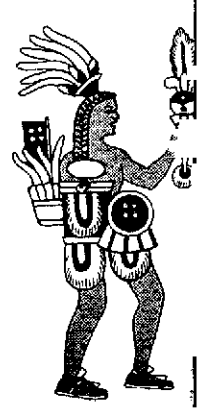
ANNUAL REPORT OF THE DIRECTOR

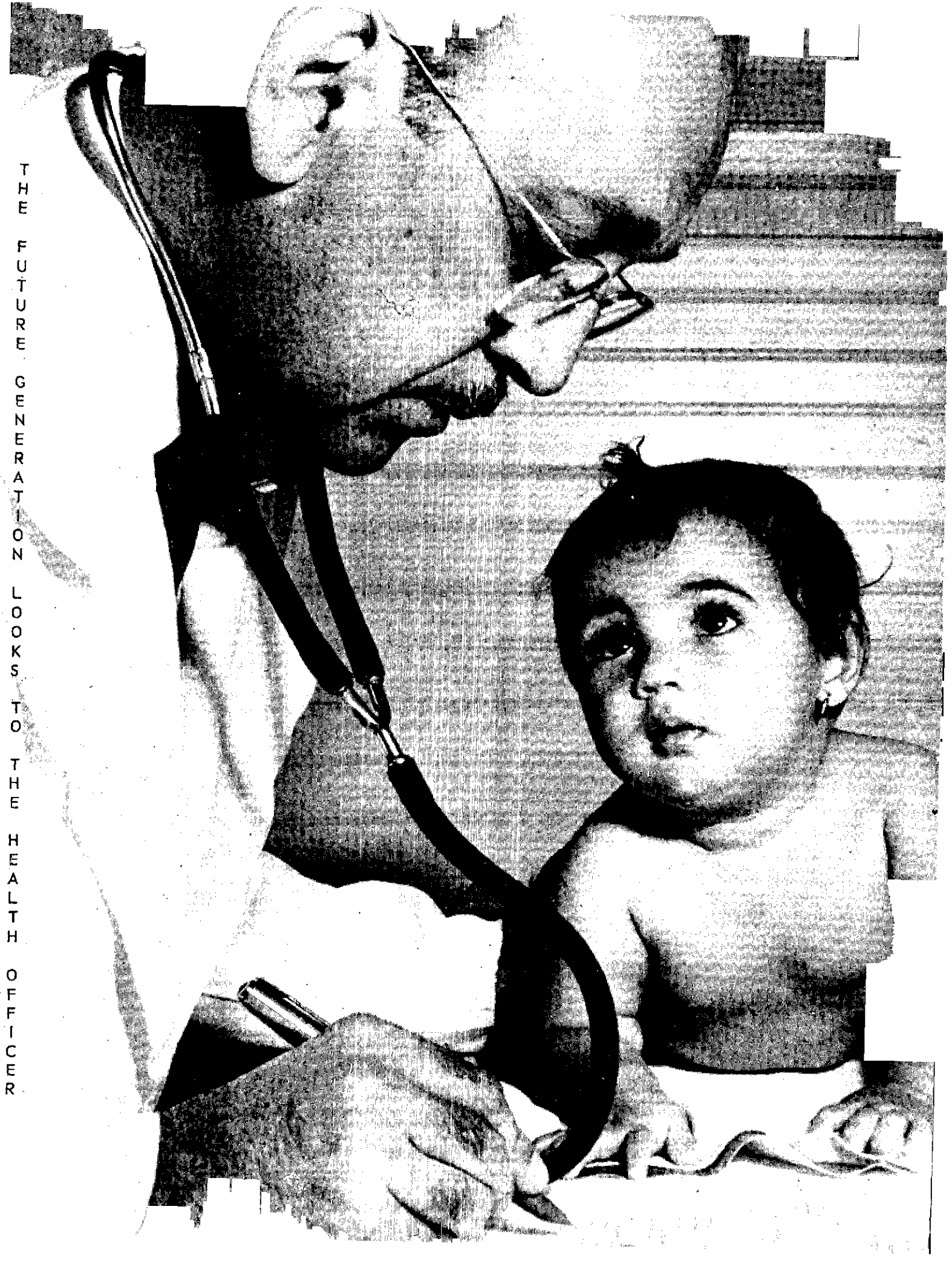
PAN AMERICAN SANITARY BUREAU
REGIONAL OFFICE OF THE
WORLD HEALTH ORGANIZATION



1954

WASHINGTON, D. C.

The designs on the cover come from Incian jars of the Amazon Delta. The Aztec figure, Ixtlilton, is the god to whose temple sick children were brought for cure.



THE FUTURE GENERATION LOOKS TO THE HEALTH OFFICER

PAN AMERICAN SANITARY ORGANIZATION

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ANNUAL REPORT OF THE DIRECTOR

of the

PAN AMERICAN SANITARY BUREAU

REGIONAL OFFICE FOR THE AMERICAS

of the

WORLD HEALTH ORGANIZATION

1954

PAN AMERICAN SANITARY BUREAU

Regional Office of the World Health Organization
1501 New Hampshire Avenue, N. W.
Washington 6, D.C., U. S. A.

To the Member States of the Pan American

Sanitary Organization

I have the honor to transmit herewith the Annual Report of the Pan American Sanitary Bureau, Regional Office for the Americas of the World Health Organization, for the year 1954. This Report covers the work of the Washington Office as well as that of the Zone Offices. It describes projects implemented in collaboration with the governments of Member States and with other international organizations. The Financial Statement for the year, Document CD8/6 and annexes, is submitted separately.

Respectfully yours,

Fred L. Soper
Director

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ABBREVIATIONS

AIDIS	Inter-American Association of Sanitary Engineering
FAO	Food and Agriculture Organization
FOA	Foreign Operations Administration
IIAA	Institute of Inter-American Affairs
ILO	International Labor Organization
INCAP	Institute of Nutrition of Central America and Panama
LARO	Latin America Regional Office
OAS	Organization of American States
OAS/TA	Program of Technical Cooperation of the Organization of American States
PASB	Pan American Sanitary Bureau
PASO	Pan American Sanitary Organization
SCISP	Inter-American Cooperative Public Health Service
TA	Technical Assistance
TAB	Technical Assistance Board
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Fund
UNTAA	United Nations Technical Assistance Administration
USPHS	United States Public Health Service
WHO	World Health Organization

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INTRODUCTORY SECTION

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Eight-Year Summary

Present Report

During 1954 the Pan American Sanitary Bureau published three volumes which together gave an unusually full account of its recent activities. These were the Annual Report for 1953, the Quadrennial Report for the period 1950-1953, and the Summary of Quadrennial Reports of the Member States, 1950-1953.

The publication in one year of an annual report, a four-year report, and a special four-year summary came as a stocktaking at the end of eight years of extraordinary growth. During these eight years the Pan American Sanitary Bureau grew from an organization expending $522,098 in the fiscal year 1946 to one which in 1954 expended $4,099,749.

In January 1947 the total staff strength was 32. By 1954, with six Zone Offices established, the number of persons employed had grown to over 400 with more than half of that number assigned to the field.

After having been a compact, active organization in its own right since 1902, the Bureau in 1924 received a solid underpinning when the Pan American Sanitary Code, a treaty ratified by all of the 21 American Republics, became its basic charter. The 1947 Constitution of the Pan American Sanitary Organization prepared the ground for the Bureau, without losing its identity, to serve as the Regional Office of the World Health Organization (WHO).

From the start the Pan American Sanitary Bureau, as its title indicates, had aimed at covering all of the Americas. In 1949, the initial 1947 move towards integration of the activities of the Bureau and the WHO was confirmed, by the signing of the Pan American Sanitary Organization/World Health Organization agreement as soon as 14 of the American countries had ratified the Constitution of the WHO. Thus the Bureau came to function as the single *regional health authority* for the entire Western Hemisphere. It now remained to grow in strength internally.

The 1949 Bureau affiliation with the World Health Organization coincided, therefore, with the beginning of a period of constructive reorganization and rapid inner growth. Once every four years the supreme governing body of the Bureau meets. With minor shifts, due chiefly to world wars, this has been done since 1902. This body, known as the Pan American Sanitary Conference, had its most recent and XIVth meeting in October 1954, at Santiago, Chile. This 1954 meeting was the second quadrennial meeting since the new amalgamation with the World Health Organization, the XIIIth having been held in 1950 in Ciudad Trujillo, Dominican Republic.

The main events of the earlier part of these eight years of rapid expansion were set forth in the 1947-1950 four-year report presented to the XIIIth Conference, and the later years were summarized in the more recent, previously mentioned reports presented to the XIVth Conference. Together these reports provide voluminous source material documenting this period of rapid maturation. For a full picture, therefore, of the two preceding quadrennial periods, the reader is referred to the above reports.

Many of the basic considerations discussed in these published reports do not need to be repeated in the present report which will concern itself more particularly with the activities and with the work of 1954.

During 1954 the Bureau continued to cooperate closely with other international organizations such as the Organization of American States and offices in the Americas of the United Nations family, particularly the Latin America Regional Office (LARO) of the International Children's Fund (UNICEF).

Throughout this report the Pan American Sanitary Bureau automatically means the Pan American Sanitary Bureau and the World Health Organization. The World Health Organization will be referred to specifically in relation to world-wide activities operated from World Health Organization headquarters. Source of funds for projects in operation during 1954 is shown in Appendix I which begins on page 170.

The 1947 Constitution

The XIVth Pan American Sanitary Conference, like previous quadrennial conferences, set the policy for the succeeding four years. In addition to being a governing body, it continued to be at the same time a forum for the exchange of information and for technical discussions needed in connection with the detailed planning of program.

One thing the XIVth Conference did in 1954 was to take time out for a thorough review of the 1947 Constitution. This Constitution had for four years, with an eye to possible improvements, been under close subcommittee scrutiny.

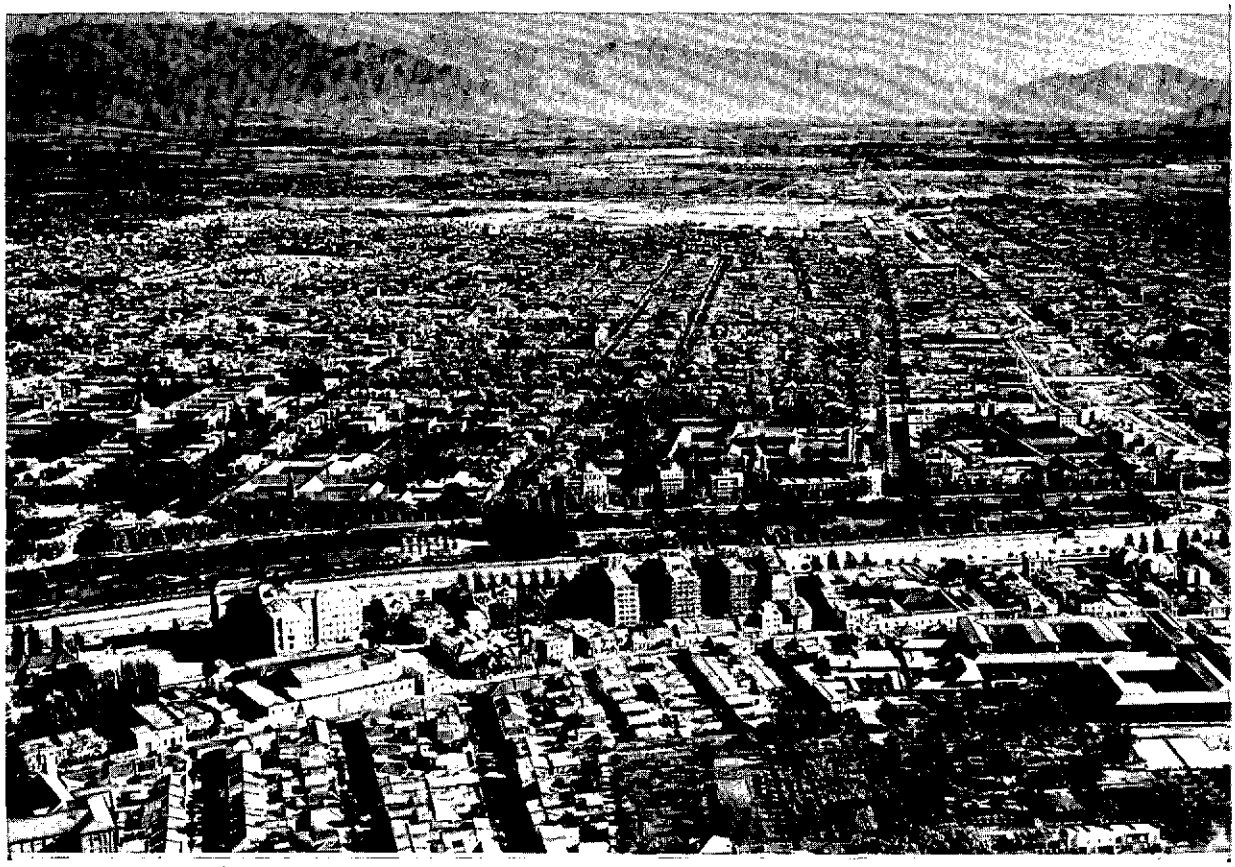
It will be recalled that according to the Constitution of 1947 the organs of the Pan American Sanitary Organization comprise:

1) The Pan American Sanitary Conference. The significance and the standing of this Conference has already been explained.

2) The Directing Council. This Council acts on behalf of the Conference and meets annually between the quadrennial meetings of the Conference. It also acts as Regional Committee of the WHO.

3) The Executive Committee of the Directing Council. This meets at least every six months or oftener and is composed of seven Member Governments elected by the Council for overlapping terms of three years. One of the chief duties of this Committee is to prepare, with the cooperation of the Director of the Pan American Sanitary Bureau, the annual program and budget for consideration by the Council.

4) The Pan American Sanitary Bureau. This is the operating agency of the Pan American Sanitary Organization and carries out its programs.



The XIVth Pan American Sanitary Conference was held in Santiago, Chile, October 7-22, 1954. Aerial view of the city, as seen from Santa Rosa hill, with the Andes in the distance. Pan American World Airways Photo.

In 1954, after examining Committee reports submitted on the subject, the XIVth Pan American Sanitary Conference decided to abide by the present Constitution. In voting the continued acceptance of this 1947 instrument in its original form, the Pan American Sanitary Conference reaffirmed the principle of the priority of technical considerations in international health.

States and territories of varied political status can, under the technical and politically neutral leadership of the Pan American Sanitary Bureau, combine to do effective public health work such as would not be possible if these countries worked independently.

This important viewpoint which makes scientific factors paramount in international cooperation has been achieved in certain fields dealing with communication and travel. It is also being achieved in the field of public health. Health is a matter so close to human life, and disease is such a universal disrespecter of national boundaries, that countries of the most varied outlook have had to learn how to work together and keep on working together in the field of public health.

The increase of knowledge and its application in the field of health looks beyond the changing political conditions and problems of countries to the common problem of safeguarding human health. This task has called forth the continuous collaboration of countries in the Western Hemisphere for over 50 years.

Closely allied with this resolve to make no changes in the basic set-up was the detailed attention given to technical reports outlining the health needs of the Western Hemisphere and pointing out directions in which future disease threats could be overcome and health departments further strengthened.

Bureau Longevity

Before developing further some of the considerations brought up by this important Conference of 1954 it can be pointed out that there is good reason why the agency now known as the Pan American Sanitary Bureau is today the oldest international health organization in the world. It survives, for one thing, because it has always enjoyed the unanimous support of the American nations.

Considering the many praiseworthy institutions that were created only to succumb during the last half-century, the survival of this Bureau from 1902 to date takes on special significance. In the 1924 Code of the Bureau and again in the 1947 Constitution, the American Continent in striking manner asserted its geographical and cultural unity. Surrounded by oceans and well separated from the rest of the world, it was natural that this Hemisphere should resist invasion even from disease and make every attempt to lead the way in establishing a high level of public health cooperation.

Perhaps the fact that only three countries on the Hemisphere, Brazil, Haiti, and the United States, each have a different language, and that all the remaining countries of the Hemisphere speak Spanish, has been a further factor in facilitating cooperation. America has its language difficulties, but there is not the wide diversity of tongues that characterize Europe and Asia. Also, the Western Hemisphere has from the start been united in the common task of exploring a new world. This gave to the population a pioneer cast of mind not afraid to strike out in new directions.

The solid foundation of agreement underlying the history of the Pan American Sanitary Bureau was further buttressed when the Bureau was made Regional Office of the World Health Organization. American countries became an integral part of the World Health Organization, but in dealing with their own regional problems retained the sense of being a closely knit group.

WHO affiliation gave the countries in the Americas a double coverage. They belonged to the indigenous Pan American Sanitary Organization and also to the more universal World Health Organization. The only two countries not yet so covered are Canada and Colombia, although Colombia does belong to the Pan American Sanitary Organization and Canada does belong to the World Health Organization. There is reason to hope that this situation will resolve itself so that all countries will have the twin status which unites the Continent and acknowledges kinship with the world at large.

Against this background of geographical unity the nations of the American Continent have in the last half-century evolved a sustained determination to work together. Joint effort between sovereign nations is never

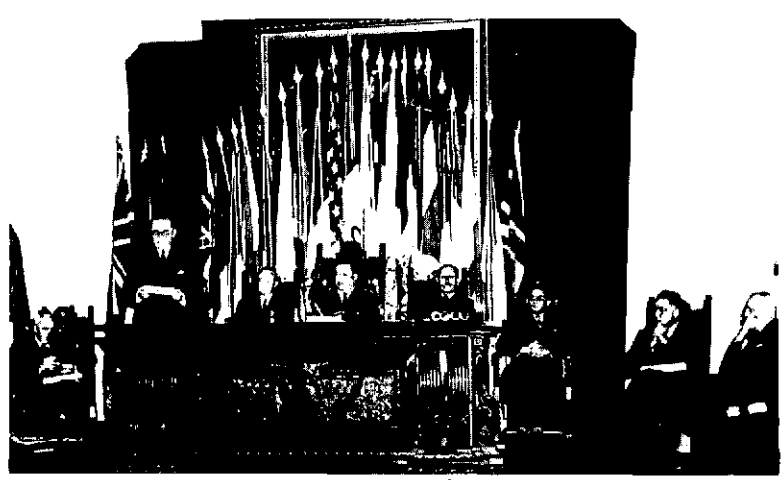
easy, but countries of the Western Hemisphere, through the Pan American Sanitary Bureau, are gradually perfecting the difficult techniques of international cooperation in matters related to public health.

A New Stage

As an illustration of efficient public health techniques embracing an entire continent there can be cited the recent efforts of the Conference to obtain a unified statistical picture of health conditions in all the many different countries in this part of the world. Attempts toward unified reports by Member States on health conditions were brought to a head during the Third Meeting of the Directing Council in Lima, October 1949. A resolution taken at that time recommended to the XIIIth Conference, to be held in 1950, that it advise Member States to present at each Pan American Sanitary Conference a written report, preferably statistical in nature, of the work accomplished between Conferences.

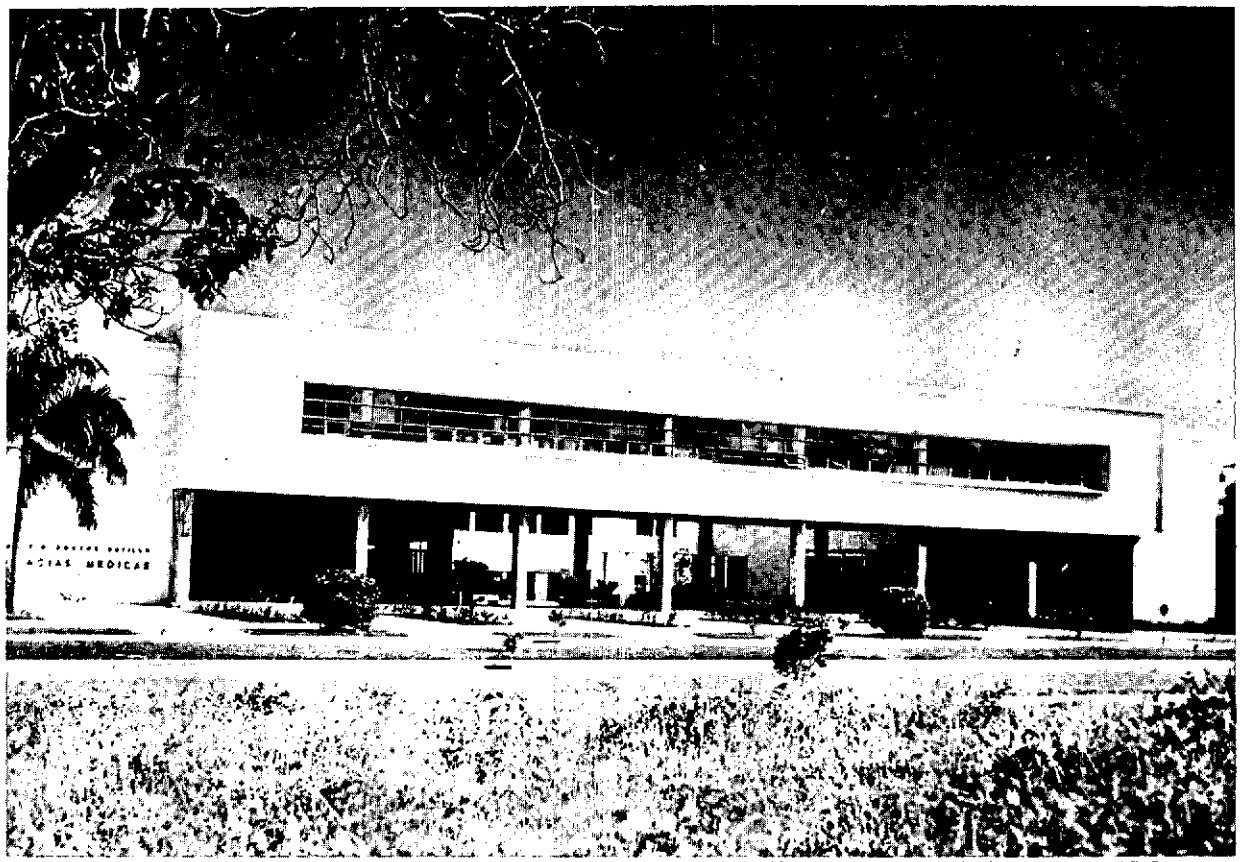
Although some countries were able to comply with the above request, one year of advance notice proved insufficient for a full presentation at the XIIIth Conference. This Conference did, however, further implement the recommendations of the Directing Council by spelling out in considerable detail the need and urgency of having Member States report on what they are doing to improve the health of their peoples.

Stimulated by these resolutions and also by considerable activity on the part of the Bureau, the XIVth Conference, held in Santiago, Chile, received a statistical and informational report which the Conference, after examination, declared to be "a valuable document for providing knowledge of the health problems of the Americas and for coordinating health programs, inasmuch as it contains statistical data on population, births, deaths, cases of communicable diseases, personnel and organization of health services, and description of programs".



Third Meeting of the Directing Council of the Pan American Sanitary Organization, Lima, Peru, October 1949.

Since it was evident that the data in these reports, because of differences in definitions and procedures followed by the various countries, were not yet strictly comparable one with another, the Conference further resolved "to recommend that the Member States (a) immediately begin the



XIIIth Pan American Sanitary Conference, October 1-10, 1950, Ciudad Trujillo, Dominican Republic. Working sessions were held at the Medical Sciences Building of University City.

improvement of these statistical data, in accordance with the recommendations of international organizations; and (b) agree to increase the statistical information that their reports to the next Pan American Sanitary Conference should contain, and decide upon the procedures for obtaining such information and the methods of ensuring international comparability, with the active cooperation of the Pan American Sanitary Bureau and through seminars and other activities for the exchange of ideas and procedures".

These health statistics covering all the countries, together with numerous addresses given at the 1954 Conference by leading health experts of the Continent, already provided invaluable data for the future planning of programs.

The Bureau by 1954 was in a good position to undertake new responsibilities. It had reached a stage of consolidation where funds were regularly coming in. Moreover, these funds were expended during the year on a well worked out program with every likelihood that this program from now on could be conducted at the same full level. Although the Bureau is financed from many different sources it has been shown that this multiple channel financing can operate efficiently. In 1954 the Bureau was cooperating successfully with other important organizations operating in the same or contiguous fields and there was every indication that the newly compiled information now available could be utilized to full advantage.

The head positions in the Bureau during 1954 were all filled. A special instance is the post of Assistant Director which was filled in May 1954, after having been vacant for almost a year. In general, in 1954 the Bureau had reached the stage where all indications pointed to full speed ahead.

Aggressive Strategy

Eradication Techniques

In addition to persisting in its efforts to receive full information on health conditions in all countries, the 1954 Conference renewed a former 1950 Conference recommendation on the eradication of malaria. This recommendation registered increased insistence that headway be made in eradicating malaria from the Western Hemisphere.

It was requested that Member States expand their malaria control operations into eradication campaigns. The Bureau was instructed to develop a hemispheric malaria eradication program.

In a large band of countries encircling the globe, malaria has for thousands of years been making serious inroads on human health. In many regions century after century malaria has blighted agriculture, hampered development, and prevented national growth by incapacitating workmen and adding to the general death rates. The demonstration in Brazil in the early 1930's that the yellow fever mosquito can be completely eradicated led to the application of the eradication technique to the solution of special malaria problems first in Brazil and later in Egypt.

The banishment in 1939-40 of *Anopheles gambiae*, an invading and malicious malaria mosquito, from Brazil by a well organized insecticide spraying campaign, and the advent around 1947 of an even more effective insecticide, DDT, provided strong confirmation of the efficacy of eradication techniques.

Eradication, to be successful, must become an ever expanding program. In 1947 Brazil proposed that the Pan American Sanitary Organization spearhead the banishment from America of the domestic yellow fever mosquito, the *Aedes aegypti*. The use of DDT as a residual spray in human habitations is effective both against urban yellow fever and malaria mosquitoes. Both of these diseases can now be eradicated.

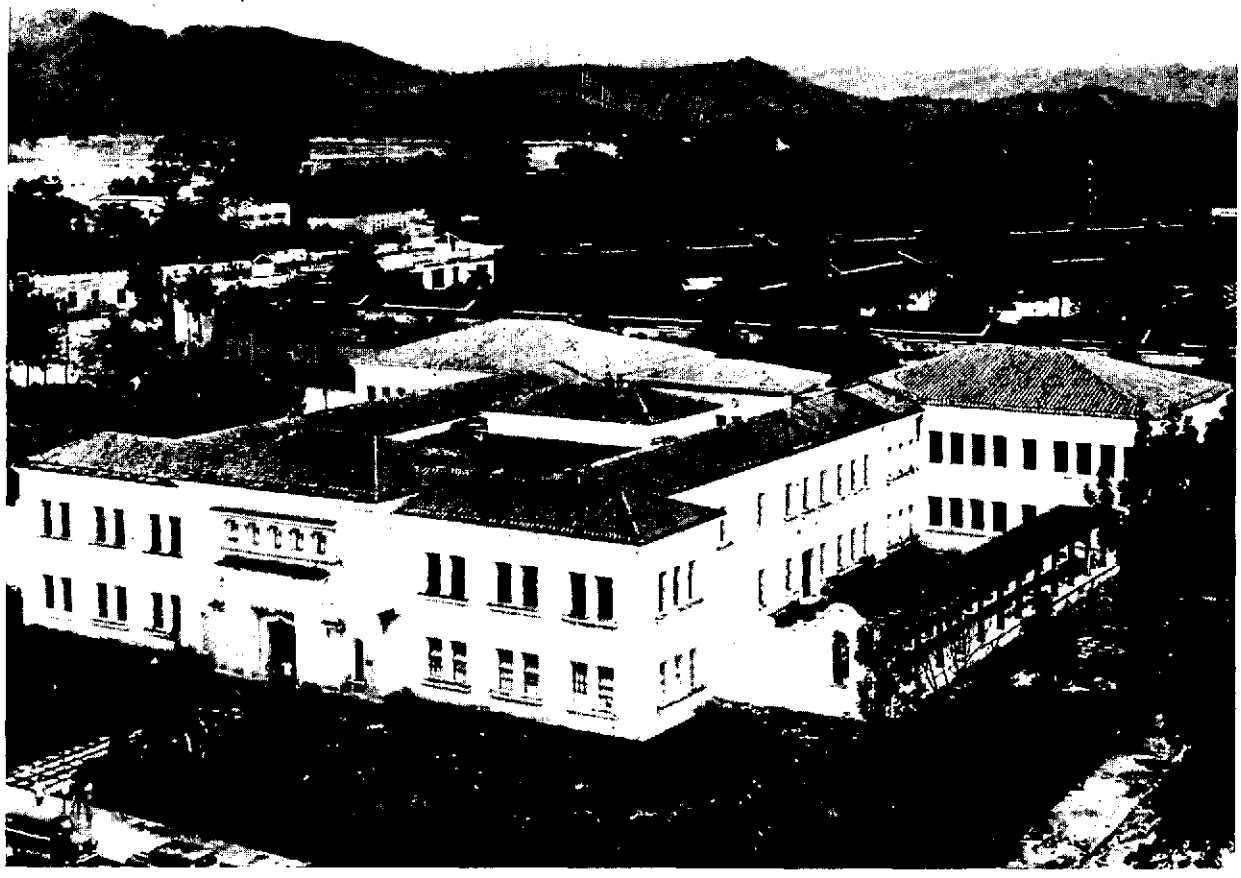
The eradication of malaria from the rural areas of the tropics may be expected to have more profound effects on raising the health and economic levels of these areas than the elimination of yellow fever had on improving the infected ports and cities of several decades ago. For the first time the world now has a single, efficient, and economical method of attack on malaria which can be standardized and applied with confidence to the malarious regions throughout the Americas. The United States and every other country in this Hemisphere, as it becomes free of malaria, has a direct stake in malaria eradication projects of other nations.

It is clear that all disease eradication campaigns have international implications. In the expanding program of malaria eradication there is no logical stopping place until world eradication has been accomplished.

In Part II of this report there is given information, project by project, of present activities in insect control, both in malaria and in yellow fever, but this subject can not be dropped here without noting that what has happened to malaria is happening to many other once prominent diseases. Yaws, syphilis, smallpox, and tuberculosis, are also on the way out. This does not mean they will disappear unaided, or may not flare up again, but it does mean that eradication techniques are today finding a constantly widening application. This makes it possible to glimpse a new era in freedom from formerly disastrous diseases.

