future scenarios aimed at attaining the goal of health for all by the year 2000. With the involvement of "actors" responsible for both the educational program and the health services, and detailed analysis of a set of indicators related to the scenarios, participants reached a better understanding of the factors that influence the education of health professionals.

Experience with the continuing education program prompted the search for innovative technologies for in-service training. A new approach-introduced in a number of countries and involving all levels of health personnel-stressed the importance of health workers' education becoming a permanent process, closely related to how actual health work is carried out and the problems it entails, and of users' and providers' participation in decisions and activities related to education and practice.

With the aim of integrating health science education and practice, clinical training shifted from an academic to a service setting covering a wide segment of the population, across all levels of care and involving staff from all clinical departments as well as from the health services. A further step in this integration entailed an interdisciplinary approach to the study of the relationship between health and disease, taking into comprehensive consideration both biological and social aspects.

Latin America and the Caribbean now had more than 100 public health training programs, but the development of most of them was limited. In light of that situation, PAHO launched an initiative aimed at stimulating greater exchange among the schools of North and Latin America, in the interest of improving research and education, especially in the critical fields of epidemiology and administration. This ini-



Working with local communities gives medical students greater insight into people's real health needs.

Since the mid-1950s, PAHO has promoted the in-service training of health care professionals, in towns and villages throughout the Hemisphere.

PAHO's Health Training Program for Central America and Panama, headquartered in San Jose, Costa Rica, emphasizes the importance of primary health care in the comprehensive development of human resources.

tiative was part of an effort to promote leaders capable of maintaining a sociopolitical dialogue, in an intersectoral context, on a broad array of issues: health and development, health situation and trend assessment, health financing and economics, the labor market, technology development and evaluation, and reconsideration of health care delivery in its curative, preventive, and promotional aspects. On the basis of a review of this initiative, the First Ibero-Pan American Conference of Schools of Public Health, held in San Juan, Puerto Rico, in 1988, issued a declaration of the schools' collective commitment to promote leadership, by recruiting all social sectors to the health-for-all movement, and to enhance the role of health education in health care delivery.

Starting in 1985 the Organization undertook an even more direct contribution to developing leaders in the health field by setting up an International Health Residency Program, which annually receives on average 10 participants. The residents spend the year working for PAHO at Headquarters and in the countries, comparing the health situation and patterns of health services delivery in different contexts and studying the international dimension of factors influencing health.

Future Challenges In the 1990s the Organization faces enormous challenges posed by the regional economic recession and sweeping worldwide political changes. These developments profoundly affect the health sector and its work force, as demonstrated in the weakening of many educational institutions, the lack of appropriate manpower policies, the insufficiency of public health approaches, the relative ineffectiveness and inefficacy of the health care process, and the inequity of the system as a whole. It has been recognized that conventional paradigms, such as the essentially scientific and institutionalized model of medical care proposed by Flexner, no longer work, and that the efforts of social and preventive medicine to effect the changes needed in human resource development have proved unsatisfactory.

In light of this situation, PAHO is striving to bring together talents from the educational and service fields to analyze and promote development of the theory and practice of public health. A select group of leaders from North and Latin America met in New Orleans, in 1991, to discuss this subject. Thereafter, a more detailed analysis began of the political, scientific, technical, and operational changes that

Today, education in the health sciences requires ready access to current biomedical literature and information technology.

Dealing with complex health problems, such as AIDS, requires the thorough training of health technicians.

have taken place and their repercussions on the social process of services, education, and research. It is expected that the involvement of experts from throughout the Americas will favor wide acceptance and political endorsement of a new kind of development—an ethical development. Along these lines, a network of educational institutions working in the health sciences in the Region is being mobilized to facilitate the exchange of theoretical and practical information, aimed at reorienting social action in the health area.

The Organization is promoting interprogrammatic cooperation among associations dealing with the education of health professionals, including medicine, nursing, dentistry, public health, and social medicine. A First Integrated Conference was organized to discuss the role of the Latin American university in improving the health of the population, with the intention of bringing the educational sector in more direct contact with the needs and requirements of local health services.

These endeavors have strengthened the promotion of leadership and made possible a more comprehensive review of institutional plans to cope with emerging developments in the area. In support of these trends, health sciences educational institutions, working together with the health services, are fostering the strategic planning of their actions. Also, a new international course on human resource development, using the best available scientific talents in the Region, is being offered once a year, each time in a different country.

In sum, the development of methological approaches, the production and dissemination of scientific and technical information, and the mobilization of qualified personnel in the countries have been instrumental in introducing innovations, promoting leadership, and creating greater visibility for human resources in the health field. Over the years, using a variety of programs to adapt to the evolving needs of the countries, the Pan American Health Organization has striven to enhance the education and performance of health personnel-doctors, nurses, dentists, engineers, veterinarians, and nutritionists as well as mid-level and auxiliary workers. In the process, PAHO has facilitated the training of more than 250,000 people through fellowships, participation in courses and seminars, and interaction with experts. In the end, however, the beneficiaries of these endeavors have been all the people of the Americas, as their health is the ultimate goal of the Organization. ❖

VETERINARY

PUBLIC HEALTH

Animals play an important role in many people's lives and have an impact on human health and well-being.

The health of human beings is tied to the health of animals, both domestic and wild, in many ways. Certain diseases (called zoonoses) can be transmitted by direct or indirect means between man and other animals. Infections and parasitic diseases of livestock may kill the animals outright, may necessitate their destruction, or may reduce the survivors' production of meat or milk, all of which can in turn reduce the food supply available to humans. Such diseases are also an obstacle to international trade, as well as a serious financial dram on livestock owners and, more generally, on the economy of a community or country-an impact which may have broad repercussions for health in a society.

The vehicle transmitting infection from animal to man is often food of animal origin. Thus, ensuring that this food is safe for human consumption has always been part of the veterinary public health field of action. Extending this activity to include the protection of all foods, regardless of their origin, is a logical step in mating a comprehensive program.

Veterinary public health became an official part of PAHO's structure in 1949, with the hiring of the first consultant in veterinary medicine. But even prior to that date, the subject had figured prominently in the work of the Pan American Sanitary Bureau. Over the years, PAHO has supported diverse activities to equip the countries of the Americas to cope with a wide spectrum of animal health problems.

Zoonoses More than 200 diseases are known to be transmissible between animals and humans. To help the countries fight these important diseases, PAHO established the Pan American Zoonoses Center (CEPANZO) in 1956 under an agreement with the Government of Argentina. Located for its first 10 years in Azul, Argentina, and afterward in two different facilities in Buenos Aires, the Center provided training to laboratory and field personnel and technical advice to the Member Governments on zoonoses control programs, standardization of diagnostic tests and reagents, and production of biologicals. It also conducted extensive research on vaccines and other control methods, served as a reference laboratory, and issued publications on zoonotic diseases. The valuable work of this Center, which closed in 1991, will now be continued by the newly inaugurated Pan American Institute for Food Protection and Zoonoses (INPPAZ), also located in Argentina.

Several zoonoses were the focus of PAHO's attention even before the founding of CEPANZO. One was brucellosis, an economically important bacterial infection of cows, goats, sheep, and swine that can be transmitted to humans through unpasteurized milk or by contact with infected animal tissue. The XII Pan American Sanitary Conference in 1947 adopted a resolution proposing an inter-American commission and national committees for the study of brucellosis and standardization of diagnostic methods. Growing recognition of the importance of brucellosis as an occupational disease led the Bureau to sponsor three inter-American congresses and two training seminars on diagnosis and vaccine productionby the early 1950s. From its inception, CEPANZO worked toward the

At CEPANZO's first installation in Azul, Argentina, a local rancher stops by to chat with staff. The Center conducted research and provided technical assistance to the countries in diagnosing and controlling zoonotic diseases.

The governor of the State of Puebla, Mexico, inaugurates a campaign in 1954 to vaccinate cattle with an improved vaccine against bovine rabies.

standardization of diagnostic antigens, and over the years PAHO has continued to support research and provide technical assistance to the countries for brucellosis prevention and diagnosis.

The 1947 Sanitary Conference also called attention to the need for more ordinances and better enforcement to control rabies transmitted by stray dogs. However, since the rabies virus can infect any warm-blooded animal, it can also be spread by wild species and poses a danger for livestock as well as humans. At the beginning of the 1950s, in response to severe livestock losses and increased human cases along the United States-Mexico border, the Bureau provided equipment, materials, and a full-time expert to coordinate rabies control programs and cattle and dog vaccination campaigns on both sides of the border. After an outbreak in Puerto Rico, the Bureau sponsored a rabies control conference in Kingston, Jamaica, in 1950, which brought together representatives from all over the English- and Spanish-speaking Caribbean area in the first effort at subregional coordination of anti-rabies measures. Thanks to vigorous control efforts, today the countries of the Caribbean, with the exception of Cuba, the Dominican Republic, Grenada, and Haiti, are rabies-free.

Over the years, rabies has continued to be a priority concern of the Organization and the countries. An international seminar on rabies in the Americas, convened by PAHO at CEPANZO in 1967, led to the establishment of a rabies surveillance system for the Americas. The Center was also instrumental in making available a more effective vaccine against rabies, the suckling mouse brain (SMB) or Fuenzalida vaccine originated at the Bacteriologic Institute of Chile. Not only does this vaccine confer better protection, it also causes far fewer adverse reactions than the classic rabies vaccine. SMB vaccine is now the standard employed throughout the Region for vaccinating humans and animals and has been a key to rabies control in the Americas.

In 1983, the goal of eliminating rabies from the principal cities of Latin America was adopted by the countries, which identified 414 cities in 20 countries as the targets of this campaign. PAHO acted to secure support from international financing sources, including the European Economic Community (EEC), the Rockefeller Foundation, the United States Agency for International Development (USAID), and the Arab Gulf Program for United Nations Development Organizations (AGFUND). By 1989, through intensified vaccination of dogs and improved case surveillance, 364 of these cities were free of the disease. The final attack phase is under way

in the remaining 50 large cities, and the next step will be to extend the campaign to medium-sized and small cities.

In the meantime, increased attention is also being given to rabies transmitted by wild animals, particularly the vampire bat, a blood-feeding bat unique to the Americas and found from Mexico to northern Argentina. This species is responsible for the largest number of wildlife-related human cases and also transmits the disease to cattle in tropical America. The Organization has begun consultation meetings on extending surveillance and defining control strategies for rabies transmitted by vampire bats. In conjunction with the U.S. Centers for Disease Control, research is also under way on techniques to identify rabies virus strains from vampire bats and other animals, so that the required technology can be transferred to laboratories in several Latin American countries.

Hydatidosis is a parasitic disease humans can contract from dogs, which in turn get it by eating the infected viscera of domestic stock, particularly sheep. It causes the formation of large cysts which may rupture and prove fatal if not detected early and surgically removed. PAHO began hydatidosis control activities in 1950 with a public education campaign aimed primarily at high-prevalence areas in southern South America. A major contribution of the Organization was the development and dissemination by CEPANZO of the arc-5 immunodiagnostic test, which allows hydatidosis to be recognized in humans at an early stage.

The microorganism causing bovine tuberculosis can be spread to humans through inhalation or in unsterilized milk, making the disease a danger for people in rural areas who consume raw milk and home made dairy products. In 1991 the countries of the Region determined that it would be more cost-effective to eradicate bovine tuberculosis than to maintain existing control programs. Therefore, the Governments requested PAHO's assistance in developing eradication strategies and a plan of action to implement them. This process was begun at an inter-American meeting held in November 1991 in Mexico.

Other zoonoses that have been signaled by the Member Governments as veterinary public health priorities are leptospirosis, anthrax, equine encephalitides, larva migrans, taeniasis-cysticercosis, toxoplasmosis, and trichinosis. PAHO continues to help the countries focus their limited resources on measures that will have the greatest impact on these diseases.

Cattle are a mainstay of economic life in many areas of the Americas. Diseases that threaten livestock also endanger human livelihood and nutritional status.

Personnel of PAHO's PANAFTOSA Center examine the tongue of a cow for lesions indicative of foot-and-mouth disease.

Foot-and-Mouth Disease Technically also a zoonosis, this disease is rare and benign in humans, but for many years it had the power to determine whether cattle could be raised profitably in any given area. Foot-and-mouth disease, also known as aftosa, was introduced in the mid-19th century into the United States and southern South America, from whence it spread northward. Strict quarantine measures, destruction of infected and exposed animals, and vaccination ended the sporadic outbreaks that occurred in North America and Mexico until the 1950s, but **this highly contagious viral disease has persisted** in parts of South America. Foot-and-mouth disease still causes severe economic losses for the South American livestock industry, amounting to some $US510 million per year, even though its impact has been greatly reduced (and eliminated in some areas) by national control programs that began in the 1970s. By debilitating cows and thus reducing meat and milk production, the disease decreases the protein supply available to the human population. Swine, goats, and sheep can also become infected.

The need for international cooperation to limit the spread of the virus spurred the Organization of American States in 1950 to request that PAHO develop a program to fight foot-and-mouth disease. With collaboration from the Inter-American Institute of Agricultural Sciences, assistance from the Government of Brazil, and funding from the OAS Technical Assistance Program, the Pan American Foot-and-Mouth Disease Center (PANAFTOSA) opened near Rio de Janeiro in 1951. From the start, the Center has engaged in research on the aftosa virus and ways to improve vaccines and diagnostic techniques, and has provided technical assistance and training to personnel in the national control programs of affected Member Countries. In the 1960s it also helped the countries develop bilateral **agreements requiring vaccination,** inspection, and exchange of information to prevent the disease from crossing borders. PAHO has continued to administer the Center and in 1968 took over its funding through contributions from Member and Participating Governments.

Though closely linked to human health, foot-and-mouth disease, as well as some other zoonoses, clearly falls within the domain of the agricultural sector. To enhance cooperation with this sector, in 1968 PAHO began convening regular meetings of representatives of the ministries of agriculture to review the activities of PANAFTOSA and CEPANZO and discuss other matters of mutual interest. The first Inter-American Meeting, at the Ministerial Level, on Foot-and-Mouth Disease and Zoonoses Control was held at PAHO Headquarters in Washington, D.C., in April 1968, and the meeting was reconvened annually until 1981 and every two years since then. Each meeting focuses on topics ranging from the role

of animal protein in human nutrition to tick-borne zoonoses. The 1980 meeting was renamed the Inter-American Meeting, at the Ministerial Level, on Animal Health (abbreviated as RIMSA), in recognition that the discussions encompassed this broader theme.

Motivated by the successful elimination of foot-and-mouth disease in Chile and the creation of other disease-free areas, the delegates at V RIMSA in April 1987 decided to launch a campaign to eradicate foot-and-mouth disease from the Hemisphere and requested that PAHO develop an eradication plan. A Hemispheric Committee for Foot-and-Mouth Disease Eradication, including government and industry representatives from all subregions, was established. It approved the plan of action at meetings in 1988 and 1989 and continues to evaluate its progress. PAHO, through PANAFTOSA, coordinates financial support from the international community, including the Inter-American Development Bank (IDB), the Food and Agriculture Organization of the United Nations (FAO), and the Inter-American Institute for Cooperation on Agriculture (IICA).

Two achievements were vital to the eradication effort. One was the development of an oil-adjuvant vaccine through collaboration between PANAFTOSA and the U.S. Zoonosis Control Center. This vaccine provides longer and more reliable protection of young animals against the virus and thus reduces the need for, and cost of, revaccination. The second was a continental surveillance system for foot-and-mouth and other vesicular diseases in animals that has become one of the most effective in the world, permitting early identification and control of outbreaks. PAHO also helped establish a laboratory network for rapid diagnosis and typing of viruses causing these diseases. With a longer-acting vaccine, strength-

The Pan American Foot-and-Mouth Disease Center near Rio de Janeiro, Brazil.

Strict compliance with quarantine regulations is necessary to prevent the spread of infectious animal diseases. Such vigilance has kept the Caribbean area free of foot-and-mouth disease.

PAHO has worked with the countries on conserving their populations of **non-**human primates, like these owl monkeys (Aotus). These ani**mals, an important** component of natural ecosystems, are also **vital to biomedical research.**

ened disease surveillance, international coordination, and community participation, the eradication campaign hopes to achieve its goal by 2009.

Biomedical Models For many years, animals have been used extensively in biomedical research as models for the study of human diseases and test subjects in the development of vaccines and other biological products. Although there is now a trend toward reducing the use of animals in experimental research, animal models remain vital to understanding some important human diseases. PAHO has been active in projects to ensure the availability and welfare of experimental animals, as well as research into alternative *in vitro* models.

Nonhuman primate species native to the Americas are essential for research on such illnesses as malaria and hepatitis. In an effort to resolve the apparent conflict between utilization of nonhuman primates in biomedical research and their conservation, PAHO and the Government of Peru convened an inter-American meeting on these activities in Lima in 1976. The discussions highlighted **the** fact that primate conservation and use in research can be complementary. Countries with primate populations were encouraged to take steps to protect them as a natural resource and to set up breeding colonies, while researchers were reminded only to use these animals when no alternative biomedical model exists.

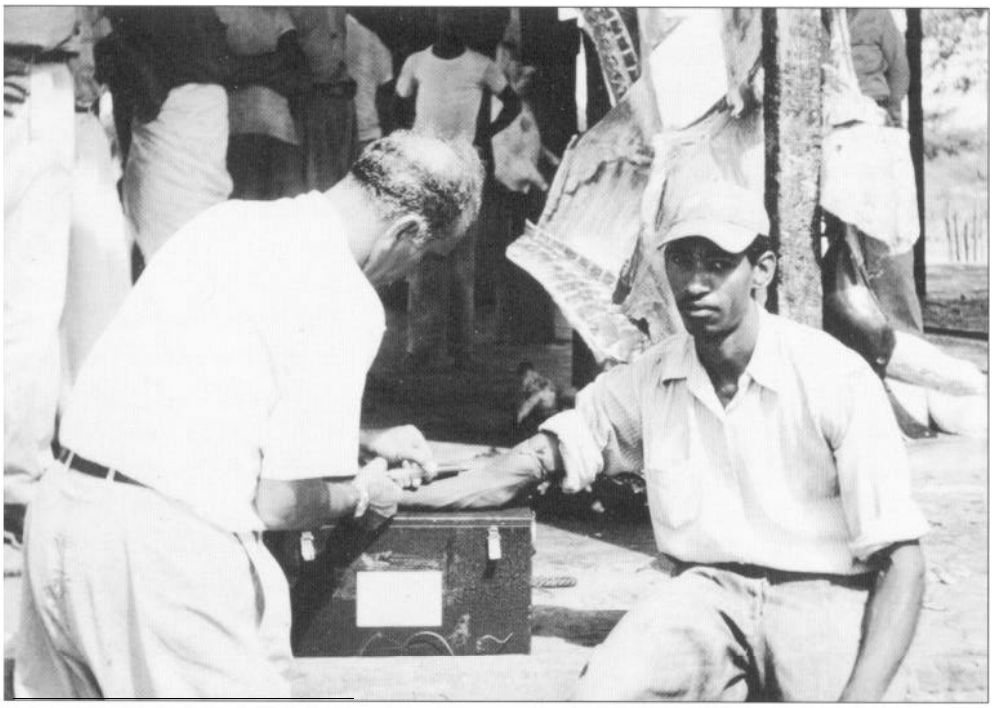
Concern for the protection of nonhuman primates led PAHO to collaborate with the Government of Peru and the U.S. National Institutes of Health (NIH) in setting up a primate center in Iquitos, Peru, a research and conservation station where several primate species are bred under semi-captive conditions in their natural habitat. Similar projects were undertaken with PAHO assistance in Brazil and Colombia in the 1970s and in Bolivia beginning in 1985. Funding has been provided under agreements negotiated by PAHO with NIH and USAID. PAHO continues to collaborate in research geared toward preserving these important animals.

Veterinary Education and Training Veterinarians were instrumental in establishing the field of public health, since their training was applied to early food protection efforts. However, in more recent years, clinical practice has been emphasized in the curriculum of most veterinary schools at the expense of public health training, even though there is a tremendous need for veterinary professionals with expertise in this area. PAHO began addressing this problem by sponsoring a series of four seminars on the Teaching of Preventive Medicine and Public Health in Schools of Veterinary Medicine in the Americas, the first of which was held in Kansas City, Missouri (U.S.A.), in 1959.

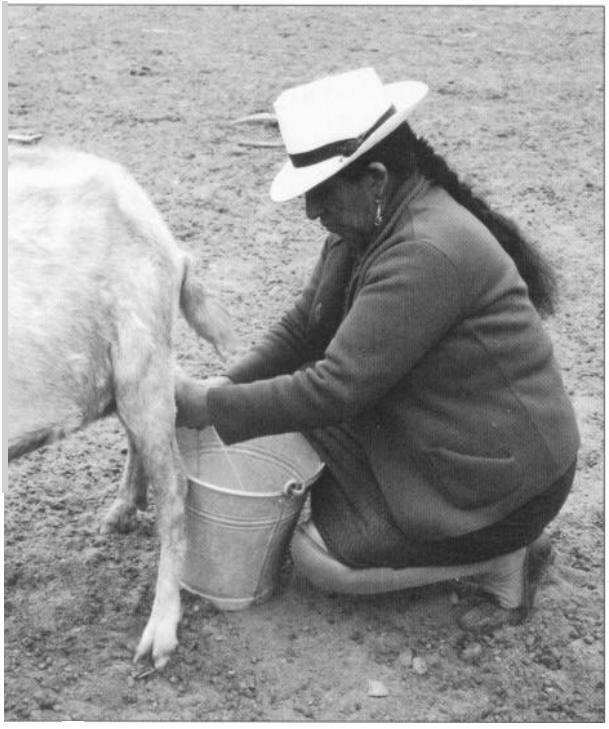
The need to produce more thoroughly trained public health veterinarians persists, and one of PAHO's focuses is the development of teaching materials for use in both veterinary schools and graduate programs in public health. This work was exemplified by the publication of technical manuals (through PAHO's Expanded Textbook and Instructional Materials Program) used in courses of the Regional Program for Training in Animal Health in Latin America, a four-year effort sponsored by IDB in the mid-1980s. During the same period, a project to train auxiliary animal health personnel, undertaken with collaboration from the United Nations Development Program (UNDP) and the Governments of the English-speaking Caribbean, helped provide much-needed services in an area that suffered from a shortage of veterinarians, while illustrating the principles of use of appropriate technology and technical cooperation among developing countries.

Training has been an important function of both of PAHO's veterinary public health centers, through seminars, courses, provision of technical assistance to other institutions, and preparation of manuals. In addition, the Organization has issued a number of publications designed to educate veterinary public health personnel on topics ranging from the operation of a municipal slaughterhouse to the investigation of food-borne disease outbreaks, and has also produced two editions in both English and Spanish of a comprehensive textbook on zoonoses widely used in veterinary schools.

Training of veterinary public health assistants in Guyana, through a PAHO/WHO-UNDP-CARICOM project, provided a cadre of personnel to respond to animal health problems.



An abattoir worker in the Dominican Republic has his blood drawn as part of a 1954 survey of the incidence of brucellosis. This occupational hazard has been reduced by health education, precautions during butchering, and vaccination of animals and workers. Brucellosis, as well as other diseases, can also be transmitted in unpasteurized milk.



Veterinary Public Health Services It is difficult to draw the line separating veterinary public health services from human health services. Animal health laboratories already perform many analyses related to human disease and are capable of carrying out other diagnostic functions. Epidemiologic surveillance systems for animal diseases can be used to assess human disease risk. Public education about animal health problems conveys important health promotion messages. PAHO is increasingly involved in seeking opportunities to strengthen local human health systems through mobilizing animal health resources. Interdisciplinary activities target human health problems such as zoonoses and food-borne disease.

Food Protection Food-borne disease is a major health problem in the Region and poses a special danger to young children. Food protection was among the earliest interests of the Pan American Sanitary Bureau, particularly with regard to milk, potentially the vehicle of a number of illnesses but also an important part of children's diet. Recommendations aimed at promoting a safe milk supply through application of the newest scientific methods (such as pasteurization) were the subject of resolutions at the VIII (1927), IX (1934), and X (1938) Pan American Sanitary Conferences. In 1934 the Bureau published and distributed a Spanish version of the U.S. Public Health Service Standard Milk Ordinance to serve **as** a model for national or municipal milk regulations.

Over the years, PAHO has advised the countries on the establishment of food protection programs, offered food analysis services at CEPANZO, and provided training for food inspectors. The Organization has also cooperated closely with the Codex Alimentarius Commission, which was created by the World Health Organization and FAO in 1981 to formulate and publish standards on food quality and safety. PAHO sponsors workshops and seminars in conjunction with the yearly meetings of the Regional Coordinating Committee of the Codex Alimentarius for Latin America and the Caribbean and works jointly with FAO to promote the development of food standards legislation by the countries.

In 1985, PAHO was one of the sponsors of the Inter-American Conference on Food Protection, held at PAHO Headquarters. The 33 countries participating in the conference requested PAHO and FAO to prepare a five-year regional program to strengthen national food protection programs in the Americas. The XXII Pan American Sanitary Conference (1986) approved a plan of action which called for food safety programs to be in place in more than half of the Region's countries by 1990. In the interim the Organization has sponsored several subregional workshops on planning and carrying out food protection programs.

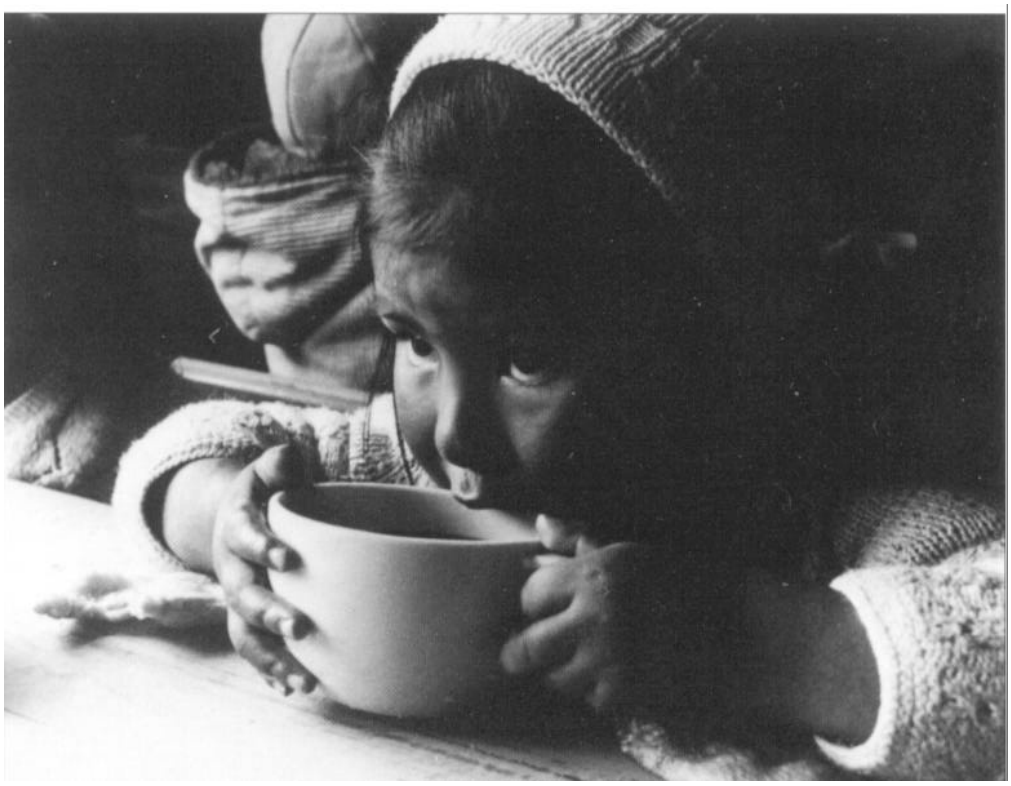
Recognizing that better knowledge of the incidence of food-borne diseases is vital to their control, in 1989 PAHO convened a meeting on epidemiologic surveillance of these diseases, which led to creation of a Latin American surveillance network. Microbiological analyses, which are essential to tracing food-borne disease outbreaks, have been provided by CEPANZO and now by INPPAZ, in cooperation with other laboratories, Since the onset in 1991 of the cholera epidemic-read by contaminated water and food-epidemiologic surveillance of food-borne illness has taken on increased urgency, and strong laboratory support and food protection services are more vital than ever. The IDB and PAHO are conducting an 18-month project to bolster the countries' capabilities in these areas, sponsoring two international seminars and 25 national training courses. Foods sold on public streets in unhygienic conditions are particularly likely to spread cholera or other diseases, and PAHO and FAO are working with the countries on developing guidelines to ensure the safety of street food while not depriving the vendors of their livelihood.