Zero Baselines

Something psychological happens to health workers when there arises the definite possibility that the incidence of a disease can be reduced to zero. The psychological effect is embodied in the adage that nothing succeeds like success. Achievement of a zero index leaves the health forces in a firm and unassailable position. Progress is measured from zero up instead of from 100 percent down. It is like a bad habit definitely gone



Air view of the Division of Malariology Building, at Maracay, Aragua, Venezuela, where every year courses on malaria eradication are held.

instead of like a bad habit only partly conquered. Instead of struggling against an ever present enemy, the victory is complete because the enemy has disappeared. The next step is to prevent reimportation of the disease by extending eradication campaigns to neighboring countries.

Zero baselines arouse a new interest in quarantine regulations. Diseases long disregarded by quarantine measures now once more become dangerous in international traffic. An illustration is malaria in the United States. So long as the United States had malaria, its introduction was not too alarming because the disease in any case was already present. Once that disease has reached the vanishing point, the regulations regarding keeping it out take on a new significance.

In this connection it is worthwhile to recall that the rapid means of modern transportation eliminate the safeguard of the short incubation period. In yellow fever it takes three to six days after infection by the mosquito before symptoms appear in the patient. In those three days the patient, unaware of his pending illness, could easily fly to a distant country still infested with *Aedes aegypti* mosquitoes ready to spread the infection brought in by this single carrier. The airplane covers in hours distance that sailing ships and even the steamers of not so long ago took weeks to cover.

The tactics of eradication or a final mopping up of diseases are further clarified if they are considered as a part of another even wider plan of action which everybody understands, namely, the promotion of human welfare. Such welfare is never entirely a matter of economics, but it often has a solid economic basis. When a city formerly shunned because of its periodic plagues gets to be a healthy place in which to live, with water supply and sewage disposal functioning perfectly, one incidental result is increased prosperity. A similar thing is happening today in rural areas.

Reclamation projects are an old story in the New World. Frontier after frontier has been opened for peaceful living, but much still remains to be done especially in the tropical and other hinterlands where disease carriers are firmly entrenched. In any community, better health conditions raise the level of living. A drive for good health invites integration with other peaceful drives such as those for good housing, good farming, good schools, good welfare work and a greater degree of security.

Although it is true that better health conditions promote prosperity, it should not be forgotten that the seedbeds of disease must be eradicated even if these seedbeds happen to be located in remote districts that offer no immediate reward of increased prosperity. Such ruthless and persistent eradication will in the end be of benefit to all.

Eradication when feasible is safer and, in the long run, cheaper than measures of control. More and more, public health strategy looks far ahead. It needs to be backed up by strong national health departments that plan their work for years in advance. The tactics of eradication are that, once successful methods of disease control are available, the next step is to intensify control measures to the point where they aim at complete elimination. Eradication brings freedom from fear of disease for so long as reintroduction does not occur.

Typical rural dwelling, the attractive stone wall houses *aegypti* foci

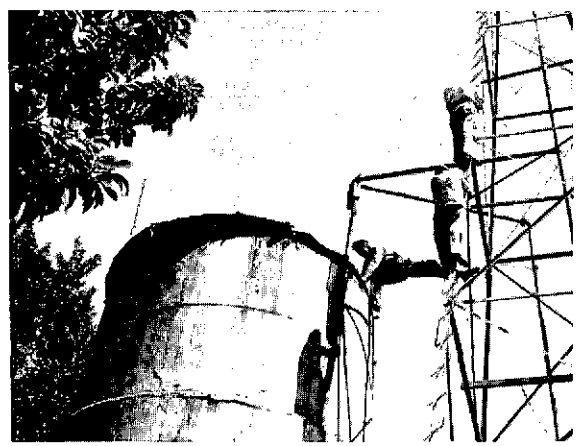
ERADICATION

AT

WORK

Water container (both may be dangerous) Flower vase

DDT-ing Refuse Dump



Protecting Water Deposits

Eradication campaigns call for thoroughness, intensive checking, and close vigilance. The vigilance is needed after the enemy is driven out from one place but continues in other accessible areas. Eradication must expand continuously at the periphery until all sources of re-infection have been eliminated. Thus it becomes pure self-interest, based on neighborly friendliness, to help our neighbors clean up their areas also. The new strategy of eradication requires full international cooperation and emphasizes the important role of the Pan American Sanitary Bureau as the agency through which the American nations help each other solve their health problems.

It is often forgotten that scientific endeavors to promote public health may involve far-reaching principles of international cooperation. The pursuit of a single disease may force contiguous or even far-distant countries to cooperate. In public health one can never say with Cain, "Am I my brother's keeper?" Without the vision that sees beyond its own immediate and selfish interests, no nation can reach its greatest development.

Promotional Work

Public Health Polarities

Eradication alone, however, is not enough. Two kinds of programs are needed. The pendulum swings between general and specialized programs, uni- and multicontrol, eradication techniques and methods promoting physical and mental health. All these methods of operation were in use in 1954.

General programs aim to keep at a low incidence level all diseases not yet suited to eradication drives. General programs require well-trained staffs with longer periods of diversified training than those needed by the specialized unilateral programs. These staffs are usually members of the regular health departments.

In the work of the Bureau it is clearly recognized that a balance should be maintained between programs aiming at eradication and programs promoting regular health department activities. The work of the Bureau emphasizes both. The Bureau also recognizes that what is needed most in all warfare against disease is knowledge: knowledge of the cause and method of spread, of the incident and movement of the disease, and, finally, that this knowledge must be lodged in the heads of a well-trained staff.

It is also necessary to leave open the road to new discoveries and make it possible to use these discoveries when they become available.

In the early days of public health, quarantine was based on the simple observation that epidemic disease follows the arrival of ships with sick on board. For a time quarantine was considered almost a universal remedy, but this blind application of quarantine proved both faulty and costly.

American States were the first to recognize that international sanitary treaties require international organizations to make them operative. American States recognized that collection and dissemination of information on the presence of epidemic disease was not enough. They made provision for aid in the studies of epidemics wherever these epidemics occurred and for collaboration of the Bureau in the control of these epidemics. American States recognized that the Bureau should be financed by contributions of Member States and should be essentially a cooperative agency controlled by health authorities of the Member States through the Pan American Sanitary Conference. American States also recognized that on this Continent eradication campaigns and vigilant health departments go hand in hand.

Strengthening Health Departments

Most health departments today need to promote maternal and child welfare, maintain public health laboratories, prepare vaccines, as well as other biologicals, and tackle problems of sewage disposal and water supply. These are some of the major activities that concern a health department in addition to the immediate fight against communicable diseases.

Every health department today needs entomologists, bacteriologists, chemists, veterinarians, sanitary engineers, nutritionists, and a nursing corps. Many activities other than those dealing directly with disease eradication are necessary in the building up of a modern health department. Such a department must be both flexible and sufficiently complex. It aims at control as well as eradication. There is the work of the day and there is also the business of building for the future. These needs call for well-rounded, farsighted organization.

The Bureau has always kept in mind this broad scope of public health work. At present it is actively engaged in over 100 specific projects, each with an appropriate but definite budget of its own. It is especially anxious to support activities that bring better health into the home. Although the need for professional groups and professional organizations is clearly recognized, the Bureau is also stressing the urgent need for auxiliary health personnel. More on this will be said in subsequent sections on education.

In its basic policy of strengthening national health departments the Bureau is not itself an operating agency. It is a clearinghouse as well as a coordinating and stimulative center for government health authorities in all the countries of the Western Hemisphere. But the governments bear the final responsibility. They alone have the authority and the power to place health efforts on a permanent basis. The Bureau acts only on request and with the consent of the government of the country in which the work is done.

In no instance does the Bureau promote parallel activities competing with health departments. The consultants provided by the Bureau work hand in hand with the health departments. Frequently they are themselves public health officers in the health department of another country. What the Bureau especially aims to do is to give every country the benefit of the experience of every other country.

Above all, the Bureau strives to channel technical aid and scientific knowledge so that the work done will have the benefit of all the knowledge available from any source whatever in the world. For this reason there is a constant thrust in the direction of more and more perfect organization with utilization of scientific procedure.

The Pan American Sanitary Bureau is not an end in itself but an intermediary which seeks to strengthen the health efforts of each member nation. In the final analysis only governments have police power, and only governments can enact laws, levy taxes, and apply these resultant funds in a way that will lift health work out of the temporary stage and build it into the permanent structure of the State.

Educational Activities

Cultural Patterns

All during 1954 there was emphasis on varied types of educational work. Such work includes the public as an active participant. The public and the public health officials alike are in the same army, waging the same battles against the same diseases. Both are continually engaged in the struggle to promote better health.

In a sense one might say that the public is the nonofficer part of the army. The public needs guidance from the many highly trained health officials who man the various divisions of the health department, and who make it their lifework to protect the public against illness and to raise the level of health. This program of the health authorities is of direct concern to the public and the public should participate in it.

It is well recognized today that the average man must, at every turn, resort to expert advice. When he gets sick he needs a doctor, when he gets into trouble he needs a lawyer, when he gets confused he needs a psychiatrist, when his television set will not work he needs and electrician. It is nothing unusual that the public, in matters of nutrition, sanitation, and in many other things that have to do with the general health, should turn to the health department. Life today is so complex that no one can be his own expert.

There is another sense in which the public is closely identified with the work of the health department. What the health department is really trying to do is to change the cultural pattern of the people in the direction of more hygienic living. This is unavoidably slow work. It requires intense and protracted educational effort. In it the public must be a full partner.

Even in times of peace the whole of society is still engaged in what might be called a warfare with nature. Man needs protection from nature in the raw. That is why he wears clothes to keep out the cold, builds houses for shelter, bears weapons to kill dangerous animals.

School of Medicine at San Juan, part of the University of Puerto Rico.

The battle against nature includes in it also the battle against human nature. Everybody has habits, some good and some bad. It is part of the duty of the health authorities to help change careless habits of living so that life may become more secure. If disease control is regarded as in some sense a battle against nature, and to some extent also a battle against human nature, it can be seen very clearly that health departments must pay attention to the education of the public. Special efforts should be directed to have the public appreciate the advantages of environmental sanitation as exemplified by water supply and sewage disposal work.

Next in importance to education of the public is the task of continually increasing the efficiency of technicians engaged in health work by enabling them to keep their technical information up to date. Nothing gets out of date as fast as a technical textbook. Within a single lifetime, or rather within the decade or two that comprise the peak of a lifetime, the scientific picture may completely change. Old college texts do not reflect current practice. Constant new editions plus monthly periodicals are needed to keep abreast of any field of interest.

One sustained activity has been to publish and to distribute the *Bulletin of the Pan American Sanitary Bureau*, a well stocked monthly journal on public health and related disciplines. This invaluable medium of exchange puts the health workers of each country abreast of public health developments in other countries. It makes available in the readers' own language current public health practices that reflect accurately the present state of knowledge.

Within the pages of a journal of this sort the laboratory worker explains his findings to the field man, and the field man in turn finds a medium where he can publish his own surveys. All alike can keep in view the epidemiological situation, of which a monthly picture is given by those who make it a business to collect and report on vital statistics. In this way the monthly articles have news as well as scientific value.

The Bureau has published this Bulletin since May 1922. During a career of more than 30 years this Bulletin has climbed to a position of eminence among the public health journals of the world. Since January 1951, and through December 1954, the Pan American Sanitary Bureau has been in charge of translating into Spanish and publishing the *Chronicle of the World Health Organization*. It also publishes the official documents of the Pan American Sanitary Organization and special publications ranging all the way from pamphlets and brochures to books. A fuller account of the publication work of this year is contained in the main body of the report.

Information more keenly alive even than that contained in a journal is exchanged when experts from all countries get together at conferences. One of the oldest activities of the Bureau has been to finance and promote international get-togethers. These may vary from the large formal Pan American Sanitary Conference, held every four years with delegates from all member countries constituting the governing body of the Organization, to more informal congresses, conferences, workshops, and seminars. The manner of holding these meetings has been the subject of constant experimentation and improvement. Generally, and this applies especially to the intensive seminars, from each meeting something is learned which helps to make the next meeting even more productive.

The exchange of views, the contacts, and even friendships, made at these meetings on the international level are invaluable. The Pan American Sanitary Bureau takes very seriously its responsibilities in arranging for, holding, and conducting these meetings. A good part of its budget should and does go to these traditional and varied conferences at which the work of each country is fitted into a coherent international program. From these meetings those who partake get both inspiration and enlightenment. Development has been in the direction of more local gatherings pointed toward discussion of a special problem and geared for a week or two of intensive work in surroundings conducive to concentration.

In addition, the Bureau itself is an institution of educational value. Staff members working in it or with it return to the home countries with a broader outlook of public health as an international activity.

Insect Eradication Seminar held in Havana.

Trained Personnel

Spurred on by scientific advances and the urgency for disease control, the growth of health administrations has outstripped the normal capacity of educational institutions to supply well-trained individuals. The problem in 1954 remains one of quality as well as quantity. Deficiencies in quantity in some of the less highly technical fields can be overcome by quickly training subprofessionals, and a number have recently been so trained.

However, such help, to be effective, needs professional supervision. Physicians, engineers, and nurses have been given postgraduate courses which qualify them to supervise the subprofessional auxiliaries. But it is obvious that, even so, demand far outruns supply. Unless this situation is remedied, public health work will be slowed down or brought to a halt for lack of trained leaders.

Since professional education requires four to seven years, schools must be enlarged now to meet the needs of the foreseeable future. The Bureau, therefore, has given assistance to countries by organizing seminars and special training courses, awarding fellowships, and helping schools to expand their courses. Materials, teaching personnel, and advisers on curricula and organization have been made available.

Special studies have been made of the medical education needs of Latin America, and a Medical Education Information Center has been established in the Bureau. This Center facilitates mutual exchange of information among important groups which are assisting medical education in this region. Assistance has also been given by awarding fellowships to professors and by providing the latest information on improved curriculum planning. Medical schools have been urged to strengthen or establish courses in preventive medicine.

Improved, expanded facilities for education of public health administrators are constantly needed as health departments increase their activities. Curriculum improvement and fellowships to students are the principal tools in this field. Aid has been given to the three major Latin American public health schools in correlating their curricula; teaching personnel and travel grants to faculty members have been provided. Also, travel grants have been awarded faculty members of North American schools to acquaint them more fully with the health problems of Latin American countries and to enable them to adapt their school curricula to include the needs of students from those countries.

Deficiencies in the field of training for health statistics are being reduced by the Inter-American Center for Biostatistics in Santiago, Chile, which has become a regional training center. It was developed under the sponsorship of the United Nations, the Bureau, and the Government of Chile. The Bureau has augmented its faculty and fellowships to its courses have been awarded.

In other fields, short-term courses have been organized for insect control, waterworks operation, health education, and the laboratory diagnosis of tuberculosis, venereal diseases, and brucellosis. The sanitary engineering courses in the schools have been supplemented by formalized field training

Biostatistics Seminar, Santiago, Chile

and seminars. Staff consultants have assisted schools of veterinary medicine in individual countries while a regional training program in the control of foot and mouth disease has been organized by the Pan American Foot and Mouth Disease Center in Rio de Janeiro, a project administered by the Bureau as part of the Technical Cooperation Program of the Organization of American States (OAS/TA). In 1954, as in other years, an international course was given in Rio de Janeiro and another one in Panama.

Fundamental standards have been established for nursing education, particularly with regard to graduate nurses and the growing number of auxiliaries, and provision was made for supplementing the inadequate training of many already in the nursing profession. Postgraduate nursing education was aided through regional nursing congresses and courses for nursing instructors. Various national schools of nursing have been assisted in strengthening and broadening their curricula on a truly professional basis so that nurses may be prepared for both institutional and public health activities.

Fellowships constitute one of the most important means of training public health workers. These fellowships provide training for personnel of specific field projects as well as for members or prospective members of national health administrations. In 1954, fellowships were awarded to 319 individuals from nearly all the Latin American Countries.

General Programs

Services

Certain central technical services are provided by the World Health Organization and are administered for the Americas by the Pan American Sanitary Bureau. The Bureau receives reports of the occurrence of quarantinable diseases, for transmission by cable to neighboring countries and to WHO headquarters, for publication in weekly epidemiological reports. As a special WHO service to ports and shipping, this information is broadcast throughout the world by 15 radio stations, four of them daily. The World Health Assembly has from time to time adopted International Sanitary Regulations and is prepared to amend them in the light of scientific advances. The Bureau, on behalf of governments who request assistance, procures and ships radioisotopes and other supplies and equipment. It also functions as a clearing-house for fellowship applications.

Recommendations for the uniform reporting of diseases and deaths have been established. Among other statistical services, health and vital statistics are collected and published, as are international studies based on them.

A world-wide system has been established by the WHO for the standardization of biological products, and a first International Pharmacopoeia has been published. The WHO works for international control of drug addiction; assists in research on narcotics, alcoholism and related subjects; establishes standards for the therapeutic, prophylactic, and diagnostic agents; and has established international centers for poliomyelitis, influenza, brucellosis, and for the study of *Salmonella* and *Escherichia*, as well as an International Blood-Group Reference Laboratory and a Tuberculosis Research Office.

Projects

Projects have been found to be the most convenient administrative units for cooperating with governments in attaining health objectives. Within a single project frequently one or more experts bring a high order of technical knowledge to bear upon the solution of some problem or on the operation of a governmental program, all the while taking care to impart this technical knowledge also to national health personnel. Material and equipment may be furnished if it is essential for teaching or demonstration purposes. Beyond that, the Bureau is not a supply agency. Supplies are furnished by governments. The only international agency whose main objective is to furnish supplies, not available locally, is UNICEF, which in this manner cooperates in health projects.

From a single project in 1946, the number of Bureau projects has grown to 115 active in 1954. This growth is due not only to the expansion of the regular program of the Bureau but also to the advent of the Expanded Technical Assistance Program and the entrance of UNICEF into the field of health.

Projects are the principal means of aiding local health services in reducing illness rates. Completed projects calling for continuous action are almost invariably integrated into national programs. A complete list of projects active in 1954 is given Appendix I, page 170.

Cooperation with Other Agencies

The Institute of Inter-American Affairs (IIAA), the regional division for the Americas of the United States bilateral assistance program (FOA), in 1954 has an extensive public health program. Quantitatively, its program has been larger than that of the Bureau (over $5,000,000) but, through development of contacts, duplication has been largely avoided. Although the Bureau and the IIAA jointly participated in but few projects, they had the same objectives and cooperated in some instances by carrying on projects which represented different phases of the same problem. In spite of differences in methods of operation, collaboration is achieved both at the country level while planning the projects and through regular joint staff meetings held in Washington, where the programs of the two agencies are discussed in broad outlines and interagency relationships clarified.

The W. K. Kellogg Foundation, active in the fields of health and education, coordinates its work through the Medical Education Information Center (MEIC), which as already explained is administered by the Pan American Sanitary Bureau. This foundation also assists in the nutritional work of the Institute of Nutrition for Central America and Panama (INCAP) and cooperates through grants for nutrition, dentistry, education, and public health administration fellowships awarded to PASB/WHO staff personnel.

The Rockefeller Foundation also coordinates its work in education through the MEIC. It has worked with the Bureau and with governments in developing demonstrations and organizing nursing and health congresses. The Foundation's virus laboratory in Trinidad was of particular value in discovering the presence of yellow fever on that island, forecasting the 1954 outbreak.

The United Nations Children's Fund (UNICEF), established within the United Nations in 1946 primarily to assist needy children in war devastated countries, has now been extended indefinitely. It operates on a world-wide basis. Health improvement is so essential to child protection that UNICEF was soon deeply engaged in that field. A unified policy between UNICEF and WHO activities is achieved through a joint committee established in 1949. In the Americas, a number of governmental projects concerning maternal and child health, BCG mass vaccinations, yaws, malaria control, and rural sanitation have been assisted jointly by UNICEF and the Bureau. Generally, UNICEF provides supplies and the Bureau experts and fellowships. These projects have been coordinated with the UNICEF Regional Office in Lima, Peru, where the Bureau maintains a WHO Medical Adviser to UNICEF/LARO and through collaboration of field staff.

Every effort is being made to integrate the health programs financed by UNICEF into the general health program of each participating country. As extensive funds are available to UNICEF, the appeal of children being strong, and as essentially all improvements in health affect the well-being of children, cooperation between UNICEF and the Bureau is of the utmost importance.

An Expanded Program for Technical Assistance for underdeveloped countries was inaugurated by the Economic and Social Council of the United Nations (ECOSOC) in 1949. In the program of the Bureau, Technical Assistance funds have made possible the development of important health programs for which other resources were not available, particularly in the field of public health administration, tuberculosis control, malaria eradication, and environmental sanitation. More details on this cooperative work are given in the section on cooperating agencies, page 166.

Governmental and international agencies have slowly evolved a system of working together in integrating their programs and coordinating their operations into an over-all program. Although the present system has not yet achieved perfection, the close working relations which have grown during the past few years are smoothing the path.

Representatives of national health administrations meet periodically as the governing body of the international health organizations to determine the type and scope of programs the organizations can undertake to further their work. These health authorities, familiar with their country's health resources and problems, in consultation with the staff of the international organizations, themselves expert health administrators, work together effectively in devising and coordinating both national and regional programs.

Through this method, relations between national health authorities and the staff of the organization have become increasingly effective. Free discussion between national and international authorities, comparing methods and results at home and abroad, have not only broadened the vision and supplemented the knowledge of national health authorities but have increased the value of the international experts.

International health work is an expansion of domestic programs, coordinating them into regional campaigns extending beyond the country while at the same time promoting improvement and invigoration of national health

administrations. Thus international health work in the Americas, under the guidance of the Bureau in fulfillment of its constitutional duties, has been progressively achieving more and better results. The intimate association of professionals at the national and international levels has been the secret of success.

Two Special Meetings

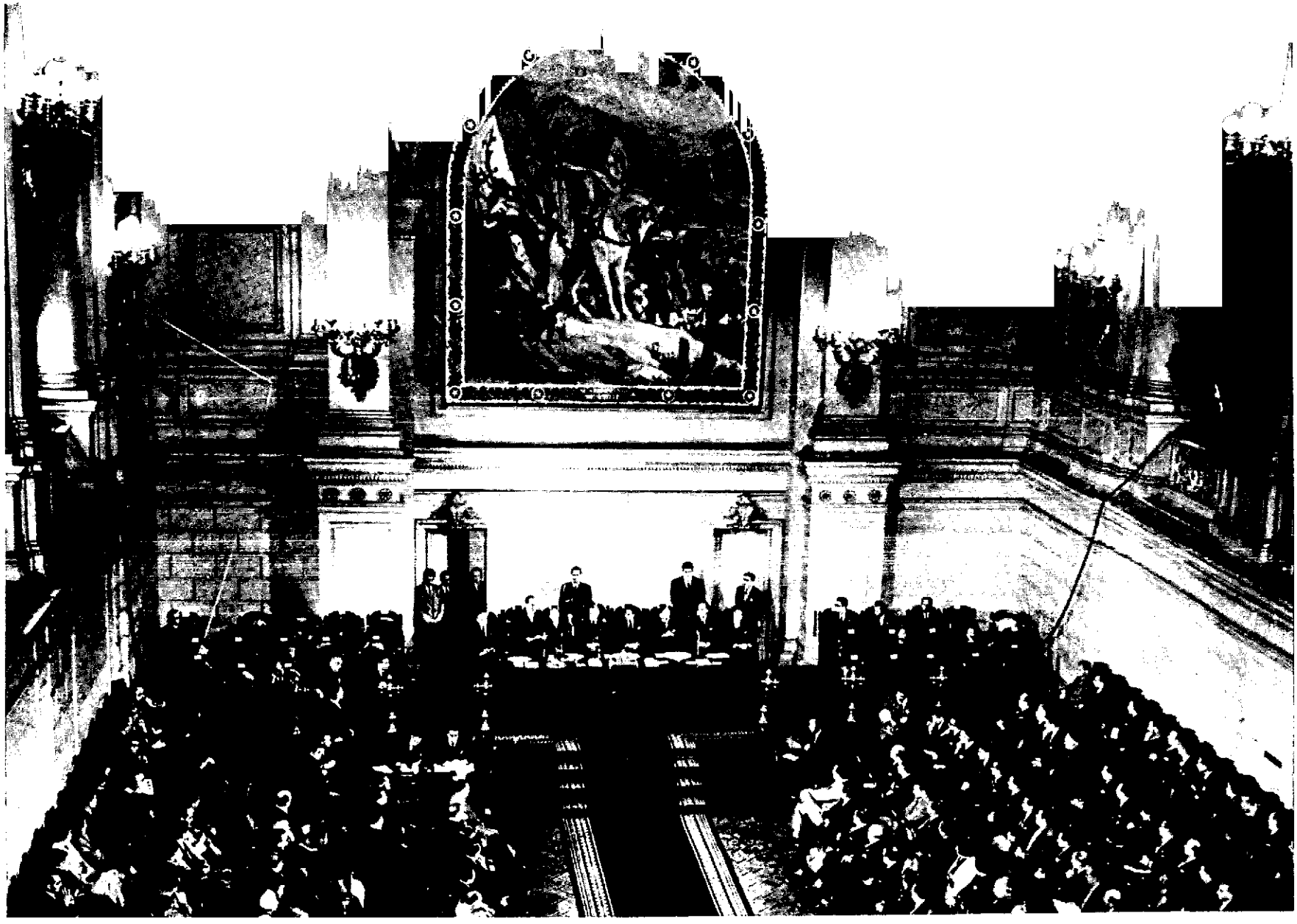
In Central America, the Institute of Nutrition of Central America and Panama (INCAP), organized in 1946 under the auspices of the PASB and installed in a special building in 1949, after a period of steady growth, moved in 1954 into a second new building supplied by Guatemala. The new building was opened with appropriate ceremonies in Guatemala City on September 11th, 1954. The ceremonies were attended by the President of Guatemala, the Ministers of Health of Central America, the President of the W. K. Kellogg Foundation, the Director-General of the World Health Organization, and the Director of the Pan American Sanitary Bureau.

During the year, Nicaragua became a member of INCAP, completing the roster and raising to six the number of cooperating countries. INCAP was established to develop the study of nutrition and its application in the Central American Republics and Panama. The seriousness of food and dietetic problems in this area called for cooperative efforts, especially on producing new vegetable proteins to replace scarce animal proteins. In 1954 these efforts were put on a permanent basis through a new abode which fittingly houses an outstanding example of international cooperation. The work receives enthusiastic moral and financial support from all the member nations and liberal collaboration from the W.K. Kellogg Foundation. INCAP has been cited as a clear illustration of how five or six nations working together, even in a field as highly technical as that of nutrition, can accomplish more than any single one of them alone or all six working separately. Details concerning the work of this institution are given in the main report.

A conference on yellow fever held in Washington, D.C., on December 21-22, under the auspices of the Bureau, reviewed the present status of yellow fever in the Americas, its current movement northward through Central America, the internationally dangerous invasion of Port of Spain, Trinidad, and the threat of future outbreaks in this Hemisphere. The meeting was attended by leading authorities from the United States Public Health Service, the U. S. Army, Navy, and Air Force Health Services, the Foreign Operations Administration, the U. S. Department of State, the Rockefeller Foundation, the Gorgas Memorial Institute, the Carlos Finlay Institute in Bogota, Colombia, and several staff members of the Bureau. Coming at the close of the year, this meeting represented a fitting climax of mounting efforts to stem the yellow fever threat and stimulate *Aëdes aegypti* eradication from the Americas.

More will be said of the 1954 yellow fever situation in Part II of this Report.

ACTIVITIES OF 1954



Inaugural Session of the XIVth Pan American Sanitary Conference, "Salon de Honor",
National Congress, Santiago, Chile, October 7-22, 1954

ACTIVITIES OF 1954

Method of Presentation

This account of the 1954 work of the Pan American Sanitary Bureau will be presented in three sections dealing respectively with communicable diseases, public health administration, and educational work.

Much of the material in the first section is taken up by a discussion of yellow fever and insect control programs. This section also deals with smallpox, yaws, typhus, and other epidemic as well as endemic diseases. The attitude toward all the diseases discussed in this first section of the report is that they should be controlled, and if at all possible exterminated. The key word in this section is ERADICATION.

The second section, dealing with public health administration, includes Pan American Sanitary Bureau work in such fields as environmental sanitation, water supply, sewage disposal, health statistics, maternal and child welfare, nursing, and nutrition. These activities are as much a part of the work of a public health service as the actual fight against communicable diseases. A well integrated public health service gives a recognized position to all activities needed to maintain a population in good health. The key word of this section is INTEGRATION.

The third section deals with the training of new personnel and the even more difficult matter of keeping everyone engaged in public health work properly informed both as to present public health conditions in the area served and as to current scientific procedures. In this section information is given on educational and fellowship programs. The key word of this section is EDUCATION.

Order of Urgency

Living conditions on the American Continent are uneven. The divergencies result from different geographic conditions and from differences in opportunity. In America gaining a livelihood runs the gamut from a bare existence by primitive types of agriculture to industrial occupations yielding the highest per capita income in the world. We find large regions with low infant mortality and also whole countries where the infant mortality rate is still high. Sanitation ranges from excellent to fairly primitive conditions with little or no sanitation. In the face of so great a diversity the Continent remains a breeding ground for most of the ills of the human race.

Naturally, any attempts to remedy this situation must pay attention first of all to regions that are under par. Public health workers go by the epidemiological data which show up the sore spots. In public health work, as in all welfare work, the lost sheep get more attention than those safely sheltered. Although public health work in every case centers on the regions where the record is blackest, it would be wrong to draw the conclusion that the whole Continent is backward. More correct would be the conclusion that the aim of all public health work is to bring substandard regions up to the level of the best. The whole idea of international cooperation is mutual protection by making each member nation safe and at the same time no longer a danger to any other country.

PART II — ACTIVITIES OF 1954

Contents

COMMUNICABLE DISEASES

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Communicable Disease Control

Control has been the traditional health department approach in attacking communicable diseases. As has been noted, under the leadership of the Bureau the trend now is toward eradication when technically feasible. The classic example is the elimination of all danger of urban yellow fever from those countries where *Aëdes aegypti*, the domestic mosquito vector, has been eradicated. Fortunately, jungle yellow fever, when it occurs among monkeys, is transmitted by species of mosquitoes which inhabit the high forest canopy and do not invade towns. *A. aegypti*-free urban areas are not endangered by the jungle infection and need not be subjected to quarantine restrictions.

Since continental eradication of *A. aegypti* requires coordinated programs, the Bureau was entrusted with this responsibility in 1947. To date, all infested countries, except the United States and three small Caribbean islands, have accepted the responsibility of initiating eradication campaigns. All country campaigns are financed and directed by the governments concerned. Through the Bureau, expert advisers are assigned, certain materials are provided, and special training courses are organized. Campaigns for eradication of *A. aegypti* have made great headway.

Jungle yellow fever offers greater difficulties. In spite of various studies, no economically feasible means, other than vaccination and eventual *A. aegypti* eradication, have yet been devised for its control. In the meantime the Bureau provides aid including equipment and supplies for the two South American vaccine manufacturing laboratories, in Rio de Janeiro and Bogotá, and has assigned experts to help standardize vaccine preparation and increase production. In 1954 these laboratories made 14,951,935 doses, 2,169,335 of which were distributed to some 15 Latin American countries.

Plague in the Americas has certain similarities to yellow fever. It is insect-borne (the rat-flea), and it subjects infected ports to international quarantine procedures. It can be driven out of cities but continue in rural areas in ground squirrels and other rodents. Bureau help during many years has been decisive in eradicating plague from the ports of Latin America.

The Bureau is also charged with the coordination of country programs for smallpox control leading to a continental eradication campaign. Encouragement was given to the development of a heat-resistant, dry vaccine and assistance was subsequently given to seven countries for its local production. In addition, the Bureau has collaborated with governments in developing mass vaccination campaigns as a part of their general health work.

Louse-borne typhus is still a matter of concern in a number of countries. The Bureau has cooperated in vaccination and DDT delousing campaigns in Central and South America. Particular emphasis was given programs among the Indians in high Andean areas where standard methods, although successful, are too expensive for the normal economy of the area. To help meet the need for a good, inexpensive vaccine, the Bureau is collaborating in the development and field testing of a living vaccine. Success would speed the initiation of a typhus eradication program.

Chagas disease is a widespread rural Latin American problem in regions where the economic status is low. The Bureau has provided consultants to study the problem, encouraged governments in educational programs, and collaborated in insect control campaigns which include the spraying against the triatomid vectors. No projects in Chagas disease were active in 1954 but interest in this disease continues.

Although control campaigns are under way in all countries, tuberculosis continues to be a problem. The Bureau has cooperated with governments of six countries and a number of the Caribbean islands in case finding, ambulatory treatment campaigns, improvement of laboratory diagnosis, home demonstration activities, BCG mass vaccination programs, and education of the public. After training local personnel, the campaigns were integrated into the broad programs of the national administrations of health. In the United States, where BCG has not been used, tuberculosis morbidity and mortality rates have reached a low level from which some authorities envisage the possibility of eradication.

Recent surveys indicate that leprosy is still a problem in five countries. A Bureau consultant has assisted one country in expanding control facilities to include the relatively new method of ambulatory treatment with sulphones, which may eventually lead to discontinuance of isolated leper colonies.

Two children, brother and sister both victims of yaws (Haiti)

A program for the eradication of yaws is nearing local success in Haiti. Through a house-to-house campaign, almost every infected person or contact has been treated with a single dose of penicillin which has proved effective in stopping transmission. Instead of being an obvious rural affliction, cases are now hard to find. Eradication is in sight in Haiti. The campaign is being extended to other infected areas. The Bureau has provided international personnel, expert in yaws and other treponemal infections, who have worked with national counterparts in organizing and operating the campaign.

In the principal venereal diseases first reliance today is on penicillin but importance is also given to diagnosis. Diagnosis is often an essential step toward eradication, although under many conditions routine mass treatment or treatment of individuals on suspicion is cheaper than diagnosis and leads more quickly to mass elimination of infection.

The Bureau has cooperated with two countries in establishing laboratories as training centers for technicians and has provided consultants to assist in improving diagnostic procedure in five others. As a result of Bureau assistance, many doctors, laboratory technicians, and public health officers were trained. The Bureau has also participated in nation-wide control in one country, and city-wide programs in another. Of interest is the joint work on both sides of the Mexico-United States border where the incidence of venereal disease became very high.

Desmodus rotundus, Vampire bat captured in a Guadalupe Cave, Nuevo Leon, Mexico, 100 miles from the United States border.
E. P. Walker Photo

The prevalence of enteric diseases and of hookworm infestation bears a direct relationship to deficiences in environmental sanitation. In addition to encouraging the growth of sanitary engineering units in national health administrations, the Bureau has provided consultants to aid governments in the development of modern environmental sanitation programs.

Technical personnel provided by the Bureau have assisted brucellosis control programs by improvement of diagnosis, standardizing tests, and organizing training courses. Reports of international congresses and the joint FAO-WHO Expert Panel were published and distributed to the countries of the Americas. In connection with the global brucellosis control program the Bureau arranged for the establishment of three research centers in the Americas.

In former years encouragement has been given to the development of laboratories for production of diphtheria and whooping cough vaccines. Upon completion of such laboratories in four countries, mass vaccination programs among children were organized. Interest in public health laboratories continues, although during 1954 no project was active bearing directly upon these diseases.

By designating national laboratories as Influenza Centers, WHO established a world-wide network to centralize information, determine strains, and devise influenza control methods. The Bureau, as the responsible agency in the Western Hemisphere, arranged for 17 laboratories and one reference center.

Rabies, dangerous to man, causes serious economic losses when enzootic in vampire bats, due to death of cattle and horses attacked by rabid vampires. The Bureau has given assistance to governments in planning control campaigns. Experts were provided to advise authorities in preparing and testing nationally produced vaccines. Vaccine production equipment was provided, wildlife destruction methods demonstrated, and cattle and dog mass vaccination campaigns organized. A study of the life history of vampire bats and methods for controlling bat rabies has been given particular attention by the Bureau.

Foot and mouth disease (aftosa), very prevalent among cattle in certain parts of South America, causes serious economic loss and affects nutrition by greatly reducing dairy and meat production. The Bureau, being the only inter-American agency with veterinary services, was asked in 1950 by the Organization of American States to prepare a program for a Pan American Foot and Mouth Disease Center, to be financed with funds supplied by the OAS. In cooperation with the Government of Brazil, the Center was developed near Rio de Janeiro and since 1952 has collaborated with governments by training their nationals and by advising on techniques for prevention and control of foot and mouth disease.

Life cycle of the parasite *Echinococcus granulosis* which causes hydatid disease in livestock and man. Chart by the Hydatidosis Research and Control Center of Montevideo.

Schistosomiasis in the Americas, found mostly in Brazil, Venezuela, and Caribbean areas, often affects 90 percent among the rural population. The long chronic infection constitutes an important local socio-economic problem. The Brazilian Government, with the National Institutes of Health of the United States Public Health Service, and the Bureau, in 1951 set up a cooperative project to study the snail host and test molluscocides. With excreta disposal and molluscocidal treatment of water, successful in small pilot projects, Brazil has embarked on a nation-wide eradication program.

Hydatidosis, a parasitic disease in man and animals, is an important problem in the lower part of South America and in Alaska. Carried by dogs and other animals, it produces cysts, often crippling, in man and cattle. The Bureau has in past years provided technical information and educational materials and, in the most heavily infected areas, has cooperated with governments in developing an intercountry project for research and control. Research grants and some material have been provided, as well as the services of veterinary public health consultants.

Mosquito-Borne Diseases

Two of these are outstanding. Both yellow fever and malaria are carried by mosquitoes. In over a score of different areas and countries the Bureau is actively cooperating in insect control campaigns. Very often one and the same campaign is aimed at both kinds of mosquitoes, that is,

those that carry malaria as well as those that carry yellow fever. In the discussion of detailed projects no sharp line will be drawn between work against the two kinds of mosquitoes responsible respectively for malaria and urban yellow fever. The emphasis now is on eradication of all of these mosquitoes. Elimination of *Aëdes aegypti* from the American Continent would do away with the danger of urban yellow fever, and spraying of human habitations for destruction of *Anopheles* is rapidly causing malaria to disappear.

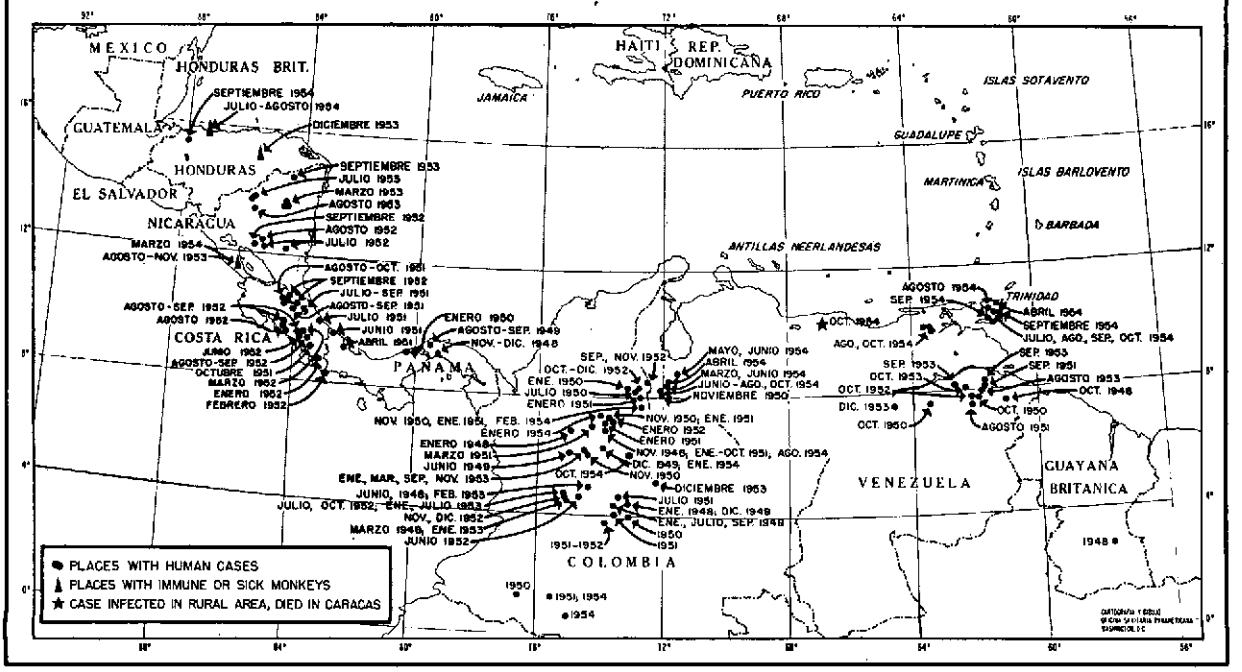
The successful antimalaria campaigns based on residual spraying of houses with DDT are successful also against *A. aegypti*. Thus the promotion of insect control campaigns helps to eradicate both malaria and yellow fever. In all integrated procedures of this kind, where a single defensive strategy leads to more than one desirable result, the protected public is the gainer.

Yellow Fever

Yellow fever as a disease entity has been known only since the discovery of America. In the eighteenth and nineteenth centuries yellow fever as an urban and maritime infection was the scourge of the New World. This yellow fever was associated chiefly with coastal areas and ports.

The identification of jungle yellow fever occurred in 1932. Jungle yellow fever and urban yellow fever are the same disease but differ in the mode of transmission. Urban yellow fever is carried by the *A. aegypti* mosquito, which breeds chiefly in artificial water containers around

AREAS IN CENTRAL AMERICA AND THE CARIBBEAN WHERE YELLOW FEVER HAS OCCURRED FROM 1948 TO NOVEMBER 1954



human habitations. Jungle yellow fever is carried by forest mosquitoes which do not wander from the wooded areas. Prominent among the jungle yellow fever mosquitoes is *Haemagogus spegazzini falco.* Because of this difference in the transmitting agent, the discovery of jungle yellow fever has split the yellow fever campaign into two divergent branches.

The special meeting called in December 1954 by the Director of the Pan American Sanitary Bureau, of which something was said in the introduction to this report, had to do with both urban and jungle yellow fever. Special emphasis was placed on the appearance of yellow fever infection in Port-of-Spain and in Caracas coming from nearby jungle yellow fever areas. It is only when forest and urban mosquitoes work together, *Haemagogus* keeping the virus alive in the forests and *aegypti* propagating it from man to man in the cities, that dreaded urban epidemics can occur.

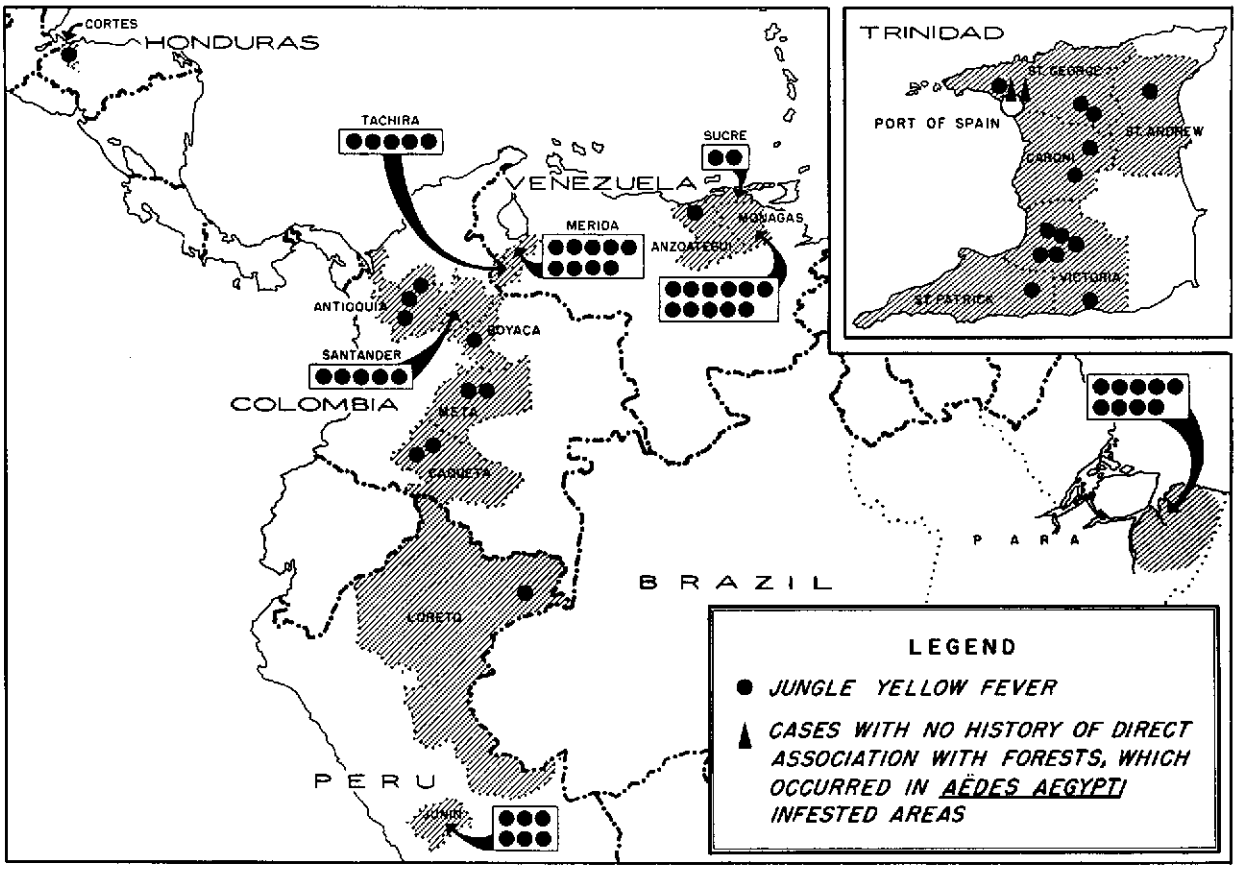
A. aegypti does not occur in the forests of America. However, there is no effective vector of yellow fever in cities other than *A. aegypti,* that is, the forest mosquitoes in turn do not enter the cities. This situation, plus the fact that there is no known method of eliminating jungle yellow fever, makes the eradication of *A. aegypti* imperative. Removal of the only urban carrier of yellow fever will make the spread of jungle yellow fever to cities impossible.

Public health men have been concerned about the way yellow fever has in recent years been creeping up through Central America. If the forward march of jungle yellow fever is not stopped, there is always the danger that urban mosquitoes will take over where the forest mosquitoes leave off. A single human case of yellow fever, infected in the forest, can give the urban mosquito its chance.

The discovery of a case of yellow fever in Port-of-Spain, the capital of Trinidad, has reawakened old fears. This conjunction of separate events — a yellow fever case in a port city and the steady advance of the disease through Central America--points to what might happen in many North American ports where *Aëdes aegypti* still abound. A resolution passed towards the end of the year by the American Society of Tropical Medicine and Hygiene meeting at Memphis, Tennessee, highlights the situation.

> "Since epidemic yellow fever arising in Panama in 1948 has progressed steadily northward and has appeared recently in Honduras, threatening Caribbean and Gulf ports where *Aëdes aegypti* occurs, and since the appearance of yellow fever in the Island of Trinidad in 1954 led to the imposition of international quarantine with disastrous economic consequences, and since the arrival of a single case of yellow fever in an infested port, even though danger of spread could be minimized by emergency measures, would undoubtedly provoke national and international reactions with serious social and economic consequences--
>
> THEREFORE The American Society of Tropical Medicine and Hygiene takes note of the potential seriousness of this development and urges that appropriate action should be taken to reduce, and where possible, eradicate *Aëdes aegypti* from infested ports in the U.S.A."

REPORTED CASES OF YELLOW FEVER IN THE AMERICAS, BY MAJOR POLITICAL DIVISIONS OF EACH COUNTRY, 1954



Seventy-three cases of yellow fever were reported in the Americas during 1954. The distribution of these cases was as follows: Colombia 13, Honduras 1, Peru 7, Trinidad 15, Venezuela 28, Brazil 9. The nine cases of jungle yellow fever in Brazil were diagnosed through isolation of the virus from the blood of persons with fever living in the forest area north of Belem, and all the other cases were confirmed by laboratory methods. The distribution of the cases by major political divisions of each country and territory is shown on the above map.

The most significant fact in 1954 regarding yellow fever in the Americas was the reappearance of this disease in Trinidad after an absence of 40 years.

In June it was learned from the Trinidad health authorities that routine blood examinations had resulted in the discovery of three positive mouse protection tests for yellow fever. These blood specimens came from the village of Miltan, in Central Trinidad, which is some distance from the east coast. The village has a population of 200 people and is very close to the forest in which "red monkeys", as they are locally called, are plentiful. Each of these individuals was 18 years of age and none of them gave a history suggestive of yellow fever, but their occupations took them occasionally into the forest.

The first reported case of jungle yellow fever in Trinidad occurred on April 18th, in the village of Cumaca, 10 miles east of Arima, St. Andrew County. Before the end of the year there were 15 confirmed cases, the last

one reported in October. The geographical distribution of these cases is shown on the insert of the map on the preceding page.

For the first time in the Americas, since 1942, cases were reported that had no history of direct association with forests, but had occurred in an area infested with *A. aegypti*, one in Port-of-Spain and one in Laventille, both in St. Georges County. Port-of-Spain was declared a yellow fever infected local area, for the purposes of International Sanitary Regulations, on September 10, and subjected to the provisions of such regulations. The city was declared to be free of the disease in December, after three months had elapsed following the occurrence of the last case, in accordance with paragraph 2(b) of Article 6 of the International Sanitary Regulations.

Since the onset of the outbreak the Bureau has given all possible cooperation to the Trinidad health authorities. The Director and other members of the staff visited the island several times to advise the government of the territory. A consultant was temporarily assigned to Trinidad to aid in the intensification of *A. aegypti* eradication, to train local personnel in the techniques of vaccination, and to establish a viscerotomy service to obtain liver specimens. Diagnostic laboratory service has been provided through the Carlos Finlay Institute (Colombia) and the Oswaldo Cruz Institute (Brazil). The Bureau also arranged for the provision, through these two laboratories, of yellow fever vaccine for an island-wide vaccination campaign conducted by the local health authorities. Over 400,000 persons had been vaccinated up to the end of the year. It is planned to vaccinate 600,000 persons out of an estimated population of 683,000 people.

By the end of the year the *Aëdes aegypti* situation in the big towns was satisfactory, but there were still high indices in certain rural areas and villages.

Another significant fact of 1954 was the occurrence of yellow fever in the slopes of the highland of northeastern Venezuela for the first time since 1933.

Yellow fever virus is active in an extensive area of eastern Venezuela. It may spread further since the jungle regions extend beyond the points where the virus has already been reported. The Venezuelan health authorities have been actively vaccinating all the rural population of the affected area. Fortunately, the main neighboring cities of Maturín, Barcelona, and Cumaná were reported already freed of *A. aegypti*.

In October a case of yellow fever came by plane to Caracas from the jungle area near Barcelona and Cumaná. This first instance of a case of this disease, known to have been transported by air, resulted in an intensification of the *aegypti* eradication work in Caracas, where *aegypti* indices reached 50 percent in some sections. A widespread vaccination campaign was also instituted. By the end of the year the *A. aegypti* situation was well under control in the capital city of Venezuela.

In Honduras a man entered the hospital in San Pedro Sula on September 28th, 1954. He died of yellow fever on the 30th, the diagnosis being made by histopathological examination. At the time there were severe floods

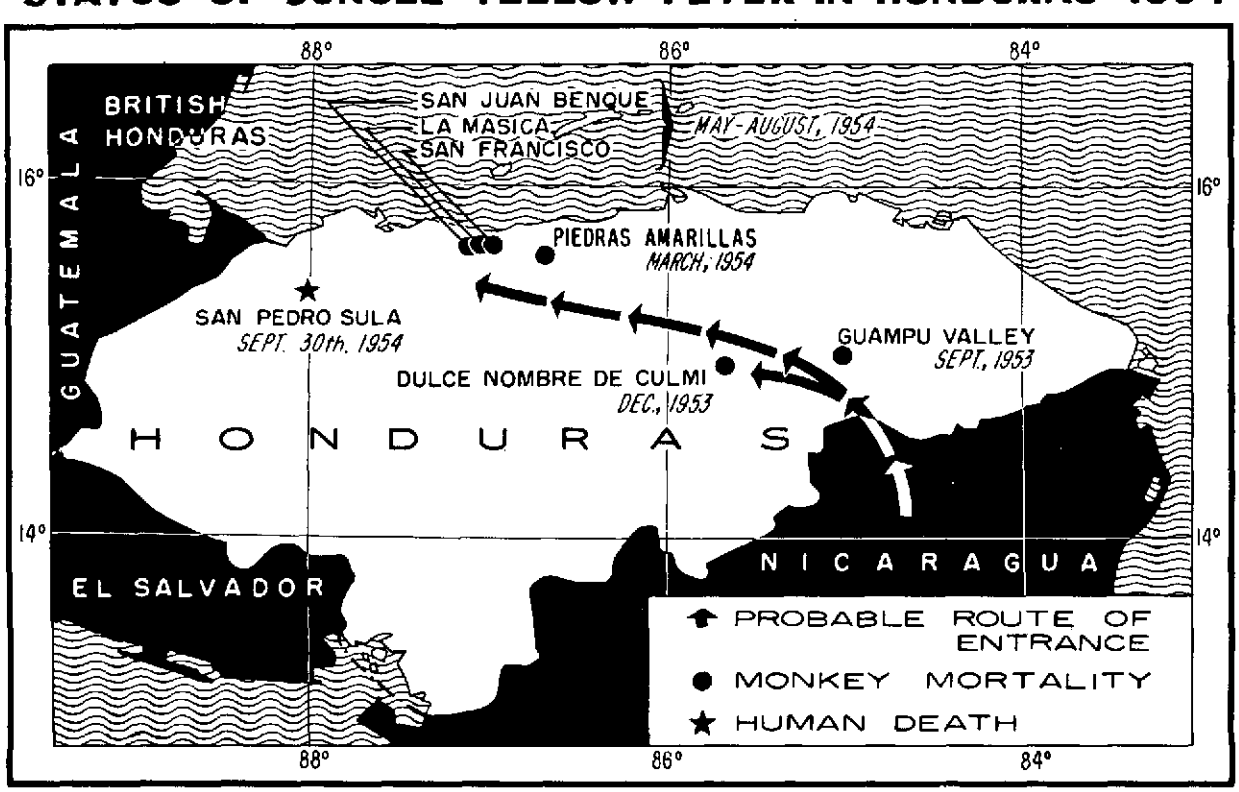
in the San Pedro Sula Valley so nothing was learned of the background of the patient. The San Pedro Sula area, however, was checked and no *A. aegypti* were found.

All the observations made in Honduras so far seem to indicate that the epizootic penetrated the country by following the Guampu Valley. In September 1953 monkeys were dying at the mouth of the Guampu river, and in December of the same year suspected human cases and monkey mortality were reported from the area of Dulce Nombre de Culmi, at the headwaters.

Explosive monkey deaths began in March 1954, at a place named Piedras Amarillas, a hamlet situated deep in the forest hills, 25 kilometers southeast of La Ceiba. In this area the monkeys were practically exterminated. From May to August monkeys were dying on the flats of La Masica, Benque and San Francisco. It thus appears that the epizootic reached La Ceiba region not by following the narrow coastal flats but, rather, by traveling from the south across a wide path of forested hills of the low mountain ranges south of Cerros de Cangrejal.

A striking feature of this outbreak was the occurrence of the monkey deaths on the flats of La Masica in the immediate vicinity of the mountain range. Whereas *Haemagogus spegazzinii falco* has been found in the hills and on the northern slope above La Masica, exhaustive searches have failed to demonstrate its presence in the remnants of forest and in the second growth of the flats, theater of the latest monkey mortality. Since the species of monkey affected by the disease, *Alouatta palliata*, has no marked migratory habits such as could explain an infection acquired several miles away from

STATUS OF JUNGLE YELLOW FEVER IN HONDURAS-1954



the site of death, it is nesessary to consider the alternative of either a new, unknown vector among the abundant fauna of the flats, or an invasion of *Haemagogus spegazzinii* from the hills. In favor of the latter hypothesis is the fact that the mortality was not generalized as should be expected if a local, permanent vector were involved, and that it seems to have stopped spontaneously, leaving groups of surviving and apparently healthy monkeys at a time of no reduction in culicine mosquitoes.

Nevertheless, the possibility of a new vector cannot be dismissed. A comprehensive plan of investigation is under way which includes extensive mosquito captures, classification of the species, and preservation in dry ice for inoculation in mice, at the Gorgas Memorial Laboratory, for virus detection.

Surveys are being carried out, by Pan American Sanitary Bureau and Gorgas Memorial Laboratory personnel, both of monkey immunity and mosquito fauna, with the hope of obtaining ahead of the wave movement information on vectors in the most probable direction of spread. The Ulua Valley, with its wide area of cultivated or swampy land and its scarcity of forest vegatation, may be a barrier to the invasion of Guatemala by the epizootic wave. But at the northern end of the valley, north of Lake Yojoa, there exist remnants of forest which may act as a corridor between the ranges on the east, and the mountains on the west. However, the valleys of Negrito and Morazan have been deforested by lumbering and colonization to such an extent as to render the westerly progress of the disease difficult.

Should the wave of yellow fever overcome this difficult obstacle and reach the forested foothills west of the Ulua Valley, there may be further extensions into the Petén area in Guatemala and into Belize.

The Bureau continued its cooperation with several countries by the provision of laboratory diagnostic services and yellow fever vaccine, through the Oswaldo Cruz Institute in Rio de Janeiro and the Carlos Finlay Institute in Bogotá (AMRO-57, Brazil-51, Colombia-52).

Malaria

Up to very recent times malaria has been hampering progress in extensive regions of the Hemisphere by reducing the beneficial effect of the general public health programs. Since the introduction of residual insecticides the Bureau has been convinced that their appropriate use has radically changed former campaign methods, which due to their high cost limited the size of the area under control, to methods which now permit the countries to reach once and for all an economic solution to the malaria problem.

Utilizing both the resources of its regular budgets, and also those of the Technical Assistance Program of the United Nations, the Bureau has placed increasing emphasis on its antimalaria campaigns. Thus, it has been possible to provide collaboration to a considerable number of countries and territories, the majority of which have also received the collaboration of UNICEF, which has provided materials and equipment needed for field activities.

Remarkable advances have been made by some countries in their programs against malaria. However, there are also extensive and important areas of

the Continent where the situation has remained static and where malaria, in taking its toll of death and sickness retards all social and economic progress.

Some 135,000,000 people in the Americas reside in what may be called malaria zones. Some 60,000,000 (44.4%) of these are out of danger because they live in "eradication zones"; 45,000,000 (33.3%) are relatively safe because they live in "protected zones", but 30,000,000 (22.2%) still live in "unprotected zones".

Four countries and two territories report malaria in large part eradicated. These countries are Argentina, United States, Venezuela, and Chile. The territories are British Guiana and French Guiana. British Guiana presents a conspicuous example of eradication in that not only malaria but also the vector *Anopheles darlingi* have been eradicated in three coastal countries comprising 5,000 square kilometers and 442,000 inhabitants or 95 percent of the population. Although it does not give any standard for evaluation or figures, Trinidad reports that malaria has disappeared in many districts. French Guiana and Puerto Rico report that, although they cannot as yet speak of eradication, malaria is no longer endemic in their territories.

The picture with regard to malaria control is favorable, especially in countries taking full advantage of the new insecticides. Thanks to these insecticides it is not too much to say that in large areas of the Continent malaria eradication is in sight.

Residual insecticides that kill adult mosquitoes are the decisive factor in antimalaria campaigns in the Americas. Mosquitoes lighting on a sprayed surface are killed even long after the spraying is over. The most widely used material for spraying is DDT. Others employed in about 10 percent of the work are BHC (benzene hexachloride), Dieldrin, and Chlordane. In almost all countries trained and well organized brigades conduct the field work. In countries where the malaria zones are extensive motorized corps are used. In addition to the squads, single sprayers may be assigned to cover scattered houses.