PAHO has long been a source of technical information on the safe handling of foods of animal origin.

With cooperation from PAHO and FAO, the countries are developing standards to ensure greater safety in the way food is marketed, while protecting the income of food vendors.

Food protection is an economic as well as a health issue. Billions of tons of food are lost each year because of contamination and improper handling, and the real or perceived threat of food-borne disease can lead to economically crippling trade restrictions. Tourism can also be adversely affected, which has led to PAHO's recent "health and tourism" initiative, designed to protect the health of tourists and local inhabitants and the economies of the countries. Thus, PAHO's cooperation with the countries in food protection, as in the other diverse areas of veterinary public health, has far-reaching benefits for the societies of the Region.❖

HEALTH THROUGH NUTRITION



A society's well-being rests on the good nutrition of its citizens-most especially of its children.

Good nutrition is essential to an individual's health, as well as to society's productivity, and the community's well-being. In Latin America and the Caribbean, nutritional deficiencies, which are more common among low-income groups at high biological risk, pose a serious public health problem and contribute to high morbidity and mortality rates, especially in children under five years of age.

Basically, malnutrition results from either insufficient food consumption-due to flaws in a country's economic structure, social organization, or food supply mechanisms or to the low purchasing power and productivity of poor families-or from an inadequate biological utilization of nutrients. The latter, in turn, can be caused by infec-

tious or parasitic diseases. Moreover, excessive or imbalanced nutrient consumption also plays a role in the development of certain chronic conditions, such as diabetes, obesity, coronary heart disease, and certain forms of cancer.

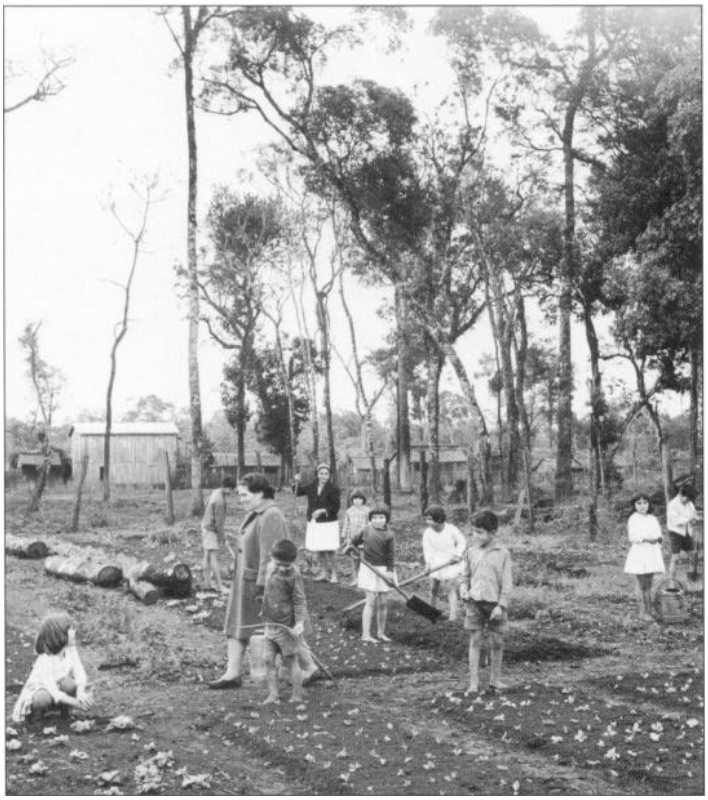
Given these complex problems, the Pan American Health Organization has given technical support to the Region's countries in formulating, implementing, and evaluating policies and strategies aimed at identifying and controlling the various factors that affect people's nutritional status and undermine their food consumption.

The First Steps When the Pan American Sanitary Bureau was established in 1902, it mainly dealt with the control of infectious diseases, but the ever clearer correlation between eating habits and human health and productivity sparked the Bureau's interest in new developments in the field of nutrition. During the 1920s, many of these developments were published in the *Boletín de la Oficina Sanitaria Punamericana,* and beginning in the 1930s, a section dealing exclusively with nutrition-related topics appeared regularly in that publication.

The Bureau's sphere of action gradually expanded from communicable disease prevention in general to establishing hygienic standards for food products. This led to the preparation, translation, and distribution of the "Ordenanza Modelo para la Leche" [Standard Milk Ordinance], which served as a basis for national and municipal regulations for pasteurization. The Bureau's efforts to ensure the safety of milk and milk products continued throughout the 1930s.

Nutritional problems that emerged from the Great Depression in 1929 led the Bureau to study nutritional habits and food consumption in the Region. In 1934, the IX Pan American Sanitary Conference recommended that the Governments create institutes that would determine the composition and nutritional value of foods produced by each country and study problems related to food production, processing, and distribution. In 1936, the Committee on Nutrition was created as the first permanent technical body to be established

One of the Organization's earliest efforts in nutrition targeted ensuring the safety of milk and milk products through technical assistance, fellowships, and the provision of supplies and equipment. In the 1950s, two bacteriologists in the Public Health Laboratory in Tlalpan, Mexico, control the quality of powdered milk.



As a way to stimulate the community's interest in good nutrition and improve the food habits of children and their families, the Organization, working with FAO and UNICEF, established a program to set up school gardens. These schoolchildren in Paraguay tend to their vegetable patches.

through a Pan American Sanitary Conference vote. In subsequent Conferences, the strict focus on hygiene gradually gave way to one in which nutrition was approached as a public health concern closely related to social well-being.

The Bureau's nutrition activities prior to 1940 had a wide and varied impact on policies in the countries, many of which set up government and industry-subsidized dining halls and established school-lunch programs and vegetable gardens, institutes, laboratories, educational centers, agencies devoted to nutrition from a health standpoint, and services of all kinds to improve nutrition. When in 1940 the IV Pan American Conference of National Directors of Health recommended that efforts to promote good nutrition be stepped up, the Committee on Nutrition prepared a series of menus for the various countries of the Region based on the local availability and cost of foods. In addition, the Bureau, in collaboration with the School of Tropical Medicine of Puerto Rico, published the first Spanish-language manual on food science for use in tropical areas.

PAHO's Food and Nutrition Centers Historically, PAHO has conducted its work in nutrition through the activities of two specialized centers: the Institute of Nutrition of Central America and Panama (INCAP) and the Caribbean Food and Nutrition-Institute (CFNI). The founding of the former in Guatemala City in 1946 was a far-reaching event. Established by agreement among six Central American republics and PAHO, and with the support of the W.K. Kellogg Foundation and the Massachusetts Institute of Technology, INCAP was established to foster the development of nutrition science. In 1949, a Nutrition Section was created within PAHO in order to strengthen technical assistance to the countries in this field.

Since its foundation, INCAP has sought practical solutions to nutrition-related problems through the efficient use of local produce, improvements in traditional diets, and the teaching of sound eating habits. INCAP's early efforts to reduce the prevalence of protein-calorie malnutrition, which is associated with high infant mortality rates in Latin American and Caribbean countries, led to the development of a low-cost, high-protein vegetable mixture, INCAPARINA, in the 1950s. Use and manufacture of the product soon spread to other countries, and today INCAPARINA continues to provide an excellent nutritional source for thousands of children. Its chief value lies, however, in having demonstrated- the feasibility of fighting malnutrition by taking full advantage of local food resources.

Today, INCAP is recognized as a prestigious source of information, experience, and technical guidance both within and outside the Region of the Americas. Its library provides services to thousands of people throughout the world, and

With the establishment of INCAP in 1946, nutrition work in Central America was forever changed. Through the years, the Institute's work has ranged far and wide: at the INCAP laboratories in Guatemala City (top left), the biochemical composition of foodstuffs, particularly proteins, were analyzed; dietitians visited even remote areas to monitor daily food intake of families (above); and INCAPARINA, the low-cost and highly nutritive vegetable mixture developed from local food sources, is manufactured, packaged, and distributed throughout the area (left).

its ongoing distribution of journals and other publications—chief among them *Archivos Latinoamericanos de Nutrición* (ALAN)—represents an inexhaustible source of information. INCAP is actively involved in education through the provision of postgraduate courses and other local and long-distance training opportunities.

Since 1949, when the Bureau acquired its second identity as the Regional Office of the World Health Organization for the Americas, it has endeavored to align its policies on nutrition with those of WHO, while simultaneously maintaining those orientations adopted in the course of its own history. The next several decades, during which greater attention was paid to nutrition-related needs within countries, saw the establishment of various national institutes, of the Regional Operational Network of Food and Nutrition Institutes, and of WHO's collaborating centers on nutrition.

The establishment, in 1967, of the Caribbean Food and Nutrition Institute through an agreement signed by PAHO, the Food and Agriculture Organization of the United Nations (FAO), the University of the West Indies, the Williams-Waterman Fund, and the Governments of Jamaica and Trinidad and Tobago also marked an event of singular importance. From its inception, CFNI has provided technical cooperation in human and material resource mobilization; personnel training; direct technical aid to countries; promotion of norms, policies, and strategies relating to food and nutrition; research; and information dissemination-mainly through radio talk shows, video programs, and two periodicals, *Cajanus* and *Nyam* News. As a result of the effectiveness of CFNI's strategies, which aim at the efficient utilization of locally generated resources, protein-calorie malnutrition no longer poses a major threat in most of the Caribbean countries, and the epidemiologic profile of malnutrition has currently shifted toward the noncommunicable chronic diseases.

Epidemiologic Trends and Primary Health Care PAHO's work in nutrition entered its most intensive phase in the mid-1960s. On the one hand, improved techniques for conducting community surveys greatly advanced the ability to assess nutritional conditions at the community level. Furthermore, several countries, motivated and supported by PAHO, FAO, and the United

During the early 1980s, as part of its overall emphasis on monitoring the needs of vulnerable groups, PAHO became increasingly concerned with the nutritional needs of infants and small children and began its campaigns to promote breast-feeding that are still in effect today.

Any improvements to the diet of the Region's inhabitants must respect traditional eating habits and rely on foods available locally. CFNI, whose headquarters in Kingston is shown above, developed strategies regarding the efficient utilization of locally produced food that have eliminated protein-calorie malnutrition as a major threat to most Caribbean countries.

Nations Children's Fund (UNICEF), launched the Integrated Applied Nutrition Programs in an effort to deal with major nutritional and health problems in rural areas through the coordinated efforts of the health, agriculture, and education sectors, and through the community's participation.

The 1970s marked the start of a regional movement to promote food and nutrition policies by urging Governments to establish priorities and take decisions oriented toward supplying citizens with basic foods and other services essential to their well-being. After the 1978 Declaration of Alma-Ata espoused the goal of health for all by the year 2000, Food and Nutrition Surveillance Systems were set up to protect groups at high risk of malnutrition. Through such systems, different sectors in each country gather information on the local availability, consumption, and biological utilization of food, and this makes it possible to track the effect of changing socioeconomic conditions and to anticipate any impending food shortage. Since their establishment, these surveillance systems have been a valuable political and economic weapon in the battle against hunger.

The main trends during the 1980s were the incorporation of nutrition services within the realm of primary health care and improved coordination with other disciplines in planning, programming, and research activities. Early in the decade, PAHO focused increased attention on the nutritional needs of infants and small children as part of its effort to monitor the needs of vulnerable groups. Along with UNICEF, it backed the International Code of Marketing of Breast Milk Substitutes adopted by the 34th World Health Assembly and initiated its current campaigns to promote breast-feeding.

Micronutrient Deficiency Control Measures
An important aspect of PAHO's activities in the area of nutrition throughout the years has been the control of specific nutritional deficiencies. As early as 1940, following a resolution of the IV Pan American Conference of National Directors of Health, the Bureau was studying the subject of vitamin-enriched foods and establishing scientific standards for their preparation. In the years that followed, iron, vitamin A, and iodine deficiencies, recognized as major problems in the Region, became the focus of special attention from PAHO and its nutrition centers.

Iron-deficiency anemia has long been a significant health concern in Latin America and the Caribbean, especially among women of reproduc-

tive age, young children, and the inhabitants of areas with a high prevalence of hookworm infection. In the 1960s, PAHO, in collaboration with FAO, launched a coordinated strategy aimed at investigating the epidemiology of anemia and its prevention. Results showed that iron-deficiency anemia in the Region can be traced to a complex interaction of multiple factors, including the insufficient intake of foods rich in iron. In 1963 PAHO sponsored the establishment of a regional reference center for nutritional anemia within the Venezuelan Institute of Scientific Research in Caracas to teach Latin American and Caribbean technicians and investigators how to study, among other things, the role of diet in iron-deficiency disorders. The results of such research led to the supplementation of wheat flour with iron in many countries.

Endemic goiter and ***cretinism*** are the two diseases most commonly associated with a diet low in iodine, although deficiencies of this micronutrient may cause a wide range of organic and functional disorders. These problems occur mainly in inland mountain regions. Beginning in the 1940s, the Bureau became a catalyst for the passage of national laws providing for compulsory iodization of salt in most countries. Nevertheless, progress has been thwarted in some locations by several economic, political, social, and geographic factors. In 1988, PAHO developed a regional project for the control of iodine-deficiency disorders in Latin America, and in 1991 the Directing Council proposed the target of eliminating such disorders from the Region by the year 2000. The latter is being promoted through the Expanded Program for the Control of Iodine-deficiency Disorders in Latin America, which provides sustained support to national control programs and a plan of action aimed at reinforcing iodization measures and their control.

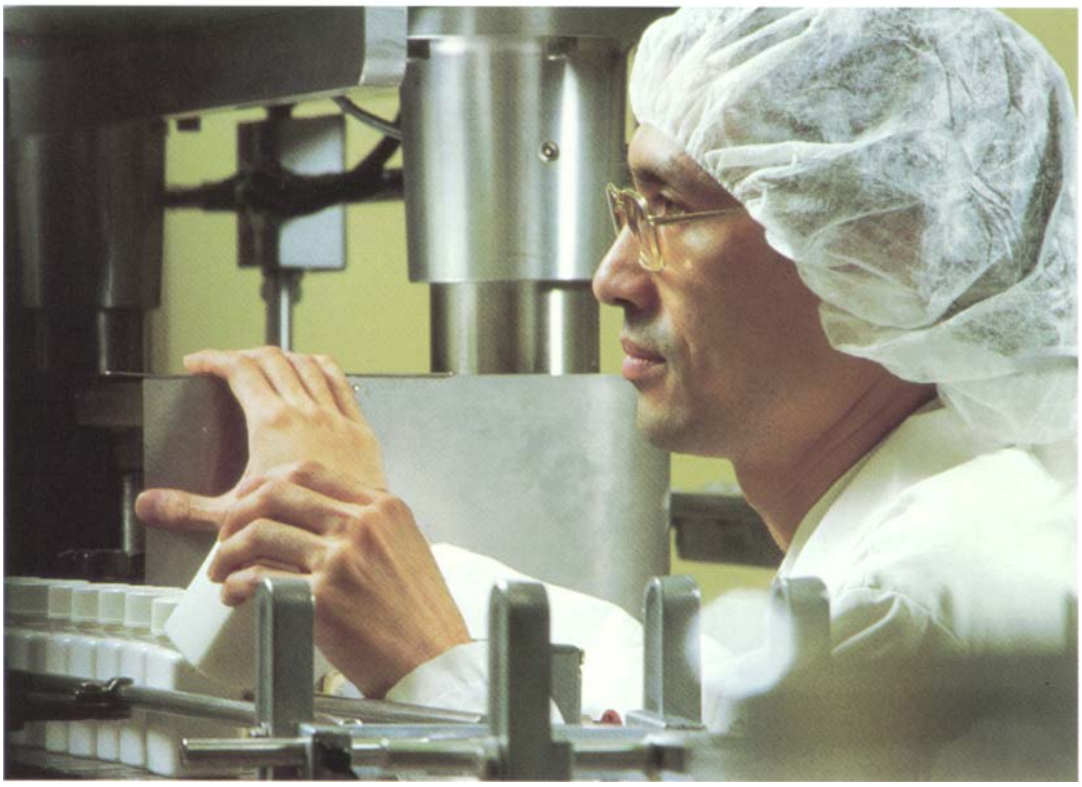
Vitamin A deficiency-which is associated with night or total blindness, impaired immunity, and increased risk of death among preschool children-came to the fore in Latin America and the Caribbean as a result of a world survey on xerophthalmia conducted by WHO in

PAHO and its nutrition institutes have been engaged in a battle to control specific nutritional conditions such as iron, vitamin A, and iodine deficiencies. A laboratory technician in Bogotá Colombia, weighs commercially produced iodized salt as a quality control measure; the compulsory use of iodized salt in most of the Region's countries has been the main thrust in the struggle against endemic goiter, cretinism, and other disorders caused by iodine deficiency.

1962 and of the first and second meetings (1962 and 1968) of the PAHO Technical Advisory Committee on Nutrition. Prior to that time the disease had received little attention in the Americas, despite its demonstrated frequency among certain groups, particularly poor children under age five. After an extensive epidemiologic study, INCAP determined that the fortification of refined sugar with vitamin A was the most promising way of correcting the deficiency, and in 1974 a fortification method fit for industrial purposes was developed. PAHO has developed a regional plan of action for eliminating vitamin A deficiency as a public health problem by the year 2000.

New Directions Today, PAHO's Regional Program on Food and Nutrition faces new challenges, particularly how to improve food availability and consumption at the family level among groups at high biological risk. This implies working with agencies and organizations that promote subsistence farming and other methods of local food production and marketing, while at the same time trying to create product surpluses in order to increase family incomes and food availability in the community. Priority backing also will be given to programs for controlled subsidies, food distribution, and nutritional support for vulnerable population groups, as well as to social communication and community education programs. Another area that will receive increased attention is that of chronic noncommunicable diseases connected with dietary habits and lifestyle, given their rising incidence in developing countries. Through its various initiatives, PAHO will continue to spur the Governments to face these challenges by aiming its food and nutrition policies and strategies toward achieving the goal of health for all by the year 2000. ❖

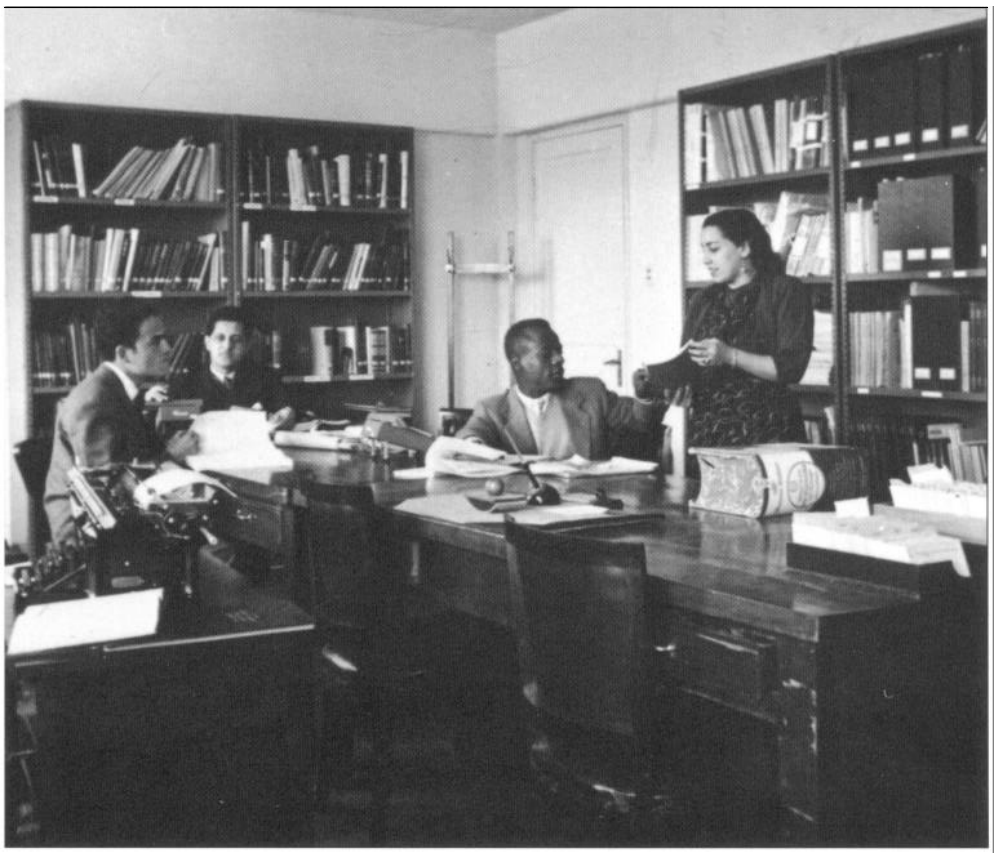
THE PROMOTION OF RESEARCH



Recognizing that research is an essential ingredient for the future of health care in the Americas, the Organization has assumed a proactive role in coordinating its many facets—including modernizing laboratory systems in order to cope with the growing demand of health programs.

The role of the Pan American Health Organization in supporting and promoting scientific research in medicine, biology, and other health-related sciences has evolved gradually In the late 1950s and early 1960s, PAHO initially gave preference to health problems of international importance, especially ecological and biological concerns that had social implications. During that early period, studies addressed such subjects as the relationship of acute infections, nutritional status, and sanitation to infant mortality; simuliid vectors as a cause of onchocerciasis; and ways to derive high-value dietary protein from plant sources. In

In the 1950s, research gathered such momentum that the Region would boast having world-renowned investigators, teams, laboratories, and institutions working in almost all aspects and areas of research. At the Inter-American Center of Biostatistics, located in Santiago, Chile, the center's librarian talks with three fellowship recipients.



Research, as a field in which knowledge and technology are created, validated, and adapted, occupies an increasingly important place in social development. In the field of health, the importance of research is even more apparent. It translates into new knowledge and technological resources to facilitate the solution **of** *health problems.*

-Strategic Orientations and Program Priorities, 1991-1994

time, the scope of research expanded to include the testing of new drugs, studies on vaccine efficacy (for example, attenuated poliomyelitis vaccines), and the development of simple techniques for iodizing salt to prevent endemic goiter. Even comparative epidemiology-represented, for example, by studies on the frequency of atherosclerosis in ethnic groups from different continents-figured on the list of research topics of the time.

Eventually, health authorities recognized the need to formulate long-term plans to coordinate research being carried out in the Hemisphere. Many obstacles impeded research in the area of health and limited its application to health services planning, the most frequent among them being a lack of clearly defined national research policies and plans and the fragmentation or lack of articulation among the various institutions engaged in health-related research. Clearly, it would be up to the Organization to assume the role of coordination and leadership in health research.

A major catalyst for new ideas that were emerging in health-related research was an agreement signed with the U.S. Public Health Service that funded a research coordination unit at PAHO Headquarters in 1961. Later, that unit became responsible for coordinating research activities being carried out under the Organization's other programs and for collaborating with them in promoting studies that would respond to priority health problems. More recently, the unit has cooperated directly with the countries in formulating and implementing policies for health science and technology development, as well as in strengthening their scientific and technical infrastructure.

While the Organization worked on formulating a long-term plan, it also began to encourage the presentation of proposals on specific research topics in the Region. The first two, for which funds were obtained from the U.S. National Institutes of Health, were a study on the economic impact of malaria eradication in various countries of the Americas, carried out by the University of Michigan School of Public Health with PAHO collaboration, and the Inter-American Investigation of Mortality in 12 major cities.

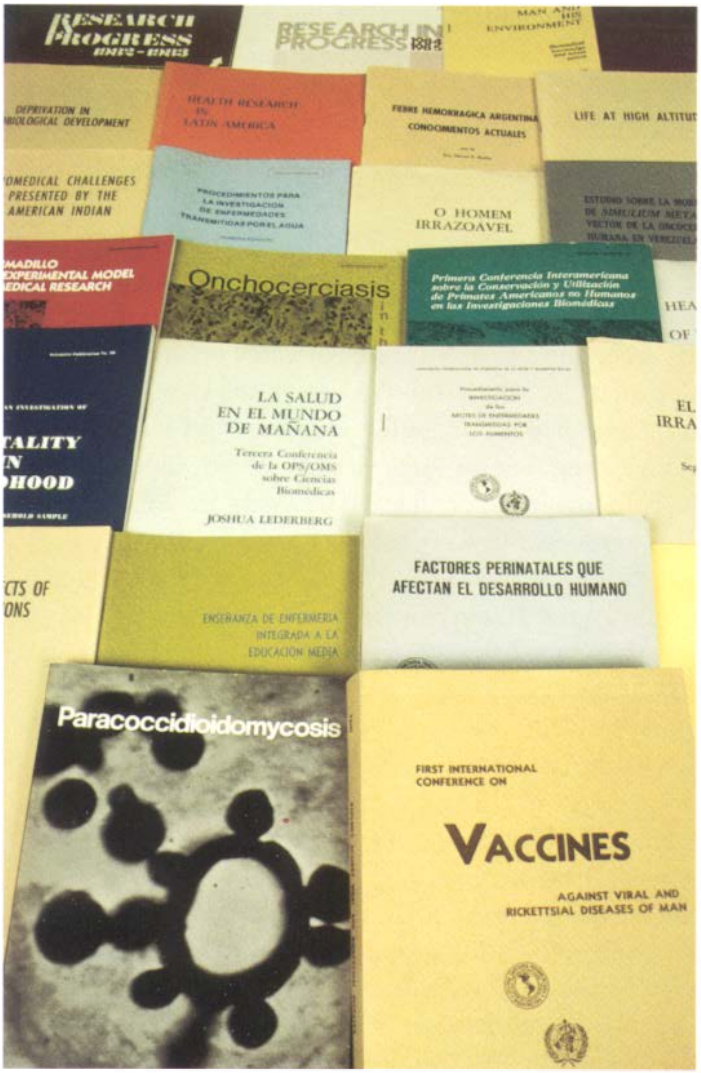
Within a short time, biomedical research had progressed more rapidly in the Region than research in other fields. Both its impetus, in terms of number of projects, and its steady growth were the fruit of State intervention in the planning of scientific activity, which began to take place in Latin America in the 1950s. Such was the momentum that within a few years the Americas could boast that it had world-renowned investigators, teams, laboratories, and institutions working in almost all facets and areas of research.

One of the characteristics of biomedical research in Latin America, especially in universities, was that it focused on basic research, generally neglecting applied research. Internal and external working groups that studied this situation concluded that more attention should be given to applied research in the area of public health. Fortunately, in the following years, Governments, international cooperation agencies, and financial institutions provided support that would have immediate practical application. By the end of the 1960s, the amount of research-not only in health, but also in the social sciences—being carried out in Latin America had increased impressively.

The Organization's efforts in this area led to the creation of the PAHO Advisory Committee on Medical Research (ACMR) in 1962, which in 1984 became the Advisory Committee on Health Research (ACHR). From the outset, the Committee's membership included renowned scientists from throughout the Region, among them several Nobel laureates. For the first 14 years the meetings of the ACMR were held at PAHO Headquarters in Washington, D.C., and starting in 1976 the venue began to alternate between Washington and elsewhere in the Region.

At the Committee's first meeting in 1962, the Director of the Bureau, Dr. Abraham Horwitz, clarified that the body had been created for the purpose of analyzing the proposed research program and making suggestions and recommendations on long-term research policies, including in the areas of research training and education. Research was understood to have a clear and very important place within the framework of the Organization's programs for improving health in the Americas. The Committee framed its work based on the mandate contained in the Charter of Punta del Este, which called for intensifying scientific research and applying its results more fully and effectively toward the prevention and cure of disease.

In the years that followed, the Organization's efforts in the area of research expanded. PAHO encouraged research proposals that addressed the needs of the countries and that met the requirements for scientific excellence and rigor being imposed by donor agencies. Multinational research programs and collaboration among major centers in the countries became increasingly important. Moreover, the Organization strengthened its own Pan American Centers, which conducted research in specialized areas, and created several new centers.