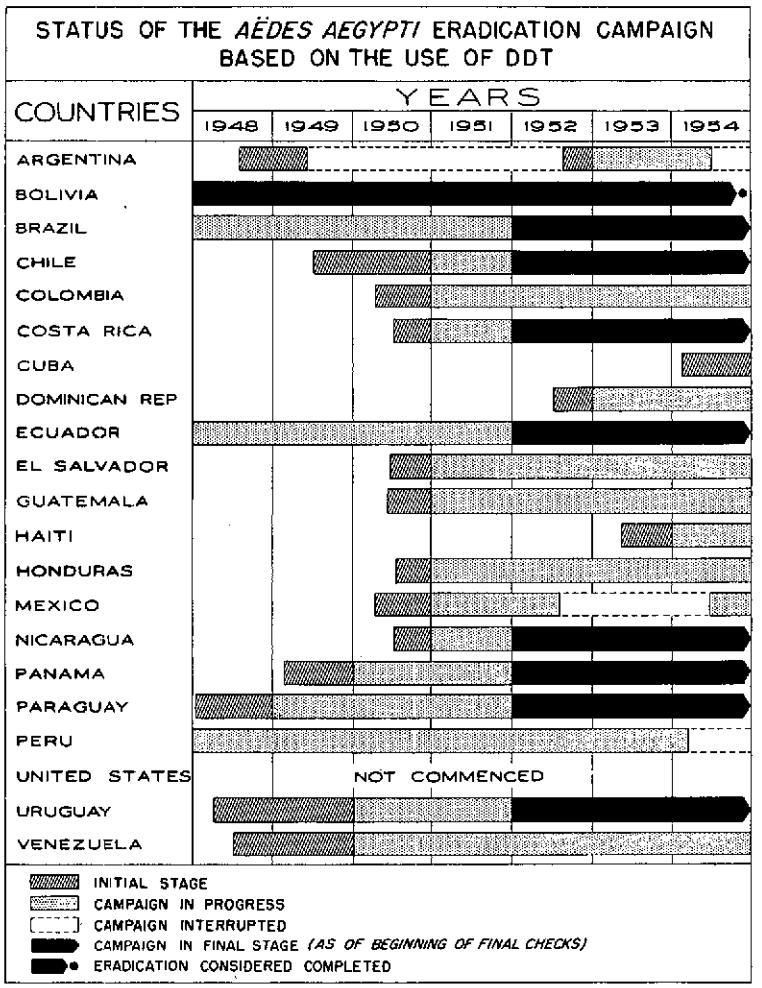
Unprotected Malarial Zones and Exposed Population in the Continent*/

Country	Malarial Zones		Exposed Population	
	square kilometers	percent	population	percent
Mexico	1,800,000	44.8	19,159,100	63.7
Colombia	786,341	19.6	3,928,700	13.1
Brazil	355,000	8.8	1,900,000	6.3
Peru	613,582	15.3	1,229,000	4.1
Paraguay	69,677	1.7	397,000	1.3

*/ In addition there are the following figures on unprotected population: Haiti 1,800,000 (6%), El Salvador 516,400 (1.7%), and twelve other countries 1,050,600 (3.8%), and for unprotected zones in square kilometers: British Guiana 180,556 (4.5%), Bolivia 150,000 (3.7%), and nine other countries 1.6%.

In fourteen countries and nine territories the national malaria service is also charged with *Aëdes aegypti* eradication. Five countries, Argentina, Brazil, Ecuador, United States, and Venezuela have training facilities for all types of personnel which can be extended to personnel from other countries. Fellowships are granted in two countries, Ecuador and Venezuela. Colombia, Costa Rica, Dominican Republic, El Salvador, Panama, Paraguay, and Peru have training facilities for field personnel only.

Special mention should be made of the debt owed by all countries in America to the School of Malariology of Venezuela which has trained the majority of the professional malariologists now directing work in all Latin American countries.

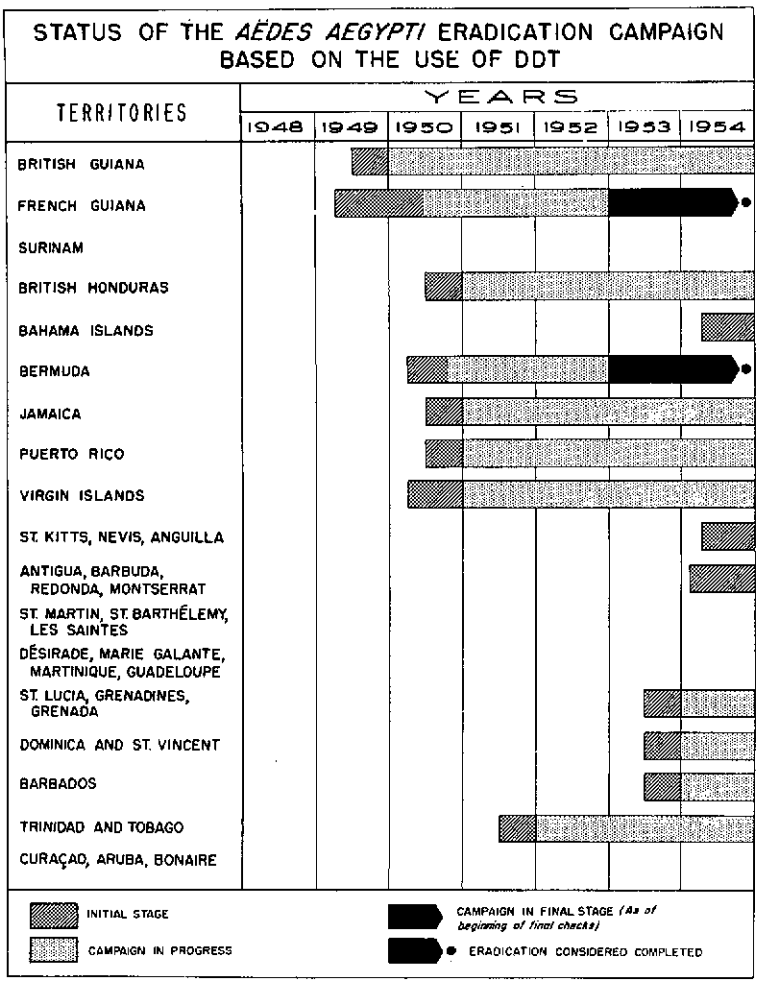


A promising and significant development in the antimalaria campaign on the Continent is the expansion of programs promoted by the Pan American Sanitary Bureau with financial support of UNICEF. Twelve countries and six territories received assistance in 1954.

Insect Control Programs

These activities continued to receive considerable attention, absorbing an important proportion of the budget and much effort. Several country projects and two intercountry projects were operating during the year on monovalent campaigns for eradication of *A. aegypti* or on combined campaigns for the control of malaria and *A. aegypti* eradication.

Substantial progress has been accomplished by countries of the Region during 1954. The Pan American Sanitary Bureau engaged a special consultant (AMRO-78) to repeat a continental survey on the prevalence of malaria and status of malaria eradication. His findings (Eradication of Malaria in the Americas, CSP14/36 ENG.), discussed at the XIVth Pan American Sanitary Conference, served as a basis for the important resolution passed by that conference regarding malaria eradication.



The adjacent charts give the status of *A. aegypti* campaigns for all of the countries and territories for which information is available. One country, Bolivia, has eradicated *A. aegypti* from its territory and a second one, Brazil, has shown after a thorough searching only a few isolated houses infested in one locality. Four countries are in the final stage of eradication, namely, Ecuador, Peru, Uruguay, and Costa Rica. In addition, Cuba in 1953 and Mexico in 1954 started campaigns. There are reasons to hope that the United States will finally take action in starting an *A. aegypti* campaign. Argentina signed a program agreement in 1954 and definite plans have been made to begin operations early in 1955.

The renewed urging by the Pan American Sanitary Conference that governments participate in a continental campaign for the eradication of malaria is one of the major public health developments of the year.

This decision was based on several facts. The spontaneous disappearance of the malaria parasite from human beings within three years after the interruption of transmission indicates that the disease can, within that time, be eradicated from a given area. The reinfestation from uncontrolled districts indicates that the full benefit of eradication requires complete coverage of all malarial areas in all countries of the region. The possible development of resistance to residual insecticides by *Anopheles* mosquitoes is causing experts to plan eradication in the Americas over a period not much longer than four to five years. The great economic burden of malaria to afflicted populations and the cost of maintaining the present partial control measures fully justify the efforts demanded from countries.

A combined *Aëdes aegypti* and malaria control program in the Caribbean region (AMRO-8) began on a small scale in 1951. From the start it combined a number of distinct projects in single islands. By 1954 eleven agreements had been negotiated. Work was begun on all but two of these and these two are scheduled to start operations early in 1955.

Although only eleven projects are covered by formal agreements, the Bureau at present is cooperating with 16 government entities. Eradication has been completed in two areas, Bermuda and French Guiana, out of 21 territories served by the Caribbean Field Office. Combined programs for malaria and *A. aegypti* eradication are under way in six territories, Jamaica, Dominica, St. Lucia, Grenada, Trinidad, and Surinam.

The Bureau does not have an insect control project in British Guiana. Circumscribed foci of *aegypti* were reported in 1954, the reinfestation having been brought in from the sea by ships, after several years of freedom. Malaria eradication is complete in the well populated coastal areas, but unless special efforts are made, it probably can continue to exist in isolated areas of the interior.

In seven territories, Bahamas, St. Kitts, Antigua, St. Vincent, Barbados, Aruba, and Curaçao, plans for the eradication of *aegypti* are under way. Six consultants consisting of one malariologist, one sanitary engineer, and four sanitarians were active in this project in 1954. Although neither Puerto Rico nor the Virgin Islands are formally within this program, technical advice was given on *A. aegypti* eradication. In Puerto Rico the problem is confined chiefly to infestation of the principal cities.

Campaigns in two groups of the British Leeward Islands began in 1954 with collaboration from the Bureau. The program called for residual spraying of every premise in the two island groups of St. Kitts, Nevis and Anguilla, and Antigua and Barbados.

In Dominica plans for a combined malaria and *A. aegypti* program were prepared in 1954. A national *aegypti* survey revealed high *A. aegypti* infestation in the urban centers. Malaria, however, is a very minor problem.

Activities in Central America (AMRO-7) in 1954 included work not only in Guatemala, Honduras, Nicaragua, and Panama, countries with which agreements have been signed, but also British Honduras and El Salvador.

Surveys carried on during the year in the San Pedro Sula Valley of Honduras, Nicaragua, and Panama failed to show any inhabited areas still containing *A. aegypti*. In Guatemala and El Salvador, where positive areas are still found, these have greatly decreased during the year.

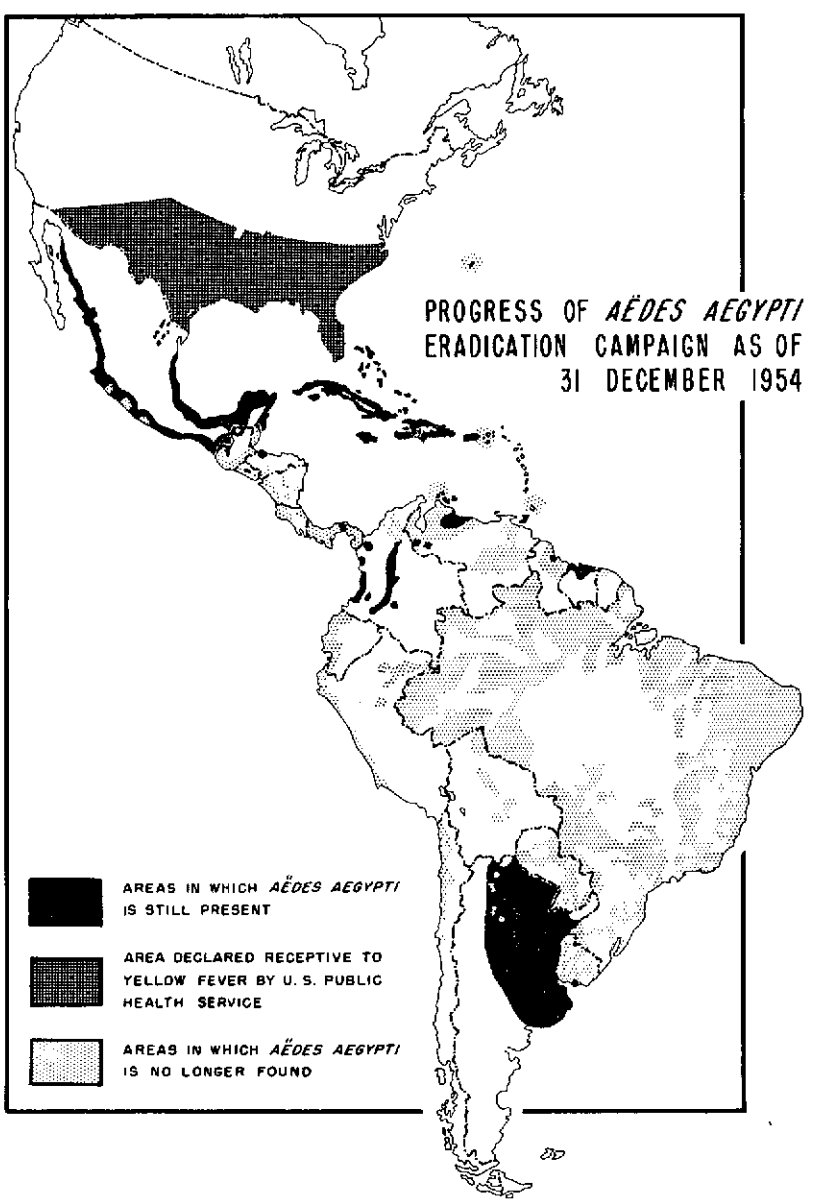
Major efforts were made toward reaching the following goals: adequate administrative and technical structure of the services engaged in insect control, review of programs with a view to extending malaria control and *A. aegypti* eradication activities, coordination of the two campaigns, standardization of methods, training of personnel, and evaluation of results. With the exception of British Honduras, which does not have a specific anti-*aegypti* service, the work in all the other countries mentioned has been successfully coordinated.

In the antimalaria work, standardization of reporting was achieved in El Salvador, Nicaragua, Guatemala, and Panama. In 1954 the adviser for the project participated in a round-table discussion with the officers in charge of the program. Much thought was given to methods

of evaluating the work. Guatemala has established a national malaria commission with the object of studying a plan to provide a strengthened national malaria and yellow fever service.

In September 1954 a consultant who has been working on insect control since 1952 was designated adviser on *A. aegypti* eradication work (AMRO-88). A training course in eradication techniques was organized by the Bureau in cooperation with the Cuban Government (AMRO-71.2). The aim was to give a practical demonstration of the methods currently employed in anti-*aegypti* campaigns. An endeavor was made to have those trained for eradication work consider themselves, not as single units interested only in a local campaign but, rather, as units of one large team entrusted with the mission of eradicating this mosquito from the Americas.

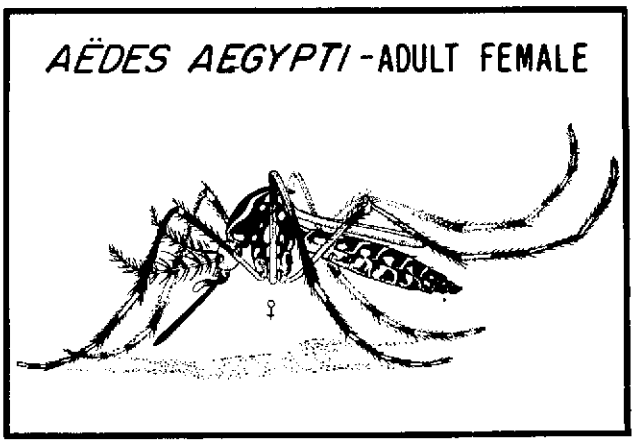
In planning these courses the Bureau took into consideration the advantages offered by the anti-*aegypti* campaign being carried on in Havana and the facilities offered by the Government of Cuba. The course, of two-weeks duration, was given in November in Spanish for participants from the Caribbean area and Mexico, and immediately thereafter in English for participants from the United States and the British colonies in the area.



There were ten participants in the Spanish course: four from Mexico, two from Guatemala, and one each from the Dominican Republic, El Salvador, Panama, and Venezuela. There were nine participants in the English course: four from the United States and one each from British Honduras, Jamaica, Puerto Rico, Trinidad, and Virgin Islands.

Participation of four doctors from Mexico and four from the United States reflects an awakening interest in

Aëdes aegypti eradication campaigns for North America. The coordinator for these courses was the Washington office adadviser in *A. aegypti* eradication.



An agreement between the Government of Cuba and the Pan American Sanitary Bureau was signed November 5, 1953 (Cuba-1). This agreement called for the eradication of the urban carrier of yellow fever for the whole island with its population of 5,800,000 inhabitants.

Great care was taken in the selection of personnel. The force comprised about a dozen foremen and some 75 inspectors. Twelve teams were put into operation, six of them in Havana, two in Marianao, two in Santiago de Cuba, one in Santa Clara, and one in Camagüey.

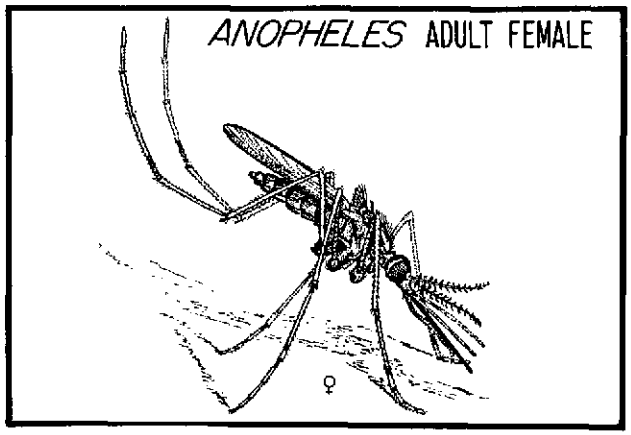
This eradication campaign using the perifocal method of DDT application, following standards laid down in similar work in Brazil, was begun on January 20th. By March 1954 the campaign was well under way. In September the campaign was extended to Marianao, Santa Clara, and Camagüey, and in October to Santiago de Cuba. By the end of the year the area worked in Havana was 87.7 square kilometers, with 4,308 blocks and 123,769 houses. The number of houses inspected was 14,934, of which 3,343 or an index of 22.4 percent were found positive. The number of houses given treatment was 116,452 or 94.1 percent of the total, and well over 5,000,000 water containers were sanitated.

In May 1954 a new agreement was signed (Mexico-53). The new work is to be a joint malaria and *A. aegypti* project.

Merida was selected as headquarters for the *Aëdes aegypti* eradication phase of this work. Training of local personnel was begun in 1954. Four physicians attended the course on *A. aegypti* eradication techniques held in Havana during November. When actual work was started in Mérida an area of 1,481 blocks was found to have an *aegypti* index of 82.7 percent.

The malaria consultant has begun inspections, and headquarters for the time being have been set up in Zone II office in Mexico City. UNICEF supplies have already been received and two international inspectors were expected to arrive early in 1955.

In Haiti the insect control program covers both malaria and *A. aegypti* (Haiti-4). *Aegypti* eradication has been undertaken in the Capital and environs. In order to facilitate house spraying as well as ship inspection, the city was divided into 18 districts, one being a separate port district. In the course of the work all water containers such as jugs, jars, tin cans and barrels were treated. Although the *aegypti* index at the end of the year still stood at 9.2 percent, this compares very favorably with 30.4 percent at the end of 1953. The protected population amounts now to almost half a million persons.



About one fifth of Haiti consists of areas threatened by malaria. A start was made on treatment of this area during 1954. A population of approximately 450,000 living in an area of some 3,000 square kilometers has been protected.

People cooperated splendidly in the DDT campaigns. This is all the more remarkable because no special regulations were passed. The work will continue in force with three more brigades to do anti-malaria work next year and two more to engage in anti-*aegypti* work.

In the Dominican Republic the work of malaria control and *Aëdes aegypti* eradication has been continued both in Ciudad Trujillo and in many rural and urban areas of the country (Dominican Republic-2).

In Bolivia the Bureau has cooperated in a malaria control program started in 1953 (Bolivia-4). Equipment and supplies are furnished by UNICEF. During 1954 a consultant was appointed who began his activities in August with the local personnel. Up to October, 43,703 dwellings were sprayed giving protection to 96,953 inhabitants. The average number of houses sprayed per man-day was nine.

A cooperative project in Colombia (Colombia-5) aims at eradication of both *A. aegypti* and malaria by the systematic application of residual insecticides. During 1954 the services of a consultant and a sanitary inspector were provided.

In Argentina, *A. aegypti* mosquitoes are prevalent in an area corresponding roughly to the northeastern third of the country, which includes the capital city, Buenos Aires. Last year the Bureau cooperated in training personnel and helped to set up programs for inspectors (Argentina-51). This training program continued during the first six months of 1954.

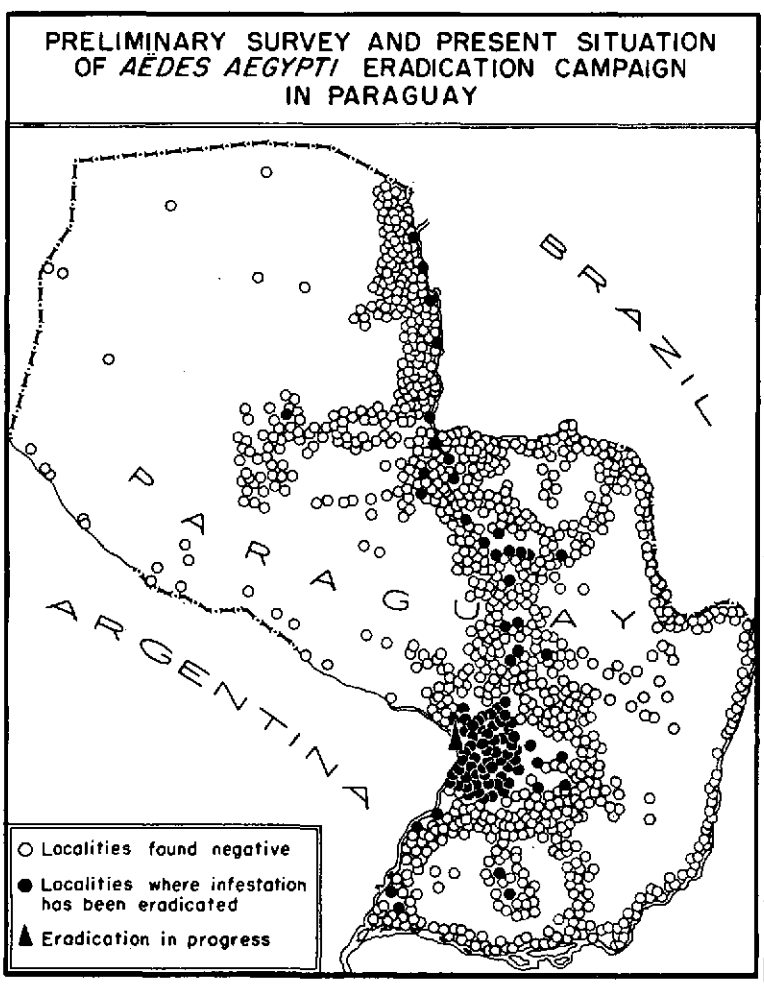
By the end of September 1954 a formal agreement was signed and in November a committee composed of representatives of the Ministry of Health, the Director of the Bureau, and the Zone Representative began to prepare a detailed plan of operations. This plan was approved by the Government. It called for work to be carried out in an initial area of operations containing three of the six sections into which the country has been divided. The field of operations includes greater Buenos Aires and the Tigre Delta. Activities are scheduled to begin April 1955 by a regular staff reinforced by an additional 500 workers.

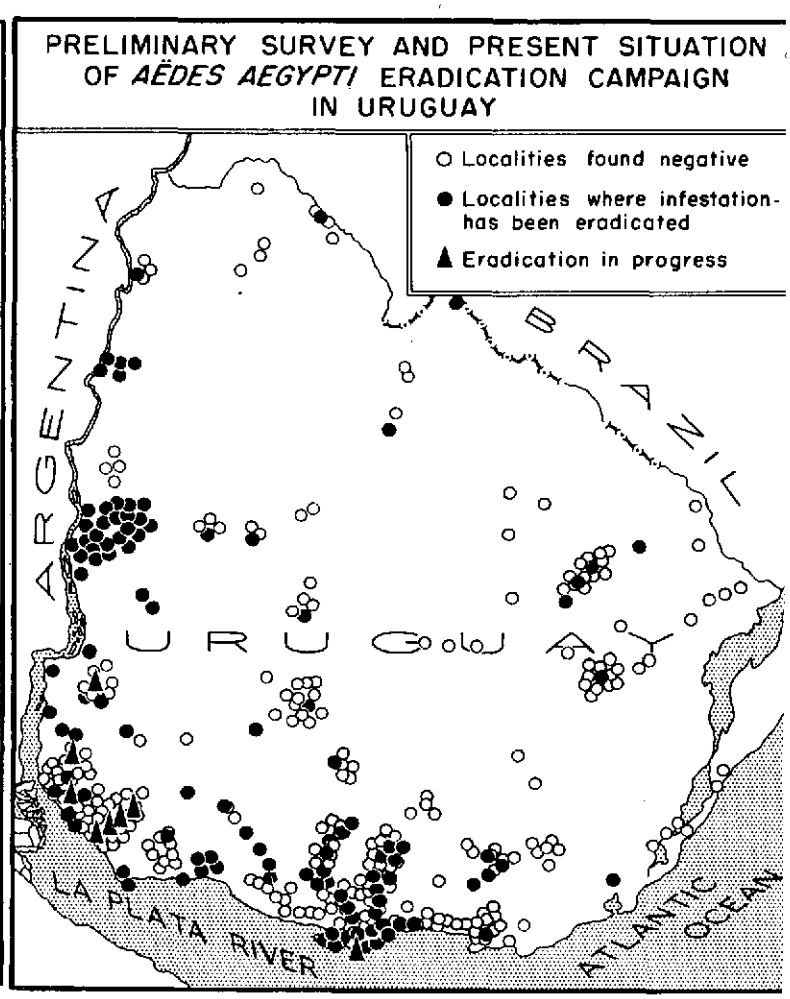
The program on *A. aegypti* eradication in Paraguay has made steady progress (Paraguay-1). Early in the year two pockets of infestation discovered in Asunción were given prompt treatment. Except for these pockets in the Capital, the picture has become one of negative findings for the whole country.

At the beginning of the campaign in 1948 a preliminary survey indicated that out of 1,476 localities inspected 98 were positive for *Aëdes aegypti*. This situation is shown on the map at the left below. The only place where some work still remains to be done is Asunción.

In Uruguay an *A. aegypti* control project which has been going on since 1948 is now approaching completion (Uruguay-51). It is expected that by May 1955 the remaining rural areas will be declared eradicated and that the sole work to be done will be in Montevideo. The map on the right below indicates the extent of former infestation, places cleared, and the location of the seven areas still not entirely cleaned up. The latter areas are all located in the extreme southwestern part of the country and all of them have been found to be negative in at least one inspection. Some have been negative also in the second and third inspections.

In Montevideo the initial task of spraying 150,000 premises has been accomplished. The city has been divided into fourteen districts. Thirteen of these districts, initially positive, are now provisionally negative. Special attention is now being paid to preventing reinfestation of the city. The airport is kept under close observation.





Onchocerciasis and Black Fly Control

Onchocerciasis, causing nodules, skin lesions, and in some cases blindness, is an African disease carried by the black fly *Simulium.* This disease occurs in Guatemala, Mexico, and Venezuela.

The Bureau prepared final reports on the onchocerciasis work done in Guatemala and forwarded these to the Government of Guatemala. This project was a joint activity of the Bureau, the National Institutes of Health of the United States Public Health Service, and the Ministry of Guatemala. The project terminated in 1953 after having been in operation for five years.

Resulting from the work of this health project, a monograph entitled *Black Flies (Simuliidae) and Their Relationship to the Transmission of Onchocerciasis in Guatemala* was prepared by one of the consultants. The monograph is being published in the Smithsonian Miscellaneous Collection with the aid of a grant from the Bureau.

Appropriate steps have been taken so that further study can be given in 1955 to the request to collaborate with Venezuela in its onchocerciasis problem. In one area of this country the disease has a prevalence rate of 24.6 percent. The Bureau will provide a consultant to advise on entomological studies and the control of *Simulium.*

Important Zoonoses

Since the beginning of time, man has had a very close association with animals, therefore animal diseases which affect man become a matter of considerable public health importance. Some of the zoonoses, or diseases that are transmitted from vertebrate animals to man, are of interest not only because they threaten human health but also because they cause severe losses in the livestock industry and diminish the meat and milk supply of a country when they attack its cattle, sheep, hogs, and goats. Other zoonoses, such as hydatidosis and rabies, involve dogs and other domestic animals.

Hydatidosis

This cystic disease, caused usually by larvae of the dog tapeworm, has numerous natural hosts including sheep, cattle and pigs. The Bureau is continuing its cooperation with the Governments of Argentina, Chile, and Uruguay in the study and control of hydatidosis. In Argentina and Chile these studies are directed toward finding an improved taeniacide for the treatment of dogs. Consideration is also being given to the importance of wildlife reservoirs in the ecology of this parasitic condition.

In Uruguay a field unit has been equipped to carry out a control program in selected areas. This program includes education of the public, improved slaughterhouse operation, and treatment of dogs. Technical guidance for this project (AMRO-43) is provided by the staff of Zone Office VI. This staff also provides coordination services for national programs on hydatidosis along certain international borders (see map, p. 165).

Brucellosis

Progress can be reported in the continuing effort to bring about a better understanding of human and animal brucellosis in the Americas. Steps have been taken to assess the magnitude of the problem in the different countries and develop appropriate control measures. In most countries there exists but little knowledge of the ravages of this insidious disease. Very few laboratories are as yet prepared to conduct the standard diagnostic tests.

As part of the Bureau's program to establish in each country throughout the Hemisphere a nucleus of trained people prepared to provide reliable diagnostic services as well as to plan control work, a training seminar was held in the early part of the year (AMRO-26.2). Conducted in Mexico City in April 1954 for candidates from Health and Agriculture Ministries in Central America and the Caribbean area, this seminar was the counterpart of the seminar held in Santiago, Chile, in December 1952, for candidates from the South American countries.

These seminars, the first of a series of three, were devoted to diagnostic procedures with particular emphasis on laboratory techniques wherein each participant was provided with facilities and guidance concerning standard tests. Rounded out by sessions on sampling techniques, proper way of farming, specimens, and evaluation of test results, the seminars provided a good grounding in essentials that should permit the participants to establish within their national services the means of obtaining reliable and comparable data on the existence of brucellosis, both in animals and man.

The brucellosis seminar held in Mexico City in April gave an opportunity to workers in Mexico and the Caribbean and Central American countries to interchange information and experiences. The handbook prepared for this seminar had such an enthusiastic reception that the limited edition was too small for the demand.

Nearly all participating countries have initiated nation-wide surveys. The preliminary reports have already revealed the seriousness of the brucellosis problem, especially in countries where the dairy industry is in an incipient stage. The use of standardized antigen and a uniform diagnostic criteria in the twelve participating countries indicates that the objectives of the seminar have been achieved.

Work in the WHO/FAO Brucellosis Centers (Inter-Regional--8), located in Argentina and Mexico, has continued and under a separate grant additional work was carried out at the University of Pennsylvania. In the Argentine Center studies were conducted to develop or improve diagnostic tests for brucellosis in goats. The Pennsylvania research work was in connection with the testing

Taking milk samples for ring test during brucellosis training course held in Mexico City in April 1954

of different *Brucella* vaccines in guinea pigs and a study of the intracellular biology of *Brucella*. In the Mexico Center the work involved an evaluation of diagnostic tests in man and animals, therapy in human brucellosis, and a study of brucellosis in cattle supplying milk for Mexico City. In addition, the Mexico Center is producing standard diagnostic antigens for other countries, particularly those of Central America.

Considerable attention has been devoted to providing countries with technical information, cultures, antigens, and other *Brucella* biological products. The type and number of the items requested indicate that interest in the problem of brucellosis has increased markedly in many parts of the Hemisphere.

Suggestions received that the Fourth Inter-American Congress on Brucellosis should be held in Mexico during 1954 were carefully studied with appropriate brucellosis authorities, and the decision was made to follow the desire expressed in a resolution adopted at a previous congress, not to convene more frequently than every five years. The consensus was that the information available was insufficient to warrant a congress before 1955.

Rabies

With the discovery of rabies in bats other than vampire bats, health officials have become increasingly aware of the rabies problem. Requests have been received for technical cooperation in diagnosis, vaccine production, and control programs having to do with rabies. These requests came from countries interested in the control of rabies on a national scale (AMRO-61).

The discovery of neutralizing antibodies, and in some cases actual virus, in bats not belonging to the vampire species has broadened the rabies problem. The problem of vampire bats and rabies is of prime interest in Mexico. However, a flare-up also occurred recently in Trinidad where the Bureau provided consultation service.

The unreliability of available information with regard to the exact role of the bats and other wild life in the maintenance of rabies virus led the Bureau to employ a mammalogist with special experience in this work. The studies conducted are being carefully coordinated with other research by national and state agencies and by certain universities. All of these studies aim at ascertaining the source of constant outbreaks of rabies in dogs with the attendant danger to the human population.

Vampire bat rabies has proved to be a rather important economic problem when it involves the cattle population. In some areas in Mexico cattle were dying from rabies introduced through the bite of vampires to such an extent that farming had to be abandoned. The development of a good, reliable vaccine suitable for use in cattle has been an important step forward in the fight against this disease. In Mexico, nearly 1,000,000 head of cattle have been vaccinated.

The Bureau assisted the Government of Mexico in producing high-passage avianized rabies vaccine suitable for the vaccination of cattle. Production of this vaccine has now reached a point where the vaccine can be made available to other countries. Assistance has also been given to Chile for testing a newly developed irradiated mouse-brain rabies vaccine of high virus content

School children bring their dogs to a rabies vaccination clinic in Saltillo, Coahuila, Mexico

(Chile-14). A coordinating service was provided in the international boundary areas between the United States and the Mexican border for the purpose of facilitating dog vaccination programs, laboratory diagnostic techniques, and methods of coping with predatory carnivora.

The World Health Organization cooperated with the United States Public Health Service Virus Laboratory at Montgomery, Alabama, in obtaining laboratory animals needed for experimental work on rabies (Inter-Regional--7).

An exhaustive search has been made for visual education material that can be used in training courses. By the end of the year a United States sixteen millimeter film and a film strip were selected for adaptation to a Spanish language soundtrack. Colored posters in Spanish were distributed to areas where these could do the most good. In addition, arrangements have been made for translation into Spanish and publication of the World Health Organization Monograph Series book *Laboratory Techniques in Rabies*.

Current Bacterial and Parasitic Diseases

Diphtheria

Through a cooperative project between the Pan American Sanitary Bureau and the laboratory of the Michigan State Department of Health, involving a grant from the Bureau, a service is provided to Member Governments for testing vaccines produced by national laboratories. Samples are submitted for biological appraisal of the nationally produced products. During the year a number of samples of diphtheria and pertussis, typhoid and human and animal rabies vaccines were forwarded to the Michigan laboratory. Appraisals were sent to the appropriate Zone Office for attention (AMRO-76).

In Peru, efforts are under way to organize and equip, with UNICEF aid, the laboratory at the National Institute of Hygiene for the production of diphtheria and pertussis vaccine, and to carry out a mass vaccination campaign against whooping cough and diphtheria (Peru-16). UNICEF provided the equipment for a preliminary vaccination campaign and the vaccine necessary to initiate the campaign. Up to October 31, a total of 168,081 vaccinations had been performed. Equipment installation was completed in August 1954 and it is expected that local production of vaccine will start early in 1955. Advisory services continue to be given through the staff of the Zone Office.

Beginning in 1951, the Oswaldo Cruz Institute in Rio de Janeiro, with aid from UNICEF, has made preparation for setting up a laboratory for the production of diphtheria and pertussis vaccine. Vaccine production began in 1953. By the end of 1954, 10,000 doses of the vaccine were being produced per month (Brazil-4).

Typhus

Development of an avirulent strain of the typhus organism, *Rickettsia prowazeki* Strain-E, has made possible the preparation of a live vaccine more effective as an agent for immunization of man against typhus than the formalized vaccine.

Although preliminary experiments have proved the effectiveness of this vaccine, it was considered advisable to extend the trials to large masses of population under field conditions. With the cooperation of the Department of Epidemiology, School of Medicine, Tulane University, vaccination trials begun late in 1953 in Peru were continued during 1954 (Peru-54). Two different groups of population were vaccinated. About 3,514 persons were given different doses of the same vaccine by different routes. Reactions and immediate serological responses were measured.

The results of these field tests reported to Tulane University showed that both the frequency and intensity of reactions, and the level of uniformity of sero-immune responses increased with increasing doses of vaccine. The smallest doses employed (4.0 to 5.0 EID) succeeded in stimulating a minimal serological response in 92 percent or more of the vaccinated persons. However, the level and persistence of complement fixing antibodies were clearly superior in the group receiving a larger inoculation. It appears that Strain-E vaccine can be given in doses which are both effective and tolerable.

In another trial, some 16,200 persons were inoculated with either the vaccine or a placebo in an effort to determine the effectiveness of the vaccine in preventing the natural occurrence of the disease. The laboratory tests have been performed at Tulane University. The investigations are proceeding very satisfactorily and a thorough follow-up is being made of both the vaccinated group and the control group.

Administration of typhus vaccine in Peru

The objective of another project receiving Pan American Sanitary Bureau support is the control of typhus in certain rural areas of Peru and Bolivia by means of DDT dusting of people, bedding and clothing. In the Cuzco and Puno departments of Peru several provinces have been dusted regularly every six months. In Bolivia, the border zone with Puno has been treated. During this year 374,323 persons, 100,828 beds, and 1,767,656 items of clothing have been dusted. These activities have led to a gratifying reduction in typhus morbidity and mortality rates (AMRO-83).

Schistosomiasis

To deal with schistosomiasis a cooperative project by the Ministry of Health of Brazil, the Pan American Sanitary Bureau, and the United States Public Health Service is in progress in Brazil (Brazil-53). The objectives are to study the ecology of snail hosts of the disease, test a variety of molluscocides and, after testing, select the most promising for field trials. The ultimate aim is to develop practical snail control methods.

Studies on the ecology of snail hosts of the disease, which had been pursued for two years, were terminated in 1954. A final report on the subject was submitted to the Government. It was found that snails which harbor the parasite in Brazil exhibit characteristics which differ from hosts in other endemic regions, particularly in increased resistance to environmental changes, and that careful control techniques must be worked out.

Field trials of molluscocides, principally sodium pentachlorphenate and copper sulphate, have been carried out in three different areas in Brazil. The results obtained are most encouraging. In December, after terminating work on field trials, the consultant was reassigned to serve as special consultant on schistosomiasis to the National Malaria Service, the organization in charge of the nation-wide control program.

Treponematoses

The chief diseases of interest under this heading are yaws and syphilis.

Active field projects are the yaws eradication project in Haiti (Haiti-1), the yaws eradication and syphilis control project in the Caribbean (AMRO-47), and the venereal diseases control projects in the Dominican Republic (Dominican Republic-52), and in Paraguay (Paraguay-4).

In Guatemala a venereal diseases laboratory and training center has been in successful operation for a number of years (AMRO-21). This laboratory was established in 1946 by an agreement between the Ministry of Public Health and Social Welfare of Guatemala, the United States National Institutes of Health, and the Pan American Sanitary Bureau. It was established for the study of various aspects of venereal disease in Central America, for training, and for standardization of diagnostic procedures to be used in serological laboratories in Central America and Panama. No international staff worked in the project in 1954 but the work was supported by a grant for expansion of laboratory facilities. All laboratories in Central America are now making serologic tests and reports indicate that the level of efficiency has been raised. The project ended in December, 1954.

In Brazil, support was given to a venereal disease laboratory and training center. The objectives of this project have been to improve the techniques for serological diagnosis of syphilis, and to train laboratory technicians in such techniques (Brazil-52).

Doctor takes blood sample from a pregnant woman in front of a rural Paraguayan house

The third training course began on February 1st and ended on April 30th, at which time seven students were given certificates of successful completion.

The fourth training course, begun on August 2nd, was attended by ten Brazilians, one Uruguayan, one Argentinean, and one Paraguayan. The last three attended on fellowships awarded by the School of Hygiene and Public Health as part of the Technical Assistance Program (AMRO-89).

Before termination of the project in December 1954, recommendations were made regarding future courses and a final project report was prepared. It is expected that the school will conduct similar training courses in the future.

In the Dominican Republic work has been carried out for the eradication of yaws and the control of venereal diseases (Dominican Republic-52). The work on yaws eradication has been initiated on the "Comunas" of Moca and Gaspar Hernandez of the Province of Espaillat. In Moca, from July 17th to September 6th, 40 percent of a population of 74,932 was examined, and 1,203 cases and 1,893 contacts were found and treated. In Gaspar Hernández, until November 10th, 60 percent of a population of 20,131 had been examined, and 1,937 cases and 4,393 contacts found and treated. It is expected that with a considerable increase in the 1955 budget these activities will be extended to all the affected areas of the country. Assistance has also been given by the consultant to the improvement of the venereal disease control methods in the country.

The program of venereal disease control in Ecuador was completed on April 30, 1954. Up to that date WHO furnished a medical and a nursing consultant who worked in Bahia, Ecuador, to supervise the clinical effectiveness of methods of mass control of venereal diseases, principally syphilis and gonorrhea (Ecuador-7).

The principal venereal disease control activities in Paraguay have been the continuation of the mass survey and the treatment of serologically positive cases, the follow-up and integration of venereal disease programs within the routine activities of health centers, the standardization of serological techniques and the training of laboratory technicians in serology (Paraguay-4).

During the year four major venereal disease surveys were conducted, three of which were combined with tuberculosis control activities. A fifth survey which had begun in 1953 was also completed. Out of 36,526 persons tested, the percentage of positive reactors for syphilis was estimated as being 12.3, 1.6 of which were primary syphilitic cases, 5.5 secondary cases and the rest other forms of syphilis, with cases of late latent syphilis predominating.

It is estimated that the average number of people examined and treated when necessary, per working day, was 71. The cost per person examined was 11.75 guaraníes, or 0.19 United States currency, and the cost per person treated was 106.24 ¢ ($1.71).

The eradication of yaws in Haiti is nearer than ever to a successful conclusion (Haiti-1). During the campaign a consistent coverage of more than 97 percent of the population has been obtained. Up to the end of December, 1954, 3,503,564 persons had been treated since the beginning of the work.

Surveys made in several regions of the country indicate that the present prevalence of yaws is probably in the vicinity of 0.6 percent. In the reporting period (January to December, 1954), 854,132 persons were treated, which is over 91 percent of a population of 936,028 in the Department of the South. Of these, 61,043 received treatment as cases, and 793,089 were treated as contacts. The daily arithmetic mean of injections applied by each inspector was 87.

The agreement on yaws eradication and syphilis control in Haiti was extended until December 31, 1955. The Haitian Congress approved the not inconsiderable budget of $196,000 for yaws eradication, plus $12,900 for urban syphilis control activities, for the fiscal year of 1954-1955.

During 1954 the Government provided new quarters for this project and the consultant continued to serve as UNICEF Representative in Haiti. A new

This modern dispensary was erected in place of the wooden shack which previously served as the clinic for the inhabitants of the Marbial Valley, Haiti

system of zonification, already approved, will be established. Venereal disease control activities will be increased during 1955 and a venereal disease regulation project will be drafted for the approval of the Government. The surveys regarding yaws prevalence in Haiti will be continued.

A venereal disease training center has been established in Mexico following former collaboration in granting equipment and three fellowships for instructors (Mexico-13). The first course for lay investigators was inaugurated on November 15th with ten Mexican students and a WHO fellow from the Dominican Republic. More courses of this kind will be given in the future to provide for students from other countries who have shown interest in this training. The letter-agreement regulating this activity was signed this year by the Director of the Bureau and the Minister of Health of Mexico.

During 1954 project proposals were prepared for St. Vincent, St. Kitts, and Grenada, where yaws is a serious problem, and campaigns employing eradication techniques are planned to begin in 1955. Each project is to be island-wide in scope. Late in 1954 a short term consultant of WHO assisted the Government of Jamaica in reviewing the yaws and venereal disease problems and in planning a project proposal and plan of operations for presentation to WHO and UNICEF. It is hoped that assistance can be provided in 1955 to Dominica, St. Lucia, Guadeloupe, Martinique, and Trinidad in planning programs of a similar nature. It is expected that this program will eventually involve a total of nine projects (AMRO-47).

The agreement between the Bureau and Health Research Incorporated, State of New York, for carrying out a study of the Treponema Immobilizing Test was extended, as the work under this project (United States-6) has been delayed and it was deemed wise to continue the investigation and thus obtain the benefit of work already done. Health Research Incorporated is a private, nonprofit corporation, established under the laws of the State of New York, which receives limited research funds from private and public agencies for the benefit of the work of the New York State Department of Health.

Shigellosis

To stimulate international exchange of information on this important disease and to coordinate laboratory research, the shigellosis centers at Atlanta, Georgia, and at London, England, have arranged to dovetail operations and divide the field of work in such a way as to avoid duplication of effort. A grant was made in 1954 and a WHO representative visited the laboratories to facilitate coordination (Inter-Regional--13).

Hookworm

The demonstration program on hookworm control in Paraguay has three principal parts: environmental sanitation, treatment of the sick, and health education of the public

Split bamboo tubular baskets used in certain rural sections of Paraguay to prevent cave-ins of privy wells

Stored concrete latrine blocks ready for distribution among rural population of Paraguay

(Paraguay-5). A smallpox mass vaccination campaign was added to the hookworm work in order to take full advantage of the house-to-house visits. The agreement was signed in 1951 but delays in the arrival of supplies, particularly drugs and vaccines, made it impossible to start the full campaign before the end of 1953.

Considerable progress was made during 1954. Mass campaigns were conducted in five rural areas and in four suburban zones of Asunción. Twenty-four thousand two hundred and twenty-eight houses, with 136,998 inhabitants, were visited. Medication was given to 44 percent or 59,963 persons, but a more satisfactory percentage has been obtained in rural areas.

A workshop in Asunción, where baskets of split bamboo and reinforced concrete slabs are made for use in the construction of privies, has been kept going at full capacity. Since the campaign started, 5,967 latrines have been either installed or repaired, thus raising from 46 to 72 percent the number of dwellings with adequate excreta disposal in the campaign area.

The number of persons vaccinated against smallpox was 92,646, or 68 percent of the population of the area. Forty thousand three hundred and fifty three of these were vaccinated for the first time. The percentage of primary takes was 55 and the index of protection achieved was sometimes as high as 90 percent. Efforts are being made in the routine programs being carried out through the health centers to maintain these indices.

It is estimated that half of the population in the area is infested with hookworm and that the five to 19 age group has an infestation percentage of up to 70. An average of 2.1 eggs per milligram of stools was found.

The training of personnel has been intensified. During the year the fourth training course for sanitary inspectors was given, fellowships were granted to two sanitary inspectors to enable them to take the course in Chile, and one inspector who had previously held a fellowship has now returned to the campaign. An engineer was recruited and subsequently awarded a fellowship to enable him to undertake postgraduate engineering studies abroad.

Leprosy

In Paraguay leprosy is a serious problem on which the Government has requested aid from WHO and UNICEF. As a result a consultant assisted the Government in the formulation of a program for the control of this disease. Plans have been made for a project to commence in 1955 (Paraguay-9).

Plague

During a meeting of the Tripartite Border Health Committee (Bolivia, Chile, Peru) held in Arica in July 1953 it was agreed that epidemiological studies on the plague situation in Bolivia and Peru should be made (AMRO-74). For many years the Bureau has been cooperating with the Government of Peru in epidemiological studies of these diseases.

In Bolivia the infected area extends from south to north, beginning at the Argentine border and extending up to Ichilo Province, 80 kilometers north of Santa Cruz de la Sierra; and east to west from the Charagua in the Cordillera Province to Zudanez Province. It covers a total of about 26,000 square kilometers. During recent years the disease is showing a tendency to spread towards the Amazon basin, thus threatening serious danger to a vast area.

At the request of the Government of Bolivia the services of a consultant were provided. The plan of operations includes arrangements with scientific institutions in England and Brazil for classification of rodents, fleas, and other arthropods collected during the studies.

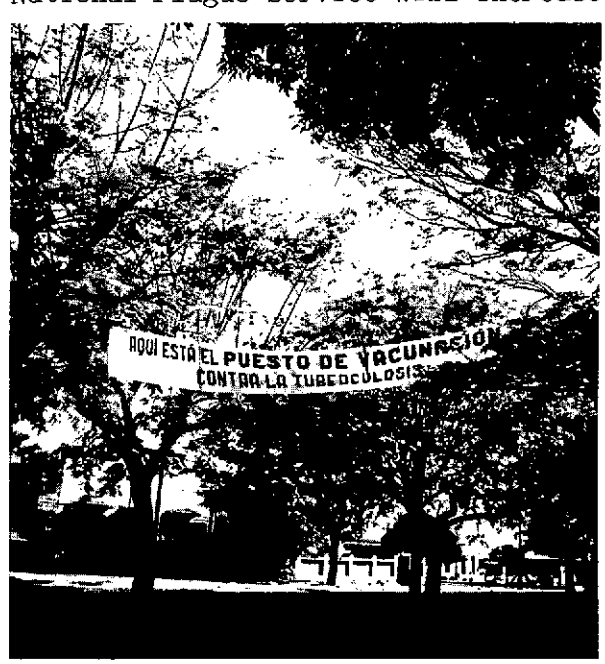
In Ecuador technical advice was given in the control of plague, especially in the areas where it is endemo-epidemic. During 1954 the WHO also provided equipment and insecticides (Ecuador-52).

During an outbreak of plague this year in Puna Island a technical consultant worked with the local authorities in setting up control measures. According to the records of the National Plague Service a total of 82 human cases were reported during 1954: three from Chimborazo, 70 from Loja, one from El Oro, and eight from Guayas. Included are six fatal cases not reported in time for treatment. The Service continues its program of rat control and control of rat ectoparasites, and of inspection of incoming ships. It is expected that in 1955 the National Plague Service will increase and expand its activities.

Tuberculosis

A recent WHO study of tuberculosis with special reference to the BCG problem[1] points out that tuberculosis is a constant threat to the health and lives of peoples throughout the world, especially in areas with scanty medical resources. Because immediate full control of this disease is out of the question, hopes of prevention on a large scale have become centered on vaccination with BCG.

[1] World Health Organization Tuberculosis Research Office, Copenhagen. *BCG Vaccination*. Geneva, 1953. 307 pages. (Monograph Series No. 12).



"Here is the BCG vaccination station"

Packing of BCG vaccines for local use, National Institute of Hygiene, Ecuador

During the past few years there have been vast international campaigns in which millions of peoples have been tuberculin-tested and vaccinated.

Yet much remains to be learned about BCG vaccination. Despite laboratory evidence that it protects animals against virulent infection and studies indicating that it does also protect man, when the mass campaigns were started some seven or eight years ago there was little precise information about the vaccine itself, its variability, its keeping qualities, how it should be applied, and particularly its immediate and long-term effects.

Since then a great deal of coordinated international research has taken place. According to the *Sixth Report of the WHO Expert Committee on Tuberculosis*, October 1954, convincing evidence is available that a specific resistance develops following a natural primary tuberculosis infection and that a similar specific resistance can be induced by vaccination.

The committee believed that when a mass vaccination campaign was carried out in a country only one method of vaccination should be used so as to avoid possible confusion among vaccines of different concentrations. It also recommended that, before undertaking a mass BCG program in an area, preliminary surveys should be made. The committee advocated integration of BCG vaccination into the tuberculosis control program and of the tuberculosis program into the general public health service of a country.

With regard to isolated BCG programs the WHO makes it a rule to withhold technical approval until a study has been made of the way in which the work can be integrated into the general public health services.

Two documents, Standard Methods for Diagnosis of Pulmonary Tuberculosis in WHO-Assisted Centers and Instructions for Statistical Work in Connection with WHO Tuberculosis Control Projects, were distributed to field personnel active in tuberculosis work.

During 1954 technical advisory services were provided in connection with a number of tuberculosis and BCG programs. Most of these programs have been in operation for various lengths of time.

In British Honduras a BCG vaccination program has been in progress since September 1953 (British Honduras-2). In Costa Rica the first nationwide campaign for BCG vaccination reached its final stages early in 1954. A Bureau consultant is assisting in the preparation of a final report (Costa Rica-5).

Boys lining up for vaccination. BCG campaign Trinidad and Tobago.

In Ecuador assistance has been given in studying the reorganization of the National Tuberculosis Service, including the BCG laboratory in Guayaquil. The aim also is to develop in Ecuador a tuberculosis training center for both national and foreign personnel and to improve the control program in that country (Ecuador-5).

Up to September 1954, an expert in pathology who assisted in the planning of the Tuberculosis Pathological Department and in the training of technical personnel was provided. Several courses and lectures were given by the consultant during the year.

The first international course for physicians was held between August 23 and October 7. The Bureau provided a short-term consultant for this course and awarded fellowships for foreign students. The course was attended by physicians from the following countries: one each from Guatemala, El Salvador, Honduras, and Panama; two each from Paraguay and Bolivia, and 12 from Ecuador.

The course consisted of 80 lectures, 116 practical laboratory sessions, 21 round-table discussions, two seminars, and several visits to tuberculosis centers in Ecuador.

In 1954 the BCG laboratory equipped by UNICEF continued to produce BCG vaccine for use in Ecuador (Ecuador-6). A short-term consultant was provided to assist in the further development of the laboratory and in the training of local staff. Up to November 30, 90,000 doses of BCG and a similar amount of Pure Protein Derivative (PPD) had been prepared and a thorough course of training had been given to the laboratory personnel. It is expected that the BCG vaccine prepared, after approval by WHO, will be used in Ecuador and other countries in Latin America.

The aim of a WHO-aided project in Colombia is to organize mass BCG vaccinations and to train professional as well as auxiliary personnel in BCG vaccination techniques and in the making of tuberculin tests (Colombia-15). A course consisting of three months of practical training was given to 60 vaccinators. Ten physicians were also given practical training. Several films were prepared in Bogotá for popular educational work preceding the campaign. The campaign began on September 20. By the end of December, 625,392 persons had been tested with tuberculin and 343,931 BCG vaccinations had been performed. The necessary equipment and supplies came from UNICEF. The WHO provided an expert and also awarded a short-term fellowship.

One of the aims of a tuberculosis project in Paraguay (Paraguay-2) was the establishment of a diagnostic laboratory with modern techniques for tuberculosis diagnosis. The international personnel assigned to this project finished their work in December. For the first time in Paraguay the tuberculosis bacillus was cultivated in the newly organized laboratory, and a large number of people were trained so that they could be used in the health centers for field and laboratory work.

The mass BCG and X-ray campaigns should furnish a clear idea on how much tuberculosis infection there is in the country. To take care of the X-ray part of the program a number of auxiliary workers were given a short course in X-ray techniques.

In the BCG campaign which began in August the response of the population was excellent. This remained true in spite of the fact that not all of the publicity films could be shown. A factor in the success of the work was the thorough training given to national technicians and the cooperation of experienced staff members attached to Zone VI (Paraguay-7).

A special building constructed by the Government of Chile on the grounds of the Bacteriological Institute was completed during the year (Chile-10). With the exception of the air-conditioning system all the equipment supplied by UNICEF has been installed. The production of vaccine has begun and after a suitable time the laboratory will be inspected by a WHO expert. UNICEF is also providing field equipment and it is hoped that the vaccination campaign in the rural areas will commence in March 1955.

In 1954, with the assistance of WHO/UNICEF, mass vaccination campaigns with BCG were completed in St. Kitts, Grenada, and Trinidad. Results as measured by the total number tested and "negatives" vaccinated were uniformly good. In each of the three islands, BCG maintenance programs and X-ray follow-up of "positives" have been provided (Leeward Islands-1, Windward Islands-1, Trindad-1).

The campaign in British Guiana which was initiated in March 1954 will be completed early in 1955 (British Guiana-1). The number of persons tested up to December 18, 1954, was 177,799, of which 96,478 had been vaccinated.

The BCG statistician responsible for the statistical analysis of WHO/UNICEF projects visited British Guiana, British Honduras, Colombia, Costa Rica, El Salvador, Ecuador, Guatemala, Jamaica, Paraguay, and Trinidad. In 1955 he will prepare a final report for the WHO Tuberculosis Research Office in Copenhagen, Denmark (AMRO-31).

In connection with the planning of future work, suggestions were prepared concerning continuation of BCG work in countries after the withdrawal of personnel provided by WHO/UNICEF. These were forwarded to the Tuberculosis Section at Geneva Headquarters. Information was sent to the Western Pacific Regional Office on a proposed plan for a comparative study of oral and intradermal BCG vaccination in Brazil. This study is awaiting authorization from the Brazilian health authorities. Isonicotinic acid hydrazid studies were continued in Paraguay.

Other Viral Diseases not Mosquito-Borne

Smallpox

Available information on the prevalence of smallpox, although incomplete, shows clearly that this disease is being pushed back. A look at the subjoined table shows that in 1954 there was no smallpox from Alaska to Panama. Canada, United States, Mexico, Central America, and even certain areas further south, are all free. Nowhere else on the globe has so large a continuous area been freed from smallpox, but in South America the disease is still a serious problem.

Smallpox in the Americas
Reported Cases 1951-1954

AREA	1951	1952	1953	1954[a]
Argentina	984	740	336	202
Bolivia	759	590	398	...[c]
Brazil[b]	1,190	1,318	875	649[d]
Chile	44	14	7	0
Colombia	3,844	3,235	5,467	7,146
Ecuador	233	670	703	2,516
Guatemala	3	0	1	0
Mexico	27	0	0	0
Paraguay	282	313	0	27[d]
Peru	1,218	1,370	161	136
United States	11	21	4	0
Uruguay	0	16	7	1
Venezuela	206	127	250	14
British Guiana	11	0	0	0

[a] Preliminary figures
[b] State Capitals only
[c] Unknown
[d] Incomplete

With the aim of eradicating this disease in the Americas, the XIIIth Pan American Sanitary Conference, Ciudad Trujillo, 1950, recommended to Member States the development of a systematic program of smallpox vaccination and revaccination. During 1953 and 1954 special allocations were made available for this purpose by the Directing Council of the Pan American Sanitary Organization. A supplementary program was initiated in 1953 and steps toward eradication were started in 1954 (AMRO-60).

In a campaign of smallpox vaccination one of the difficulties is the proper conservation of the vaccine. Assistance has been given to local authorities for the production in sufficient amounts of dry vaccine that is potent and that keeps well. This would solve problems of transportation, importation, and storage.

An expert in the production of dry smallpox vaccine has visited several countries since 1951 and has given assistance to health authorities in establishing production laboratories for dry smallpox vaccine. The following countries were visited by this expert during 1954: Cuba, Mexico, Costa Rica, Guatemala, El Salvador, Panama, Ecuador, Peru, and Brazil. Further technical advice and essential supplies and equipment have been furnished up to the end of this year to Ecuador, Bolivia, Argentina, Cuba, and Chile. Arrangements were made with the Copenhagen Serum Institute for testing the dry smallpox vaccine produced by the national laboratories.

In the planning and actual development of national smallpox campaigns the Bureau is providing the services of consultants specialized in this field, promoting the training of personnel, and furnishing a certain amount of equipment required for the vaccination campaigns. With the active interest of Zone Offices, such programs have started in Colombia and are in the advanced planning stage for Cuba, Bolivia, and Ecuador.

Future plans for the expansion of smallpox eradication programs were furthered by a resolution of the XIVth Pan American Sanitary Conference authorizing the use for this purpose of 1953 surplus funds in the amount of $144,089. This expanded program, chiefly already in operation, includes: (1) advisory services with regard to the techniques of laboratory diagnosis of smallpox and the production of smallpox vaccine; (2) consultant services for the planning and implementation of national smallpox eradication campaigns, with special emphasis on integration of them into the general public health service of the country; (3) assistance and advice in the preparation of national legislation for the prevention of the disease; (4) supplies and equipment for laboratories and for vaccination campaigns; (5) facilities for the training of local personnel in the techniques of vaccine production and in the planning and organization of field work, and (6) improvement in the reporting of the disease.

For information on a combined hookworm and smallpox control project (Paraguay-5) in Paraguay the reader is referred to page 56.

Police requesting passengers of car to show smallpox vaccination certificate; when not forthcoming, persons are vaccinated on the spot (Peru)

Aspect of smallpox vaccination campaign (Peru)

Poliomyelitis

Following the recommendations by its Expert Committee on Poliomyelitis the WHO has been active in developing a world-wide network of regional poliomyelitis centers whose functions will be: (1) to identify, to type, and to study poliomyelitis virus and viruses responsible for similar diseases; (2) to make available to other WHO poliomyelitis centers and to other research laboratories working in this field the strains of virus isolated; (3) to prepare and distribute limited quantities of standard laboratory reagents to facilitate the work of national laboratories engaged in the study of poliomyelitis; (4) to undertake research in the WHO poliomyelitis centers and coordinate with the research of the laboratories working in this field; (5) to undertake the training of virologists in the new tissue-culture techniques used in the study of poliomyelitis; (6) to report to the appropriate Regional Office of WHO and to WHO Headquarters the occurrence of epidemics of poliomyelitis in the areas of interest to centers; (7) to issue annual, or more frequent reports, on the work performed in the centers.