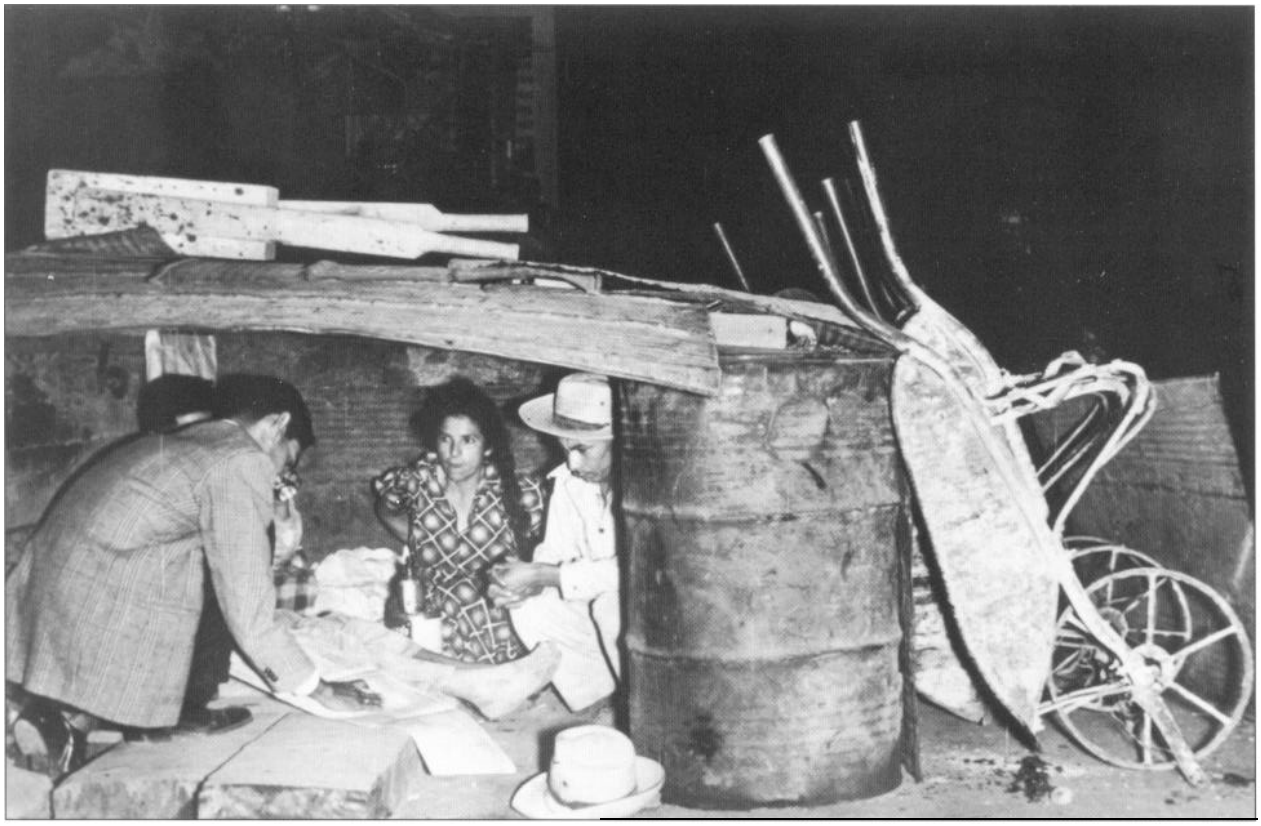
Since research is only complete when its results have been communicated, PAHO has furthered the dissemination of health and biomedical information through a long-standing series of scientific publications.

The approach of the Organization's research program involved identifying health problems and finding solutions to them within the Region's socioeconomic environment. Its emphases were compatible with prevailing sector policies and priorities: the strengthening of health services and the extension of their coverage to rural and neglected areas; disease control, especially communicable diseases; human resource development; family health and family planning, with emphasis on maternal and child health; and environmental health.

In the 1970s, the ACMR began to participate much more actively in the detailed evaluation of ongoing research. At the same time, conditions and health needs in many of the Region's countries forced the Committee to consider other types of potentially necessary biological, epidemiologic, social, and administrative research for improving or expanding disease control programs.

An important meeting of the ACMR, held in Caracas in 1982 under the joint auspices of PAHO and the Government of Venezuela, brought together ministers and representatives of universities, research councils, international agencies, and foundations for the purpose of promoting the acceptance and application of research policies as an integral part of national health development plans. The Committee addressed the priority issues affecting research in the Region and reaffirmed its responsibility to review research being carried out within the Organization, to advise PAHO on policy matters relating to research, and to establish subcommittees to examine areas that might require special attention and possible strengthening. That last function has led to stepped-up research in the areas of communicable diseases, maternal and child health, environmental health, veterinary public health, medical education, health planning and policies, and the organization of scientific activity.

The mid-1980s saw a change in the Organization's approach to promoting health research. Whereas in the past the emphasis had been on strengthening the supply, the focus began to shift to cooperating with the countries in organizing scientific activity so that it would respond more



Because accurate and complete data collection is essential for conducting many types of investigations, the Organization always has worked toward achieving the greatest possible coverage in surveys. A census taker in Guatemala goes the extra mile to gather information.

closely and effectively to people's needs. The "management of knowledge"—defined by the current Director of the Bureau, Dr. Carlyle Guerra de Macedo, as "promoting the generation of knowledge, compiling it, critically rethinking and renewing it, disseminating it, and helping the countries to use it"—has become the cornerstone of PAHO activities in this area.

In recent years, PAHO has sought to expand its cooperation in health science and technology beyond enhancing the countries' capacity to establish their research policies and priorities, and to focus instead on strengthening the scientific and technical infrastructure in two strategic areas-biotechnology and health services systems. The ACHR has created subcommittees and entrusted them with the responsibility of orienting the policies and programs to be developed in these two areas. The work of these subcommittees is now fully under way. ❖

RESPONDING TO THE HEALTH NEEDS OF MOTHERS AND CHILDREN

The care a society demonstrates for its members in their most vulnerable stages is a yardstick of that society's values. For as long as the Pan American Health Organization has been in existence, the countries of the Americas have shown that the welfare of mothers and children is a priority concern, and the Organization has responded to those values with support for a broad spectrum of activities aimed at improving maternal and child health. In a sense, any activity that lessens the threat or impact of disease benefits mothers and children, along with the rest of the population, and for that reason improvements in maternal and child health conditions over the past 90 years have depended upon—and are inseparable from—the overall development of the health sector, and of primary health care in particular.

"Motherhood and childhood are entitled to special care and assistance"—Universal Declaration of Human Rights (Article 25, paragraph 2), United Nations General Assembly, 10 December 1948.

A 1920s poster from the public health department of Bahia State, Brazil, emphasizes the benefits of breast-feeding.

The Early Years International collaboration in child welfare issues in this Hemisphere dates from 1916, when the first of a series of Pan American Child Congresses was held in Buenos Aires. These congresses presented the opportunity for pediatricians and other experts to exchange information on medical and social problems afflicting children and on the role of the public sector in resolving them. In addition to the international meetings, national child health conferences were held, and some countries designated a special day or week devoted to drawing attention to the health of children and mothers. The 1920s and 1930s were a time of burgeoning social action in Latin America, as many of the countries adopted legislation protecting children and pregnant women and many localities made provisions for prenatal and delivery care for indigent mothers at maternity hospitals. All these developments were chronicled in the *Boletín de la Oficina Sanitaria Panamericana*, which periodically devoted a section to summarizing the medical and legal advances in the countries related to maternal and child welfare, as well as publishing articles and reporting statistics on illness and mortality among these groups.

Resolutions adopted by the Pan American Sanitary Conferences from 1920 onward also reflected interest in maternal and child health by recommending attention to such topics as hygiene in

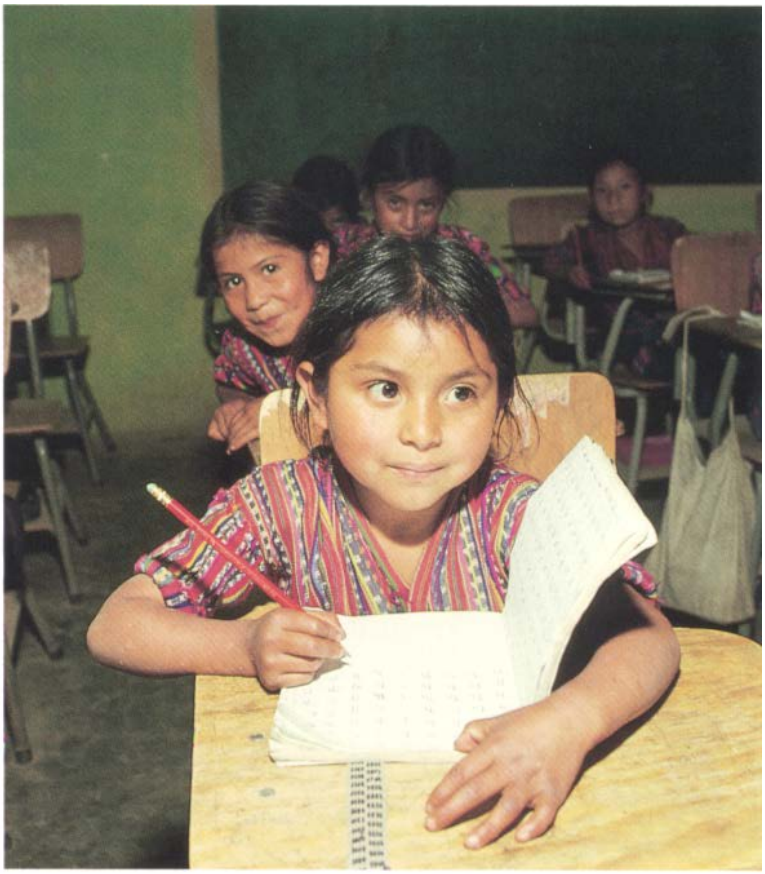
A routine check-up for a healthy baby at a Dominican Republic health center in 1956; the poster on the wall promotes vaccination against whooping cough. Such clinics were part of an integrated public health program initiated in that country in 1953 with technical support from PAHO and UNICEF.

A health worker in Costa Rica visits a mother in her home to provide information **about family planning techniques. PAHO has answered the countries' requests for support to family planning programs since the 1960s.**

schools, intensification of campaigns to prevent infant mortality, and adequate training for midwives. The first broad statement of principles in this area by PAHO's Governing Bodies came in 1948 with the approval of the Declaration of Caracas, drafted at the IX Pan American Child Congress, of which PAHO was cosponsor. The declaration affirmed the right of children to the best possible health protection, beginning in the prenatal period and thus encompassing care for the mother. The II Meeting of the Directing Council enthusiastically approved the Declaration, adding the reminder that activities focusing on children must be closely integrated with national public health programs, since the health of the entire family unit is intertwined.

Nineteen forty-eight was also the year the World Health Organization was founded, and the First World Health Assembly affirmed that maternal and child health was among the priorities of the new organization. Another international entity, the United Nations Children's Fund (UNICEF), had come into being two years earlier with the express mandate to work for child welfare, and the need to coordinate the activities of these agencies was immediately recognized. To that end, the Director of the Pan American Sanitary Bureau met with WHO and UNICEF representatives in April 1949 in Geneva and again in October of that year in New York, where an accord was reached on the allocation of UNICEF funding to joint projects in Latin America. In 1950, PAHO announced the beginning of a regional campaign for maternal and child health and sent its Regional Adviser in this subject on a lengthy fact-finding mission throughout Latin America in order to tailor the emerging technical program to the countries' needs. By 1954, PAHO and WHO were sponsoring field programs in maternal and child health in Brazil, Chile, El Salvador, Mexico, Paraguay, and Peru, and immunization programs against diphtheria, pertussis, and tuberculosis in a dozen other countries, all with the collaboration of UNICEF.

Better education for females is associated with better nutrition, lower birth rates, and lower maternal and infant mortality rates, illustrating the close links between health and social conditions.



At a health center in Ecuador, mothers who seek care for sick children learn how to prevent or, if necessary, treat dehydration due to diarrhea, a leading cause of infant death.

Targeting Special Problems Because of the great variety of health problems affecting mothers and children, PAHO's cooperation with the countries has always been multifaceted, as it continues to be today. Some of the earliest efforts focused on control of diarrheal diseases, a leading cause of death of young children. This problem formed the topic of technical discussions in 1954 at the XIV Pan American Sanitary Conference. To further stimulate the interchange of ideas on diarrheal disease control, PAHO organized two international seminars, the first in Chile in 1956 and the second in Mexico in 1957, and published the reports arising from them as one of its early scientific publications.

Though extremely important, diarrheal diseases are only one of a host of causes of infant mortality. The stark statistics on death rates of children under one year old had long been recognized as perhaps the most sensitive indicator of overall health conditions in a country. To better understand the causes of childhood mortality, PAHO sponsored and coordinated the Inter-American Investigation of Mortality in Childhood, carried out from 1968 to 1972 in 15 diverse areas of 10 different countries. Over 35,000 deaths among children under five were studied to uncover the primary and underlying causes. The major health problems in different areas were found to be distinctive, but nutritional deficiency—in children and pregnant women-was the single most important factor contributing to child mortality, especially in rural areas. This comprehensive study not only clarified the magnitude of certain disease problems but also highlighted the importance of social and environmental factors, such as maternal education and piped water supply, allowing the countries to establish more effective programs to tackle the problems specific to certain communities.

Both this investigation and the earlier Inter-American Investigation of Mortality in Adults (1962-1964) revealed the heavy toll of frequent pregnancies on women's health and the survival of their children. In addition, death following abortion had been found to constitute a major public health problem in several cities, accounting for 10% to 50% of maternal mortality. These findings pointed to the pressing need for family planning services. In the mid-1960s, even before the United Nations Fund for Population Activities (UNFPA) was established, PAHO initiated activities on the health aspects of human reproduction by offering its technical expertise to the countries upon request, establishing regional training and education centers on population dynamics, and creating an office of health and population, including a population information center, within the Organization. In 1969, at the request of the Government of Colombia, PAHO began a full-scale collaborative effort to extend maternal and child health and family planning services in that country, providing not only advice but supplies and equipment, fellowships, and training programs. Other countries increasingly requested similar collaboration, leading PAHO to establish a Department of Health and Population Dynamics in 1970, which incorporated its ongoing maternal and child health program. The Organization emphasized that, rather than being a separate effort, family planning must become an integral part of the established health services. Within two years, PAHO was providing support to programs in 20 countries, in many cases with financial collaboration from the U.S. Agency for International Development (USAID) and UNFPA.

PAHO's Five-Year Work Plan in Family Health for 1974-1978, partially funded by UNFPA, strongly asserted the health benefits of family planning and called for action directed toward program management and policy development, training of health personnel, and family life education. Activities in these areas continued to be emphasized, even as new initiatives were launched. In accordance with resolutions of PAHO's Governing Bodies, the health of youth received increasing attention in the 1970s, with PAHO sponsoring and participating in conferences and seminars on adolescent fertility and other health concerns. For example, in honor of the International Year of the Child (1979), proclaimed by the United Nations General Assembly, nine such "health and youth" meetings were held in the English-speaking Caribbean countries. Also in celebration of that Year, PAHO prepared two publications on the health conditions of children

and youth in Latin America, which outlined and presented case studies of the innovative maternal and child health program approaches being applied in the countries. One such new approach involved identifying those mothers and children most at risk so that specific services could be provided where they were most needed. The "risk approach" became a guiding concept in the provision of primary care services and has been the subject of numerous PAHO-sponsored workshops and seminars.

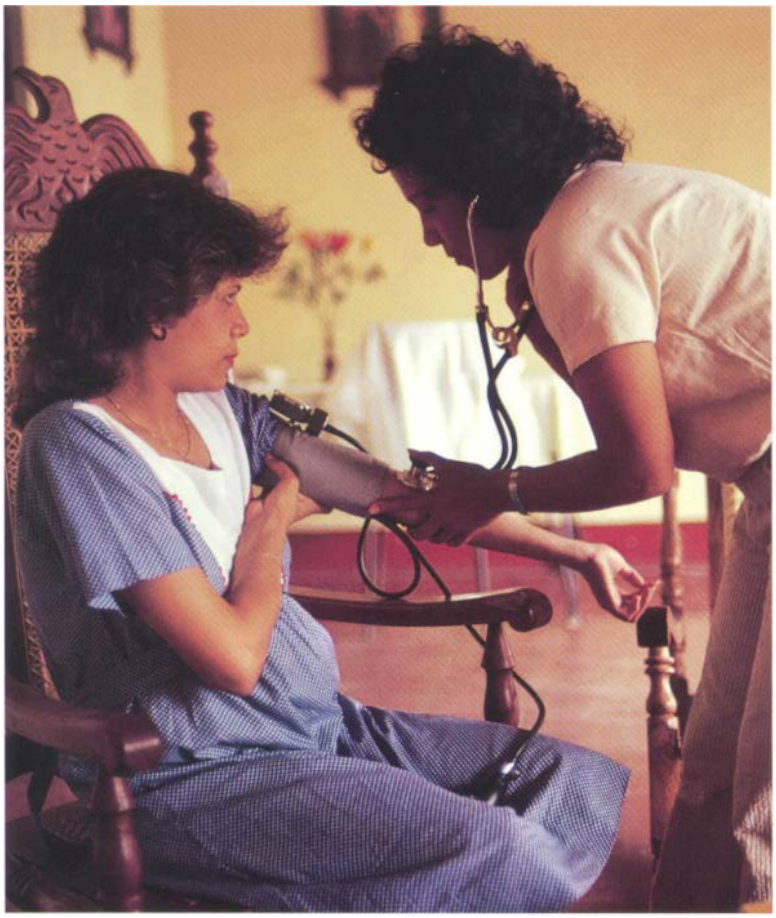
The 1980s was a decade of diverse activities. In addition to almost 50 projects carried out with joint support from UNFPA, a three-year grant from the W.K. Kellogg Foundation launched work to create demonstration areas where primary care, training, and research in perinatal, maternal, and child health would be integrated. By 1983, 18 of these projects were in operation. Subsequently, networks of national and subregional projects in administration and health technology development and evaluation were established with Kellogg Foundation support. Research and the provision of training and information to health personnel at all levels continued to be emphasized by PAHO, and new regional programs to combat diarrheal diseases and acute respiratory infections were set in motion. In addition, the Expanded Program on Immunization (EPI), begun in the Americas in 1977, continued to make enormous strides in protecting children against measles, polio, diphtheria, pertussis, tetanus, and tuberculosis.

In 1984, the Governing Bodies were presented with a report from the Director titled, "Basis for the Definition of the Organization's Action Policy with Respect to Population Matters." The document pointed to the close relationships between health, development, and family planning, and urged the Member Governments to strengthen their maternal and child health programs, especially for high-risk and underserved groups, in order to narrow the socioeconomic gaps existing in the countries. Those proposals were endorsed by a resolution of the XXX Meeting of the Directing Council. The report was also submitted to other cooperating agencies, including USAID, the World Bank, and the Inter-American Development Bank (IDB), to improve coordination of efforts. The Directing Council requested periodic reports on progress made in maternal and child health and family planning, which were presented in 1985, 1988, and 1991. Reaffirming the mandates approved by previous meetings of the Governing Bodies, the XXIII Pan American Sanitary Conference in 1990 approved a regional plan of action to reduce maternal mortality by 50% by the year 2000.

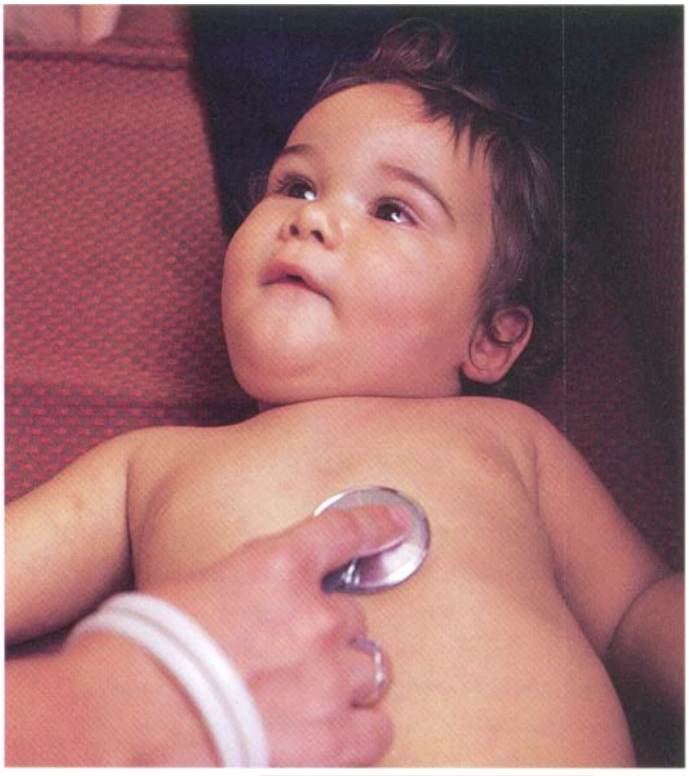
As the most recent progress report pointed out, improvements in the overall health status of mothers and children, even after a decade marked by economic decline, are evident in the statistics. Coverage of maternal and child health services increased in the previous 10 years, as did use of contraception. Infant mortality, maternal mortality, and the birth, fertility, and population growth rates all decreased, while life expectancy at birth went up. Nevertheless, the progress of the countries has been uneven, and substantial segments of the population, especially in rural and marginal urban areas, remain in dire need of the most basic preventive and curative services. Meanwhile, the emergence of new problems—such as AIDS—and the exacerbation of old ones—such as alcohol and drug abuse, accidents, and violence—by deteriorated social conditions challenge the countries and the international organizations to do more. PAHO continues to respond to that challenge in myriad ways.

Contemporary Concerns PAHO currently carries out activities in several areas of maternal and child health: growth, development, and human reproduction, which includes a wide array of efforts aimed at improving the health of children and women; adolescent health; control and treatment of acute respiratory infections; control and treatment of diarrheal diseases; and immunization.

Although PAHO activities regarding adolescent health date back many years, it is the newest formally established area of activity, having been officially incorporated in 1989 following technical discussions on the subject at WHO Headquarters in Geneva. PAHO is assuming a leadership role in this field by presenting a policy paper on health and adolescents in the Americas at the 1992 meetings of its Governing Bodies.

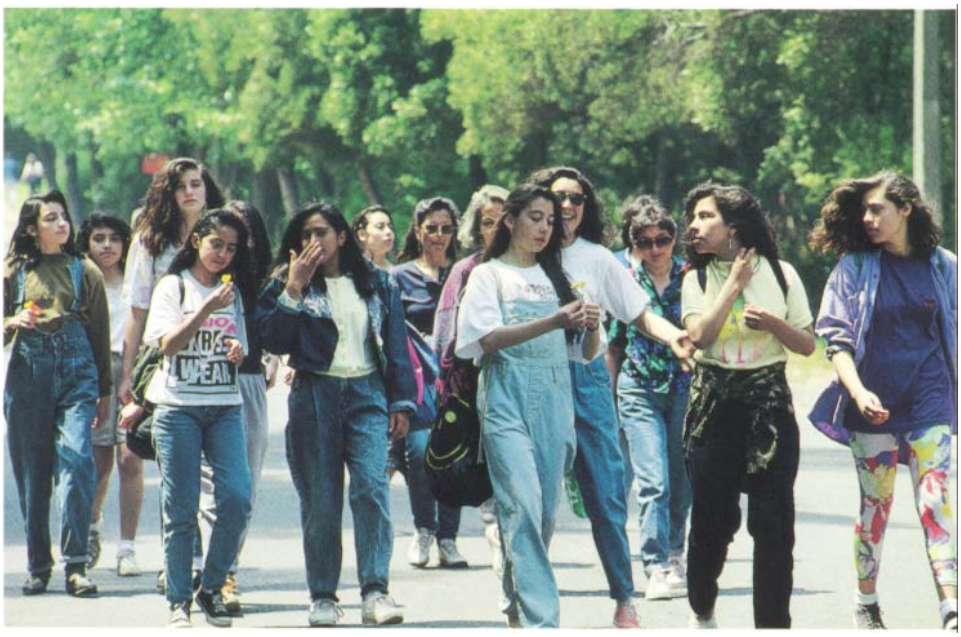


Monitoring a woman's health during pregnancy is a key element in preventing maternal mortality. PAHO is committed to helping the countries reduce the number of maternal deaths by one-half by the year 2000.



A healthy start in life is promoted by prenatal care, safe delivery, newborn care, and regular checks of growth and development.

Adolescents are a group with special health needs and risks, many of them behavior-linked, requiring a comprehensive response from health services.



The Organization's work in this area also encompasses the Latin American Center of Perinatology and Human Development (CLAP), located in Montevideo, Uruguay. This Pan American Center, founded in 1970, is devoted to education and research aimed at reducing maternal and infant mortality and morbidity, with emphasis on problems that affect survival during the perinatal period, such as low birth weight and prematurity, birth asphyxia, and congenital disorders. Its research activities center around developing and evaluating appropriate technology and conducting epidemiologic studies. Since 1970, CLAP has hosted 3,700 participants from throughout the Region in its courses, seminars, and workshops, and has provided 7,600 consultant-days in response to requests from the countries. In addition to publishing a widely distributed newsletter for the past seven years, the Center has also produced more than 2,000 publications, including bibliographies, teaching materials, and research reports.

Keeping the Region's scientists and health workers abreast of the latest technical health information continues to be a high priority for the Organization. One form this activity takes is a newsletter on the EPI produced in English and Spanish, and a Spanish version of newsletters on diarrheal disease control and prevention of acute respiratory infections. Technical guides for health workers are produced through PAHO's Expanded Textbook and Instructional Materials Program, and audiovisual training materials are also prepared, in some cases in collaboration with schools of public health in the countries. Publications on subjects ranging from adolescent health to low birth weight have been produced throughout the years.

Program activities are interdisciplinary, involving cooperation both between areas and with other PAHO programs. An example is the promotion of breast-feeding, which is included in the growth and development, diarrheal diseases, and perinatology areas of maternal and child health and is carried out in cooperation with PAHO nutritionists. Activities focus on educating mothers about breast-feeding at the community level using the mass media and specially produced educational materials, and instructing health personnel about the importance of encouraging and facilitating breastfeeding.

Another example of the broad scope of PAHO activities is the binational project along the U.S.-Mexico border called "Primary Health Care and Maternal and Child Health Technologies for Women, Adolescents, and Children." The project began in May 1988 with funding from the Carnegie Foundation and Pew Charitable Trust, and is under the supervision of the PAHO Field Office in El Paso. Its strategies to improve the health status of women,

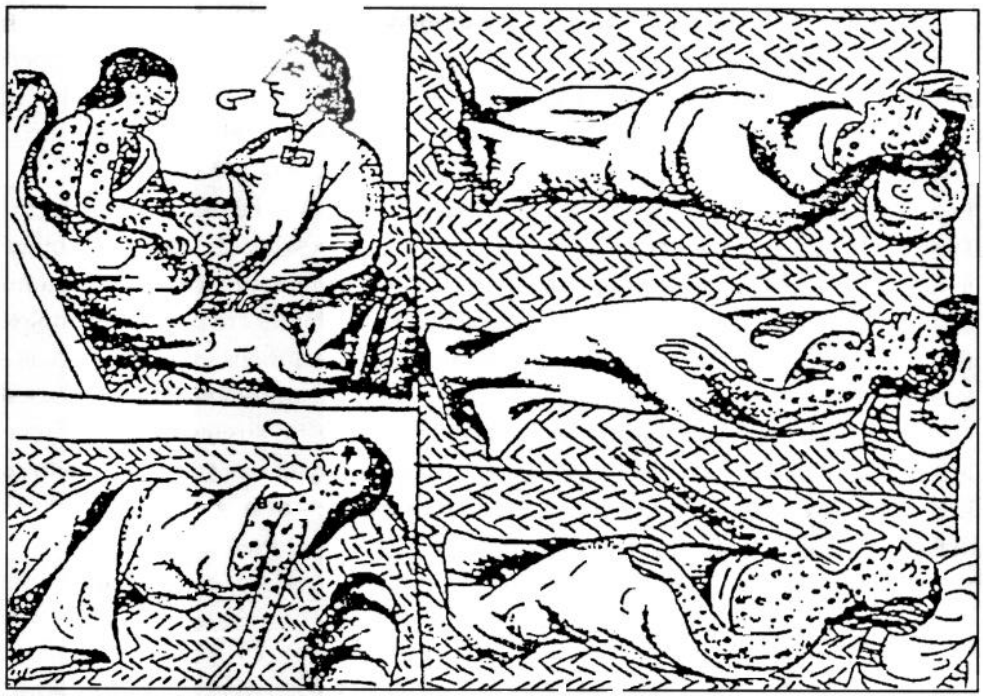
children, and adolescents in the border area involve research, education, and the creation of networks of collaborating institutions in both countries to address a wide range of problems, including the physical and psychological health of working women, risk-taking behaviors of adolescents, infant and child morbidity and mortality, and specific diseases such as cervical cancer and HIV infection.