The Poliomyelitis Unit of the Section of Preventive Medicine, at the Yale University School of Medicine, has been designated as WHO Regional Poliomyelitis Center for the Americas. A consultant visited Jamaica in December in order to study the outbreak of poliomyelitis that occurred in that country. The Bureau also cooperated in the arrangements for poliomyelitis research with the Mexican health authorities (Inter-Regional--14, --15, Mexico-20).

In order to assist the Government of Costa Rica in the emergency created by an intensive epidemic of poliomyelitis which occurred early this year in that country, the Bureau provided the services of a consultant in rehabilitation of paralytic cases (Costa Rica-11).

The Bureau maintained close liaison with the National Foundation for Infantile Paralysis in order to be kept fully informed on the various projects of the Foundation and particularly the vaccination tests.

Influenza

The Bureau, as Regional Office of the WHO, continued to be responsible for the development of the WHO influenza program (Inter-Regional--10) in this hemisphere. The fundamental objectives of this program are to plan against the possible recurrence of a pandemic, to devise control methods to limit the spread and severity of the disease, and to limit the economic effects of an epidemic. A world-wide network of centers and observers has been established for detection of outbreaks, quick identification of the virus, and coordination of research in this field. During 1954, as in the previous year, a number of epidemiologists and clinicians agreed to serve as WHO influenza observers. Their task is to be on the alert for outbreaks, to notify the Bureau of such outbreaks and, when possible, to assist laboratories in the collection of samples for specific diagnosis. New influenza observers were designated in Cuba, Haiti, Dominican Republic, and the United States.

One new center, the Virus Section of the Institute Adolfo Lutz of São Paulo, Brazil, has agreed to cooperate in this influenza program. There

are now 17 influenza centers in the Americas, 10 in the United States, two in Brazil, and one each in Argentina, Canada, Chile, Jamaica, and Mexico.

Antigens and antisera for typing and identifying influenza virus were provided to the Bacteriological Institute Carlos Malbran, which is the WHO influenza center in Argentina. In 1954 this center classified four strains of the virus isolated in the 1953 outbreak, using reagents provided by WHO, and sent them to the WHO influenza reference laboratory for the Americas, located in New York. Samples of lyophilized influenza virus, isolated during the 1953 epidemic in São Paulo, Brazil, were received from the influenza center in that city and likewise forwarded to the reference laboratory.

Foot and Mouth Disease *(Aftosa)*

The Pan American Foot and Mouth Disease Center, located near Rio de Janeiro, Brazil, under the technical direction of the Bureau, (see pages 18 and 168) is now in its fourth year of operation (AMRO-77). During 1954 it continued its fourfold function, consisting of training, field consultation, diagnosis, and research. Two training courses were held. The first was a training course held during April-June for nine veterinarians from Brazil, Chile, Paraguay, and Uruguay. The second took the form of a two-weeks training seminar held during November in Panama City for 24 senior agriculture and *aftosa* officials from the countries and territories of Central America, the Caribbean, Colombia, and Venezuela.

During 1954 in this hemisphere no country previously free of foot and mouth disease became infected, although towards the end of the year an outbreak in a part of Brazil already infected was threatening to spread to livestock in British Guiana. Mexico has not had another flare-up and, as the disease did not reappear within a prescribed time (one year since the last case), the United States Department of Agriculture ban on transport of livestock products from Mexico to the United States terminated December 31, 1954. The countries of North America, Central America, and the Caribbean, as well as Ecuador, were again reported free of the disease

Inspecting cattle during anti-aftosa program (Mexico)

Throughout the year available equipment was studied and attention was given to the purchase of items for the establishment of a pilot vaccine production plant. With this equipment practical field trials will be conducted of the newer vaccines developed in the research work. Requests for diagnostic services have increased. Expanded vaccine production led to the appointment of a virologist.

A more detailed report of this project will be found in the annual report of the Center which is published separately.

PUBLIC HEALTH ADMINISTRATION

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Scope of Public Health

Building up Health Departments

Programs of disease control and eradication are not all there is to public health work. A counterpart to the destruction of disease is the building up of health.

This section of the Pan American Sanitary Bureau annual report will deal with support to such constructive activities as maternal and child health, nursing, nutrition, mental health, and public health laboratories. It will also include, first of all, an account of support to certain basic activities that guide, underlie, and strengthen all public health endeavors, namely, health statistics, epidemiological information, and environmental sanitation.

Finally, a prime purpose of the Pan American Sanitary Bureau has been to assist governments in the organization of strong, well-rounded health departments.

It is evident that unless the national health service provides adequate follow-up on disease campaigns, not only will the achievements of such programs as *Aëdes aegypti* eradication, malaria eradication, BCG vaccination, yaws eradication, venereal disease control, and smallpox vaccination be lost, but these mass operations may have to be repeated in whole or in part at a later date to recover lost ground. Health departments are the permanent agencies that maintain vigilance against the reimportation of diseases and that make it their business to raise the existing level of health.

Constructive Integration

During 1954 planning committees were formed within the Ministries of Health in several countries where integrated health programs are in operation. International advisers and their national counterparts serve on these committees, which are charged with the responsibility for broad, long-range planning. Such a committee may have in it representatives from several ministries. Panama and El Salvador have been outstanding examples of this type of procedure.

More will be said about public health education in a later section of this report, but the training courses within such integrated programs include in their scope physicians, public health nurses, sanitary inspectors, health educators, and auxiliary personnel. An important feature is in-service training. The services provided cover the broad area of insect control, sanitation, communicable disease control, nutrition, statistics, maternal and child health, medical care, and public health administration.

Integrated public health programs may develop either out of a single activity or out of several activities; or they may grow out of a health demonstration area. In Paraguay, for example, hitherto separate programs in sanitation, maternal and child health, health education, tuberculosis, venereal disease, smallpox, and hookworm control have been brought together into a coordinated program under a single leadership with over-all responsibility. Such integrated activities represent the natural functioning of a well-organized health department.

The present trend toward the integration of health activities into a single, coordinated program of service is intended to eliminate the overlap of scattered activities; hence, also, the growing tendency of the Bureau to question technical requests for assistance in varied activities on an isolated basis. To be effective, such activities should be part of an integrated program, which in turn requires the support of a strong, centralized public health department manned by full-time, well-trained, adequately paid public health career men.

Health Statistics

The Pan American Sanitary Code, adopted in 1924, includes many references to statistical data with recommendations to standardize morbidity and mortality statistics and to interchange information useful in improving public health and combatting the diseases of man. Thus, the basis for an active program in the field of statistics was well established many years ago.

The inclusion of methods of improving the reliability of raw statistical data as one of the subjects for technical discussion at the XIVth Pan American Sanitary Conference (Santiago, Chile, 1954) gave added importance to Bureau assistance for statistical work. The ten resolutions included in the Final Act of the Conference give the Bureau an excellent foundation for a future statistical program.

Estimated Population for which Mortality Data are Available by Continents - 1950[1]

Continental Division	Estimated Pop., 1950	Covered by Statistics	
		Population	Percent
Africa	198,000,000	45,094,000	23
North America	216,300,000	212,655,000	98
South America	111,400,000	56,055,000	50
Asia	1,272,000,000	556,865,000	44
Europe	396,300,000	334,111,000	85
Oceania	12,900,000	11,192,000	87
USSR	193,000,000[2]	--	--

[1]Demographic Year Book, United Nations, 1951.

[2]Estimated for 1946.

Because of the significance of these resolutions, they are summarized here to show the broad scope of the statistical program in the Americas. In the first resolution it is made clear that the term *health statistics* includes statistics on population, births, deaths, morbidity, health resources and services, and socio-economic statistics related to health. The second resolution recommended that health agencies promote reliable demographic statistics and cooperate in the planning of

population censuses. Other resolutions recommended the use of published standards for improving vital statistics and case-reporting systems and for providing comparable national and international data; and that Member States take measures to obtain statistics on the national resources devoted to health so as to facilitate planning, evaluation, and improvement of health programs. The use of socio-economic statistics to unify activities designed to raise the living standards of the population should also be promoted.

Since statistics are essential in all phases of the health program, one resolution recommended that Member States stimulate and strengthen the statistical services of health administrations by providing material facilities and trained statistical personnel. For improving the reliability of statistical data, it was recommended that schools of medicine, nursing, and social work include the teaching of statistics and that provision be made for the education and training of health statisticians.

In this connection, reference should be made to the 1950-1953 Summary of Reports of the Member States. This printed report, available from the Bureau, in a form more complete than ever before, for the first time presented detailed mortality and morbidity statistics on American countries.

The Conference felt that this Summary of Reports of the Member States was a valuable document for providing knowledge of the health problems of the Americas. It recommended that the Member States immediately begin to improve the statistical information for the next report. A final resolution recommended that the Bureau assist the Member States in the development of programs for education and training in health statistics.

Epidemiological Information

The routine collection of information regarding quarantinable and other communicable diseases is an established procedure. Immediately on receipt of reports of quarantinable diseases, cables are sent to neighboring countries and to the Geneva, Singapore, and Manila offices of WHO.

Each Tuesday, the *Weekly Epidemiological Report* is prepared for release on Wednesday, by air mail, to health officials in the Americas. This report contains data regarding cases of quarantinable diseases, special reports of influenza and poliomyelitis, and information concerning the application of the International Sanitary Regulations.

During the year a new summary table was added on the first page of this report to show the cumulative total of cases of yellow fever, plague, louse-borne typhus, and smallpox reported during the current and previous year as well as the number of cases during the current week. Also, to meet a current need, there is released special information regarding *Aëdes aegypti*.

The data received monthly on notifiable diseases in the Americas are published in *Health Statistics*, issued quarterly and widely distributed to Member States and interested institutions and persons. This quarterly publication also contains reports in English and Spanish of international and inter-American activities in the field of vital and health statistics.

A seminar on reporting of communicable diseases, sponsored by the Pan American Sanitary Bureau and the Government of Chile, was held at Santiago, Chile, from November 30 to December 11, 1953. The recommendations of the seminar were published in July 1954, as Basic Procedures for the Reporting of Communicable Diseases. An issue of 1,000 copies for the English edition and 4,000 for the Spanish edition proved wholly inadequate to meet the demand for these booklets, and more are being printed. This publication, the International Sanitary Regulations, and others on closely related subjects were made available to students of schools of public health in the Americas.

As a further step in the program to improve reporting it is planned to have a seminar on the International Sanitary Regulations. At this seminar, stress will be put on the necessity of reporting notifiable diseases and of developing clear and efficient reporting systems. Such reporting is essential if the Regulations are to be intelligently applied.

The collection of information regarding requirements for international travel and pertinent to the application and interpretation of the Regulations are functions of the Bureau. The recent declaration of an infected local area (yellow fever in Trinidad) resulted in extensive correspondence and interpretation of the Regulations. The Spanish edition of the Regulations was reprinted in 1954, and additional copies are being distributed in the Americas.

Statistics for Program Planning

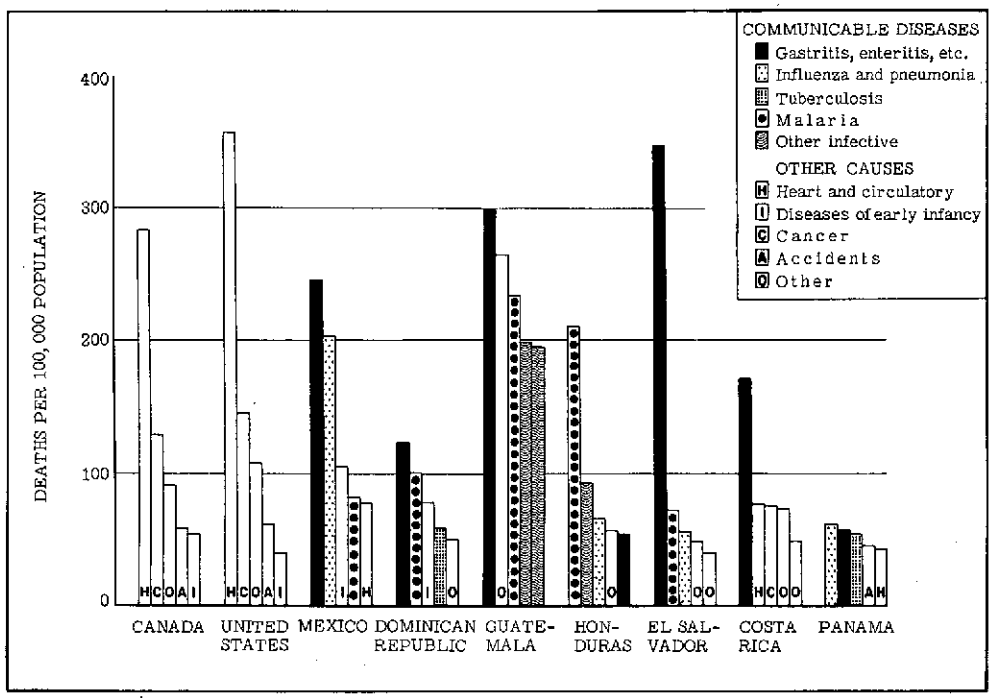
In addition to collecting and distributing notifiable-disease statistics, the Bureau collects and distributes information regarding health conditions in the Americas as the basis for program planning. The four-year report on health conditions, chiefly of a statistical nature, prepared for the XIVth Pan American Sanitary Conference held in Santiago, Chile, in October 1954, has already been referred to (see pages 1,5).

The way in which health statistics reveal basic conditions is illustrated by the charts on page 73 which reflect principal causes of death in certain North and South American countries. Diseases still prominent in some countries have in other countries been successfully repressed, so that they no longer figure among principal causes of death.

Forms have been developed for recording basic information for each country. Since immediate data were needed on environmental sanitation for World Health Day, 1955, when the theme Pure Water for Health will be featured, these were developed first. These forms include requests for health statistics diagrams on the structure and relationships of the national and local health services, a roster of health leaders, tables on water and sewer systems, food sanitation, personnel, budget, and professional training of engineers, veterinarians, and sanitary inspectors.

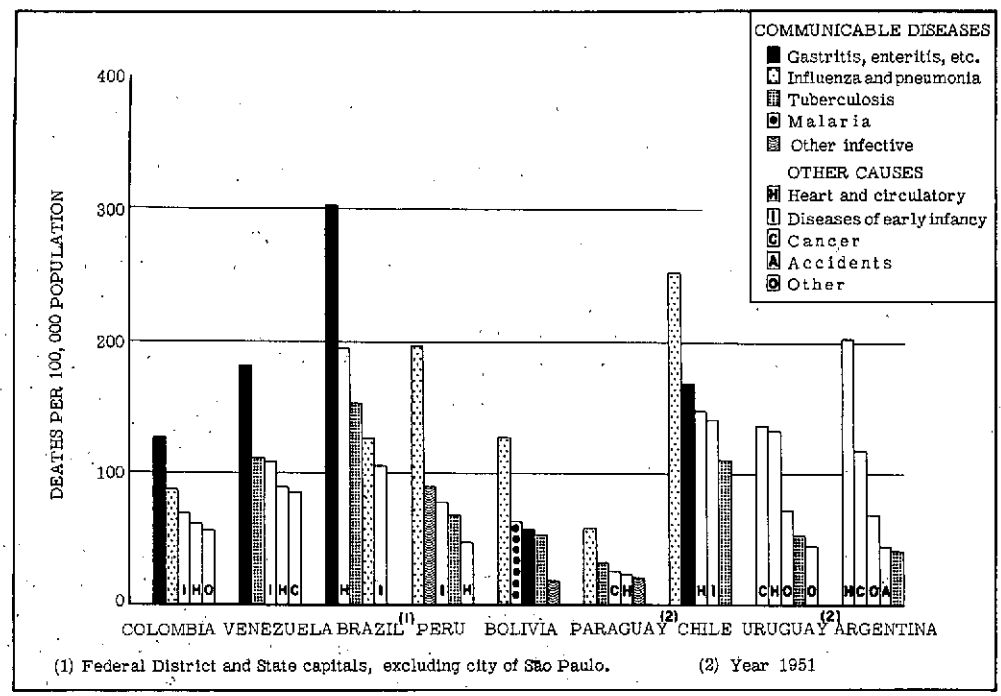
Monthly and quarterly reports of campaigns for the eradication of *Aëdes aegypti*, received routinely, are summarized for publication. (See pages 122-125 for information also on other publications.) During the year new forms and procedures were explained in a Guide for Preparation

FIRST FIVE PRINCIPAL CAUSES OF DEATH PER 100,000 POPULATION IN 9 COUNTRIES OF NORTH AMERICA, 1952



First five principal causes of death per 100,000 population in 9 countries of North America, 1952

FIRST FIVE PRINCIPAL CAUSES OF DEATH PER 100,000 POPULATION IN 9 COUNTRIES OF SOUTH AMERICA, 1952



First five principal causes of death per 100,000 population in 9 countries of South America, 1952

of the Reports on the *Aëdes aegypti* Eradication Campaign in the Americas (published in English and Spanish). Satisfactory progress has been noticed in the number of countries submitting reports.

Analyses of statistical data have been prepared on various subjects which include malaria morbidity and mortality, maternal and infant mortality, and diarrhea and enteritis.

Consultant Services

To assist in the improvement of health statistics in the Americas, consultant services are regularly supplied to countries. In addition to such services from the Regional Office, provision has been made for a statistical consultant in 1955 for Zones II and III. The following services will be provided in this program: (1) advice to countries in accordance with recommended standards on the improvement of health statistics, with emphasis on notifiable diseases; (2) assistance in the development of seminars, workshops, and training courses in statistics, in the selection of students for fellowships, and in the follow-up of students after completion of courses and training in fellowship program; and (3) advice on the statistical evaluation of Bureau projects and assistance in the compilation and analysis of information for program planning.

Special Training

For the improvement of statistical services in the Americas, education and training programs are under development at several educational levels, in accordance with the needs of the various countries.

A constructive development for education and training in statistics in the Americas was the report of a Commission in Chile, appointed to make recommendations in regard to the establishment of undergraduate university education for persons desiring careers in statistics. It was recommended that courses already being given in the faculty of philosophy and education could be used for the undergraduate curriculum. A graduate course for doctors and professional statisticians in biostatistics at the School of Public Health of the University of Chile, leading to the Master's Degree, is being planned.

The Inter-American Center of Biostatistics (AMRO-10), sponsored by the Government of Chile, the Pan American Sanitary Bureau, and the United Nations, was established in 1952 for the purpose of improving vital and health statistics of Latin American countries by training technical personnel of the various statistical services. The faculty of the School of Public Health of the University of Chile offers six months of academic studies and three months of field training. The first class at the Center completed the nine months course on November 27, 1953, and the second on November 30,

1954. During the first two years 53 students completed the course with the following distribution:

Argentina	2	Cuba	1	Nicaragua	1
Bolivia	1	Ecuador	1	Panama	2
Brazil	1	El Salvador	2	Paraguay	4
Chile	25	Guatemala	1	Peru	2
Colombia	1	Haiti	2	Uruguay	3
Costa Rica	2	Mexico	2		

Twenty-three of these students received fellowships from the World Health Organization/Pan American Sanitary Bureau.

Another objective of the Center is to assist in improving the work of government offices in Chile concerned with various aspects of vital and health statistics. International personnel, including a staff member, participated as professors in the academic phase of the program and as consultants to the government for the development of statistical services.

An inter-American seminar of directors of civil registration offices, sponsored and organized by the Government of Chile, by the Service of Civil Registration and Identification, the Inter-American Center of Biostatistics, and the Institute of Inter-American Affairs, was held for the two weeks from November 29 to December 15, 1954.

In addition to the training center in Chile, there is need for short-term training courses on a regional and national basis. The first short-term training course in biostatistics for the Caribbean (AMRO-79) was held in Kingston, Jamaica, for the six-week period from November 1 to December 10, 1954. The course was designed to provide training in vital statistics, health statistics, and elementary statistical methods for persons responsible for collection and analysis of statistical data in the health and medical services of the English-speaking territories. The course was sponsored by the British West Indies Public Health Training School, the Jamaica Medical Service, and the World Health Organization. Nineteen students from twelve areas attended this course. The group was a homogeneous one and the participation, attendance, and interest of the students were excellent.

Case reports received during the recent epidemic of poliomyelitis in Jamaica proved serviceable in this course for teaching case reporting, tabulation, analysis, and interpretation of data. There is great need for this type of training in the Caribbean as well as in other areas in the Americas. There is a possibility that the British West Indies Training School may incorporate the training of statistical clerks as part of their program of training auxiliary health workers.

Other types of education and training programs, such as institutes and seminars, are being developed for in-service training of those employed in statistical work. For instruction and interpretation of the International Statistical Classification of Diseases for the Spanish-speaking countries of the Americas, a Latin American Center is being developed in the Venezuela Ministry of Health.

Environmental Sanitation

Program Planning

Reports from the Member Countries to the XIVth Pan American Sanitary Conference at Santiago, Chile, 1954, clearly voiced the need, particularly in the rural areas, for such aid as could be provided by a strong sanitary engineering service, functioning as a part of the national health department. Large areas and populations on the Continent are still without adequate water supply and sewage disposal facilities.

To assist in bringing about needed improvements, a set of forms was devised which national health services could use to analyze their requirements and to serve as a basis for planning well-conceived sanitation programs. In setting up new programs in environmental sanitation, every effort is made to get these activities incorporated into a broader scheme of integrated public health work.

Because of the great need for more and better trained sanitation personnel, the Pan American Sanitary Bureau gave more attention in 1954 to seminars, training courses, fellowships, and training institutes. The decision of UNICEF to assist environmental sanitation activities as a part of programs including maternal and child health activities opens up good prospects for fruitful long-term planning.

Advisory and Other Services

Assistance was given to various committees in providing experts on insect control and environmental sanitation. Information was furnished on specifications for insecticides, particle size of dusting powder, separate shipment of emulsion concentrate components, establishment of an *Anopheles aztecus* colony, as well as other problems associated both with malaria work and environmental sanitation.

Other technical information supplied to Member Governments embodied such subjects as garbage disposal and crematoria, toxicity of inerts, wetting and dispersing agents contained in insecticide formulations, mosquito resistance to DDT, dieldrin studies in Venezuela, uperization process of milk treatment in Switzerland, streptomyces in water, waste treatment, food sanitation, ground water supply development, water works operation, use of coal-tar dyes in food, vessel sanitation, toxicity of insecticide constituents, back-flow prevention in water distribution systems, chlorination, biology of sewage treatment, treatment of water and sewage by ionizing radiation, sewage sludge digestion, fluoridation of water, rural health, and public health engineering.

Liaison was maintained with several agencies of the United States Government as well as with nongovernmental agencies and institutes doing work related to environmental sanitation.

Active Projects

In Bolivia an interim report was made on the study of the La Paz water supply. Recommendations were made regarding the services of a permanent consultant and a possibly more complete study of the water supply problems of this city (Bolivia-6).

In the course of work having to do with the public health demonstrations and training center at Callao, Peru, recommendations were made concerning fluoridation equipment and specifications for fluoridation chemicals required for the treatment of city water (Peru-13). A study on the role of sodium silico-fluoride for the treatment of water was prepared for use in this work.

In Guatemala City an eighteen-month project in garbage disposal terminated on August 27, 1954. Municipal collection of household refuse for a large part of the city, embracing 20,000 houses, was put on a new basis. Full use was made of landfill projects. Twelve new enclosed garbage trucks and one crawler tractor are in operation. It is intended soon to include the whole city in the new service, which was stimulated by the leadership of a former WHO fellowship holder (Guatemala-10).

Waste disposal is a problem the world over. Disposal of snow-like cotton gin waste as landfill.

An environmental sanitation project to promote training within this field in Latin America was started in 1952, with three schools of public health cooperating in São Paulo, Mexico City, and Santiago, Chile (AMRO-1). Operations in 1954 were essentially unchanged. In 1954 five fellows went to São Paulo to take the course for sanitary engineers, and five more fellowship awards were made during the year for the 1955 course. At the school in Santiago fifteen fellowship holders attended the course for sanitary inspectors. Equipment and material for teaching purposes were delivered to both institutions. A short-term consultant made a brief visit to Santiago in connection with the course for sanitary inspectors. He also spent some time at São Paulo in connection with a seminar on the teaching of sanitary engineering in Brazilian engineering schools.

In connection with the training of environmental sanitation personnel at the schools of public health located in São Paulo, Brazil, and Santiago, Chile, steps were taken to assign a consultant for six months to the school of public health at Santiago.

In Mexico the School of Engineering of the National University is now offering complete graduate courses in sanitary engineering. At present these courses are independent from the general public health training given at the School of Public Health.

A second seminar on sanitary engineering for Central American countries was held in San José, Costa Rica, from March 17 to 24 (AMRO-13.2). Participants included representatives from all countries in Zone III.

In Guatemala a training course for water works operators, scheduled to be held in October 1954, had to be postponed because of disturbed political conditions. Plans were made to hold the course in March 1955. A number of fellowships have been awarded in connection with this course which is designed especially for students from Central America and Panama.

A seminar for engineers in the countries of Zone IV and Zone V was held in Caracas, Venezuela, May 17 to 24 (AMRO-64.2). There was active student participation and strong support from the Government of Venezuela, which assumed a large part of the cost of publication of a final report.

In Nicaragua a project dealing with rural sanitation received a part of its support from the Bureau. One purpose of this project is to train sanitary engineers and inspectors employed by the government in environmental sanitation work (Nicaragua-51).

Maternal and Child Health

Converging Programs

Harking back for a moment to programs already discussed, attention is called to the direct bearing which environmental sanitation and insect control programs have on lowering the infant death rate.

Pure water and good waste disposal help to check the fatal diarrhea, one of the chief causes of infant mortality. The sanitation program is only one of a number of programs that converge on this area of child welfare. Fly control is unusually important. Any insect control program would be especially beneficial as an auxiliary to other, and perhaps more direct, means of increasing health among children.

Today it is more and more coming to be realized that adequate child welfare work includes not only standard clinic and home-visiting services but also attention to school health services and health education. Moreover, for the control of diarrheal diseases, the protective value of breast feeding has been generally acknowledged. Under poor hygienic circumstances, bottle feeding leads too easily to food contamination. Breast feeding, in turn, calls for a satisfactory diet for mothers so as to improve both the quality and the duration of the milk flow. Where breast feeding is impossible, the use of powdered milk has been found advantageous. In general, many health programs are today making a united effort to improve the health conditions of both mother and child.

Total Populations of the Americas and Distribution by Age Groups in 18 countries, Puerto Rico and 18 Territories

Area	Estimated Population 1950	Percentage of population in age groups			
		Under 15	15 to 34	35 to 54	55 or over
The Hemisphere	326,337,000	33.7	32.2	22.0	12.1
North America	165,105,000	27.2	30.5	25.5	16.8
Central America	51,280,000	41.2	32.9	18.1	7.8
South America	109,952,000	39.9	34.2	18.5	7.4

In South America 40 percent of the population is under 15 years of age. In any consideration of the general welfare, the health of this early age group looms very large. This group includes the infants as well as the children, and it is the deaths under one year of age and in early childhood that often mar an otherwise creditable health record. In any population so heavily weighted in favor of youth, it is to be expected that governments and agencies responsible for health improvements put great stress on maternal and child health services and communicable diseases. The high incidence in Latin America of intestinal and insect-borne diseases so fatal to infants ties all these health problems together. It is also a reason why good child health care leads straight to an interest in a whole network of closely interrelated health programs.

Infant Mortality

Infant mortality the world over was made the subject of a PASB/WHO news release on April 14, 1954. Under the heading A Sharp Decline in Infant Mortality: a Mid-Century Report, information was given regarding the publication of a WHO statistical report giving the world picture.

This report points out that, in general, infant mortality has dropped in a spectacular manner in all countries for which accurate data are available and which are those where social and economic development has advanced extensively. Indeed, all social and health advances have a marked effect on child survival. Fifty years ago known infant rates varied from 264 per thousand live births to 75. In 1952, less than 30 out of a thousand babies died before the end of their twelfth month in the most favored countries of Western Europe, North America, and in Australia and New Zealand. In contrast

Estimated Population and Birth and Death Rates per 1,000 Population and Infant Death Rates per 1,000 Live Births in the Americas--1952.

Area	Estimated Population	Live Births per 1,000 Population	Deaths per 1,000 Population	Infant Deaths per 1,000 Live Births
Argentina	18,053,913	24.6	8.7	67.5
Bolivia	3,089,479	42.1	15.6	184.6
Brazil[a]	6,062,537	27.1	15.7	172.9
Canada	14,009,000	27.9	8.7	38.0
Chile	5,945,415	36.5	13.7	121.8
Colombia	11,844,090	36.8	13.0	110.8
Costa Rica	853,412	54.6	11.6	80.2
Dominican Republic	2,236,228	42.2	10.1	78.7
Ecuador	3,350,000	46.5	17.0	109.5
El Salvador	1,905,240	50.8	17.0	85.5
Guatemala	2,975,143	51.0	24.2	112.2
Honduras	1,512,668	40.1	12.7	64.3
Mexico	27,283,148	43.3	14.8	89.7
Nicaragua	1,128,409	42.8	10.6	77.5
Panama	785,285	36.9	8.6	50.4
Paraguay[b]	1,183,000	20.8	7.0	87.7
Peru	8,428,392	31.4	11.2	100.1
United States	155,755,000	24.7	9.6	28.4
Uruguay[c]	2,438,995	18.6	7.9	54.7
Venezuela	5,245,504	44.0	10.8	74.7
Puerto Rico	2,233,000	35.9	9.2	66.6
Territories (U.S.)	737,000	30.1	6.1	27.3
Territories (French)	630,290	28.0	11.0	66.2
Territories (British)	3,366,132	35.6	12.5	87.5

[a] Federal District and State Capitals except city of São Paulo
[b] 83 percent of population, 1951
[c] 1951

with this picture, there are still regions in the world in which estimated rates of infant mortality are above 250 per 1,000 live births.

Infant mortality rates for the American countries are given in the table on the preceding page.

From the analysis of the data from the American countries, it can be seen that infant mortality has only reached the lower limits in Canada and in the United States. In 1952 there were still 14 countries with known rates ranging between 50 and 100 and there were seven countries with rates above 100 per 1,000 live births. These rates show the wide variation in the advancement of the health services and in the general social and economic development. It can be inferred that declines in infant mortality have occurred in practically all countries of the Americas since the beginning of the century. However, the great variation in the infant mortality rates for those countries (in 1952) shows how much remains to be achieved in the Americas.

PASB Policy

The general policy is that maternal and child health should include not only the standard clinic and home-visiting services for maternity, infant and preschool care, but also those for school health services. These should be developed in complete relationship with the programs for control of major communicable diseases and with the fundamental sanitation program for adequate water supply and excreta disposal. They should further include all the relevant aspects of health education.

Where there is a major communicable disease problem, this may well receive top priority even in a maternal and child health program. An interesting example of this occurred in one country in the planning of maternal and child health activities as part of an integrated program when it was found that syphilis was the most urgent problem, affecting 20 percent of the pregnant mothers in the rural areas and 30 percent in the urban centers. In this case, carefully supervised mass treatments were recommended to be developed with the maternal and child health activities as part of the integrated program.

The control of infant diarrheas was discussed at the XIVth Pan American Sanitary Conference in Santiago in 1954. At a follow-up, informal meeting in Washington recommendations were made for future action, based on the knowledge that has been obtained from those countries where a reduction from an earlier high incidence associated with unsanitary conditions has been successfully achieved, and where a number of adequate control studies have resulted in more accurate information on the etiology and epidemiology of the diarrheal diseases. It is recognized that in many of the American countries accurate information is at present not fully available, and that there is a need for studies including the better registration of causes of deaths and the adoption of a simple classification of digestive disorders following the International List of Causes of Diseases and Death adopted by the World Health Organization. Following this meeting a proposed plan of action was prepared, setting out the following principles:

1) For the prevention of shigellosis, one of the major diarrheal diseases, it seems logical to aim at a reasonable degree of water sanitation, with special emphasis on the provision for each house of an adequate supply of water for personal cleanliness. This is on the assumption that limited funds are available and that there is no heavy pollution of the water supply.

2) Proper excreta disposal is essential in the control of diarrheal disease. Special emphasis should be put on fly-proofing latrines. In the more primitive areas, where programs for the construction of latrines can not at present be introduced, the people can be taught to protect themselves from contamination, directly or indirectly, by burying the excreta.

3) Insect control programs have definitely had an influence in reducing acute diarrhea. The development of resistance to insecticides in the fly populations is unfortunately at present a major obstacle. As it is, the most important thing is to prevent flies from having access to feces. A second important item would be to prevent the flies from having direct access to houses and to food supplies. The removal of animals from the immediate surroundings of the house eases the situation with regard to the control of flies in the living quarters.

4) A health education program is very important and should stress the need for more extensive use of water for personal cleanliness.

5) The protective value of breast feeding has been established. In terms of diarrheal disease, the danger of artificial feeding is specifically related to contamination from the necessary manipulations which enter into the making and storage of the infant formula.

6) Advances in the treatment of acute diarrheas are based on the prompt correction of fluid and electrolyte disturbance by the systematic administration of fluids, electrolytes, glucose, plasma, and blood. Of less importance from the public health viewpoint is the selective use of antibiotics and sulfonamides. It is obvious that many cases would not need special hospital care if there were earlier recognition of the disease and if simple methods of treatment had been promptly applied at home for the prevention of dehydration. As a general measure of medical care in the prevention of severe diarrheal disease, the systematic early application of oral rehydration appears to be the one method capable of widespread results in a program aiming at the reduction of cases of severe toxic diarrhea needing hospitalization.

Active Projects

During the year, the maternal and child health services in Peru, receiving support from the Bureau, went into operation. Included were school health, dental, and nursing services. A laboratory with equipment provided by the Government was working to full capacity (Peru-10). The objectives of this project are to establish public health services in the Lima-Pativilca-Huaylas area, which is located in two different regions, one on the coast and one on the mountains. These services will constitute a demonstration and training area for public health personnel.

During 1954 the WHO provided three international consultants: one medical officer, one public health nurse, and one laboratory consultant, as well as extensive equipment for environmental sanitation.

In 1955 the program will, with the assistance of UNICEF, be extended to the Callejón de Huaylas. WHO is providing advisory services through the Zone Office staff, as well as one or more fellowships.

The aim of the program in maternal and child health in Ecuador is to assist the Government in the expansion of this type of service and to extend such service into rural areas (Ecuador-4). The WHO provided the services of a medical officer and a public health nurse. The United Nations Technical Assistance Administration (UNTAA) provided a social work consultant and UNICEF furnished supplies and equipment for the maternal and child health centers. One center was opened in December. In 1955 it is planned to put five or more centers into operation.

During the year several successful courses for the training of local personnel were given. Courses for social workers, for physicians, and for auxiliary nurses were also held.

Preschool medical examination in Venezuela

In its maternal and child health activities the Government of Paraguay, with cooperation from the Bureau and UNICEF, has embarked on the installation of ten health centers. Up to December 1953, four health centers were in operation, and during 1954 two more were inaugurated. It is estimated that by the end of the year, 79,000 people in the rural part of the area and 42,000 in the Capital had benefited by the services of these health centers. This estimate includes 5,360 mothers-to-be, 11,260 infants, and 16,100 children of preschool age (Paraguay-3).

The aim is to establish integrated public health services with a special emphasis on maternal and child health. This includes the organization of nursing services on both national and local levels and health education of the public at all levels. Clubs for mothers and allied groups which lend support to maternal and child health activities are located in each center. Short training courses and in-service training programs for local personnel at all levels have been developed. Special mention should be made of in-service training for nursing personnel conducted on different occasions in each of the health centers. Periodic seminars and discussions have been arranged to achieve team work and coordination.

The maternal and child health project in Colombia, described in previous annual reports, has continued its activities throughout 1954. Two nursing consultants were provided up to August 31, and one from there on. The Bureau also awarded a fellowship for nursing study in Puerto Rico (Colombia-4).

A course in obstetrical nursing, combined with public health nursing, had an attendance of 13. A demonstration course for lay midwives, held in Cali, was attended by 40. A health center for teaching purposes was organized in the same building as the School of Public Health. The equipment was provided by UNICEF.

For 1955 it is planned to expand the activities of this project and assist the Government in the development of an integrated health program, through the local health services of five regions. UNICEF will provide equipment and supplies and the Bureau, the technical services of a medical officer, a public health nurse, and a veterinary public health consultant. These consultants will act in an advisory capacity, assisting the Government in the planning and implementation of the program.

After long negotiations between the Government of Chile, UNICEF, and the Pan American Sanitary Bureau, a tripartite plan of operations was signed for a demonstration and training center for the care of premature infants. The purposes of this project are to lower the mortality rate among prematurely born infants by means of improved care, establish a demonstration and training center for professional and auxiliary personnel, develop standard procedures, and incorporate the care of premature infants into the existing over-all plan for family health services.

Plans for modernization of the center and in-service training for professional and auxiliary personnel have been initiated and arrangements made to have teaching begin in the second half of 1955 (Chile-12).

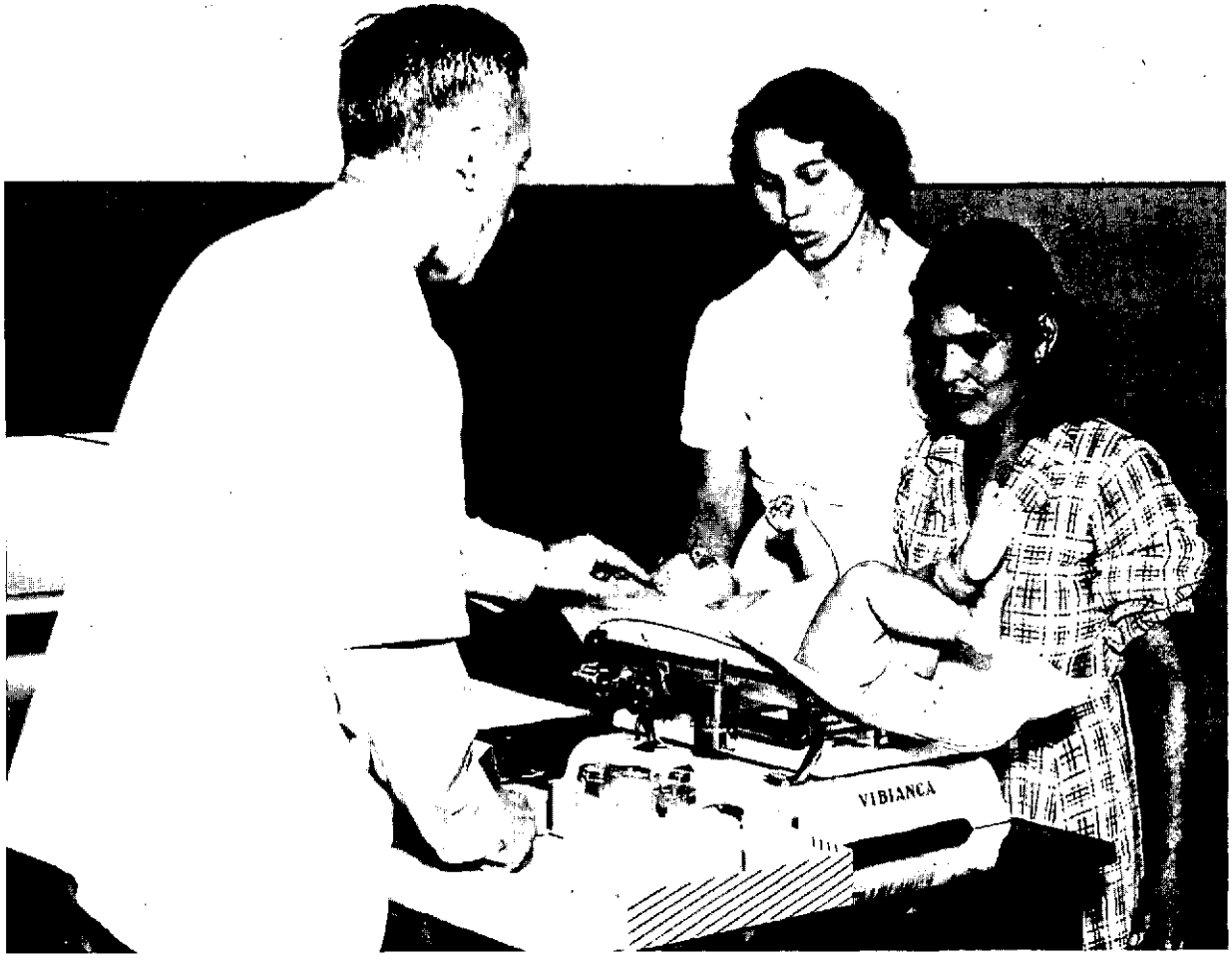
In Brazil consultation service has been furnished to both the National Children's Department and the National Health Department and, through these to several State Health Departments. Technical supervision and approval of the UNICEF-assisted health programs are carried out with Zone Office personnel. Outstanding developments during the year include the submission of requests by the National Children's Department for UNICEF and WHO assistance for the following kinds of programs: maternal and child health, environmental sanitation, health education, yaws control, and trachoma control. In close contact with the National Health Department and UNICEF, it has been possible to work out an integrated program of maternal and child health, environmental sanitation, and health education in nine northwestern states. Beginning in selected sanitary districts, the program is being gradually expanded. For the time being, yaws and trachoma control have been postponed

This photograph from El Salvador has been widely used as a poster

Modern clinics (Unidad Sanitaria) in El Salvador are housed in renovated buildings, remodeled under the supervision of sanitary engineers. Mothers and children chat and play while they wait their turn.

Nurse demonstrates elementary cleanliness

Maternal and child health work in Center in Paraguay



until a clearer picture can be obtained of methods and administration. The National Children's Department selected candidates for public health administration fellowships under this program (Brazil-3).

For some time the Government of Mexico has been seeking to extend its assistance from UNICEF maternal and child health services to rural areas. Mexico, in common with other countries, has a great many small rural communities which do not have any organized public health service. Out of a total of 90,603, only 900 have health centers. The situation is complicated by the fact that 63.3 percent of these communities have less than 100 inhabitants, and 27.4 percent have 100 to 500 inhabitants. As a full health center cannot be set up in each community, a system of extension health services is called for. Since 1936 a "regional", "auxiliary", and "communal" center system has served the region of Torreón (Coahuila), but a lack of trained personnel and equipment has prevented extensions to other parts of the country. The request to UNICEF was made for material assistance in extending a similar arrangement to other rural areas (Mexico-15).

In January 1954, arrangements were made with PASB/WHO for technical assistance to the project. Following this, discussions took place with the Mexican authorities, leading to the appointment of a short-term consultant for a period of three to four weeks to draw up a preliminary plan of operations. From March through June the nursing adviser worked closely with the Mexican authorities in the postgraduate training of nurse-midwives.

In March, the Executive Board of UNICEF approved an allocation for the further implementation of this program, and recruitment of a maternal and child health consultant was undertaken. In September the newly appointed consultant made an extensive field trip to the states in which the extension of maternal and child health services has been planned. Based on his report and on consultations between Zone Office personnel and the Ministry of Health, a tripartite plan of operations has been drafted for approval by WHO, the Mexican Government, and UNICEF. Program details are now under discussion with the health authorities of Mexico.

Nursing

A Feature of the Year

A hundred years ago Florence Nightingale finally succeeded in reaching the Crimean front to start her unique career as a pioneer nurse. Nursing conditions were then everywhere on a primitive level.

This year the work of this woman, whose name is synonymous with all that is good in nursing, was made the theme of World Health Day. Kits with pictures and inspirational appeals were widely distributed. From the press everywhere, and particularly from the press in the Western Hemisphere, came a heartening response in the way of hundreds of news items and editorials about nursing. The tributes were all the more fitting because of the tremendous need for nurses that still prevails, especially in Latin America.

A public health nurse on her daily rounds inquires about the health of an Indian mother and child in Peru

Even in the United States, where for close to 50 years nursing has been a career for educated young women and where there is one nurse for every 400 inhabitants, the shortage of nurses is still so acute that many hospital wards remain closed and new public health centers have never opened their doors.

A very rough estimate of the need for nurses in Latin American countries shows that an additional 30,000 professional nurses would not be too many to care for the present population. Fortunately, a good beginning has been made. There are now some 80 schools of nursing in Latin America recognized by the authorities of the countries in which they are situated.

The Present Program

A review of public health nursing projects under Pan American Sanitary Bureau supervision in 1954 reveals that 11 international public health nurses employed were active during the year in seven projects in Colombia, Ecuador, El Salvador, Panama, Paraguay, and Peru. Three of these projects (Colombia, Ecuador, and Peru) carried emphasis on maternal and child health and four (El Salvador, Panama, Paraguay, and Peru), as integrated health projects, paid attention to the whole health picture. In all of them assistance by the public health nurse advisers was given to national authorities in the organization of health services. In five of the seven projects, nursing services were organized primarily in rural areas.

It is becoming more and more evident that there is a vast shortage of nursing personnel at the project level. When new nurses are trained, a great deal of supervision is required. Every effort will continue to be made to meet this urgent need.

Nurse advisers participated in the setting up of new activities in public health nursing to be developed in Barbados, Bolivia, Colombia, Nicaragua, and Venezuela. Because of recruitment difficulties, the regional adviser in public health nursing from Washington spent approximately six weeks on nursing activities in the Dominican Republic (Domiiican Republic-4).

During 1954 the regional adviser in public health nursing assisted the health authorities of Haiti in organizing a Nursing Section in the Department of Public Health of the Ministry. The Section went into operation in October.

In Paraguay a 1954 development is that the nursing program has by now become a generalized service (Paraguay-3). This has been a gradual growth. Present status reflects the groundwork done in the past when, since 1951, the Bureau collaborated with the Government of Paraguay in developing its health centers, with emphasis on improving nursing procedures. The following gains have been achieved:

1) An in-service education and supervision program has been established, with regular meetings of directors and head nurses of health centers.

2) The health center at Caacupé is to include in-service patients, particularly maternity cases. Three midwives who joined the staff of this center are being prepared for the projected work.

3) The position of a supervising nurse in the program was established. A former fellowship holder who returned from Brazil is to occupy this position.

4) Discussions with representatives of the graduates from the three schools of the Dr. Andrés Barbero Institute have improved relationships between nursing personnel and joint planning for future activities is in progress.

5) Monthly meetings were held with the nursing consultants of the Inter-American Cooperative Public Health Service (SCISP) to coordinate work being done by public health nursing personnel in the various services.

6) The nursing manual, prepared originally for the course for auxiliary nursing personnel, has been used to good effect and is now undergoing revision to meet current demands.

In addition, nursing work played a prominent part in several projects in which major attention was given to maternity and child care. Information on these projects is given on pages 82-84.

Seminar for Nursing Instructors in Costa Rica

A technician determines serum protein by the density gradient technique

Nutrition

The Work of INCAP

In Central America and Panama the chief agency in the field of nutrition is the Institute of Nutrition of Central America and Panama (INCAP), founded in 1946 (AMRO-54). INCAP is a joint enterprise supported by the governments of Central America and Panama and administered by the Pan American Sanitary Bureau.

Nutrition is very close to the heart of public health. It is an area in which agriculture cooperates with public health. Joint efforts of the type now in operation in Central America and Panama furnish the answer to the question of how countries can successfully undertake welfare jobs too big for one country alone. The six nations collaborating in this Institute have set an example of effective work which carries with it immediate health benefits for the people concerned.

During 1954 there was continued progress in all phases of the INCAP program. Headquarters were transferred on September 11 to a larger building especially constructed for the purpose by the Government of Guatemala. Nicaragua formally became an active member in February. This brought the total membership to six. All the countries of Central America and Panama are now members.

Dietary surveys in Panama, Nicaragua, Guatemala, and El Salvador confirm the prevalence of diets deficient in vitamin A, riboflavin, and proteins of good biological value. Laboratory studies show low values for riboflavin and alkaline phosphatase, normal or high values for protein and vitamin C. Although frank deficiencies were rare in the survey groups, many physical findings compatible with a low vitamin A intake were encountered.

Intensive studies of the infantile pluricarencial syndrome (kwashiorkor) were initiated. Improved diet, without any other kind of treatment, sufficed to bring about satisfactory response. Upon initial examination the children had skin and hair changes, were grossly underweight, and had other symptoms. Seven cases autopsied showed lesions in the liver and pancreas.

Field trials of administration of vitamin B_{12}, aureomycin, penicillin, and penicillin with added vitamin B_{12} were made and the results published. Aureomycin appears to have produced a significant initial response in two villages but this effect wore off in the second six months. The response to penicillin and to penicillin plus B_{12} was negative except on one village.

Work was carried out on the enrichment of tortillas with locally available food products, the effect of lime treatment on the nutritive value of corn, and the development of a vegetable protein mixture for infant and child feeding.

In animal nutrition, in cooperation with the National Agriculture and Livestock Institute of Guatemala, a number of indigenous vitamin A sources were studied. The most important of these was ramie, a plant of high nutritive value which grows well and may be used for grazing or forage.

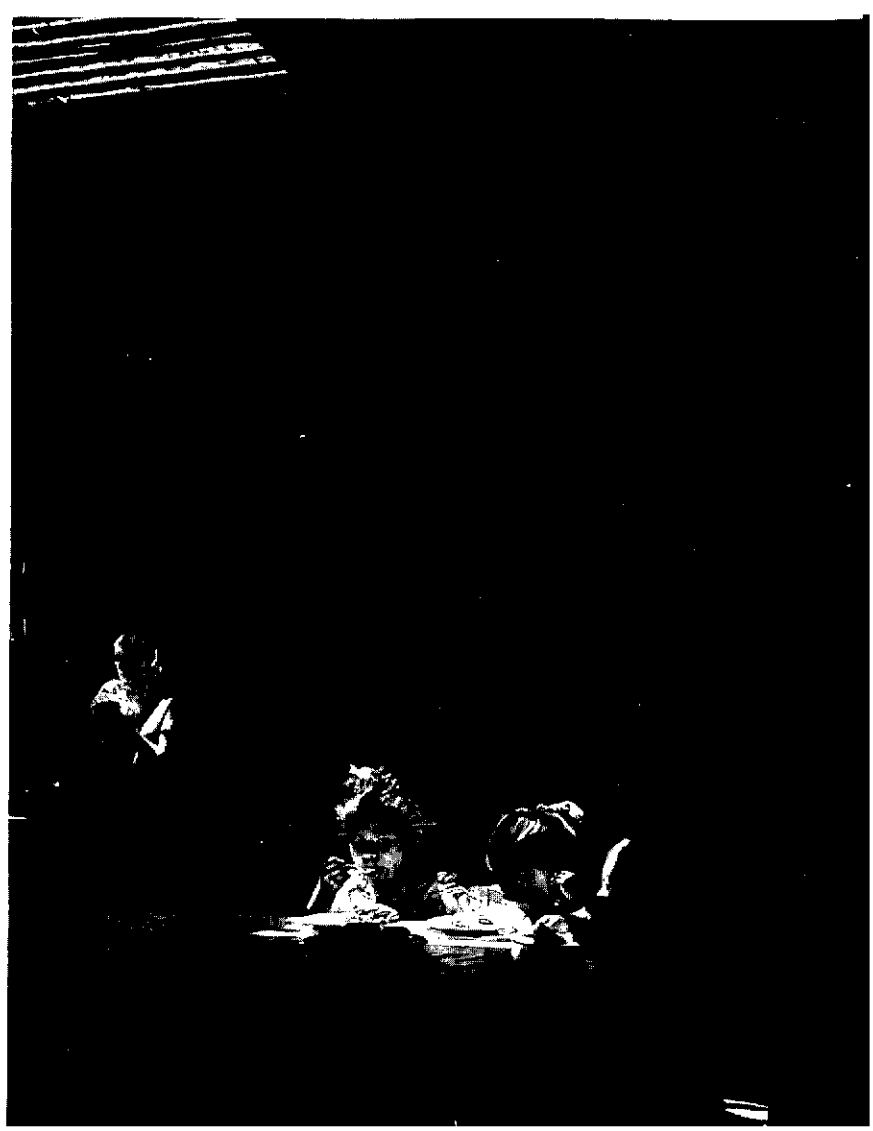
Endemic Goiter

Surveys of endemic goiter were completed in all departments of both Honduras and Guatemala (AMRO-87). In Honduras 12,644 persons were examined and goiter was found in 22.6 percent. Corresponding figures in Guatemala were 39,000 persons examined with a prevalence of 38.7 percent. A decree requiring the iodization of all salt for human consumption in Guatemala was signed on October 21. The potassium iodate successfully demonstrated by INCAP in 1952 to be effective for the control of endemic goiter will be used. Studies made have shown that the added iodine, under ordinary conditions, is stable without special packaging for a period of at least eight months.

Other Work

In Ecuador, the Bureau continued during 1954 its assistance to the National Institute of Nutrition (Ecuador-53). The Institute has done effective work in analysis of local food products. It has also conducted endemic goiter investigations and clinical studies on nutrition. Advisory services were furnished by the Zone Office as well as by visits of INCAP staff.

In Cuba a project on bromatology, or the science of foods and dietetics, was terminated in 1952. A 1954 reverberation is that the recommendations resulting from this early work have been incorporated in the national Food Control Regulations and made a part of the planned revision of the present Cuban Sanitary Code.



Other Activities

Public Health Dentistry

A public health dentist, appointed in September by the Pan American Sanitary Bureau, proceeded to Michigan for a Master of Public Health course prior to taking up his duties in 1955. This fellowship was financed by a grant from the Kellogg Foundation. Public health dentistry is one of the fields in which general and specific information from various countries is urgently needed (AMRO-72).

As part of the project Peru-10 (see pages 82-83), fluoridation of water supplies was undertaken after a meeting with the Chief of the Dental Division of the Ministry of Health.

Public Health Laboratories

More emphasis is being placed on public health laboratories as an integral part of health services. At present there is active a public health laboratory project in Haiti as well as preliminary work on laboratory phases of public health work in integrated programs in the following countries: Dominican Republic, Ecuador, Nicaragua, Panama, Paraguay, and Peru.

The project in Haiti deals with the training of technicians for the public health laborabory. A fellowship was given to one of the technicians to study parasitology. The purpose is to obtain a trained head of the parasitology section of the public health laboratory to be established next year (Haiti-9).

Mental Health

A Pan American Sanitary Bureau consultant in mental health reported on follow-up visits to several countries which participated in the seminar on alcoholism held in Buenos Aires in May 1953. A growing number of physicians are interested in this problem, and a considerable amount of research has been done. Increasing attention paid to alcoholism from the point of view of health education indicates that basic surveys are needed to determine "drinking patterns". Arrangements are under way for another mental health seminar in 1955.

Cultural Anthropology

A cultural anthropology project (AMRO-29), active during the year, will be extended into 1955. Collection of data is almost complete. The anthropologist is preparing reports on El Salvador, Guatemala, and Honduras; those on Nicaragua and Panama are finished. These are slated for publication in the *Bulletin of the Pan American Sanitary Bureau.*

The reports on the Ica Health Center have aroused wide interest. Requests for the published articles Child Feeding and Food Ideology in a Peruvian Village,

and Pregnancy, Childbirth and Midwifery in the Valley of the Ica continue to come in.

Blood Banks

A consultant went to Uruguay to advise the Government on the setting up of a national blood bank. His report contained information of general application also to other countries. A survey, of a more preliminary nature, was also made in Paraguay (Uruguay-3, Paraguay-11).

Local Health Services

In El Salvador, work in a health demonstration area was continued during 1954. Between March 1 and September 1 a second training course for sanitary inspectors was held with 22 students completing the course. Beginning on October 18 a third course for the joint training of sanitary inspectors and nurses was given to 12 nurses and 18 inspectors of whom three were WHO fellows from Nicaragua and Guatemala. During the year there was also given an in-service training course for local personnel in which there were enrolled five doctors, 10 nurses, 12 inspectors, five teachers, and 20 helpers. Three sanitarians from the first course have already been assigned to the National Health Department and are supervising the work of sanitary inspectors throughout the country (El Salvador-5).

In 1954 a large variety of normal public health activities were carried out in El Salvador in the health demonstration area which contains 75 percent of the sugar plantations and 10 percent of the cotton plantations in the country. The various agricultural occupations of the area result in a large floating population which makes housing an extremely difficult problem. Trained agricultural experts have now been assigned to the area.

Attendance and normal activity at Rural Sanitation Post No. 5, Health Demonstration Area (El Salvador)

The first visit to a rural clinic includes a complete physical exanimation of the patient by the physician, who also advises expectant mothers on adequate diet and physical care. (El Salvador)

One of the important developments in the country in recent years has been the provision of medical care through social welfare services. Funds are obtained by increase in income tax. Amounts spent by the large landowners for the benefit of workers, however, is tax-free. At the beginning, trainees for educational work were hard to find; now candidates are in large supply and many of them have a secondary education.

A consultant for the drafting of a sanitary code for the Dominican Republic, following a request of the Government, went to that country in February 1954. A final report was presented to the Government in July, 1954, and steps have been taken to convert this draft into the official sanitary law of the country (Dominican Republic-5).

Assistance to the National Institute of Hygiene of Guayaquil was continued throughout 1954. A consultant gave advisory services to various departments of the Institute, especially to the bacteriological laboratory, and also helped train local personnel. Recruitment of an animal colony consultant and a food and drug chemist is under way (Ecuador-11).

A project in Peru aims at the integration and expansion of public health services in Callao. This Public Health Demonstration and Training Center has been planned on a five-year basis (Peru-13).

During 1954 several departments at the Center, particularly those for communicable diseases and nursing, expanded their activities. A promising effort has been made to have hospitals and private physicians improve the reporting of communicable diseases. Four additional nurses were appointed. Health education, school health, environmental sanitation, and especially nursing training activities were also expanded. During this year, the WHO provided the services of two experts and the equipment for water fluoridation.

Guatemala is studying and, with the assistance of PASB/WHO, preparing plans for an extensive reorganization of the public health services in the country. This reorganization is carried out in two parts: (1) complete reorganization of the central public health administrative unit; (2) reorganization of the rural public health services (Guatemala-8).

In September a public health physician was appointed by the national Government and in October further appointments were made for the posts of sanitary engineer and public health nurse.

Following numerous visits, and after due consultation, it was decided to use the municipality of Amatitlán for the model sanitary unit and training center, and various other sites were chosen for the other units.

Preparation for intensive work in Nicaragua, related to reorganization and development of health services in rural areas, is now in full swing. Specific plans for reorienting environmental sanitation, extending local services, and strengthening the central health department are under way (Nicaragua-3).

A short-term consultant visited Brazil for two weeks, to analyze the existing situation with reference to the control of endemic disease in rural Brazil and to present recommendations regarding the type of organization necessary to combat such maladies. The report by the consultant is now under study by the Ministry of Health (Brazil-15).

Panama is the site of one of the first large projects in which full account is taken of the directives of the governing bodies of PASB/WHO to concentrate on long-term, integrated activities strengthening the national health services (Panama-1). This project, which started at the end of 1952, has an annual allotment of about $75,000 and provides the services of a health administrator, a nurse, a sanitary engineer, and a laboratory adviser; UNICEF's contribution through 1954, mostly in supplies, amounted to $65,000. The Government allocated the sum of $134,000 as part of the permanent regular 1953 budget. This sum was largely devoted to increasing the number and salaries of local and central personnel. Full support has been given by the national authorities to developing and strengthening the structure of the central public health department, which experience has shown to be indispensable to the continuation and expansion of the work in the rural area, representing 64 percent of the 805,000 population and 55 percent of the working population.

Another outstanding feature of the development of the project was the gathering by the international team, in the first year, of a complete dossier of information, a model of its type, on the health and related conditions of the country. There has been wide and intelligent use of this information in carrying out the program by the national authorities and participating workers. In a recent visit by the Chief of the Division of Public Health of the Pan American Sanitary Bureau, steps for further progress were discussed with national authorities along these main lines: gradual creation of full-time, well-paid, stable positions in the health department, leading toward the development of a public health career service; full use and support of the new School of Medicine, which will graduate the first doctors in Panama in 1956 and, strengthening of the School of Nursing.

Plans for the immediate future include: development of health centers, for which the nucleus of staff has already been trained, with special attention to the model center at Chorrera and to those having maternity services; progress in the organization of the basic sections of the central health department; organization of a central laboratory, and intensification and coordination of the malaria campaign.