In addition to support from private non-governmental organizations, such as those mentioned above, cooperation among the international multilateral and bilateral agencies continues to be imperative for achieving maternal and child health goals. In 1983, the Regional Director of UNICEF for Latin America and the Caribbean and PAHO's Director signed an agreement which amplified the long-standing relationship between the two agencies by setting up yearly technical meetings to coordinate their joint and complementary activities. Representatives of these two organizations as well as the UNFPA, USAID, and IDB signed a memorandum of interagency collaboration in 1991, pledging to unite in providing technical cooperation to the countries of the Region so that they can fulfill commitments to maternal and child health made at the World Summit for Children held at the United Nations in September 1990. That meeting-which brought together representatives from 146 countries, including 71 heads of governmen-ratified the World Declaration on the Survival, Protection, and Development of Children and approved a Plan of Action for Governments, international agencies, and other organizations to reduce child and maternal morbidity and mortality, combat malnutrition and illiteracy, improve sanitation and provide safe drinking water, and improve the social conditions of women. Specific goals have been set toward these ends in the regional plan of action for maternal and child health developed by PAHO for 1992-1995.

The recurrent theme in the struggle to improve the health status of mothers and children is interdependence: the problems are not isolated, but rather are part of a complex social matrix; thus, the solutions must be based on an approach that is both comprehensive and focused toward achieving specific targets. So too, the benefits from improving maternal and child health are impossible to separate from benefits to society as a whole, for they are reflected throughout the life of the individual, and onward into new generations. ❖

The future is theirs: the World Summit for Children in 1990 marked an intensified international commitment to the welfare of children, the hope of all societies.

THE DEATH OF A DISEASE



This 16th century Aztec drawing depicts a victim of smallpox. The disease decimated indigenous populations in the Americas, where it had never occurred prior to European contact.

The eradication of smallpox, a disease that had ravaged humanity for untold centuries, was an unprecedented public health victory The Region of the Americas was the first to rid itself of this scourge, doing so through a united effort whose benefits to the population's well-being went far beyond ending the threat of smallpox and also paved the way for future disease eradication campaigns.

Although it is impossible to trace the earliest occurrence of smallpox, evidence suggests that it may have been endemic ever since humans first gathered in densely populated agricultural settlements. Medical historians believe that smallpox spread from its origin in Egypt or India to Asia, West Africa, and the Mediterranean area throughout the first 10 centuries A.D. as the population in these areas increased. It was well established in Europe by the 16th century and spread to the New World as early as 1507 along with European explor-

A freeze-drying unit for the production of smallpox vaccine, Institute of Hygiene, Havana, Cuba, 1956. Freeze-dried vaccine remained effective without refrigeration even in tropical heat, and its production in several countries of the Americas, facilitated by PAHO-supplied equipment and consultants, aided the smallpox eradication campaign in this Hemisphere.

ers and colonists. Where it was endemic, the disease caused periodic epidemics that afflicted mainly children (who lacked **immunity conferred by previous** exposure), killing up to 30% of those attacked and leaving others disfigured and blind. In the New World, it decimated the previously unexposed Amerindian populations.

It had been known since the 13th century that cutaneous inoculation with the causative agent of smallpox, the variola virus—a practice called variolation—produced a milder form of the disease and conferred resistance, but inoculated subjects sometimes died or transmitted severe smallpox to their contacts. The milestone discovery by English physician Edward Jenner in 1796 that inoculation with the closely related cowpox virus—vaccination—could protect against smallpox gave the world its first safe means of preventing this dread disease. The implications were obvious to Jenner, who wrote in 1801, "it now becomes too manifest to admit to controversy, that the annihilation of the Small Pox, the most dreadful scourge of the human species, must be the final result of this practice."

Vaccination was rapidly and widely embraced in Europe and the United States of America. However, a problem hampered its application in tropical countries: liquid vaccine quickly lost much of its potency at ambient temperatures, and refrigeration was difficult to come by. The solution was provided by the technique of freeze drying vaccine, developed in France in 1919. By the time the World Health Organization was established in 1948, the efficacy of freeze-dried vaccine had been well documented in the French colonies in Africa, as was reported to the First World Health Assembly.

Upon hearing of these reports, Dr. Fred L. Soper, then Director of the Pan American Sanitary Bureau, recognized that the thermostable freeze-dried vaccine offered the chance to eradicate smallpox from the countries of the Americas. In 1949, he proposed to the Seventh Meeting of the Executive Committee that the countries cooperate in an effort to eradicate smallpox in the Americas by means of an intensive program of vaccination and revaccination. The Executive Committee endorsed his proposal, and in October of the following year the XIII Pan American Sanitary Conference recommended that the countries develop systematic smallpox control programs and resolved that the Bureau would aid them in solving whatever technical, financial, or legal problems they encountered.

Measures to transform this resolve into action had already been set in motion. In March 1950 the Bureau had hired Dr. Abraham Horwitz (who nine years later would become PAHO's Director) to assist in the continental coordination of smallpox control

by negotiating cooperative programs with health authorities in the affected countries. Dr. Soper also enlisted the help of the United States National Institutes of Health and the State of Michigan Department of Health in studies on new techniques for the production of freeze-dried vaccine and field trials of the vaccine's efficacy. An expert in dry smallpox vaccine production was contracted by PAHO to visit several countries, starting with Peru in January 1951, and assist national health authorities in establishing production laboratories. Successful initial studies in Peru led to the commercial-scale production of freeze-dried vaccine in that country by 1953.

The smallpox situation in the Americas when this effort began was characterized by unevenness. Extensive use of vaccination, which was compulsory in some states, had eliminated the disease from the United States by 1950, and it had disappeared six years earlier in Canada. Endemic smallpox was also gone from the Caribbean and virtually nonexistent in Central America. Mexico saw its last cases in 1951. However, 11 countries in South America were still each reporting hundreds to thousands of cases yearly.

Throughout the 1950s, the Bureau continued to provide the expertise and equipment needed to establish laboratory facilities capable of producing freeze-dried vaccine to meet the needs of the countries' mass vaccination campaigns. The objective was to integrate the smallpox eradication effort into the general framework of public health services in the countries, which would serve to strengthen those services overall. Through mass vaccination campaigns mounted by the national Governments, by 1959 smallpox transmission had been interrupted in all but five countries: Argentina, Bolivia, Brazil, Colombia, and Ecuador. Of these countries, only Brazil, which had not yet launched a national campaign against smallpox, still suffered major outbreaks of the disease.

In 1959, the Twelfth World Health Assembly decided to undertake the worldwide eradication of smallpox by means of a program similar to the one being carried out in the Americas. The program proposed national vaccination campaigns reaching at least 80% of the population, with technical assistance from WHO. However, it was not until January 1967 that a special budget for this effort was allocated, marking the beginning of the WHO Intensified Smallpox Eradication Program. In the meantime, the Region of the Americas had been adding to its already-impressive successes. By the start of WHO's

PAHO celebrated World Health Day 1965 by offering smallpox vaccination at its Headquarters in Washington, D.C. The United States had been free of the disease since 1950, but the threat, and thus the need for vaccination, remained while smallpox still existed anywhere.

Vaccination of schoolchildren in Paraguay against smallpox. The achievement of high vaccination coverage was key to eradicating the disease.

Intensified Program, endemic smallpox transmission had been interrupted in every country except Brazil.

With its vast land area and large population Brazil presented an enormous challenge for smallpox eradication through mass vaccination. The country's first national campaign against smallpox began in 1962 but made limited headway. The introduction of a new vaccination technique, the jet injector gun, spurred an intensified second national program beginning in 1966 after a PAHO-assisted pilot project showed that the injector gun decreased cost and increased vaccination efficiency and efficacy compared to older techniques.

Brazil's strategy involved a state-by-state mass vaccination campaign, supported by vaccine produced in national laboratories. A 1967 outbreak in a town in Alagoas State that had been previously visited by the vaccination campaign pointed to the need for another essential component to the program: assessment of vaccination **coverage** and take rates using household sample surveys. But the decisive factor in the eventual success of the program was a surveillance and containment effort that began in four populous states in 1969. Field investigation by epidemiologists uncovered large numbers of unreported cases, and discovery of these outbreaks **allowed containment vaccination to be quickly instituted.** Reporting units were encouraged to make weekly reports, and a standardized report form was developed. The surveillance and reporting system was expanded throughout the country over the next two years, and all suspected cases were investigated. The last case in Brazil-and the Americas-was detected in April 1971.

Surveillance continued for two years after the last case was discovered, and during that time Brazil and countries sharing a border with it began the process of preparing reports for the Commission for the Assessment of the Smallpox Eradication Program in the Americas, which met in 1973. Based on the definition developed by the WHO Expert Commission on Smallpox Eradication in 1971, namely, the absence of clinical illness caused by the variola virus for at least two years in countries with active surveillance programs, the Commission certified the Americas free of smallpox. It urged, however, that vaccination

Poster produced by the World Health Organization in 1978 offering a $1,000 reward to anyone reporting a confirmed case of smallpox during the period before eradication was certified. The reward was never collected, the last case having occurred in Somalia in 1977.

and surveillance activities continue and that, with PAHO's help, the technical proficiency of diagnostic laboratories be strengthened, since laboratory investigation of every suspected case was essential for epidemiologic surveillance. In 1979, the eradication of smallpox worldwide was certified by the Global Commission for the Certification of Smallpox Eradication, the last case having occurred in Somalia in 1977.

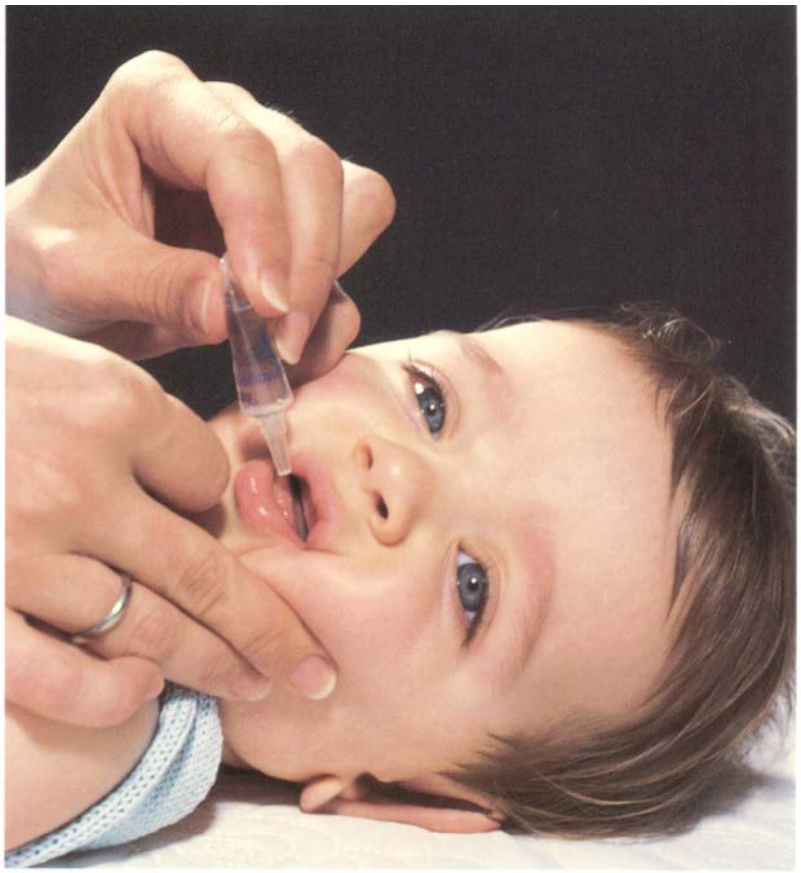
During the Brazilian campaign, routine and mass vaccination had continued in other countries of South America, with a total of 76.2 million vaccinations performed between 1967 and 1972. In the same period, 134.5 million vaccinations and revaccinations were carried out in Brazil. Between 1966 and 1972 alone, more than 60 million doses of freeze-dried vaccines were produced in South America, almost half of them in Brazil. This massive effort was supported by the Governments themselves, multilateral organizations, and bilateral aid from other Governments. In Brazil, during the period of the intensified campaign, the national Government spent $US4.5 million and PAHO and WHO contributed approximately $US1.8 million, which was used to sup ply advisers, vehicles, jet injectors, vaccine, and vaccine production equipment. The United States of America provided another $US892,000. Worldwide, in the period 1967-1979, the international expenditure to eradicate smallpox (multilateral and bilateral) was $US98 million, while national Governments spent $US200 million. When the average total annual cost of the eradication effort—about $US23 million—is compared to the yearly cost (estimated for 1967) of the disease and measures to protect against it—$US1.35 *billion* —the economic benefits of the eradication campaign become clear.

Other benefits accrued that are still paying dividends. The eradication campaign provided a rich training ground for health personnel. It led to the establishment and strengthening of surveillance and sample survey systems that are being employed in the fight against other diseases. It stimulated the development of improved diagnostic and vaccine production capabilities in many countries. Finally, it demonstrated the feasibility of freeing the world from a once-feared disease, given a worldwide political commitment and the joint efforts of Governments and intergovernmental organizations. ❖

THE CAMPAIGN AGAINST POLIO

"…it is unacceptable for any child in the Americas to suffer from polio."

The time has come for us to say that it is unacceptable for any child in the Americas to suffer from polio." With that affirmation, on 14 May 1985 the Bureau's Director, Dr. Carlyle Guerra de Macedo, announced the beginning of a campaign to eradicate transmission of wild-type poliovirus in the Region of the Americas by the end of 1990. The time for such a campaign seemed propitious. Polio incidence had fallen sharply in the previous five years, thanks to increased vaccination coverage resulting from the Expanded Program on Immunization (EPI), which had been launched by WHO in 1974 and in the Americas by PAHO in 1977. The disease had already disappeared from

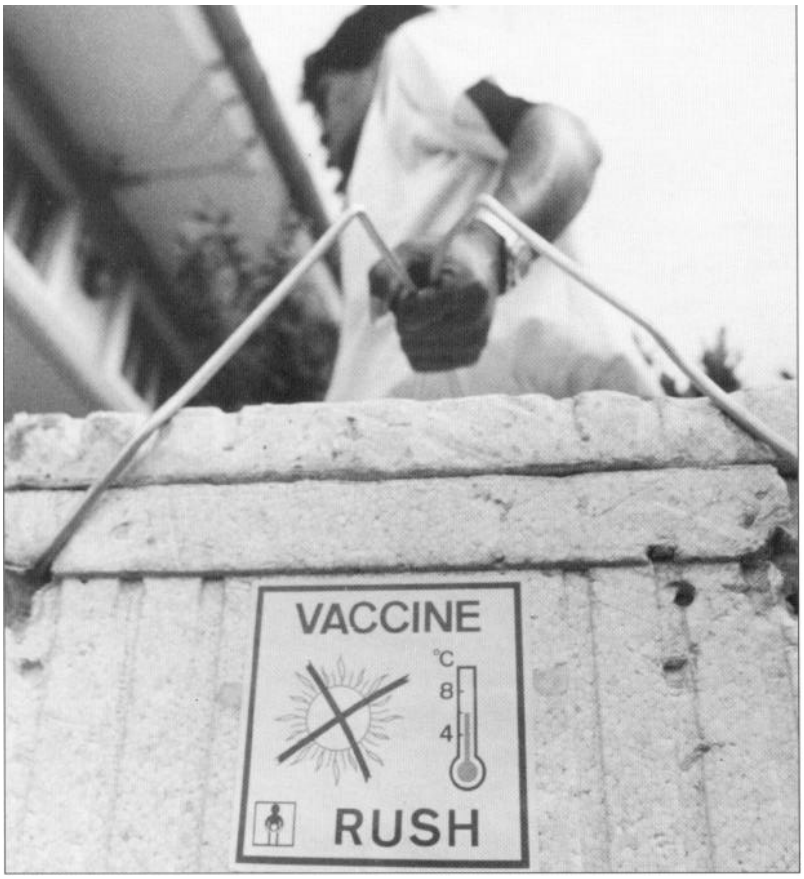


The oral poliovirus vaccine (OPV) is quick and painless to administer.

some countries, lending credence to the idea that eradication was possible. Later in 1985, PAHO's Directing Council would endorse the Director's proposal, pointing out that the EPI as a whole would benefit from this campaign. But no one doubted that formidable obstacles-technical, logistical, managerial, and financial-would have to be overcome to achieve this goal.

To help surmount some of these obstacles, PAHO organized two groups. The Technical Advisory Group, composed of five international experts, would **meet** periodically and provide technical guidance, review progress, and recommend any needed adjustments in the campaign against polio and other vaccine-preventable diseases targeted by the EPI. The other group, the Inter-Agency Coordinating Committee (ICC), represented an unprecedented commitment by diverse organizations to work together toward a health objective. It was charged with coordinating financial support for polio eradication and included members from PAHO, UNICEF, the U.S. Agency for International Development, the Inter-American Development Bank, the Canadian Public Health Association, and Rotary International, a private voluntary organization with chapters worldwide. Representatives of these organizations had been present for Dr. Macedo's announcement and had already pledged financial support. Nevertheless, it was anticipated that the countries themselves would have to provide at least two-thirds of the needed resources. To assist them in resource mobilization, national versions of the ICC, chaired by a government representative, were set up in each country.

In the early 1950s, before the introduction of the inactivated poliovirus vaccine (IPV) in 1955 and the attenuated live oral poliovirus vaccine (OPV) in 1961, poliomyelitis killed thousands of children and crippled many thousands more each year in this Hemisphere. The successful use of OPV in the industrialized countries of North America and Europe, its lower cost compared to IPV, its ease of administration (orally instead of by injection), and several immunologic considerations had made OPV the polio vaccine of choice for inclusion in the EPI. However, this vaccine did have a major drawback: unlike the thermostable freeze-dried vaccine that had permitted the eradication of smallpox in the 1970s, OPV was rendered ineffective at temperatures above 8°C, necessitating a "cold chain," or system of refrigeration during transport and storage.



Maintaining the "cold chain" is vital to the polio eradication effort. The vaccine must be kept below 8°C from the time of manufacture until use.

A network of laboratories was essential to the effort, since polio's symptoms are mimicked by some other diseases, and true polio cases can only be differentiated by viral isolation from stool samples. Thus, the success of the eradication campaign depended not only on ensuring high vaccination coverage but also on building surveillance systems to uncover suspected cases and a laboratory infrastructure to verify polio cases so that control measures could be instituted. These control measures, consisting of intensive vaccination drives in the localities where new cases were found, became known as "mop-up" operations.

Vaccination When the EPI began in the Americas, only about 35% of one-year-old children were covered with two or three doses (depending on the country's practice) of OPV. By 1985 that figure had increased to around 70%. The goal of universal child immunization against polio would be approached through three complementary strategies: routine vaccinations carried out at all health care facilities at every opportunity, mass vaccination by means of national vaccination days, and the mop-up efforts targeting extensive areas around cases.

At the beginning of the initiative in 1985, the 11 countries that were classified as polio-endemic (meaning they had reported confirmed cases in the past three years) were encouraged to hold national vaccination days, or *jornadas*, twice per year at least four weeks apart. The goal of these days was to vaccinate as many children under five years old as possible, regardless of their previous polio immunization status. National vaccination days had been used successfully in several countries for years and had led to striking reductions in polio incidence. Even before the polio initiative began, PAHO had recommended that this strategy be made an integral part of the overall EPI program.

The success of national vaccination days, combined with continued routine vaccination, is evident: as of 1991, OPV coverage was 89% for the Region as a whole, and coverage with other EPI vaccines included during national vaccination days also increased substantially. Even in the midst of civil strife in Central America and Peru, vaccination campaigns were carried out with the cooperation of the opposing factions.

Surveillance The key to surveillance is case reporting, which in turn depends on knowing exactly what to report. For that reason, a uniform case def-

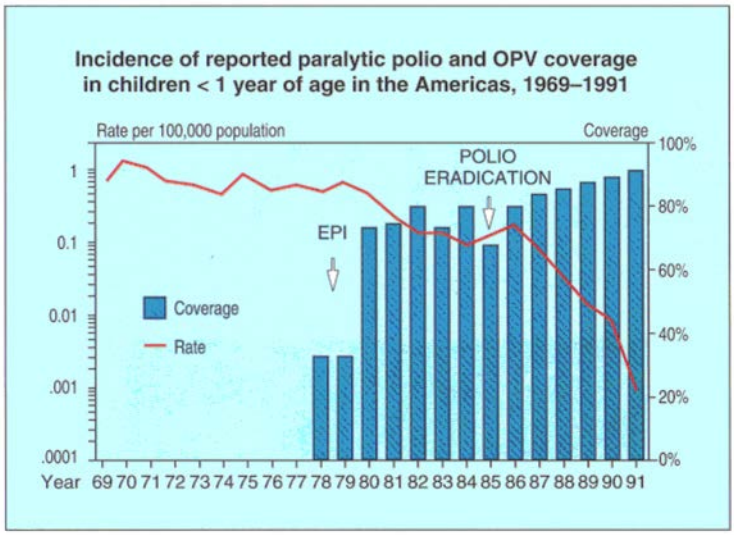
inition was adopted which called for cases of acute-onset flaccid paralysis in children under 15 years of age to be reported as a suspected case of polio. Investigations would then be carried out to determine the cause of paralysis. Under the definition of a confirmed case in use before 1990, cases were classified as polio if wild poliovirus was isolated or if they had residual paralysis, were lost to follow-up, or died, even if laboratory tests to identify the virus had not been performed.

The need for virus isolation creates a pressing demand for timely and correct collection of stool samples and for laboratories able to analyze them. Soon after the initiative began, PAHO organized an eight-member regional laboratory network. These laboratories work together to solve technical problems related to polio diagnosis, develop new analytic approaches, and provide training to laboratory personnel, offering benefits to the countries of the Region that extend beyond the laboratories' role in eradicating polio.

Intensified surveillance activities through a network of 20,000 reporting units, most submitting weekly reports, has led to a doubling in the number of cases of acute flaccid paralysis that are reported and investigated—from 1,100 in 1985 to 2,390 in 1991. PAHO has also been offering a $USlOO reward since 1989 for written reports of cases that are later confirmed as polio in order to spur public awareness and ferret out cases that might escape the notice of health services. Even as case-finding activities have increased, the number of confirmed cases has kept declining, falling from 946 in 1986 (an increase over 1985 owing to the enhanced surveillance) to only 9 in 1991.

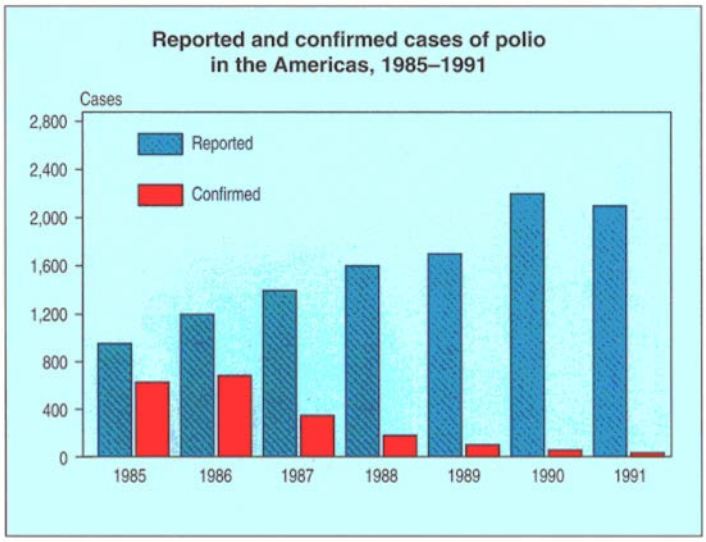
Mop-up By 1989, confirmed cases were limited to northwestern Mexico, the Andean subregion (Colombia, Ecuador, Peru, and Venezuela), and northeastern Brazil. Special house-to-house vaccination campaigns of children under five were begun in these areas to reduce the risk of outbreaks. In 1991, polio cases were confirmed only in coastal Colombia (8 cases) and central Peru (1 case), and the mop-up operations swung into high gear in these areas. During two rounds of campaigns in 1991 and a third in early 1992, health workers and volunteers visited over a million households in 199 coastal counties in Colombia and vaccinated 80% of the children under five years old. An even more massive mop-up campaign-targeting two million households-was held in Peru in March and May 1992 in response to the last case of polio detected in the Americas, on 23 August 1991 in Junín. To maximize the value of this contact with the population, health education activities aimed at reducing the enormous cholera epidemic were included in the operations in both countries.

Schoolchildren in Mexico publicize one of the country's national vaccination days with signs telling parents "Vaccinate me!" Mass vaccination campaigns are an important part of the strategy to eradicate polio and control the other EPI diseases.



The dramatic reduction in polio cases as immunization coverage has increased is clearly illustrated in the above graph.

Even as surveillance has intensified, resulting in reports of more cases of paralytic disease, the number of cases confirmed as polio has plummeted.



In anticipation of the day when all these labors will achieve the campaign's goal, in July 1990 PAHO convened the International Certification Commission of Poliomyelitis Eradication in the Americas to develop a methodology for certifying countries polio-free. However, a stumbling block to this process is that timely and adequate stool specimens are sometimes not obtained from reported cases of acute flaccid paralysis, which means that a diagnosis of polio cannot definitively be ruled out. Efforts to strengthen all the links in the surveillance and diagnosis chain are continuing. In addition, the Commission called for environmental sampling from sewage to complement surveillance for cases.

As it did in the campaign to eradicate smallpox, the Region of the Americas has led the way in the fight against polio. Noting the progress that had already been achieved in this Region, in 1988 the Forty-first World Health Assembly resolved that WHO would work toward the global eradication of poliomyelitis by 2000, and a WHO consultation recon-unended in 1990 that the campaign should employ strategies similar to those in use in the Americas.

In this Region, the investment of resources, both human and financial, has been enormous. The agencies of the ICC have contributed over $US110 million to the campaign, while the countries themselves, despite the economic crisis of the 1980s, allocated almost US$500 million to immunization efforts against polio and other diseases. Although the 1990 target date was not met, eradication now appears imminent, since no new cases have been detected since August 1991. The campaign can certainly be considered a success and the investments well spent. The threat of polio has vanished for the vast majority of the Region's children, not only preventing hundreds of deaths and incalculable suffering but also saving millions of dollars in treatment and rehabilitation costs each year. The strengthened surveillance and laboratory systems are a legacy that is currently being utilized in efforts to eliminate other diseases-campaigns that will continue to benefit from the lessons learned in the fight against polio, long after that disease is just an unpleasant memory. ❖

Update

As of 31 August, no cases of poliomyelitis had been confirmed in the Americas in 1992. The last case was detected in Junín, Peru, on 23 August 1991. Three years must pass after the last case, and stringent surveillance criteria must be met, before the International Certification Commission of Poliomyelitis Eradication will certify the disease gone from this Hemisphere.

PREVENTING DISEASES THROUGH IMMUNIZATION

It only hurts for a moment, but the benefits last a lifetime—vaccination with DPT and measles vaccine in Mexico.

When the International Sanitary Bureau (now PAHO) came into being in 1902, one of the responsibilities set forth for it was "to offer its aid and experience in the promotion and protection of the health of the countries in order that disease may be eliminated...." At that time, the weapons available for this undertaking included only one vaccine—against smallpox. Since then, an arsenal of vaccines has been developed, and immunization has proven to be the most cost-effective public health measure for preventing disease and death, especially among children. Today, the dream of eliminating some vaccine-preventable diseases is close to becoming reality, as it did for smallpox, and research is under way to develop new vaccines and improve existing ones.

"For the life of the child"—a reminder to participate in a national vaccination day campaign.

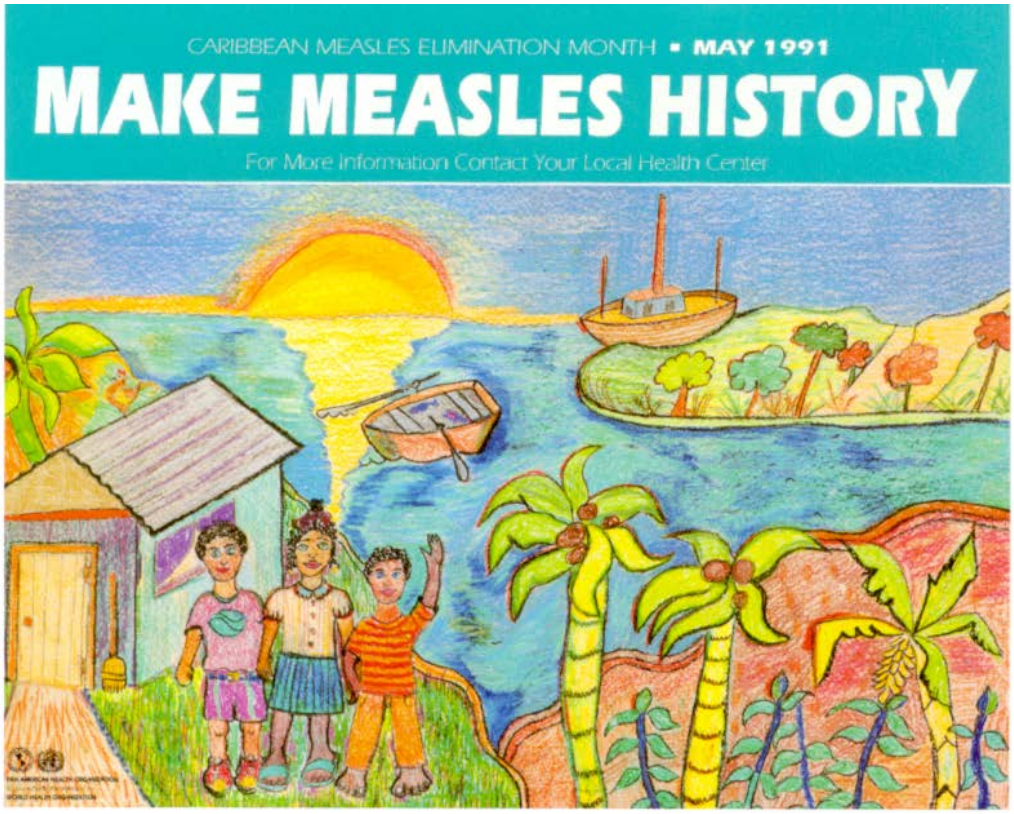
In May 1974 the World Health Organization announced the beginning of the Expanded Program on Immunization (EPI) in order to make the enormous benefits of immunization available to more children in developing countries. Six diseases were targeted by the program, requiring application of four different vaccines: measles vaccine; DPT, against diphtheria, pertussis (whooping cough), and tetanus; BCG, against tuberculosis; and oral polio vaccine (OPV). In 1977, when PAHO launched the EPI in the Americas, only 25% to 30% of the children in this Hemisphere were covered by these vaccines.

The purpose of the EPI program in this Region and the other WHO regions is to provide support to national immunization services so that they can reach the goal of immunizing all children under one year old. Because of precarious economic conditions, developing countries often encountered a major obstacle to improving immunization coverage at the first step: obtaining the needed vaccines. At the start of the EPI in the Americas, PAHO developed a means of ensuring that the countries could obtain a steady supply of highquality vaccines at the lowest possible cost. The EPI Revolving Fund was authorized in 1977 by PAHO's Directing Council and became operational in 1979. The fund was capitalized with money from the PAHO budget, large donations from UNICEF and the Governments of the Netherlands and the United States of America, and contributions from several other Governments.

The Revolving Fund works as follows: Each year the countries submit to PAHO a listing of their vaccine requirements, broken down by quarters. PAHO consolidates all the lists and sends out bids to vaccine suppliers, advising them of amounts needed and required delivery dates. The lowest bidders that can supply vaccine meeting WHO quality specifications on the required schedule are selected, and the vaccines are purchased with money from the fund. The counties then reimburse the fund in local currency once they have received the vaccines. This system not only prevents disruption in vaccine supplies but also permits the countries to benefit from the reduced costs of bulk orders. These savings are so substantial—up to 80% off the price of vaccines ordered by an individual country—that they can be crucial to a national immunization program's success.

The remarkable progress attained since the EPI's inception is obvious **from** the figures on vaccination coverage of children under one year old. For measles vaccine, Region-wide coverage rates have increased from 23% in 1978 to 80% in 1991; for DPT, from 12% to 75%; for BCG, from 31% to 81%; and for OPV, from 24% to 89%. These coverage increases translate into millions of cases of illness averted and young lives saved, and, in the case of polio, have resulted in the virtual disappearance of a much-feared disease (see pp. 221-225).

The success of the polio eradication effort has



The Caribbean holds a month-long campaign to make measles history . . . and here's how.

encouraged new goals. Some countries and subregions of the Americas are currently engaged in campaigns to eliminate measles. because measles is highly contagious and easily introduced from other areas, it is impractical at present to speak of eradicating this disease from a given area (that is, wiping it out permanently). Instead, it may be possible to eliminate the indigenous transmission of the measles virus by achieving and maintaining a high level of immunity in the population.

After the introduction of an effective vaccine in the 1960s, measles cases in the Region dropped off dramatically, but periodic epidemic outbreaks have continued to occur. The goal of eliminating measles in the United States, originally set for 1982, has not yet been realized. Nevertheless, since humans are the only host of the virus, the interruption of transmission is theoretically possible and may have been accomplished in Cuba, where a mass vaccination campaign launched in 1988 achieved 95% coverage of children 1 to 14 years old. Another such drive has begun in the English-speaking Caribbean and Suriname, based on the 1988 commitment of the Caribbean Community Ministers Responsible for Health to eliminate measles in that subregion by 1995.

Under the slogan "Make Measles History," the Caribbean has set out to make history by being the first extensive geographic area to rid itself of the disease. The cornerstone of the plan of action developed by PAHO for this effort was a month-long mass vaccination campaign held in all the countries in May 1991. Well in advance, a large, multimedia promotional campaign was undertaken to raise public

To protect newborns against neonatal tetanus, women of child bearing age are vaccinated with two doses of tetanus toxoid. They pass the immunity to their babies.

awareness of the importance of immunization. Popular entertainers were enlisted for a half-hour television special that aired several times just before the vaccination drive began. Measles Elimination Month succeeded in immunizing over 90% of children 9 months to 15 years old. The next steps are to maintain high vaccination coverage among children born each year and to strengthen the surveillance system for measles. To that end, all the countries began weekly reporting of the occurrence (or nonoccurrence) of measles cases to PAHO's Caribbean Epidemiology Center (CAREC) in September 1991. Suspected cases are investigated, with analysis of blood specimens at CAREC, and outbreak control measures immediately instituted.

Other countries are following the example set by those in the Caribbean. In November 1991, the Council of Ministers of Health of the Central American Countries resolved to eliminate the indigenous transmission of measles in Central America by 1997, with activities beginning in 1992. After a highly successful campaign in the state of São Paulo, Brazil embarked on a national vaccination campaign against measles in April 1992, and Chile began its own initiative in the same month. The results of all these initiatives will be carefully studied to assess the feasibility of a regional campaign. Measles, the biggest killer among the vaccine-preventable diseases, may soon be on the run in this Region.

One killer disease that until recently had received less attention is neonatal tetanus, an infection acquired at birth when delivery takes place in unhygienic conditions. While around 1,300 cases have been reported annually in the Americas in recent years, surveys indicate that 10 times as many may actually occur. Since newborns are affected, vaccina-

tion campaigns aimed at older infants or children are useless against this disease. Fortunately, newborns can be protected if their mothers receive at least two doses of tetanus toxoid vaccine (TT). In 1989 WHO and PAHO both endorsed the goal of eliminating neonatal tetanus as a public health problem by 1995, and vaccination of women of child-bearing age with TT has been integrated into the EPI. PAHO's strategy calls for vaccinating all such women who live in high-risk areas, which are defined as a district in which the incidence of neonatal tetanus was higher than the national average in any of the three to five previous years. These high-risk areas—5% of the districts—account for over half the cases. Offering women in these areas immunization at every opportunity—such as during prenatal examinations and other contacts with the health services, in house-to-house vaccination campaigns, and along with their children on national vaccination days—should dramatically reduce the number of neonatal tetanus cases. Figures reported to PAHO in 1991 indicate that the countries are concentrating their resources in line with this strategy; while still low overall, TT vaccine coverage rates are up to twice as high in high-risk areas. Improved epidemiologic surveillance for this disease is another important feature of the fight to eliminate it.

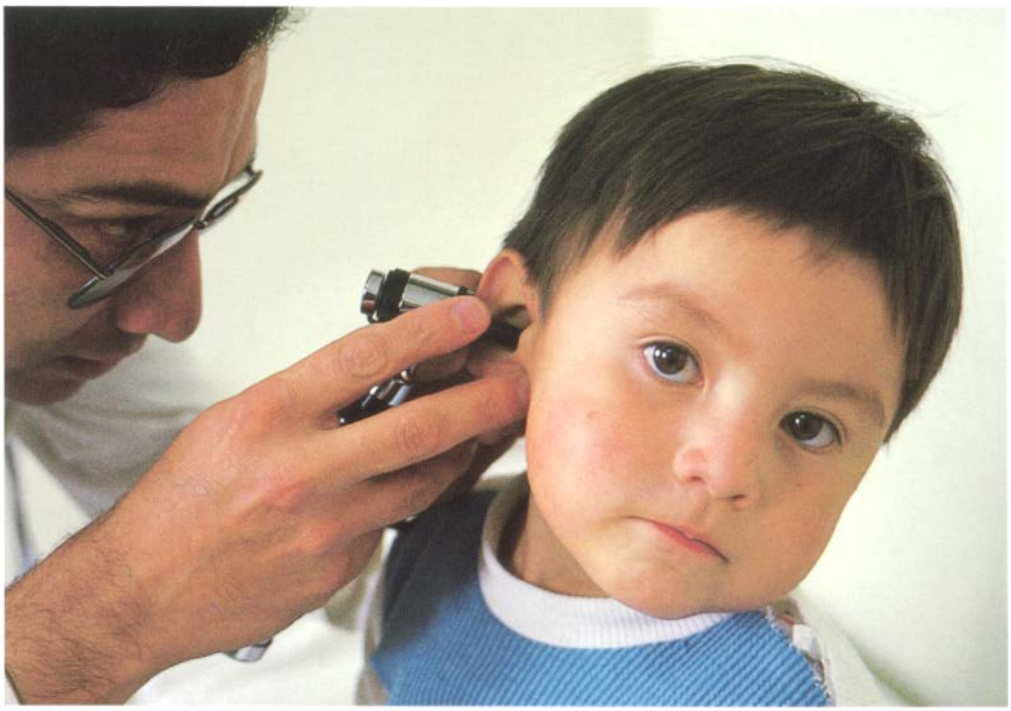
The need for improved surveillance also applies to ***pertussis,*** which is outranked only by measles and neonatal tetanus as a vaccine-preventable cause of death. As with the other EPI diseases, as vaccination coverage rates (with DPT) rose, the number of reported cases dropped sharply. But because the symptoms vary in severity and can be hard to recognize, it is believed that pertussis is greatly underreported. To help resolve this problem, PAHO has recently proposed a standard case definition and will work with the countries in improving their case identification and reporting systems.

Vaccines against several other diseases may be added to the EPI in the future. Experts on ***viral hepatitis*** have called for the inclusion of hepatitis B vaccine. EPI is promoting more research on the epidemiology and incidence of ***rubella*** to permit the most appropriate vaccination strategies to be selected. A new vaccine against ***Haemophilus influenzae*** infection, an acute respiratory illness of young children, may be added if studies show it is a cost-effective intervention and resources are found to purchase it.

The development of new vaccines against other serious diseases and the improvement of existing ones would be a boon to the health of children around the world. To strengthen vaccine-related research in the countries of Latin America and the Caribbean, PAHO has proposed the creation of a Regional System for Vaccines, which would aid the countries in the development and testing of new and improved vaccines and stimulate training in new technologies. A worldwide effort, the Children's Vaccine Initiative, was launched in December 1991 by WHO, UNICEF, the United Nations Development Program, the World Bank, and the Rockefeller Foundation to encourage the pharmaceutical industry to invest in vaccine research and development. A single-dose tetanus toxoid vaccine, a measles vaccine that would be effective in children younger than nine months of age, and a thermostable oral polio vaccine are among the first goals of the initiative. A "super vaccine" combining protective agents against many different diseases is a long-term dream.

Further gains in immunization coverage, with new or existing vaccines, will require the continued commitment of the countries and the multilateral, bilateral, and private organizations—such as UNICEF, the U.S. Agency for International Development (USAID), the Inter-American Development Bank (IDB), Rotary International, and the Canadian Public Health Association (CPHA)—that have provided such valuable support to the EPI throughout its existence. This unprecedented cooperation is continuing in the form of Child Health Phase II, a five-year (1991-1996) accelerated immunization program in the Americas launched by PAHO and USAID. Rotary International, IDB, and CPHA have also joined in this new effort. It aims to give the financial boost needed to complete the polio eradication effort and the current measles and neonatal tetanus elimination campaigns, as well as to further reduce the occurrence of all the vaccine-preventable diseases. In the wake of the enormous success already achieved by the EPI, these goals, once distant visions, are within sight. ❖

ACUTE RESPIRATORY INFECTIONS



An important complication of acute respiratory infections is inflammation of the middle ear, which can lead to hearing loss.

From the common cold to influenza, respiratory infection is a universal experience and in most instances only a minor, though miserable, illness. However, not all cases are so benign: every year acute respiratory infections, particularly pneumonia, prove fatal to more than 100,000 children under one and more than 40,000 children one to four years old in the Americas. Even in their milder forms, respiratory infections are so frequent (an average of four or more episodes per year in children under five) that they place a tremendous burden on health services, generating 30% to 60% of all pediatric consultations. More serious cases account for 20% to 40% of child hospitalizations.

About one in three hospitalizations of children in the developing countries of the Americas is attributable to an acute respiratory infection, most commonly a bacterial pneumonia.

PAHO helps train health care professionals to diagnose and properly manage cases of acute respiratory infection.

Although the diseases are ubiquitous, there is a great disparity between the industrialized and developing countries in the toll they exact. Only 1% to 3% of deaths among children under five in the developed countries of the Region are due to pneumonia, whereas in the developing countries pneumonia accounts for 10% to 25% of these deaths. Degree of access to health services is a key element explaining this difference.

For many years PAHO's work has addressed aspects of the acute respiratory infection problem. As far back as 1929 the Pan American Sanitary Bureau was publishing periodic updates on the occurrence, diagnosis, and treatment of influenza and pneumonia in its *Boletín de la Oficina Sanitaria Panamericana.* When prevention of three dangerous acute respiratory infections became possible with the advent of effective vaccines against diphtheria and pertussis (whooping cough) in the 1940s and against measles in the 1960s, the Organization assisted in the development of vaccine production laboratories and the planning of mass vaccination campaigns in the Member Countries, even before the start of the Expanded **Program** on Immunization (EPI) in the Americas in 1977. Nevertheless, it became clear that the complex problems posed by acute respiratory infections—diseases of diverse etiologies, requiring varying treatments and giving rise to several important complications—called for a comprehensive approach to aid the countries in preventing and managing them.

Since 1978, the program of work of the World Health Organization has included a section specifically dealing with the control of acute respiratory infections. The 32nd World Health Assembly (1979) adopted a resolution which urged the Member States of WHO to give priority to the fight against respiratory infections and called on the international funding agencies to lend support to this new initiative as an important element in primary health care. The Program for the Control of Acute Respiratory Infections (ARI) was established as a distinct WHO program in 1982, with funding beginning in 1984.

In the meantime, PAHO and the countries of the Americas had also begun to work in this area. As early as 1970, Costa Rica had established ARI control activities. By 1980 several countries had expressed interest in starting national ARI programs, and an ARI program was organized with PAHO support in Pará State, Brazil. The experience of Costa Rica and Brazil was instrumental to WHO's design of control strategies in the late

1980s. The regional ARI initiative became a major activity of PAHO technical cooperation in 1983.

One goal of the regional program is to aid the countries in setting up national ARI programs that will reduce child mortality through correct case management of acute respiratory infections, particularly pneumonia. About one in every 50 episodes of respiratory illness in children develops into pneumonia, most commonly caused by the bacteria *Streptococcus pneumoniae* and *Haemophilus influenzae*. Without adequate treatment 10-20% of these cases result in death. Proper case management depends on early recognition of pneumonia and treatment with antibiotics. Training to recognize pneumonia must be directed not only to medical and nursing personnel and community health workers, but to families as well, so that they will quickly seek medical attention for the child. Prompt treatment with antibiotics is crucial in cases of bacterial pneumonia. However, most acute respiratory infections are caused by viruses, which are not affected by antibiotics. Unnecessary antibiotic treatment is not only a waste of resources, it is dangerous because it can lead to the emergence of drug-resistant bacterial strains, produce toxic side effects, and deplete the supply of these drugs, making them unavailable to patients who really need them. The regional ARI program has promoted guidelines to reduce the inappropriate use of antibiotics and is working to train health workers in this regard. Clinical training is carried out in ARI treatment training units, which PAHO is helping to establish in some health services that see a high volume of acute respiratory cases. Twenty such units are now in operation in seven countries.

Other training activities carried out by PAHO have included sponsorship of numerous courses and seminars for ARI program managers, development and distribution of technical standards for case management, and production of manuals and other teaching materials, including training modules for supervisors, primary care and hospi-

Parents must be educated to recognize the signs of a respiratory infection that requires medical attention.

The smoke produced by indoor cooking fires-as well as other forms of air pollution-poses a hazard. Children subjected to heavily polluted air suffer from more frequent and more serious respiratory infections.

tal personnel, and community health workers. The regional program also translates and distributes a Spanish version of the international newsletter *ARI News* ("Noticias sobre IRA"), and since 1983, in collaboration with the U.S. National Library of Medicine, has been producing a periodic bibliography of scientific works on acute respiratory infections.

Another component in the fight against these illnesses is research. PAHO is supporting research on diagnostic criteria for pneumonia in infants and older children, on the behavior of families with regard to seeking medical care when a child becomes ill, and on the effectiveness and efficiency of health services in treating ARI. Other studies are directed toward testing promising new vaccines against the pneumonia-causing bacteria—research that potentially will add to the already—important role immunization plays in preventing deaths from acute respiratory infections.

Other interventions besides vaccination can reduce mortality and complications from respiratory infections, since certain preexisting conditions tend to make the illnesses more severe. The most important risk factors are low birth weight and malnutrition, which weaken a child's resistance to disease and ability to fight it. Indoor air pollution, especially smoke from cooking fires in poorly ventilated areas and parental tobacco smoke, also has been shown to increase the incidence of respiratory infections and aggravate their severity. Therefore, the aims of the ARI program are closely linked to those of other maternal and child health initiatives, and its work is interconnected with that of other PAHO programs, such as nutrition, environmental health, essential drugs, and health services development.

Control of acute respiratory infections is one of the most important elements in the overall effort to improve children's health and development to which heads of State committed their countries at the U.N.-sponsored World Summit for Children in September 1990. The goal of reducing deaths from acute respiratory infections by one-third is one of the six child health targets. Those countries with the highest infant mortality rates (above 40 per 1,000 live births), which account for most of the ARI mortality, will be the priority focus of program activities in the period 1992-1994. In addition to activities related to the countries, the regional program is working to

Proper nutrition for young children helps keep a minor respiratory infection from becoming a serious one.

coordinate and establish support from international agencies of the United Nations system and other nongovernmental organizations. For this purpose, PAHO, WHO, UNICEF, and the United Nations Development Program (UNDP) organized the International Consultation Meeting on the Control of ARI, held in Washington, D.C., in December 1991, which brought together specialists and representatives of international agencies to analyze progress and declare their commitment to support the project. An Interagency Coordinating Committee for the Control of ARI, made up of PAHO, UNICEF, and the United States Agency for International Development, has been established, and the countries are being encouraged to include an acute respiratory infection component in the national committees charged with pursuing the goals of the World Summit for Children.

To date, all the countries have designated a focal point for ARI control and have adopted the WHO technical guidelines for ARI prevention and treatment. Sixteen countries have prepared ARI control plans that follow these criteria, 20 have done a profile of the problem in their country, and 20 already use PAHO training modules. As more of the countries put control plans into operation, the toll of these diseases will be reduced significantly, and the effectiveness of the health services will be strengthened in the process. ❖

THE CAMPAIGN AGAINST CANCER

A health worker urges community members to get involved in the battle against cancer, and thus become active participants in preserving their own health. In the future, PAHO's anti-cancer campaign will be fought through national programs that can provide *all* communities with educational materials on the prevention, early detection, and treatment of this scourge.

Cancer, one of the most feared scourges of humankind, continues to pose a challenge for modem medical science and public health agencies. Several aspects associated with socioeconomic development are contributing to the rise in mortality from cancer being seen in many parts of Latin America: rapid industrialization and urbanization, increasing life expectancy and the rising average age of the population, improvements in communicable disease control, and the popularity of harmful habits such as smoking. And, aside from changes in the population's profile, the incidence of cancer also is gaming in real terms.

PAHO's research work on cancer includes a survey in the early 1970s of eight Latin American cities to ascertain the frequency of smoking; the publication resulting from the survey is still widely cited in the literature in this field.

For almost three decades, PAHO has been making a significant contribution to cancer control in the Region's countries. Given the complexity of the factors that contribute to the development of malignant neoplasms, many of the Organization's programs are involved in cancer control in one way or another. These activities are carried out along two basic levels: in general terms, healthy habits are promoted to help prevent certain types of cancer, and, specifically, activities are undertaken in the areas of research, dissemination of knowledge, training, development of registries, detection, treatment, and social support services.

Background Articles in some of the earliest issues of the *Boletín de la Oficina Sanitaria Panamericana* sketched what would become the long-term effort to unravel the enigma of cancer and stop its devastating impact on the Region's societies. At the beginning of the century, the fight against cancer was waged almost entirely through oncology centers located in some of the countries, congresses and meetings, and the work of independent researchers.

The full participation of international public health agencies in the cancer campaign began in the 1960s, when WHO, on the basis of data collected by numerous international tumor reference centers, began to develop an international classification of malignant neoplasms in a series of "blue books" accompanied by color slides. At the same time, the section on tumors in the *International Classification of Diseases* was expanded, and in 1972, a provisional supplement was published containing a nomenclature for the histological typing of neoplasms. After careful revision of existing tumor nomenclature, in 1974 PAHO published an updated Spanish version of the American Cancer Society's original 1951 edition of the *Manual of Tumor Nomenclature and Coding (Manual de Nomenclatura y Codificación de Tumores),* which proved to be a major contribution to the work of pathologists, oncologists, and researchers in Spanish-speaking countries.

Cancer Registries During the 1960s, PAHO actively joined the fight against this disease, which by then had become one of the leading causes of mortality in the Region. The Organization began by providing technical advisory services to the countries for the establishment of cancer registries, which are indispensable sources of data for the

Since the 1980s, the Organization has stressed the modernization and expansion of cytology-based diagnostic programs in several countries. Technicians at the Brazilian Cancer Control Institute run cytology tests, an extremely important step in the control of cervical cancer.

design of control programs. In 1969, PAHO sponsored a seminar in Colombia on cancer registries. The resulting report, *Seminario sobre Registros de Cáncer en América Latina* [Seminar on Cancer Registries in Latin America], has served as a model for the counties of the Region, along with a Spanish translation, published in 1977, of the WHO Hand*book for Standardized Cancer Registries.* The direct support provided to the Bureau for the creation and maintenance of these registries in a number of places has been strengthened over the years and continues to be an important aspect of the institution's effort to conquer cancer.

Research Activities The establishment of reliable registries enabled PAHO to undertake regional epidemiologic studies on cancer. In the mid-1960s, one of the first and most important was carried out in 12 cities to identify patterns of mortality in urban areas. The resulting publication, *Patterns of Urban Mortality,* revealed alarming figures, which led PAHO to establish a Cancer Control Unit at its Headquarters in 1968.

While it is impossible to list all the studies carried out or supported by PAHO in the years that followed, many of which played a decisive role in the orientation of its control policies, the highlights included: a survey conducted in eight Latin American cities to ascertain the frequency of smoking (with a resulting publication that is still widely cited in the literature in this field), a study on the role of health education in the control of cancer, studies of dietary factors in the development of stomach cancer in three countries with high cancer incidence, and epidemiologic and biochemical research on cancer of the gallbladder among Bolivian women.

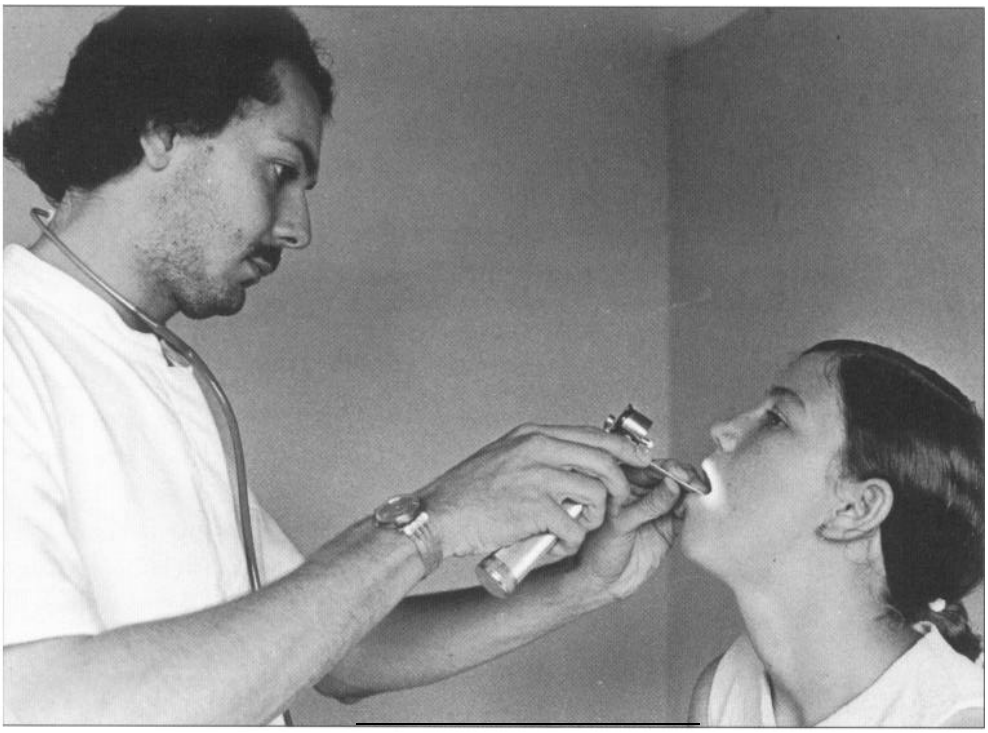
Through the Collaborative Cancer Treatment Research Program instituted by PAHO in 1977 at several centers in Latin America and the United States, many phase I, II, and III studies have been done on the effects of surgery, radiation therapy, chemotherapy, and immunotherapy in the treatment of different types of neoplasms. In the last decade, PAHO has participated in a series of four-year studies, conducted in collaboration with WHO and several U.S. and Latin American institutions, on the possible carcinogenic and teratogenic effects of pesticides on humans. When, in the mid-1980s, the human T-lymphotropic virus (HTLV) began to spark the scientific community's interest, PAHO conducted a study on it in Jamaica. These examples illustrate the breadth of PAHO's research in the area of cancer, ranging from epidemiologic aspects to causality, detection, and treatment.

Development of Programs and Human Resources Since the 1960s, PAHO has provided technical advisory services to oncology institutes in many countries and has prepared guidelines for developing and coordinating detection and control programs throughout Latin America. Three forms of the disease in particular-cancer of the cervix, breast cancer, and lung cancer-have received the most attention because of their high prevalence and the possibility of controlling the first two through early detection and the third through behavior modification. During the 1980s, PAHO focused on the modernization and expansion of cytology-based diagnostic programs in several countries.

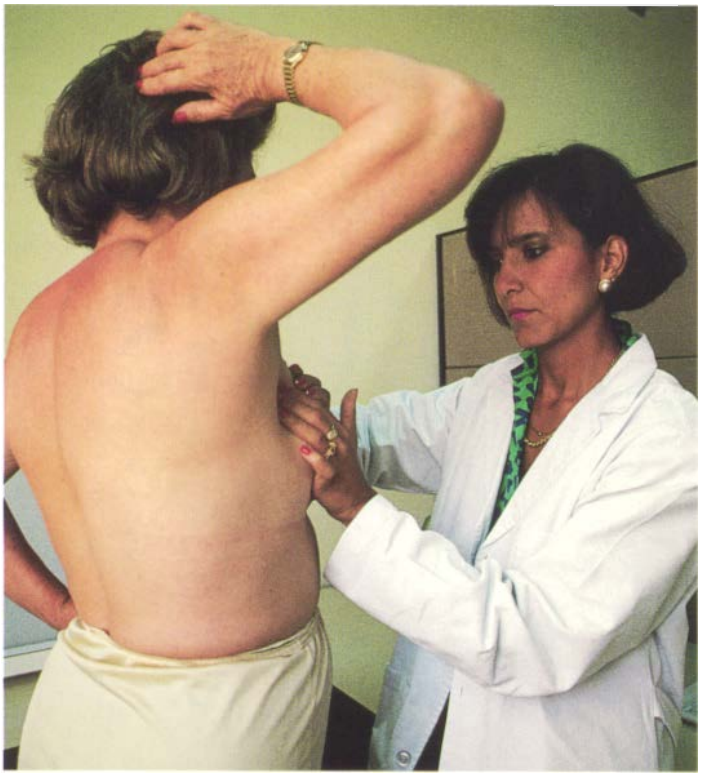
To cope with the manpower needs generated by the expansion of these programs, PAHO promoted the creation of training centers and has offered fellowships at the graduate level, courses in clinical oncology, and many other educational opportunities for pathologists, radiation therapists, epidemiologists, and other professionals and technicians concerned with cancer detection or treatment. An example of these efforts was a project that involved training and exchange of knowledge about chemotherapy carried out by PAHO in 1974 with the participation of oncology centers in Brazil, Chile, Colombia, Peru, and the United States.

Cancer Treatment PAHO also has left its mark in the area of treatment. During the economic crisis of the 1980s, the high cost of drugs used for chemotherapy became an especially serious problem in the Latin American countries without social security programs or access to these drugs at reduced prices. In 1983, the Organization compiled a list of essential cancer treatment drugs and developed a plan for their procurement in the countries. Following up on these initiatives, chemotherapy protocols were prepared for stomach cancer, cancer of the cervix, breast cancer, leukemias, and pediatric tumors. In the 1980s a survey of dosimetry units used in radiation therapy was conducted among institutions participating in the Collaborative Cancer Treatment Research Program.

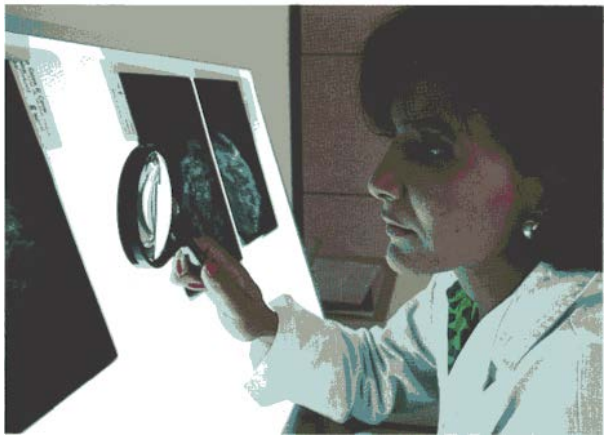
Dissemination of Knowledge In 1974 PAHO, working in collaboration with the U.S.



A physician in Costa Rica examines a patient's mouth to rule out the presence of a precancerous lesion. PAHO currently promotes the establishment of screening programs in the countries aimed at detecting cancer before the first symptoms appear.



Periodic breast examinations and, especially, mammographies such as the ones being studied by this physician, represent the best hope for detecting breast cancer early enough for a good prognosis. PAHO emphasizes educating women about the importance of these early detection methods.



National Cancer Institute, the International Union Against Cancer, and the International Agency for Research on Cancer, initiated a project to link the Latin American and the Caribbean countries in a specialized information network known as the Latin American Cancer Research Information Project (LACRIP). Under this project, which is managed by the Regional Library of Medicine and Health Sciences (BIREME) in São Paulo, Brazil, the articles, protocols, and studies on cancer that are produced in the Region are fed into the major data bases such as CANCERLINE, CANCERLIT, CANCERPROJ, and CLINPROT. Among its benefits, LACRIP serves as a valuable tool for identifying new areas of research. An especially important initiative under this project was the formation, in 1983, of the Selective Cancer Information Dissemination Service, whose Spanish-language quarterly, *Diseminación selectiva*, provides information on diagnosis, epidemiology, and treatment to thousands of subscribers.

Through reports and other publications, PAHO has placed countless teaching materials within the reach of professionals and technicians in the field of oncology, some of which already have been mentioned. Additional examples include the following scientific publications: a Spanish-language version of *Early Detection of Oral Cancer and Precancerous Lesions, Manual on Norms and Procedures for Cervical Cancer Control* (updated in 1985), and a manual on clinical radiation dosimetry (adapted to needs in Latin America).

In the future, PAHO's campaign against cancer will be waged through the structuring of national control programs that will help to provide all communities, even the most remote, with educational materials on prevention, early detection, and treatment. The success of the programs-measured in terms of reduced cancer mortality-will depend on the extent to which they succeed in instilling in the population the importance of healthy habits, self-monitoring, and periodic checkups for early detection. In its ongoing support of the Governments and agencies that are joined in the struggle against cancer, PAHO will continue to work on mobilizing all involved sectors in a common effort to reduce the physical and moral burden that cancer inflicts on our societies. ❖

TARGETING UNIVERSAL AVAILABILITY OF ESSENTIAL DRUGS

In an illustration from the *Florentine Codex,* a medicinal plant changes hands between two Aztec men.

Of all the spectacular advances of the 20th century, few have benefited humankind as much as the development of safe and effective drugs. The continuous search for new drugs has given rise to a huge transnational pharmaceutical industry and to thousands of commercial products whose quality, safety, registration, distribution, advertising, and use require careful regulation. The Pan American Health Organization has been a leader through the years, playing a proactive role in setting regulatory policies in this area.

This 19th century advertisement illustrates the exaggerated or outright false claims about the healing power of medicines that have been made for centuries. In the 1950s, the Organization issued a strongly worded warning against "miracle drugs," and a decade later, PAHO's Directing Council recommended the prohibition of false or misleading advertisements.

Historically, technological dependency has forced the health sectors in Latin America and the Caribbean to devote a major portion of their budgets to the purchase of pharmaceutical products, but they have been unable to overcome some of the difficulties typical of developing societies: unavailability of drugs to certain groups, lack of information and false claims about drugs, discrepancies between demand and real health needs, inappropriate use of products, and ineffective supply systems. In response to these problems and in order to adapt its policies to the priorities of the moment, PAHO has provided ongoing advisory services to the countries of the Americas, with a view to making available safe, effective, and good-quality pharmaceutical products to all segments of the population.

Early Activities of the Bureau The *United States Pharmacopeia,* first published in 1820 and since updated numerous times, was the officially recognized list of drugs in the United States at the beginning of this century. In 1905, the II International Sanitary Conference proposed that it be translated into Spanish in order to provide a basic reference for physicians and pharmacists in the Americas. The project was slow to come to fruition, but the translation of the 11th revision of the *Pharmacopeiu* and its *First Supplement* was finally published in 1936. It was followed three years later by the translation of the *Epitome of the Second Supplement.* This impressive effort, carried out by the Pan American Sanitary Bureau with the assistance of auxiliary commissions from Cuba, Puerto Rico, and the Philippines, remains one of the earliest and most outstanding examples of international scientific collaboration,

In the early part of this century, all the countries had independent pharmacopeias and the need for a common standard was urgent. As early as 1923, the V International Conference had recommended that the countries adopt uniform regulations, and in 1924 the VII Pan American Sanitary Conference laid the foundation for the corresponding legislation. The proposals of that Conference were subsequently adopted by the IX Pan American Sanitary Conference in 1934, which also designated the Bureau as the liaison among the national commissions of the American pharmacopeias. To fulfill this mandate, in 1938 the Bureau began publishing a series of 24 articles in the *Boletín* entitled "La Farmacopea y el médico" [The Pharmacopeia and the Physician].

Growth of the Pharmaceutical Industry The Bureau's efforts in the area of drug regulation gathered momentum with the rapid growth of the pharmaceutical industry during World War II. In 1947, the XII Pan American Sanitary Conference recommended the creation of a Committee on

Through its initiatives, PAHO strives to even out distribution discrepancies of pharmaceutical products between the public and private sectors. In addition, beginning in the 1960s, its policies endeavored to extend drug supply services from the tertiary to the primary care level.

Drugs and Foods to study problems arising from the exportation, importation, manufacture, and supply of drugs, food, and cosmetics, coupled with the setting of standards to facilitate commercial exchange while safeguarding health objectives. It also recommended that the Bureau ensure that official laboratories be supplied with standards for determining drug potency. In response to proposals of many earlier Pan American Sanitary Conferences, the XII Conference ratified the promulgation of a Pan American Pharmacopeia—a project that never came to fruition—and recommended that the countries endeavor to stem the traffic of dangerous or fraudulent drugs, make a general revision of pharmaceutical products and remove any that violated the principles of modem therapeutics, and make manufacturing licenses renewable for periods not longer than five years.

Quality Assurance Measures When the Bureau became the Regional Office of the World Health Organization in 1949, the World Health

Assembly had already been given the authority, under the WHO Constitution, to adopt regulations regarding the quality, advertising, and labeling of drugs that moved in international commerce. Over the next two decades, the Bureau concentrated on ensuring the safety, potency, and purity of drugs and on setting guidelines for their evaluation. In order to ensure good quality beginning with the preparation phase, it approved a set of "good manufacturing practices," with which producers of pharmaceuticals were urged to comply. These standards have served as the basis for all quality control activities since then. To reinforce them, the Bureau has sponsored numerous courses and workshops, many held for its own staff members and inspectors.

During the following two decades WHO published the first *International Pharmacopeia,* and the measures designed to ensure legislative standardization were strengthened. In 1958, with the assistance of the Organization of American States, WHO, and the International Union for the Protection of Industrial Property, PAHO established a food and drug control program. At the same time, the Governing Bodies suggested that laws be adopted in the countries giving the Governments the authority to regulate research activities and all aspects relating to the purchase, control, registration, inscription, and distribution of drugs in their territories. In order to support these measures, PAHO followed the recommendations of the XV Pan American Sanitary Conference, held in 1958, and increased distribution of the most recent publications on therapeutics and pharmacology, organized meetings on the subject, and provided resources for the training of specialists in control techniques.

The 1950s brought increased awareness of the damage that could be done by irresponsible and false advertising of products. Several strongly worded warnings were issued against "miracle drugs," and in 1960 the Directing Council recommended the prohibition of any false and misleading advertising that would diminish the benefits of drug control laws.

A successful program of essential drugs rests on well-trained pharmacists who are fully aware of their role as experts. PAHO has devoted much effort toward enhancing education in this area, including the establishment of centers in Central America and the Andean area that disseminate up-to-date information.

Following a lengthy study, PAHO determined to undertake a closer examination of certain aspects of the problem, particularly the potential teratogenie properties of some drugs. In 1962, the XVI Pan American Sanitary Conference recommended that congenital defects be noted on certificates of fetal death and live birth and that all imported and domestically produced pharmaceutical preparations be subject to quality inspections. In light of the latter recommendation, in 1965 PAHO began working toward establishing official international quality control laboratories, which would later become important centers for research, reference, and training. It also began to sponsor annual meetings for officials responsible for food and drug control in Central America and Panama.

During the 1960s, PAHO espoused policies aimed at extending the drug supply services from the tertiary to the primary care level, while simultaneously continuing to ensure the quality of food and drugs and to strengthen control activities in the Region. The first Seminar on Drug Control in the Americas, held in 1970 and sponsored by PAHO and the Government of Venezuela, emphasized the importance of adequate training for auxiliary personnel and clinical pharmacologists and the need to standardize existing policies. Consumers were the focus of increasing attention, as was highlighted in 1972 when the 25th World Health Assembly urged Governments to inform their populations about the use, hazards, and limitations of drugs. In addition, it requested that they study the expiration of pharmaceutical products and that they maintain good records and a system of certification to guarantee good quality.

The Regional Program on Essential Drugs

After the Declaration of Alma-Ata (1978), PAHO turned its attention to the cost and availability of drugs. It was acknowledged that given the rapid growth of the population, if the goal of "health for all by the year 2000" was to become a reality, taking into account the rapid growth of the population, a larger portion of the limited budgets of ministries of health would have to be devoted to therapeutic agents as key elements in the control of morbidity. However, it was also recognized that there were too many brand-name products in circulation that did not correspond to the basic health needs and economic capacity of the countries. WHO responded to this situation by preparing a list of essential drugs-using only international nonproprietary names-based on criteria of cost, effectiveness, and safety. Inspired by this example, almost all the countries in Latin America and the Caribbean had prepared their own therapeutic formularies, or basic drug tables, by the mid-1980s. These have been reviewed periodically with a view to adding or deleting products based on an assessment of their relative benefits and risks. Since 1978, decisions regarding the safety and effectiveness of drugs have been published in a special section of the *Boletín* entitled "Información farmacológica" [Pharmacologic Information].

Following WHO's initiative, in 1983 PAHO launched the Regional Program on Essential Drugs, which has two fundamental objectives: to support the development and application of basic drug tables and to help the countries to create national drug programs and policies based on their national health needs, their supply and demand profile, and the supply capacity of their industrial sectors. Between 1984 and 1989, PAHO published several important works: *Development and Implementation of Drug Formularies, Policies for the Production and Marketing of Essential Drugs, Clasificación Internacional de Medicamentos* [International Classification of Drugs] (a document prepared in collaboration with WHO), *Manual para la administración de farmacias hospitalarias* [Manual for the Administration of Hospital Pharmacies], and *Pautas para el establecimiento de un programa national de control de medicamentos* [Guidelines for the Establishment of a National Drug Control Program], among others.

Despite the benefits of the foregoing measures, the cost of drugs escalated and problems relating to the administration of supply systems intensified during the economic crisis of the 1980s. In response to this situation, PAHO concentrated its efforts on improving the efficiency of supply

The best medicines in the world are useless if they are allowed to stockpile and expire in warehouses because of poor administration. In order to help get drugs off the shelves and where they are needed, the Organization and Member Countries are working together to modernize distribution and supply systems throughout the Region.

systems and fostering self-sufficiency in the countries by promoting the domestic manufacture of generic products and the use of traditional drugs with proven safety and efficacy track records. It also began to support financial and administrative mechanisms designed to facilitate joint purchasing of drugs by public sector entities. Reiterating its traditional support for regulatory agencies, in 1984 the Organization sponsored the formation of the Latin American Network of Official Drug Quality Control Laboratories. The Network's sphere of action was extended to encompass drug registration and regulation by the Ibero-American Meeting on the Registration, Inspection, and Quality Control of Drugs, held in Madrid in 1991.

Policies regarding the production and marketing of essential drugs were the subject of the Technical Discussions held during the XXIX Meeting of the Directing Council of PAHO in 1984, an important event at which considerable time was devoted to discussing the drug situation in specific countries of the Region, as well as at the level of subregional markets. Today, the multinational nature of many PAHO projects in the area of drugs is an outgrowth of the need to adapt regulatory and normative criteria to the processes of economic and political integration that are taking place in the Region. Most projects are carried out in the context of the PAHO subregional initiatives involving the Central American and the Andean counties which assign priority to essential drugs.

Rational Use of Drugs With the advent of the 1990s, the rational use of therapeutic agents has begun to occupy a prominent place in the Organization's policies. In this context, one of the greatest challenges facing PAHO is overcoming the enormous resistance of professionals and the public at large to the use of generic drugs for pur-

poses of prescription, dispensing, and consumption. In order to ensure the correct utilization of therapeutic agents, it will be necessary, basically, to modify the way in which physicians and pharmacists are trained and to awaken in the latter an awareness of their vital role as true experts. In 1990, the first Pan American Conference on Pharmaceutical Education was held in Miami. The declaration of principles regarding the role of pharmacists that emerged from that Conference has led pharmacy schools throughout the Region to undertake an in-depth review of their curricula. In order to enhance education in this area, PAHO has created various centers in Central America and the Andean area to disseminate up-to-date information. The Organization itself is continually disseminating information through a variety of publications, many of them widely distributed reference materials. Notable among these are the Spanish-language version of the eighth edition of *USP Drug Information for the Health Professional*, a prestigious international source of information on drugs for health professionals comprising two volumes and published under an agreement signed by PAHO, the Convention of the United States Pharmacopeia, and the Ministry of Health and Consumer Affairs of Spain.

Prospects The Organization's work in the area of essential drugs continues to expand rapidly in response to the true needs of the peoples of the Americas. While at the beginning this work concerned itself chiefly with regulation, today its scope has broadened to include all drug-related matters—from the selection, purchase, distribution, labeling, and quality control of drugs to their prescription and use. Increasing multidisciplinary involvement in this area poses a challenge for the future, particularly in view of the difficulty in coordinating the interests of all the sectors con-

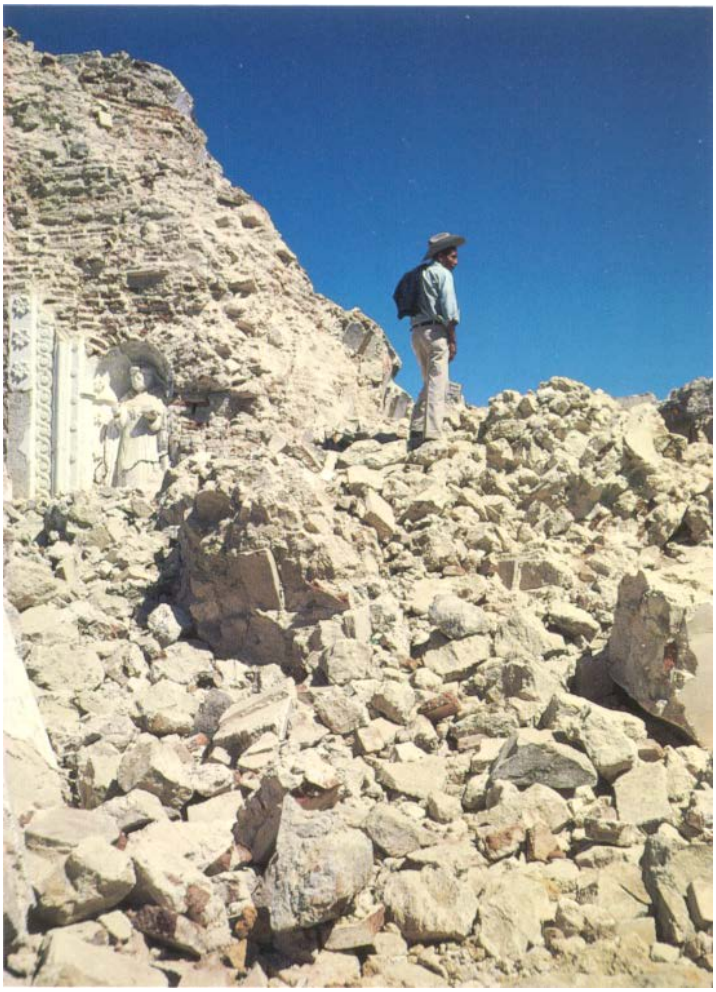
In response to increased accessibility problems and the escalating costs of drugs during the economic crisis of the 1980s, PAHO fostered the countries' self-sufficiency by promoting the domestic manufacture of pharmaceutical products and the use of generic drugs.

An educated consumer is the linchpin in the effort to achieve an effective and wise essential drug use.

cerned, but it is precisely this characteristic that will ensure vitality and progress. The Latin American Conference on the Economic and Financial Aspects of Drugs, held in Caracas, in March 1992, was one of the first clear demonstrations of the way in which the pharmaceutical and economic sectors today are inextricably linked.

In its work on essential drugs, PAHO receives ongoing support from WHO, the United States Food and Drug Administration, the Canadian Health Promotion Branch, the Ministry of Health and Consumer Affairs of Spain, and the American Association of Colleges of Pharmacy, as well as a number of other public and private entities in Member Countries. Activities are funded mainly through extrabudgetary funds from WHO and projects with donor agencies, with the pharmaceutical industry also providing support through its national and international associations. It is difficult to predict exactly what direction the Organization's work in this area will take in the future, but its course will undoubtedly be determined by the technical innovations and social, epidemiologic, economic, and political trends that develop along the way. It will almost certainly have to grapple with the challenges created by the biotechnological revolution, for example, as well as the growing incidence of chronic and environmentally related diseases in the developing countries. The Organization has heretofore been, is now, and will continue to be a valuable instrument for the Governments of the Americas in their efforts to secure the health and well-being of their peoples through the wise use of good-quality drugs. ❖

PREPARING FOR DISASTERS



A single statue peering from its niche keeps lonely vigil over all that remains of a church in Guatemala in the wake of the devastating 1976 earthquake. Although any disaster is unwelcome and some may never be prevented, the work of PAHO and its Member Countries offers hope of minimizing human and material losses and the social and economic upheaval that disasters bring.

The Region's record for natural disasters since 1970 is a stark reminder of just how vulnerable the Latin American and Caribbean countries are. Massive earthquakes in El Salvador, Guatemala, Mexico, Nicaragua, and Peru, killed more than 100,000 persons. Hurricanes have wrought havoc in the Caribbean each year—David, Allen, and Gilbert will be remembered for some time to come, and Hugo and Andrew were so devastating that the names have been retired.

A child wistfully waits upon the remnants of her Montserrat home shattered by Hurricane Hugo in 1989. Disasters do not hit with an even hand: they strike hardest at the poor, especially the women, children, and elderly among them-and it is this highly vulnerable group that is most affected by a poorly planned and slow recovery effort.

Many communities live with the imminent threat of volcanic eruptions, like that of the Nevado del Ruiz volcano, which buried the city of Armero, Colombia, killing 23,000. And, while floods may not claim the same attention from the international press, their impact each year on public health in the countries is every bit as great.

Until the 1970s, the role of the Pan American Health Organization was essentially to respond to specific emergencies. In 1977, however, the Member Countries requested the Director to set up a disaster unit with instructions to define the policy of the Organization, formulate a plan of action for the various types of disasters, make an inventory of the human and other resources available, and tram the necessary personnel. With the creation of the emergency preparedness program, the countries began to tackle the difficult question: How can emergency health services cope more effectively with disasters?

Disaster preparedness became the key to managing the health consequences of disasters. The level of disaster preparedness in a country's health sector was seen as a reflection of the overall quality of its health services and its ability to provide effective care and coverage in normal times. Conversely, a country's level of preparedness could only be as good as the health sector's organization and resources. In effect, the quality of emergency health care delivery under disaster conditions often reflected the quality of routine public health care in normal times.

In working with the countries, PAHO devised a health sector disaster preparedness strategy that comprised two main components: strengthening health sector institutions and developing human resources. The countries were encouraged to consider disaster preparedness as a permanent function of their health sector institutions, as permanent an aspect of their organizational structure as,

Picking through the cascading rubble of what once was a multi-storied building, a battalion of Mexico City volunteers and emergency personnel searches for victims and survivors from the 1985 earthquake. Contrary to popular myth, the affected population is neither too shocked nor too helpless to take responsibility for its own survival.

say, a maternal and child health or an epidemiologic surveillance program. The countries responded by establishing or strengthening technical emergency preparedness programs in the health sector, through adoption of the requisite administrative and legal measures and provision of the necessary human and budgetary resources. Without this national commitment, workshops, seminars, and other ad hoc activities would not have achieved the expected results. Whereas prior to 1977 disasters were considered to be almost exclusively the responsibility of civil defense or similar agencies, today every country in the Americas also has a disaster coordinator for the health sector within the ministry of health.

The other key component of disaster preparedness-developing human resources in the health sector-is especially important, because an effective response to disaster depends, first and foremost, on the readiness and qualifications of the first responders—local leaders and primary health care workers in the affected communities—and then on the ability of those at the central level to coordinate the external response. The better prepared the local health services and communities are, the better the overall national response will be. In support of human resource development, PAHO organizes some 200 workshops, courses, and other training initiatives each year. Even more importantly, to ensure continuity among future generations of health sector professionals, PAHO has targeted the systematic inclusion of disaster preparedness in the undergraduate and postgraduate curricula of medical, public health, nursing, and engineering faculties in the Region.

While the disaster preparedness of first responders is critical, the Organization has also recognized the importance of coordinating the inter-institutional response to disaster. Efforts

International assistance in the aftermath of a disaster must respond to real needs; otherwise, unsolicited medical supplies, clothing, food, and even foreign medical teams can contribute to the chaos.

have focused on preparing key decision makers in the health sector, whose motivation and support is essential; deans and faculties of medical and health-related schools, who can progressively include disaster preparedness in students' formal education; and officials from the foreign affairs and planning sectors as well as the mass media, who-if they acquire a basic understanding of health-related disaster problems-can effectively support the health sector.

By the close of the 1980s, disaster preparedness was well accepted by the countries of Latin America and the Caribbean. Their conviction that emergency planning and preparedness must be an ongoing process has prompted them, during non-emergency times, to initiate many activities at the national level. They recognized that seemingly unrelated events, such as changes in the national infrastructure or reductions in personnel, can alter the logistics of a national disaster plan. And, they understand that planning is perhaps even more critical in the aftermath of a disaster, when strategies can be evaluated, lessons can be learned about the implications of emergency decisions, and disaster plans can be revised.

The United Nations has proclaimed the 1990s the International Decade for Natural Disaster Reduction, the objectives of which are to reduce the loss of life, property damage, and social and economic disruption caused by natural disasters, especially in developing countries. Worldwide, countries have been encouraged to create National Decade Committees—consisting of representatives from an array of sectors, including health-to identify their disaster priorities and devise work plans that will improve the countries' capacity to reduce the effects of disasters.

In response to the International Decade, PAHO has shifted the emphasis of some of its activities toward other disaster reduction measures: prevention and mitigation. While preparedness accepts the inevitability of disasters and focuses on how communities and health institutions can respond quickly and in an organized manner when disasters occur, disaster prevention aims at keeping natural hazards from becoming disasters. Preventive measures can range from building a dam to retain waters during major floods, to enacting urban planning and public works legislation that decrees where not to construct or locate key facilities such as hospitals.

An effective response to a disaster depends, first and foremost, on the readiness and qualifications of the front—line response team—local health leaders and primary care workers. PAHO organizes hundreds of training events each year to ensure that the health sector has well-prepared personnel who can cope with disasters.

Disaster mitigation, on the other hand, will not prevent a disaster, but can lessen the impact of a disaster on the population and physical structures. Mitigation measures such as retrofitting or strengthening hospitals, or designing them to withstand earthquakes or hurricane-strength winds, assure that these structures will remain in operation after disasters, rather than contributing to the death toll.

The relationship between disasters and development is complex. If there is no development—no human settlements or health care facilities, for instance-then a natural hazard cannot become a disaster that causes human or material losses. At the same time, however, underdevelopment—which prevails wherever poverty abounds and education is lacking—can make a country's population more vulnerable to a disaster. Too often, unsafe housing is constructed in disaster-prone areas. Ironically, as countries develop and their populations change the way they build their homes and farm their lands, their vulnerability to disaster does not necessarily decrease; on the contrary, it may increase. Nowhere is that increased risk more evident than in the link between industrial development and the risk of technological disasters.

Disaster reduction represents a long-term investment in a country's development. As the nations of Latin America and the Caribbean focus their efforts on disaster reduction activities during the l990s, they may be able to take advantage of the opportunities for genuine reform and improvement that disasters offer. ❖

HEALTH PROMOTION

As health has come to be viewed as something that people can influence over the course of their lifetimes, the Organization has focused on promoting healthy lifestyles and behaviors. The pursuit and enjoyment of exercise is important for the overall health of children as well as adults.

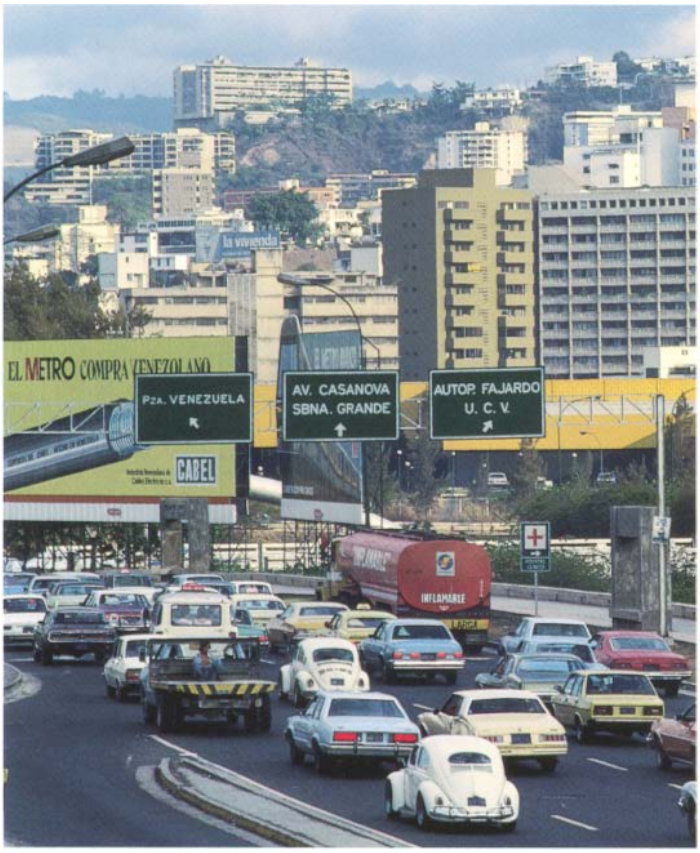
Since its founding in 1902, the Pan American Health Organization has worked to safeguard the health of the peoples of the Americas. The concept of health, however, has evolved over time, and, in turn, so have PAHO's policies and approaches. When health was considered primarily in terms of the absence of disease during the first part of the century., the Pan American Sanitary Bureau focused mainly on controlling communicable diseases. By mid-century, around the time that the

An important aspect of health promotion involves detecting those persons who are at risk of developing life-threatening cardiovascular diseases. To that end, PAHO helps the health sectors in the countries to provide equitable and accessible screening services to rural and periurban residents.

World Health Organization was created, a modem understanding of health had emerged—one that the WHO Constitution defined as a "state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." Later, as the relationship between health and development became more apparent, the Organization undertook to help the countries to improve their health infrastructure, particularly at the primary care level, and to meet the needs of groups at risk.

Today, chronic, noncommunicable diseases—those diseases that develop gradually as a result of unhealthful habits typical of modern societies—rank high among the causes of death in countries at all stages of development. Consequently, health has come to be perceived as something that people themselves determine over the course of their lifetime, through their behavior and through environmental modification. Relying on this concept, PAHO now focuses on promoting lifestyles and behavior patterns that are compatible with overall well-being. Its emphasis on health promotion targets educating and encouraging people to adopt healthy lifestyles that will allow them to achieve maximum levels of productivity and to live in harmony with their environment. Critical to this new approach is individual responsibility: each person must consciously choose day-to-day habits and behaviors conducive to well-being and reject those that are hazardous. In addition, Governments must support individuals through official measures designed to reduce harmful environmental influences. It follows that health promotion, no longer the exclusive province of the health sector, now requires the coordinated efforts of many groups and sectors.

In light of the worldwide goal of health for all by the year 2000, WHO, Health and Welfare Canada, and the Canadian Public Health Association signed the 1986 Ottawa Charter for Health Promotion, which advocates the modern concept of health and underscores the importance of individual and collective responsibility and of



The waves of humanity migrating from rural to urban areas have made many of the Region's cities so congested that their inhabitants are subjected to extreme noise, pollution, and other hazards of urban living as well as the stress, accidents, and violence that seem an integral part of a fast-paced life. PAHO aims at preventing these problems from undermining people's mental and physical health.

environmental transformation. The Charter identified peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice, and equity as prerequisites for health. Subsequently, in 1990, the XXIII Pan American Sanitary Conference approved the Organization's strategic orientations, which underscored the importance of health promotion as "the sum activity of the population, the health services, the health authorities, and other productive and social sectors, aimed at improving the status of individual and collective health."

PAHO's efforts in the area of health promotion center on a concern for the needs of adults and the elderly-the groups that are most directly affected by unhealthful behaviors and harmful habits such as alcoholism, smoking, drug addiction, poor diet, sedentary lifestyles, and long-term stress. These factors tend to manifest themselves, sooner or later, as malignant tumors, cardiovascular disease, chronic respiratory and kidney diseases, diabetes mellitus, mental and neurological disorders, and accidents and violence. Currently, Latin America and the Caribbean are experiencing an upsurge in the occurrence of these problems, as people assume the lifestyles of affluent industrialized countries.

To implement its health promotion strategy, PAHO coordinates activities related to the health of the elderly, chronic noncommunicable diseases, prevention and control of drug and alcohol abuse, blindness prevention and eye care, mental health, smoking prevention, and accident prevention. Many of these areas have had a long history within the Organization. Efforts to combat alcoholism and drug trafficking, for example, go back to the 1920s. The campaign against smoking was launched in the 1960s, a time when institutional efforts to investigate the origin and magnitude of addiction problems also began. PAHO's cooperation with the countries in the area of health promotion involves formulating official policies, setting up programs, and organizing educational campaigns, training courses, seminars, congresses, and national and international workshops.

Chronic Noncommunicable Diseases The occurrence of chronic noncommunicable diseases in the Latin American and Caribbean countries is rising rapidly as the population ages and urbanization and industrialization lead to unhealthful lifestyle changes. Cardiovascular disease, cancer, and diabetes mellitus are now among the three leading causes of death in many countries of the Region. Unfortunately, health services have responded almost exclusively to the advanced

A 1930s poster advertising an anti-marijuana film relies on drama—and even exaggeration—to get the most out of that early campaign. Today, the control of alcohol and drug abuse involves dovetailing rehabilitation efforts, campaigns to reduce or stop the production and distribution of addictive substances, and improvements in the population's living conditions.

phases and complications of these diseases, which has stretched their capability to meet the population's needs and has favored the over use of complex technologies, whose high cost puts them beyond the reach of the neediest groups.

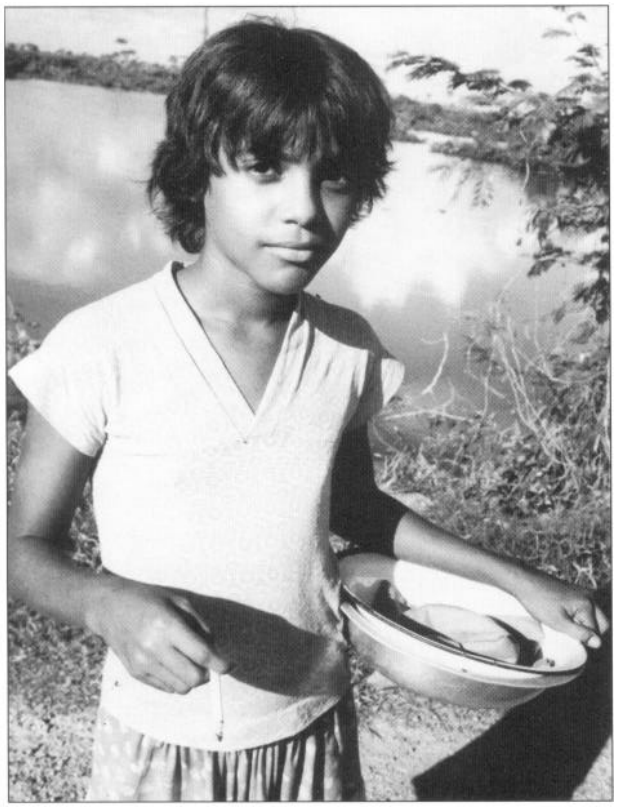
To improve this situation, PAHO promotes the establishment and development, at the level of local health systems, of "integrated operational interventions"-broad measures aimed at promoting health, preventing the risk factors for chronic noncommunicable diseases, improving the effectiveness and accessibility of health services, and making the best possible use of the mass media. A recent and noteworthy example of the last-mentioned approach is the Region-wide community initiative, "From Heart to Heart," aimed at effecting a long-term "cultural change" and of modifying the attitudes of people in the Americas toward health, as well as their lifestyles and perceptions about their personal responsibilities.

Prevention and Control of Drug Abuse It is estimated that 10% of the people in the countries of the Region drink excessively and that 4% to 9% of them abuse psychoactive substances. These behaviors have an irreversible effect on health and contribute to high rates of traffic accidents, homicide, and suicide. Drug and alcohol abuse also contributes to family breakup, arrests child development, and has a detrimental effect on collective well-being, social productivity, and health economics. In order to control these problems, it is necessary not only to provide rehabilitation services but also to develop preventive strategies aimed at reducing the production and distribution of substances that lead to addiction.

The Organization has waged an ongoing battle against these problems for many years and currently has as its objectives: to promote fiscal, legal, and police control measures and to support policies and programs aimed at reducing the demand and consumption of alcohol and drugs; to advise

the countries about setting up epidemiologic surveillance systems and conducting research; and to aid the victims of drug and alcohol dependency by establishing appropriate assistance services. Along with other international agencies, PAHO is mobilizing the resources needed to carry out these activities, while providing direct technical advisory services to the countries.

Mental Health By the year 2000, an estimated 88.3 million people in Latin America and the Caribbean are expected to be suffering from some form of mental disorder. Although the Organization has for many years endeavored to help the countries to organize assistance and rehabilitation services, train personnel, and improve institutional psychiatric care, the new concept of health calls for a broader and more preventive approach. PAHO focuses its efforts on combating the risks that lead to mental disorders and establishing community-based assistance programs in the context of general public health plans. In addition, it promotes the incorporation of mental health services into primary care and local health system activities.

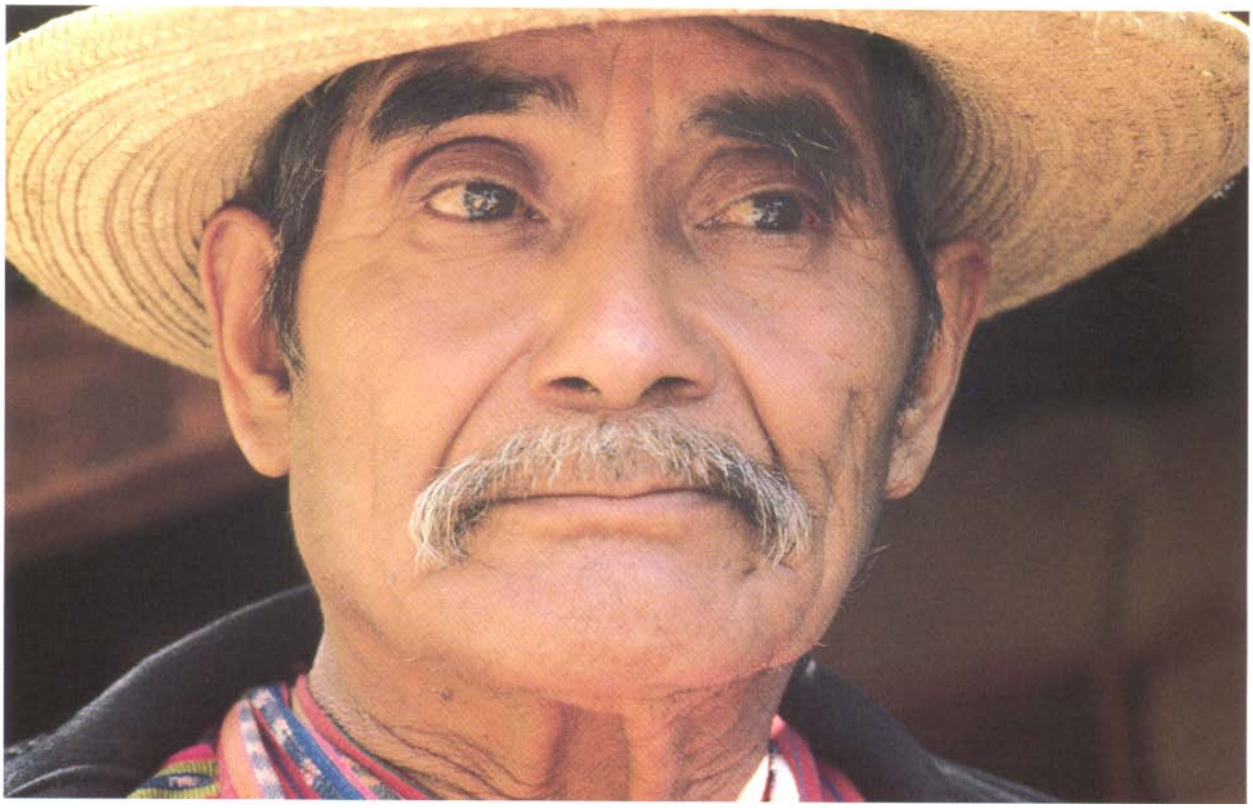


Tobacco or Health **Surveys** on smoking in several Latin American and Caribbean countries have revealed an unexpectedly high prevalence of tobacco use among both sexes and a progressive increase among adolescents, affluent young women, and residents of urban areas. It is estimated that more than half a million avoidable premature deaths in the Region every year can be traced to smoking.

Since the 1960s, PAHO has been convening groups of experts, organizing workshops, and promoting national policies, plans, and programs for the prevention and control of smoking—activities that have gained momentum over the last decade as a result of the new emphasis on health promotion. In 1989, the PAHO Directing Council adopted a plan that set the goal of keeping societies and future generations "smoke-free."

Toward that end, PAHO analyzes existing laws in the countries and advocates changes if necessary, as well as promotes official measures aimed at reducing tobacco use and protecting the rights of nonsmokers. The latter approach has recently taken on growing importance, as people have become more aware of the harmful effects of passive exposure to tobacco smoke. PAHO also provides technical advisory services, identifies areas where there are deficiencies, and cooperates in the training of research personnel. The translation into Spanish of the United States Surgeon General's 1992 report, *Smoking and Health in the Americas,* coupled with a PAHO study of the

While the massive antismoking campaigns of recent years have yielded positive results in the industrialized countries, in many of the Region's developing nations, smoking seems to be on the rise-especially among young women. In order to make the battle against smoking more effective, the Organization strives to rally the participation of several sectors.



smoking situation in each of the Region's countries, provides an example of efforts to disseminate information, mobilize public opinion, and heighten awareness at every level of authority.

Accident Prevention Accidents of all types, including those resulting from violence, are important causes of death, disability, and morbidity in the Region, especially among young adults and the elderly. It is estimated that in 1986, accidents accounted for one-third of the total years of potential life lost from all causes of death in the group aged l-24. Among accidental deaths, the number resulting from traffic accidents in particular has reached epidemic proportions. In **some** cases, cultural factors, such as **a** belief in fate, tend to hinder control measures.

PAHO cooperates with the countries in activities aimed at providing information and raising the level of public awareness concerning the types of behavior that lead to accidents. In addition, it helps them to structure their assistance services so that accident victims will receive appropriate attention at the primary care level, within the local health systems, and in emergency rooms.

Health of the Elderly As a result of a combination of demographic and epidemiologic changes-decreased fertility, fewer deaths from infectious diseases, and greater life expectancy at birth-the elderly population in **the** Region **is** growing rapidly. According to recent estimates, the proportion of persons aged 60 or older in Latin America will increase from 6.4% of the total population in 1980 to 7.2% by the year 2000 and 10.8% by 2025. This aging of the population will most probably place an excessive burden on health services and give rise to a range of social, economic, and political problems.

In 1980, the Directing Council urged Member Governments to expand social and medical services for the elderly in order to meet the growing needs of this age group. The following year, the Council, in its Plan of Action for the implementation of regional strategies to achieve health for all by the year 2000, singled out the development of programs

One of the main thrusts of the Organization's health promotion efforts targets the needs of the elderly. PAHO stresses the importance of keeping the elderly as active and as independent as possible and of their remaining within their family and social environments.

for the elderly as a priority. In 1983, the Organization established a general plan of action for comprehensive care of the population aged 60 and older. This led to a number of surveys, including one on the needs of elderly persons carried out in 15 countries, and other data collection efforts aimed at assessing the needs of this group. Studies were also carried out on morbidity, the prevalence of dementia, and drug use patterns among the elderly.

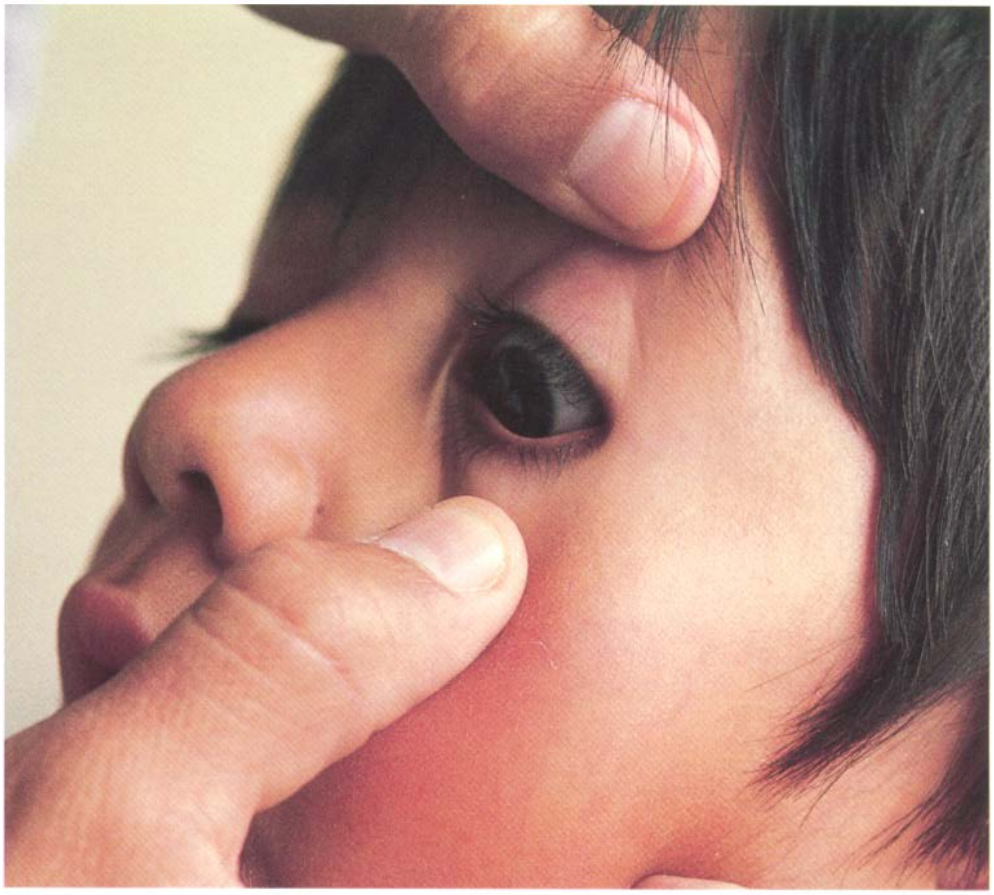
In general, PAHO promotes the concept of "active aging," according to which the elderly should remain with their families and social nucleus, without losing their independence or ceasing to fully participate in decisions that affect their well-being. This implies reeducating the public in order to debunk outmoded ideas about the "dependent" role of the elderly. At the same time, PAHO assigns priority to the elderly population in efforts to encourage the adoption of social policies aimed at improving the quality of life. Special attention has been given to research about the health needs of elderly women and the fulfillment of those needs.

Blindness Prevention and Eye Care Of the 1.9 to 2.5 million cases of blindness in the Region, approximately 80% are curable or could have been prevented. Most of these cases are due to cataracts, and the remainder mainly to glaucoma, diabetic retinopathy, ocular trauma, and, to a lesser extent, onchocerciasis, trachoma, and vitamin A deficiency.

Since 1980, PAHO has actively supported national eye care programs, seeking to remedy the relative lack of effective early detection systems and improve the accessibility of services, which tend not to be provided on an equitable basis in the less developed countries. Efforts target reducing the prevalence of avoidable blindness and ensuring that every person in the Region has access to good eye care as a basic right.

General Strategies and **Lines of Action** The Organization's cooperation in health promotion takes into account countries' sociocultural, economic, political, and epidemiologic situation. Surveys and other means produce data to deter-

PAHO has always supported eye care programs, and today is particularly concerned with ensuring that persons in all social strata have access to such services. The Organization also tries to steer the activities of eye care programs toward the prevention and early detection of various eye diseases common in the Region.



mine the magnitude of the problems and the status of the control measures that have been initiated at the national level. Using that information, efforts target bringing about the changes needed in order to correct shortcomings, a process that requires mobilizing resources; identifying the top technical centers at the national level and locating sources of financing; training personnel through courses and teaching materials; collaborating in the design, implementation, and evaluation of new policies and programs; and promoting epidemiologic and operations research.

In addition to technical support, PAHO provides health workers in the countries with current technical and scientific information. Noteworthy examples include the Latin American Cancer Research Information Project (LACRIP), the *Cuadernos de Gerontología* [Gerontology Reports]; a program for selective dissemination of eye care information; and bibliographic abstracts on mental health.

As part of the Organization's strategy for transforming local health systems into dynamic and efficient instruments of action that emphasize risk prevention and management rather than traditional medical care, the critical health promotion approaches of community participation and mass communication are gaining importance. The special attention devoted to the problems of women and the elderly and to the rational use of complex high-cost technology reflects PAHO's concern for equity in the delivery of health care.

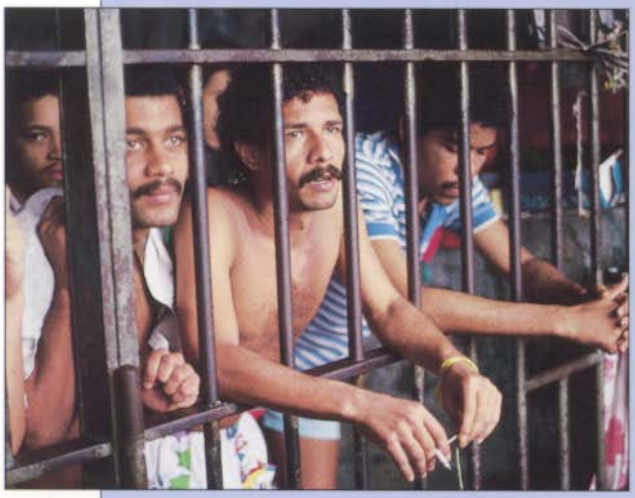
The Organization endeavors to coordinate the efforts of its staff members and consultants with those of the countries' political officials and the public and private sectors. Ultimately, however, successful health promotion depends on raising the population's level of awareness so that each person, through his or her example, can transform the attitudes of others and advance the modem concept of health and well-being. ❖

THE BATTLE AGAINST AIDS

Of the many battlefronts against AIDS, the most compassionate and compelling is the local arena, for it is here that the success or failure of national programs often is decided.

In the relatively short time since it was discovered in 1983, the human immunodeficiency virus (HIV) has spread throughout the world. The number of HIV-infected adults is estimated to be between 9 and 11 million, including 3 to 4 million women. More than one million cases have already been recorded in the United States and Canada, and almost one million in Latin America and the Caribbean. According to conservative estimates, by the year 2000 there will be almost 10 million cases of acquired immunodeficiency syndrome (AIDS) among adults worldwide, and a total of 30 to 40 million people will be HIV infected—10 million of them children.

Intravenous drug users, commercial sex workers, and prisoners are at high risk of contracting HIV infection; PAHO has focused its efforts against AIDS toward persons at high risk.



To combat AIDS and strengthen national AIDS programs in the countries, the Pan American Health Organization's regional strategies have targeted surveillance, research, promotion, information dissemination, direct technical cooperation, resource mobilization, training, and international coordination.

between 1980 and 1984, 9,145 cases of the disease were registered, prompting PAHO to request, in 1984, that the countries formally report all diagnosed cases. The following year, considering advances in understanding the disease's epidemiology, the Organization distributed a publication containing preliminary guidelines for the control of AIDS. In response to the Governments' growing **concerns,** the Caribbean Epidemiology Center (CAREC) provided advisory services and education and carried out a research program in collaboration with the U.S. National Institute of Allergy and Infectious Diseases. The causative agent of AIDS was known, a test to detect the virus had just been put on the market, and the international scientific community had exchanged experiences and knowledge about the epidemic at the first international conference on AIDS, held in Atlanta, Georgia. Without any effective treatment for HIV, the only way to stem the epidemic was to prevent transmission. The Organization had to act quickly and effectively in order to address this problem that threatened to reach unprecedented proportions.

In 1986, the Organization responded with an

effort to consolidate the epidemiologic surveillance system that had been proposed to the countries and to revise and update, with the help of an expert group, PAHO's guidelines on AIDS. PAHO distributed the guidelines and other audiovisual materials; provided direct advisory services, especially in regard to diagnosis, surveillance, and research; and established a standardized AIDS information system.

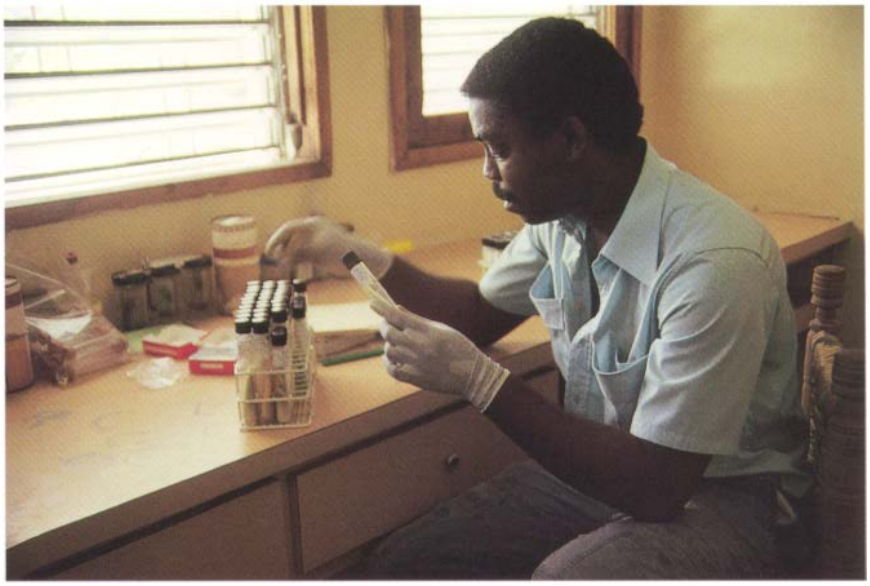
At the request of the countries, CAREC offered laboratory support for research in Trinidad and Tobago; studied migrant farm workers from Saint Lucia and from the Grenadines who had worked up to six months in Florida; examined migrant workers in Dominica; and took blood samples from donors in Grenada, Saint Lucia, and St. Vincent and the Grenadines.

The strategy to combat AIDS clearly hinged on reducing HIV transmission, basically through behavior modification of infected persons and of those at risk of contracting the infection. That strategy had to be coupled with the distribution of accurate, timely, and clear information to raise the population's awareness of the magnitude of the problem, explain how to avoid infection, and dispel unjustified fears.

In the beginning, most of the people affected by AIDS in the Region had been homosexual or bisexual men and persons who had received blood transfusions or blood derivatives. In the United States, intravenous drug addicts also had contributed notably to the spread of the epidemic. There was growing alarm in some countries, however, at the increasing number of cases being reported among heterosexuals, a phenomenon which could significantly increase the rate of HIV transmission.

The magnitude of the estimates and the need to care for all those affected by AIDS placed increasing pressures on the countries' health systems, which were already overburdened and financially strained. This situation underscored the urgency of setting up effective prevention, control, and treatment programs.

The Organization, beginning in 1987, worked to consolidate epidemiologic surveillance systems; conducted joint research activities with the U.S. National Institutes of Health; helped develop national plans of action; established the Regional Program on AIDS in the Americas; provided support to laboratory services for the diagnosis of AIDS and, in particular, for the training of laboratory personnel; and supported research proposals on developing and evaluating methods for diagnosis of the disease. In addition, more than $US2 million in WHO extrabudgetary funds were mobilized to assist in the rapid development of national plans to fight AIDS in the Region.



A blood-bank technician tests donors' blood for HIV. Starting in 1987, part of the Organization's work against the disease involved supporting laboratory services in AIDS diagnosis, particularly in the training of laboratory personnel.

In order to effectively combat AIDS through behavior modification, the public at large must be given clear, timely, and accurate information. This sampler shows a variety of messages tailored for different audiences.

The Organization collected and disseminated scientific and technical health information, including scientific article reprints and compact discs containing MEDLINE-AIDS bibliographies and selected literature; CAREC established the first clearinghouse for educational information on AIDS; and work began on the creation of another clearinghouse in Mexico. An issue of the *Bulletin of the Pan American Health Organization* and another of the *Boletín de la Oficina Sanitaria Panamericana* were devoted entirely to the AIDS epidemic, and that information also appeared in PAHO's *AIDS: Profile of an Epidemic.* Using a standardized report form developed to compile data from the countries, PAHO collected, analyzed, and published this information in monthly epidemiologic reports on the AIDS situation in the Americas.

PAHO's I Pan American Teleconference on AIDS, held in Quito in September 1987 and broadcast by satellite in four languages to 650 sites in the Region, demonstrated that telecommunications could be used to deliver important health information to a large audience more effectively than the conventional media.

During 1988, considerable headway was made in preventing and controlling AIDS in the Region. Most of the countries that had developed AIDS or AIDS-related programs committed themselves to putting the plans of action formulated by the Organization into effect as quickly and efficiently as possible. For its part, the Organization sought ways to meet the Governments' urgent requests for technical collaboration and financial support by increasing regular contact with the WHO Global Program on AIDS, the U.S. Agency for International Development, the European Economic Community, the Canadian International Development Agency, and the United Nations Fund for Population Activities, among other agencies. Moreover, collaborative efforts were undertaken with the International Red Cross and the International Lions Club. Workshops, meetings, and conferences at the local, national, and subregional levels served to put governmental, nongovernmental, multilateral, and bilateral agencies into contact with one another and aided efforts to develop national plans for AIDS prevention and control. PAHO played a major role in organizing and subsequently evaluating the First International Symposium on Communication and Information on AIDS, held in Ixtapa, Mexico, and transmitted the II Pan American Teleconference on AIDS via satellite from Rio de Janeiro.

During 1989, PAHO teaching workshops for personnel covered topics such as counseling, health promotion, marketing of condoms, the role of nurses in preventing and controlling HIV trans-

With the Pan American Teleconferences on AIDS (three have been held so far), the battle against the disease gained a new and powerful weapon. At the electronic hub of the I Teleconference, monitors capture images that will be broadcast by satellite to 650 sites; at a press conference during the II Teleconference, a panel that includes PAHO staff members fields questions.

mission, ways to ensure balanced media coverage of the subject, and mobilizing youth in the campaign against the disease.

As a result of the intensive work carried out in preceding years, epidemiologic surveillance of AIDS substantially improved by 1990, making it possible to detect and report a much larger proportion of AIDS cases. As heterosexual transmission of the infection increased, the Organization modified its prevention and control strategies, seeking ways to effectively meet the difficult challenges posed by the disease through interprogram work and coordination with other international agencies. The countries' national programs for the prevention and control of HIV infection underwent substantial changes, which helped transform the emergency and short-term control programs into medium-term prevention programs.

During 1991, the III Pan American Teleconference on AIDS, held in Caracas in March, proved particularly noteworthy for the relevance of its technical content, the degree of multisectoral participation achieved, and the involvement of the countries' political and governmental representatives. Work also began on an inventory of AIDS related research in the Americas, which was published in mid-1992. In addition, various research projects in collaboration with the United States National Institute of Allergy and Infectious Diseases were completed or continued. PAHO allocated a total of $US60 million in 1991 to support national AIDS programs,

To prevent and control AIDS in the Americas, PAHO and the Governments have committed themselves to applying a global strategy, the objectives of which are to prevent HIV infection, to reduce its personal and social impact, and to mobilize and unify national and international forces against AIDS. Ultimately, AIDS must be considered not only as a health problem, but as a social, economic, and political problem that will have long-term repercussions in the communities and countries of the Region. At the national level, the fight against AIDS and the reduction of the epidemic's social consequences will require a sustained and concerted effort of ministries of health, social security institutions, the communications media, the private sector, and a vast array of organizations and community groups. Success will require political support at the highest levels, technical leadership from the health sector, financial resources from national and international agencies, and, above all, the unconditional commitment of local health systems and communities. ❖

HEALTH:

A CONDITION FOR DEVELOPMENT

This *amate,* a typical Mexican art form rendered on bark, depicts a healthy and peace-loving rural community surrounded by the bounty produced through its own efforts.

As the beacon and, to an extent, the historian of public health in the Americas during the 20th century., the Pan American Health Organization has always clearly understood the importance of health for the social and economic development of countries. The decisions of the first Pan American Sanitary Conferences-which were primarily concerned with the improvement of sanitary conditions in ports and territories and the prevention of "pestilential" diseases—undoubt-

The health of adults determines the productivity of the work force.

edly were aimed at facilitating international trade, which was the cornerstone of that period's economic modernization. The creation of the International Sanitary Bureau and the adoption of the Pan American Sanitary Code were pivotal steps in establishing a firm basis for Hemisphere-wide cooperation in the interest of common progress. The idea that health is a fundamental component of development, however, has only come to the fore in relatively recent years, and making that idea a force for change will require the political support of every country in the Region.

Evolution of the Concept The concept of public health that is currently practiced in the Americas derives from England's 19th century health reform movement that set out to protect workers **from** the threat of disease and premature death associated with the Industrial Revolution and urbanization. The Government's involvement

The health and well-being of workers is closely related to the public health and economic growth **of** *a country, and the damages produced by industry cause the nation serious harm, diminish production, and, above all, affect people's performance potential.*

—VIII Pan American Sanitary Conference, 1927

The community's involvement in the organization and execution of health projects that are based on local needs can effectively contribute to improve health and spur development.

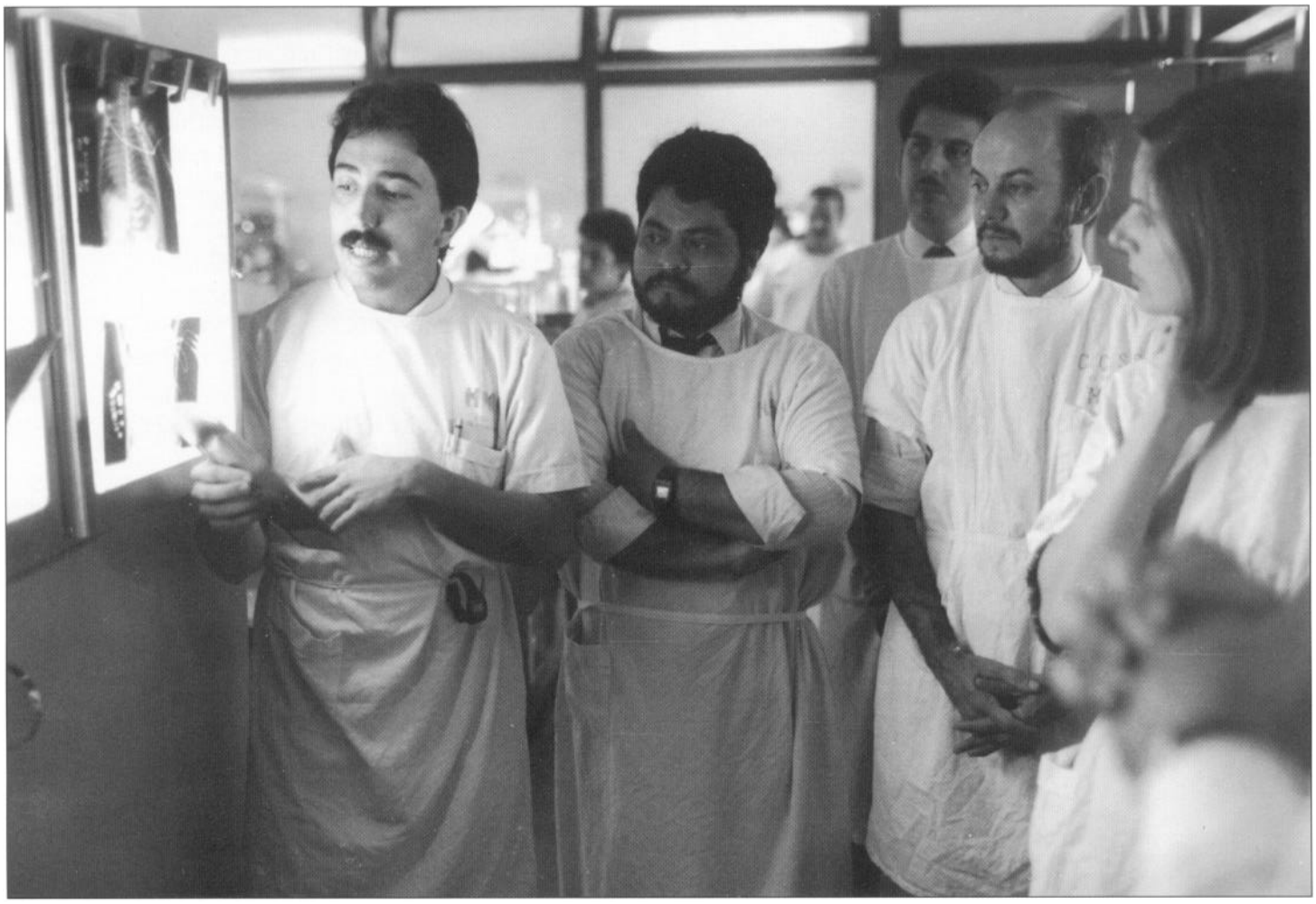
The international exchange of fellows from the health field is a way to respond to the countries' health needs and to promote development through technical excellence and regional solidarity (facing page).

arose from its acknowledgment of the value of human capital, and ultimately led to the establishment of a ministry of health in 1919.

During the first half of the 20th century, the countries of the Americas also came to the realization that people's productivity largely depends on their state of health. The VIII Pan American Sanitary Conference, held in 1927, recommended that Member Countries establish special agencies within their health administrations in order to ensure the best possible living and working conditions for workers. The ministries of health were still in their infancy, however, and any initiative they attempted to promote was greatly resisted. Overall, the health sector's meager political influence and the State's lack of support precluded effective action for many years, and this situation was exacerbated by the fact that many of the constitutions of the American republics made no mention whatsoever of health.

Gradually, the world has come to understand that health and disease affect not only the biological sphere, but also the social, cultural, economic, and political environment in which individuals and communities live. In addition, it is now recognized that development cannot be solely sustained by economic production, but instead depends on an array of factors that affect human capital-its driving force. In the social context, this implies a series of transformations regarding the political order and the exercise of power, the makeup of the work force and the distribution of income, the organization of the State and government, the education and health systems, lifestyles, values and social standards, and various demographic and family factors, which, in turn, involve changes in health and disease, in risks and mortality, and in the health sector's practices.

These considerations underlie the Organization's strategic orientations and program priorities, on which its cooperation with the countries has been based since 1987, but many of these approaches have been part of the Organization for a long time. As early as the 1930s and 1940s, many innovative thinkers were contributing ideas, and regional and country-level collaborative initiatives were undertaken that marked progress in the application of those ideas. An important trend was the rise of the principles of "social medicine" within academic circles. However, the strength of the still dominant biomedical paradigm, with its



emphasis on curing disease, and the largely economic slant of development theories and policies hindered widespread acceptance of the notion that health is an essential component of development.

Health as a Right The creation of the World Health Organization in 1948 represented an enormous humanitarian step, in that it legitimized the desire of the majority of the countries in the world to consider health as a fundamental human right. Up to that point, health interventions had been conditioned by the level of social development and the prevailing standards in each country. The advent of WHO signified an unprecedented opportunity for global cooperation that could reduce the time lapse between the achievement of scientific and technological advances in the most developed countries and their application elsewhere in the world. In this, the most important international health forum ever to be created, the influence of disease and health on the economies of the nations began to be debated and, although the discussion was not new, the sense of urgency was.

In 1949, the United Nations General Assembly established the Expanded Program of Technical Assistance for the economic development of underdeveloped countries to promote the exchange of technical knowledge. In the Americas, the Pan American Sanitary Bureau continued to provide the necessary technical support to strengthen health services in the countries, and it now played an additional role as a Regional Office of WHO. An agreement signed in 1950 with the, Organization of American States set forth the Organization's functions as a specialized inter-

The construction **of a health center in Colombia was one of many activities designed to improve living conditions that were carried out in Latin America under the aegis of the Alliance for Progress.**

possible to objectively document the correlation between health indicators, per capita income, and investment in health care. Particular emphasis was placed on programs aimed at controlling various diseases and improving the environment-for example, the malaria campaign, which held the potential for enlarging the work force and making vast expanses of land suitable for economic use to benefit the countries; projects to supply water to communities, essential for the development of agriculture, industry, and tourism; and general sanitation, as a means of preventing basic health problems.

By 1960, the concept of health as an integral part of economic development had become firmly established as one of the guiding doctrines for the Organization's activities. At this time, when the populations of the countries had grown and regional development was the issue of the moment, there also was widespread discussion of the social consequences of the economic situation and of the strategies needed to promote increased production. Singularly important agencies were established, including the Inter-American Development Bank and the United Nations Economic Commission for Latin America, as well as the Special Committee of the OAS. The Act of Bogota summarized the deliberations of the third meeting of the Special Committee with regard to the harmonization of social and economic factors, the creation of opportunities for international credit, and the establishment of an inter-American program of social development for Latin America-whose priorities were to include public health.

From Growth to Crisis The Charter of Punta de1 Este, adopted in 1961, made the States responsible for promoting health as part of development. The Alliance for Progress that grew out of that accord fostered a spirit of solidarity and launched a major cooperative effort by the Governments aimed at accelerating progress and improving living conditions. In the flurry generated by the

American agency, defining the way in which the two Organizations would coordinate their efforts and reinforcing the concept of health as a basic component of development. At their meetings, the Governing Bodies placed increasing emphasis on the interconnectedness of the economic, cultural, and social development of a community and its health problems. Simultaneously, growing importance was attached to programs to combat diseases such as malaria, which sapped the countries' productive capacity and economic strength.

When the Special Committee of the OAS Council met in 1959 to study new measures of economic cooperation, the Director of the Bureau outlined the repercussions from failing to assign sufficient importance to human energy as an indispensable element of economic development; he pointed out that the production of goods and services declines and that this results in lowered wages that force workers to live in unhealthy dwellings under wretched conditions that foster the spread of disease. Since these conditions sap workers' energy, the production of goods and services declines even further. In the case of a country, this translates into a reduction in funds available for prevention, as more and more money is spent on curative care. Thus, diseases continue to occur frequently and, as a result, production levels remain low. It also was pointed out at that meeting that in the formulation of development plans it is necessary to consider the customs, traditions, attitudes, and values of the population and the relationships that exist between various groups.

In the years that followed, PAHO was an active participant in several international meetings that sought to define new measures of cooperation and economic development. Health was increasingly perceived not merely as an indicator of a country's capability to provide for the most basic needs of its people, but, more importantly, as an essential factor for ensuring the quality of the human resources on which production and productivity ultimately depend. Statistics made it

On the tenth anniversary of the Organization's Constitution, Dr. Fred L. Soper addresses the Directing Council, emphasizing the importance of new long-term cooperative programs.

Alliance's initiatives, planning was identified as a fundamental mechanism for promoting development and improving health care. As a result, the Ten-Year Public Health Program was adopted, a Hemisphere-wide commitment to achieve universal health through concrete long- and short-term objectives. It was followed by the Ten-Year Health Plan for the Americas, which covered the 1970s. The target of "health for all by the year 2000," adopted in 1977 by the Thirtieth World Health Assembly, represented a commitment by the Governments to attain a level of health that would allow all the citizens of the world to lead socially and economically productive lives. That same year, in the Final Declaration of the IV Special Meeting of Ministers of Health of the Americas, primary care was identified as the best strategy for extending health services coverage to every individual, thereby attaining the goal of health for all. This strategy, which has become a PAHO policy, was the cornerstone of the international consensus reached the following year in the Declaration of Alma-Ata.

Although the capability to achieve major health improvements had existed for most of the century, the unfortunate reality was that vast segments of the population still lacked basic services -and the health sector lacked sufficient political clout to change that situation. In 1978, WHO called on the world's political leaders to give priority to health as a way of promoting development and peace. In his address to the delegates of the countries at the XX Pan American Sanitary Conference, the Director-General of WHO underscored the urgency of supporting and attaining social and economic goals by waging "a political war for health" and educating the masses so that they would insist on their rights.

Generally speaking, the 1970s witnessed steady economic growth in Latin America. The development-oriented optimism of the time reinforced tacit or explicit support for the theory that social progress would be an automatic outcome of economic growth and the interventions proposed by normative planning. By 1980, all the countries had formulated national health strategies and many had developed health sector plans. Some countries had succeeded in boosting life expectancy, reducing infant mortality, and increasing immunization against the common

Despite the impressive advances achieved in public health during the 20th century, in the 1960s vast segments of the population still had no access to even the most basic health services.

By 1980, vaccination campaigns in several countries had been astoundingly successful—most children had been immunized against the common childhood diseases, and infant mortality was **down.**

childhood diseases, but there continued to be tremendous disparities between and even within countries. After two decades of economic growth, the number of poor people had increased by 50%, inequalities had been exacerbated, and numerous health needs were not being met. Clearly, economic growth would not necessarily be accompanied by parallel improvements in health and well-being. The progress achieved had not yielded the anticipated benefits in terms of overall health, and the social debt was mounting at an alarming rate. The economic crisis that began in the early 1980s revealed the frailty of the prevailing development models. The balance of payments was rendered negative, and by 1989, Latin America and the Caribbean had transferred more than US$300 billion to the "First World," either as service on an overwhelming foreign debt or through capital flight and trade deficits. Production declined, and by 1990 per capita income had dropped 10%. Fiscal spending decreased, which had a particularly detrimental effect on the social sectors and investment. Internal imbalances led to spiraling prices, with annual inflation rates that ran as high as 30,000%, and income was increasingly concentrated in fewer hands. Poverty became widespread, eventually affecting almost half the total population. With the introduction of macro-economic stabilization and adjustment policies, social problems grew worse still. Never before had there been such a patent need for a sweeping revision of the concepts and policies governing develop ment.

Recent Years Over the last 10 years, the concept of health as a component of development has become more firmly rooted and has evolved to have a more dynamic connection with all social factors. In an attempt to deal with the countries' health problems, the deepening economic crisis, and conflicts between countries, PAHO has sought creative ways of mobilizing and rationalizing national resources and raising external funds for the execution of priority programs. Through subregional initiatives involving groups of countries, efforts and resources have been pooled to

The Plan for Priority Health Needs in Central America, operating under the theme "Health, a Bridge for Peace," helped to facilitate a dialogue that would lead to the resolution of ideological differences and would eventually banish the specter of child soldiers.

address common problems. The Plan for Priority Health Needs in Central America, initiated in 1984, underscored the fact that ideological rivalries and differences, which cannot always be resolved in the political arena, can be overcome through the consensus that health is a human right. Notwithstanding armed conflict and changes of government, the Plan, working under the theme "Health, a Bridge for Peace," made it possible to implement interventions in seven areas crucial to health and development and led to an intense process of internal change, with collective backing by the international community, and the establishment of a second phase called "Health and Peace for Development and Democracy," to be carried out during 1990-1995. The English-speaking Caribbean countries have launched a similar initiative, known as "Caribbean Cooperation in Health." Analogous efforts are under way in the Andean Area and Southern Cone, where bilateral cooperation also is being actively promoted.

The contribution of health to development is extensive and indispensable. The health of the peoples is a condition that leads to fulfillment **of** *the requirements and attainment of the objectives of development. The priority that is attached to health will inevitably be reflected in the possibilities and viability of the achievements made in the countries—individually and as a Region.*

—Carlyle Guerra de Macedo, 1992

At PAHO Headquarters, Member Countries' flags fly high as a symbol of solidarity. The countries' cooperation and joint endeavors are, more than ever, an essential ingredient for their individual survival.

The growing spirit of collaboration and solidarity in this area has led to success in the campaign launched in 1985 to eradicate poliomyelitis. This campaign helped to strengthen several aspects of the health infrastructure and has inspired the countries to set new targets for the elimination of other diseases. Within national health systems, decentralization remains the fundamental strategy for change, while local health systems are the mechanism for promoting the communities' education and democratic participation in health matters. The strategic orientations and program priorities that have guided the work of PAHO since 1987 represent a firm commitment to work toward ensuring that health and well-being are given their rightful place in the new development models and that the health sector plays a significant role in the revision of national objectives and strategies.

In its advisory services to the countries, PAHO advocates a model of sustainable development that is designed to prevent the deficiencies of the past, is guided by the principle of equity, and is aimed at stabilizing the economy in order to enhance universal well-being. The necessary development also entails a far-reaching transformation of the processes of production, as well as increased regional integration, both of which are essential steps for achieving an effective participation in the global economy. Moreover, it requires that the functions of the State and its relationship to society be redefined in the context of regimes founded on principles of freedom, democracy, and an unwavering adherence to the rule of law. Health is at the center of this new model of development, as **an** essential component in the process and its ultimate objective: the well-being of all. In this way, the universal view of health in development is reconciled with a health sector perspective that is based on general and specific actions, while at the same time the political cast of the sector's work is reaffirmed.

The enormous social deterioration that followed the economic crisis of the 1980s, as well as the nature of international relations within the evolving new world order, require a united regional front. Fortunately, the transition toward democratic government in most of the countries augurs well for a return to the social commitments and responsibilities of States. The Organization, for its part, will continue to press for the inclusion of provisions to ensure universal access to health services, measures to fight poverty, and programs of social solidarity as part of development policies. And, it will seek to ensure a more influential role for the health sector in the crafting of political agendas that decide the distribution of the countries' resources. ❖

EPILOGUE

The story of the Pan American Health Organization over the course of its first nine decades parallels the history of profound social, political, and economic change experienced by the countries of the Americas throughout the 20th century. During that time, the Organization has repeatedly made history of its own, as the foregoing pages of this publication recount.

The premier public health forum for the Region, the Organization has acted like a social helix, interweaving the various and ever-changing health needs from Alaska to Tierra de1 Fuego into positive, practical, and sustained technical cooperation. The experience of 90 years has shaped the tradition of Pan Americanism, has embued policies with the dynamism that permits adaptation to change, and has contributed to the spirit of hemispheric solidarity.

Throughout the years, PAHO has served-and continues to serve-as a prime mover in setting regional policies, in assessing trends and evaluating the countries' health situation, in exchanging experiences and transferring information, in promoting health at the center of human development, and in mobilizing and channeling resources by forming partnerships with others working in pro of health in the New World.

Those efforts have resulted in accomplishments of which the Organization and its Member Countries can be justly proud. The immunization campaigns alone-leading to the eradication of smallpox, polio, and, it would appear now, neonatal tetanus and measles-represent a dramatic revolution in public health in the Region. Those accomplishments, however, are but milestones along the road of a continuing journey.

In travelling toward the next millennium, we cannot afford to rest on our laurels. We must use our history of past achievements to forge a future of effective action. The challenges ahead are great and formidable. From now until the year 2000, the Region's population will grow by an additional 100 million people, adding in turn to the imposingly large number of previously unmet social needs. Most of these people will crowd into already overcrowded cities whose infrastructure has long since proved unequal to the task of equitable public service. In the future, we must address inequities in access to health care. We will also have to confront the AIDS pandemic that is growing exponentially. And we must take on the myriad communicable diseases and chronic and acute illnesses that continue to take their deadly toll.

We will have to meet these challenges, moreover, in the midst of a changing world in which the hopes arising from the end of the cold war are offset by regional and local conflicts, ethnic strife, unresolved economic troubles, eroded human values, increasing inequity and growing poverty, and-in Latin America and the Caribbean-societies still caught in the throes of the deepest economic and social crisis of their history.

In the face of these daunting odds, we have a decided advantage: we know where we want to go. Our unequivocal goal is universal access to health services. Reaching it will require leadership, and in the years to come the countries of the Hemisphere will continue to look to the Pan American Health Organization for regional leadership in defining health policies, transforming health systems, and strengthening health programs.

Henceforth, that leadership will be informed by a new concept that envisions health as an integral part of communities', countries', and the Region's development. In pursuing that development, we must never lose sight of its ultimate purpose: to assure a quality of life that benefits everyone, that centers on human needs, that fosters the full realization of human potential. Liberated from the competing ideologies of the past, all those involved in the social enterprise can now channel their efforts toward effecting this new concept of health.

Emboldened by its constituents' commitment to achieve a better world for all-for our children-the Organization will orchestrate the expression, throughout the Americas, of a political will that the health sector not only participate in the process of development but that it, in effect, set its direction.

There is no single recipe for successful development. In seeking a better future for all its citizens, each country will pursue its own course. Each will draw from its own particular cultural roots. Each will affirm its people's unique identity. And, as the history of the Pan American Health Organization has shown, united the countries can order a new world for all the Americas.

There are those who claim we dream. That we do. But our dream is anchored in reality. It stems from the understanding that health is the most patent indicator of a society's development. It is a dream to transform a world where today a cholera epidemic can flourish but that holds the promise, tomorrow, of health for all. For the sake of those who otherwise would be without health and deprived of access to health care, ours is a dream that must come true.

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MEMBER GOVERNMENTS OF PAHO

Member Governments	*Date of PAHO Membership*	*Total area (sq. km.)*	*Population*
Antigua and Barbuda	20 Sept. 1982	440	76,000
Argentina	1 Oct. 1947	2,791,810	32,712,000
Bahamas	8 Oct. 1974	11,404	258,000
Barbados	2 Oct. 1967	430	255,000
Belize	20 Sept. 1982	23,003	182,000
Bolivia	1 Oct. 1947	1,098,581	7,521,000
Brazil	1 Oct. 1947	8,513,844	153,330,000
Canada	27 Sept. 1971	9,976,000	26,736,000
Chile	1 Oct. 1947	756,626	13,387,000
Colombia	1 Oct. 1947	1,138,000	33,613,000
Costa Rica	1 Oct. 1947	51,000	3,088,000
Cuba	1 Oct. 1947	111,000	10,711,000
Dominica	21 Sept. 1981	750	83,000
Dominican Republic	1 Oct. 1947	48,482	7,321,000
Ecuador	1 Oct. 1947	284,000	10,851,000
El Salvador	1 Oct. 1947	21,000	5,376,000
Grenada	29 Sept. 1977	344	94,000
Guatemala	1 Oct. 1947	108,889	9,467,000
Guyana	2 Oct. 1967	215,000	800,000
Haiti	1 Oct. 1947	27,750	6,647,000
Honduras	1 Oct. 1947	112,088	5,298,000
Jamaica	23 Aug. 1962	11,424	2,485,000
Mexico	1 Oct. 1947	1,958,000	90,467,000
Nicaragua	1 Oct. 1947	148,000	4,000,000
Panama	1 Oct. 1947	77,381	2,466,000
Paraguay	1 Oct. 1947	406,756	4,397,000
Peru	1 Oct. 1947	1,285,215	21,996,000
Saint Kitts and Nevis	24 Sept. 1984	360	44,000
Saint Lucia	22 Sept. 1980	620	155,000
Saint Vincent and the Grenadines	21 Sept. 1981	340	118,000
Suriname	29 Sept. 1976	350	429,000
Trinidad and Tobago	20 Sept. 1963	4,828	1,301,000
United States of America	1 Oct. 1947	9,372,143	251,086,000
Uruguay	1 Oct. 1947	186,925	3,112,000
Venezuela	1 Oct. 1947	915,000	20,227,000
Participating Governments			
France	1 Oct. 1947		
French Guiana		91,000	115,000
Guadeloupe		1,709	387,000
Martinique		1,100	360,000
Kingdom of the Netherlands	1 Oct. 1947		
Aruba		192	61,000
Netherlands Antilles		766	191,000
United Kingdom of Great Britain and Northern Ireland	1 Oct. 1947		
Anguilla		91	8,000
British Virgin Islands		153	15,000
Cayman Islands		260	28,000
Montserrat		102	12,000
Turks and Caicos Islands		430	12,000