EDUCATION AND TRAINING

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The activities of the Pan American Sanitary Bureau that have to do with education and training are manifold, but in general these activities can be reviewed under four headings:

I Promotion of Professional Education
II Fellowship Program
III Education of the Public
IV Conferences, Publications, and Exhibits

In response to directives from the Pan American Sanitary Bureau governing bodies, chief stress in all educational work is on giving aid in the preparation of personnel in charge of the many projects in which the Bureau is active. The educational program is, therefore, as many sided as the work itself. In 1954 the continuation of existing programs and maintenance of the previously established general pattern have been the keynote rather than the development of new projects. This made it possible to give some much needed attention to consolidation of educational projects already inaugurated.

During 1954, established institutions for education of medical, public health, and nursing personnel have been aided directly and indirectly; special courses, seminars, and conferences have been organized; reference and teaching material has been supplied; exchange of knowledge and ideas among the schools has been facilitated; fellowships have been provided to students who could not otherwise attend institutions of higher learning; and travel grants have been made to faculty members of such institutions to give them additional background for adapting their instructions more closely to the needs of students from other countries. In addition, special attention was devoted to the education of the public and to an extensive publication program.

Professional Education

Medical and Public Health Education

With the objective of bringing together information on what governmental and nongovernmental agencies and foundations were doing in the development of medical education and fellowship programs in Latin America, it was decided in 1952 to establish at the Bureau a Medical Education Information Center (MEIC). The purpose of this Center is to receive, collate, and circulate information regarding medical schools, plans for aid, and fellowships awarded. Some of the agencies cooperating with MEIC are: the Rockefeller Foundation, W. K. Kellogg Foundation, Institute of Inter-American Affairs, Unitarian Service Committee, Inc., Division of International Health of the United States Public Health Service, Association of American Medical Colleges, and the Council on Medical Education and Licensure of the American Medical Association.

During 1954 the MEIC continued its operations, making slow but steady progress. All information coming into the MEIC has been transferred to a card system which reflects with facility the picture in any particular country


MEXICO
Monterrey
S. Luis Potosi
Guadalajara
Leon
Morelia
Mexico City
Puebla
Merida
Campeche
Oaxaca
Havana
CUBA
HAITI
Port-au-Prince
DOMINICAN REPUBLIC
Ciudad Trujillo
HONDURAS
Tegucigalpa
GUATEMALA
EL SALVADOR
NICARAGUA
Leon
Granada
Cartagena
Maracaibo
Caracas
Merida
PANAMA
Medellin
VENEZUELA
COLOMBIA
Bogota
Popayan
Quito
ECUADOR
Guayaquil
Cuenca
Belem
Recife
PERU
Lima
B R A Z I L
BOLIVIA
La Paz
Cochabamba
Sucre
Salvador
Belo Horizonte
Niteroi
PARAGUAY
São Paulo
Rio de Janeiro
Asuncion
Curitiba
CHILE
Porto Alegre
Cordoba
Rosario
Santiago
URUGUAY
Buenos Aires
Montevideo
La Plata
ARGENTINA
Concepcion
SCHOOLS OF MEDICINE AND PUBLIC HEALTH
IN LATIN AMERICA

or field of training and which allows ready identification of individual fellowships.

In the training of teachers of preventive medicine no awards were made to department heads, but travel grants were given to two younger members of the Department of Preventive Medicine in the University of Buenos Aires. Other fellowship awards made were for training of a Professor of Physiology for the University of Haiti and of an Associate Professor of Psychiatry at the University of Chile (AMRO-18).

Most of the work with medical schools under this project is carried out by the Zone Offices. A detailed outline of how methods of aid and plans of action by the Bureau might be developed was distributed early in the year. A similar outline with regard to schools of public health was distributed at the same time.

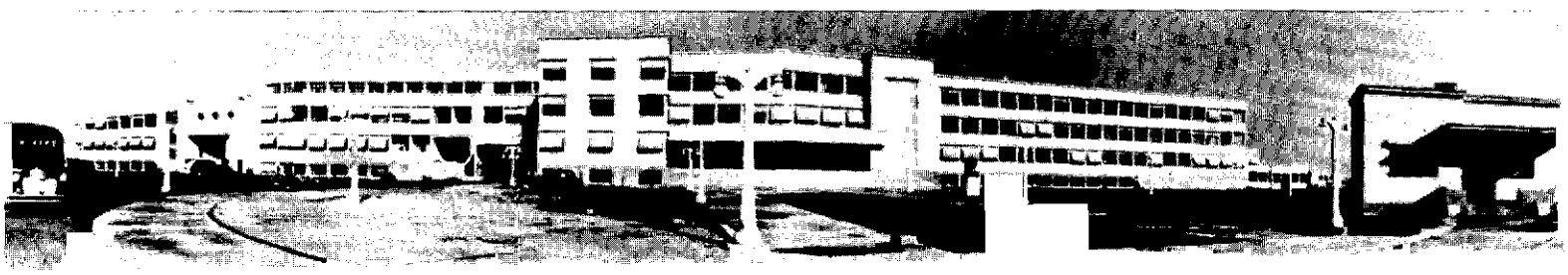
In the field of professional education in public health, activity was extensive particularly in regard to exchange of experiences and the broadening of contacts among faculty members of schools. Twelve travel grants were awarded during the year and an additional seven persons, whose awards had been made in 1953, made their trips in 1954. By the end of the year, all the schools of public health in the Continent which accept foreign students had participated in this program.

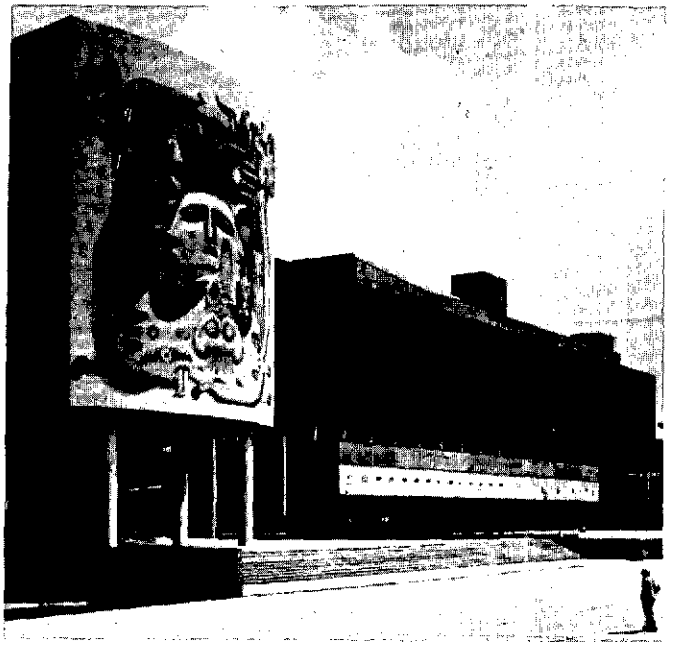
Travel grants were planned for United States teachers specifically for the purpose of familiarizing them with the social and health conditions which students from other countries have to face and with the type of health services in which they work. Faculty members of Latin American schools have also visited other schools of public health to observe teaching methods and exchange ideas about curriculum. A useful device has been to arrange to have teachers visit active former fellowship holders and so have an opportunity to observe success of previous teaching. At the same time the former fellowship holder can offer suggestions for still further improvements of the fellowship program.

Another activity under this program is to make available visiting professors in special subjects. It is expected that the consultant who visited Chile in connection with a Bureau project (AMRO-10) will spend some time in 1955 in São Paulo, working with the School of Public Health and probably with the Medical School as well.

Latin American schools of public health have been asked to assemble teaching outlines and teaching materials for interchange purposes. By the end of the year, such material had been prepared by the school in Mexico. Continued uncertainty as to the leadership in some of the schools made it desirable to postpone the hoped-for meeting of the Latin American deans. One of the latter, newly appointed, made an extensive trip to the other schools in Latin America and to selected schools in the United States.

The School of Hygiene in Santiago, Chile, is located in the right wing of the Bacteriological Institute, illustrated below.





School of Medicine in the University City of Mexico

Certain basic teaching equipment was provided for one of the Latin American schools under this program. Two more received teaching equipment, particularly connected with environmental sanitation (AMRO-1). A large number of copies of the International Sanitary Regulations was supplied to all the schools in the Americas for use of students.

It is difficult to estimate the accomplishment of this project. Improvement in educational techniques is not easily measured and effect on students may take years to show. However, greater international consciousness is already clearly evident, there is increased knowledge concerning teaching programs in other schools, and there is greater awareness of the importance of relating theory to field practice. On the other hand, mutual criticism and adjustment of curricula are still not prevalent, local examples of health problems continue to predominate at each school, and new methods to compensate for language and cultural differences still need to be discovered. The process is slow, but the general trend is forward.

Another project expected to contribute to the betterment of medical education aims at bringing together at a working conference all the medical schools in Latin America. The preliminary groundwork for such a conference has been laid. Thirty-two answers were received to letters of inquiry sent to 64 schools in December 1953. There was obviously great interest in a seminar on preventive medicine and a strong desire to participate by all who responded. Financial participation could be expected from only a very small number, although one school, despite its own limited resources, did make a small appropriation.

Two short-term consultants were recruited to start work early in 1955, and preliminary plans were made to hold a first seminar in July or August and a second about six months later. The first seminar will include eight countries in South America and the second all the other countries in Latin America.

A further project has to do with the teaching of pediatrics, a major phase of clinical education. It involves, first of all, a survey of pediatric education similar to that previously carried out in the United States, Canada, Europe, Australia, and New Zealand. Preliminary planning for carrying out this project in 1955 consisted in recruiting a short-term consultant. A circular letter was sent to all professors of pediatrics in the United States asking for information on senior staff members who could speak Spanish. Participation by the International Pediatric Association, the American Academy of Pediatrics, and other regional pediatric associations was also sought.

Nursing

At the turn of the century the superior type of nurse exemplified by Florence Nightingale was attracting widespread attention. Several physicians from Latin American countries, while studying abroad, saw the work of these trained nurses and became interested in obtaining similar preparation for young women in their home countries. On their initiative, British nurses were persuaded to go to Argentina, Chile, and Uruguay to organize schools. A school was also founded in Cuba, patterned on United States models.

A second impetus was given to nursing in Latin America by World War I. Latin American physicians, forced to give up their European tours, came to the United States for further medical study. These physicians approached philanthropic institutions for help in founding modern schools of nursing in Latin America. Through fellowship programs and direct financial aid in the construction or equipment of schools of nursing in several countries, philanthropic foundations in the next 30 years became an important early influence in the development of modern nursing throughout the Continent.

World War II touched off another wave of interest. Seven countries in Latin America founded schools for the first time, others added new schools and reorganized existing curricula to provide teaching in public health. In Brazil alone, since 1940, at least 15 new nursing schools have been established.

From the beginning, nursing education in Latin America has been the concern of governments. Nursing schools are often located in government supported universities and follow the regulations and courses of the government schools. In Chile, candidates to the school of nursing must complete the same high educational requirements as candidates to the school of medicine.

Nursing Education

During the year, considerable special attention was given to nursing. Every year on Health Day, April 7th, some aspect of public health work is featured by the World Health Organization throughout the world, with the Pan American Sanitary Bureau featuring the same subject throughout the Americas. This year the subject was nursing, the specific occasion being that 100 years ago Florence Nightingale, after reaching the Crimean front, started her unique career as a pioneer nurse.

The nursing program of the Bureau began in 1941, but it was not until after World War II that requests for aid in establishing public health nursing programs became frequent. With funds supplied by the United States through its Office of the Coordinator of Inter-American Affairs, the Bureau gave Brazil, Colombia, Ecuador, Guatemala, Haiti, Paraguay, and Venezuela technical assistance in establishing new schools of nursing, reorganizing older ones, and developing public health nursing services.

In September 1947 the Bureau expanded its nursing program. Consultants in nursing visited all the American Republics to meet the leaders in nursing and to become acquainted with the national nurses organizations

Nursing graduation ceremony in Costa Rica.

and problems. Data collected during these visits were compiled and made available for reference.

In February 1949 the *Bulletin of the Pan American Sanitary Bureau* began publishing articles of interest to nurses. The Bureau early became a clearing-house for nursing texts in Spanish, publishing among many items a glossary of nursing terms in English, Portuguese, and Spanish. It has promoted fellowships, short-term concentrated instruction, consultant advice and regional nursing congresses where nurse leaders of this Hemisphere meet to exchange ideas.

One aim of PASB/WHO nursing education activities throughout the hemisphere has been to develop leadership qualities among nurses in Latin American countries. For decades fellowships have been given by various organizations to individual young women to prepare themselves for a nursing career, but further assistance is needed to help returned fellows make the best possible use of their newly acquired knowledge.

Outstanding work has been done in Costa Rica. As early as 1951 a nursing education consultant completed a report on the survey of the nursing school in Costa Rica and, following the signing of an agreement, a team of four international nurses began work in July of that year (Costa Rica-3).

In 1954 a class of 56 nurses received diplomas from the School of Nursing. This is the first class to graduate under the reorganized program. These nurses completed three years of training. Two nurse instructors on fellowships finished their period of study abroad and joined the faculty of eight national instructors who had previously received additional preparation under this program. Two nurse advisers were added to assist in the

integration of public health and mental hygiene into the basic curriculum and to guide student nurses in establishing public health and psychiatric nursing affiliations.

A complete review of the financial structure of the School of Nursing was made by national personnel with the assistance of international consultants from the Pan American Sanitary Bureau.

A postgraduate course for the preparation of nurse-midwives was inaugurated. The first course, of six-months duration, was completed in December of this year. Ten nurses were prepared in this specialty and three national instructors were given guidance in nurse-midwifery preparation.

In the program for the training of auxiliary nursing personnel, initiated in 1953 under the guidance of an international nurse adviser, a second course in a 1,400-bed hospital in the San José area was completed and the program extended to include such training also in a 170-bed hospital in one of the provinces. Initial arrangements have been made to start a similar course in a 260-bed hospital in another provincial area.

Further progress in 1954 included establishment of auxiliary nurse preparation under an official government organization with registration, a more clearly defined line between professional and nonprofessional nursing personnel, a regulation uniform for the auxiliary nurse, and a standard program of instruction to be used throughout the country.

Within the year, three doctors and five nurses on travel grants sponsored by the World Health Organization, visited this project in Costa Rica and followed planned programs of observing the work being carried out under agreement between the Costa Rican Government and the World Health Organization's Technical Assistance Program. The visitors represented six countries: Mexico, Haiti, Dominican Republic, Colombia, Bolivia, and Chile.

At present there are five international nurse advisers assigned to the project. At the request of Costa Rican health officials, plans are under way for studying the advisability of annexing the School of Nursing to the University of Costa Rica.

In Bolivia aid was given to the National School of Nursing. Without interrupting the regular work by which 15 postgraduate nurses received their certificates in 1954, intensive efforts were made to expand the curriculum (Bolivia-5).

The new subjects added to the course emphasize the social aspects of nursing. Added also was instruction in ward administration which is of special interest to graduate nurses. This expansion looks toward the future integration of health programs as planned by the Government. During the year the services of two international nurses were provided and 10 fellowships for basic and postgraduate studies were awarded by the Bureau.

A series of nursing congresses, workshops, and seminars have been held since 1949 to give nurses throughout the Americas an opportunity to discuss ways and means of solving common problems within the educational, social, and economic framework of Latin America or, more specifically, of individual countries in Latin America.

Since 1949 the Bureau has organized three regional nursing congresses. The first two were held in Costa Rica and Peru for the countries in the northern and southern halves of the hemisphere respectively. In 1953 all the countries in the Americas were invited to the third congress held in Rio de Janeiro. These congresses have provided a welcome forum for national nursing associations and a most useful medium for direct exchange of ideas. For these congresses the Bureau handles organization and arrangements, but attendance of delegates is a responsibility of governments and individuals.

National nursing associations in 19 countries in Latin America are participating in planning the Fourth Regional Congress, to be held in Mexico in September, 1956. The associations have been consulted as to which topics they wish to discuss. A deadline of December 31, 1954, was set for receiving suggestions. Up to the end of the year 17 countries had answered, of which 14 wanted to have two topics discussed. The topics most frequently suggested and therefore chosen for discussion in 1956 were: (1) organization, administration, and curriculum planning for basic programs in nursing, and (2) organization and administration of nursing services.

Less ambitious than the congresses are the seminars likewise sponsored by the Bureau. A fourth series of seminars on nursing education was inaugurated on November 3 in Mexico City (Mexico-11.3, 1-12, AMRO-46.4). From there meetings adjourned to Zimapán, three hours away by car. As in the past, accommodations for the group had been arranged in a single hotel so that meetings might be supplemented by informal discussions. Ten Mexican nurses and eight from other countries (Costa Rica, El Salvador, Haiti, Nicaragua, and Panama) were present. The participants discussed the type of personnel needed for nursing activities in any given country and the data which must be obtained on the socio-economic, health, and educational conditions of a country before plans for nursing education can be made.

The seminar was divided into three two-week periods. During the first period there were lectures and round-table discussions on the socio-economic, educational, and cultural characteristics of Mexico. Main topics of the following two weeks were the health conditions and nursing resources of the country, while in the final period a university level school of nursing curriculum was planned to meet the needs of Mexico.

Facts brought out during the seminar which have a direct bearing on the question of nursing education in Mexico may be summarized as follows:

1) Despite attempts to obtain basic factual data on numbers of nurses and auxiliary nursing personnel working in Mexico, such information is not yet available. The attempts to obtain this information, however, have stimulated the interest of government statistical and health authorities to make a survey which will furnish the needed information.

2) Four hundred questionnaires were sent to nurses and auxiliary personnel in various parts of the country to ascertain activities performed by these nurses and their background training. The response was excellent. The 360 replies showed that there is practically no difference in the nursing activities performed by those classified as professionals and those classified as auxiliaries.

Nursing workshop, Mexico City, small group session and advisers.

3) It is not yet possible to say how many young women graduate in Mexico from secondary schools (nine years of schooling) or complete the "preparatory" education and obtain the degree of "bachiller" (12 years). Information compiled by a UNESCO consultant in Mexico shows that 51,653 girls completed primary education in 1951 (six years of schooling), 7,000 girls entered secondary school in 1952, and 1,671 girls were enrolled in the two-year preparatory school in 1951.

It seems likely that in Mexico, with its population of some 30,000,000, from 800 to 1,000 young women may finish 12 years of schooling to obtain their "bachillerato". It seems reasonable to consider 10 percent of those obtaining a "bachillerato" may become candidates for the school of nursing. Thus, at present, about 100 young women with 12 years of schooling might be interested in entering a school of nursing at the university level.

The National Autonomous University of Mexico is insisting that all schools having university status require the "bachillerato" for entrance or lose that status.

With the above in mind, it was the conclusion of the group that Mexico could properly support no more than two or three schools of nursing on the university level. It seemed advisable that these schools concentrate on preparing nurse instructors for the nonuniversity schools and construct their curricula with that in mind.

Based on the educational picture for women in Mexico, it was the consensus that the bulk of nursing education given in schools under the auspices of the Ministry of Education should limit entrance requirements to nine years of schooling, that is, termination of the "secundaria".

The final report of this seminar which terminated on December 14 will be published shortly.

Definite progress has been made in Latin American postgraduate nursing education in 1954. Heretofore, nurses who could speak only Spanish or Portuguese have had difficulty in preparing for teaching and supervising positions.

The National Health Service in Chile and the School of Hygiene in Santiago are cooperating in establishing a university course for postgraduate nursing studies to which not only Chilean nurses, but nurses from other countries in Latin America may be admitted.

The agreement providing for assistance in the establishment of advanced courses in nursing in the School of Hygiene in Santiago, Chile, was signed on October 27. Under the agreement, the School of Hygiene creates a Department of Nursing, with a nurse as full-time head of the department. The school will give courses in advanced nursing education to prepare national and foreign nurses as instructors of schools of nursing and as supervisors and administrators of nursing services in hospitals or in the field of public health.

Fellowships Awarded in the Americas, by Country of Origin and Country or Region of Study

(Totals in the first vertical column do not include duplicates resulting from 75 individuals who studied in more than one country)

Country of Origin	TOTAL, STUDENTS	Country of Study in the Americas																						Study in Europe
		Argentina	Bolivia	Brazil	Canada	Chile	Colombia	Costa Rica	Cuba	Dominican Republic	Ecuador	El Salvador	Guatemala	Haiti	Mexico	Nicaragua	Panama	Paraguay	Peru	United States	Uruguay	Venezuela	British Territories	French Territories	
Total, all Countries	319	5	2	59	6	60	6	7	20	2	13	8	21	4	31	1	25	2	5	68	4	25	13	1	6
Argentina	10			3	1	6														2					
Bolivia	9					4					2									2		3			
Brazil	36			24		2									1					7		3			
Canada	2																			1					1
Chile	9	1	1	5							1				1			1		7					4
Colombia	7			1											1		1			1		3			
Costa Rica	17			2	1	3							4		2		3			5	1	1			
Cuba	6			1		2									1		2								
Dominican Republic	17			1		4			1				1		4		2			3		1			
Ecuador	6					1														2		4			
El Salvador	12					4			1		1				1		2			3					
Guatemala	12			1		2			2		1	1			2		2			3					
Haiti	13			1	3	1		1				3			5		3			3		1		1	
Honduras	9										1		5				2			1					
Mexico	31	1		1	1	1		2	5	1			3	1	8					10	1	2			1
Nicaragua	8			1				1				2	3		2										
Panama	14			1		2			1		1		4		2					3					
Paraguay	25	2		7		12	1				3									3	1	1			
Peru	11			2		5														1		3			
United States	14	1	1	4		2	4	3	5	1	3	2	1		1	1	2	1	5	2	1				
Uruguay	14			3		7														2		2			
Venezuela	7			1		2	1		1								1			2					
British Territories	27								4					3			4			4			12		
French Territories	1																			1		1			
Netherlands Territories	2																1						1		

Directors of the four schools of nursing and other leaders of the profession in Chile drew up the plan to be followed in setting up the first course. Collaboration of all schools of nursing, hospitals, and public health services has been assured. Seven students from other countries and five from Chile will attend the first course to be given in 1955 which will emphasize communicable disease nursing. It is planned that year by year the types of programs offered will be extended, until eventually the school will offer all phases of nursing. Such a goal can be achieved in Chile largely because:

1) All nursing education in the country has been on a university level for approximately ten years.

2) Many nurses have been prepared for positions of administration, supervision, and instruction through fellowship study in the United States and Canada under grants from the Rockefeller and Kellogg Foundations, the Institute of Inter-American Affairs (FOA), and the PASB/WHO.

3) Last, but not least, the members of the medical profession in hospitals, public health services, and the School of Hygiene, have been receptive to the aspirations of nurses and helpful in assisting them to arrive at solutions of their problems.

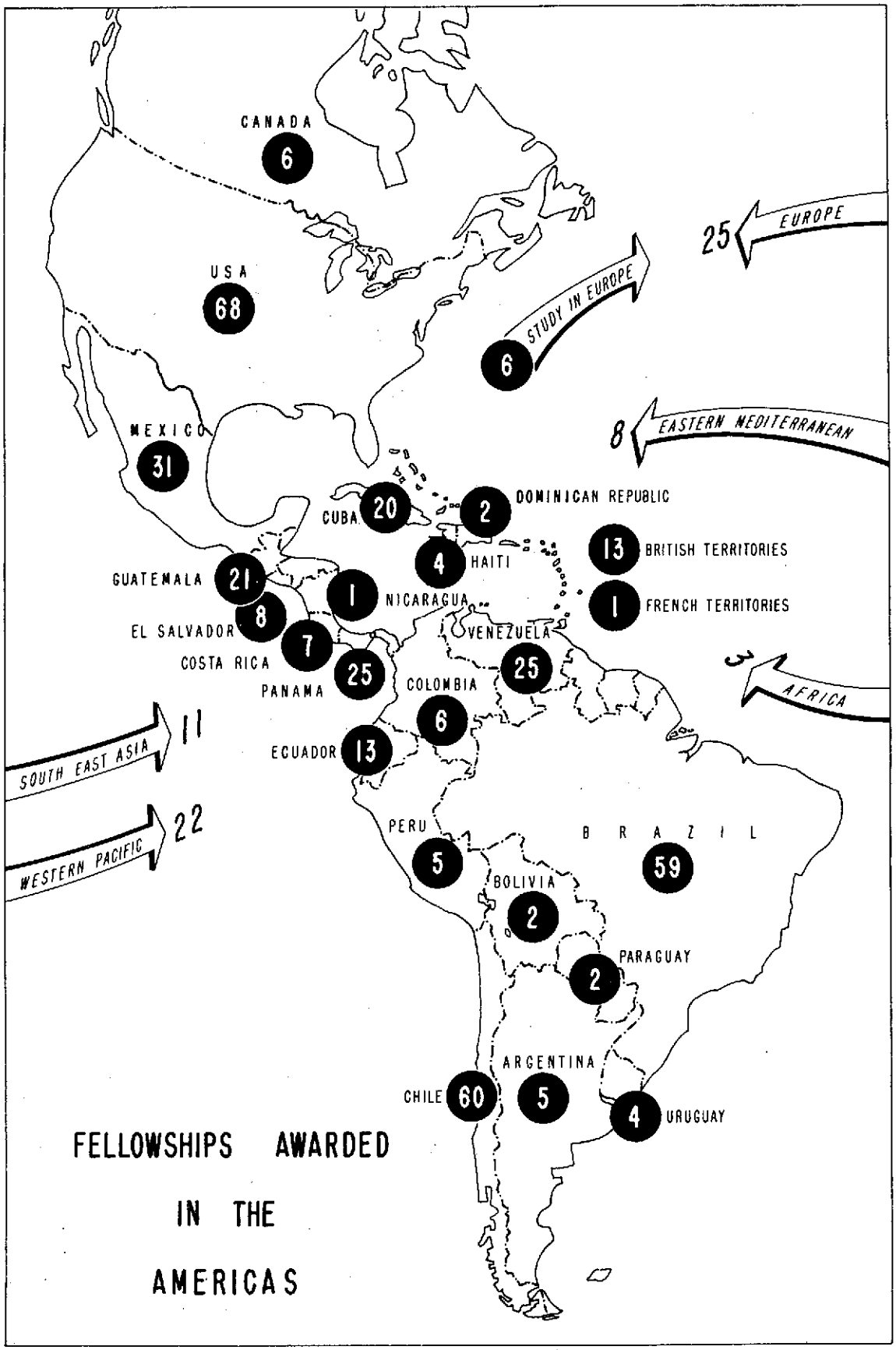
Fellowships

Distribution of Fellowship Holders

The use of fellowships as a means of promoting international collaboration in education has long been recognized. As a rule fellowships provide training not locally available. In previous years, fellowship funds were assigned chiefly on a country basis.

The year 1954 marks the first full year in which major emphasis has been placed on planning fellowships for the specific purpose of training national personnel to carry on programs of service in which the Pan American Sanitary Bureau and the World Health Organization were collaborating with the Governments. General fellowships for the strengthening of national health services have also been awarded, and specific awards have been made to attend courses, some short and intensive, others of full academic status, organized within the assistance program.

Details of origin and distribution of fellowships are given in the map, table, and graph on the following pages. By far the greater part of the fellows, 319, came from the Americas; 69 came from other regions to study in the Americas. All of the 319 students from the Americas studied at schools and institutions within the Americas, with the exception of six who went to Europe. See table on page 108.


CANADA
6
USA
68
MEXICO
31
CUBA
20
DOMINICAN REPUBLIC
2
HAITI
4
GUATEMALA
21
NICARAGUA
1
EL SALVADOR
8
COSTA RICA
7
PANAMA
25
VENEZUELA
25
COLOMBIA
6
ECUADOR
13
PERU
5
BRAZIL
59
BOLIVIA
2
PARAGUAY
2
ARGENTINA
5
CHILE
60
URUGUAY
4
13 BRITISH TERRITORIES
1 FRENCH TERRITORIES
25 EUROPE
STUDY IN EUROPE
6
8 EASTERN MEDITERRANEAN
3 AFRICA
11 SOUTH EAST ASIA
22 WESTERN PACIFIC
FELLOWSHIPS AWARDED
IN THE
AMERICAS

The total number of fellowships awarded in the Americas is 23 percent lower than in 1953, but most of the change is related to the decrease in seminars organized by the Bureau. This decrease takes the form of a fairly uniform reduction among all the separate countries.

The trend toward broadening the scope of resources used for training has continued. A notable example, particularly in health education, has been the Department of Preventive Medicine and Public Health of the University of Puerto Rico, which is shortly to expand its facilities still further through a grant from the Foreign Operations Administration.

The major reduction in number of fellows from other regions studying in the Americas--from 119 in 1953 to 69 in 1954--chiefly concerns those for whom other arrangements were made, mainly travel grants, rather than attendance at regular academic courses. The increased availability of local

or other training resources where conditions more closely approximate those in the home country, plus need to restrict expenditures in dollars, were the determining factors.

Governments of the Americas seldom request training outside the Continent, and 1954 was no exception. Only six fellows traveled outside the Americas. Approximately 64 percent of the fellows carried on their studies or training, in part or in full, in Latin America, as compared with 70 percent in 1953. The slight falling off is largely accounted for by the reduction in the number of seminars.

Fields of Study

The subjects in which fellowships were given cover the entire field of health activities, from public health administration through nursing to clinical medicine. The full list of subjects, together with number of students in each subject as well as the countries from which these students came, are displayed in the table on the opposite page.

A comparison between 1953 and 1954 in the various fields of study is most difficult in view of the fact that a new standardized classification, introduced by WHO this year, has been applied in the 1954 tabulation. Thus, some of the changes in direction are more apparent than real. As nearly as can be determined, there has been no great change in basic pattern. Henceforth, using the new classification, it will be possible to make a more detailed and consistent analysis.

Supervision and counseling of fellows has steadily improved. With expansion of personnel, it has been possible to organize regular visits to students in the United States, and to plan consistent follow-up visits through the Zone Offices for students in other countries. In the United States an arrangement has been made with the Division of International Health of the United States Public Health Service so that when either their staff members or those of the Bureau visit a school, fellows of both organizations are interviewed.

For the first time, this year advantage was taken of the fellowships offered by the Brazilian Government as part of its contribution under the United Nations Expanded Program of Technical Assistance (Brazil Catalogue of Services). Fellowships awarded for the course in venereal disease serology at the University of São Paulo involved candidates from Uruguay, Paraguay, and Argentina. These fellowships come under the aegis of the PASB/WHO although no actual cash outlay is involved (AMRO-89).

Visa problems have occurred with regard to study in the United States because, under the United States Information and Educational Exchange Act of 1948 (Smith-Mundt Act), a visa issued to a fellow must show an Exchange Visitors Program Number. Such numbers have been issued to United States agencies and institutions accepting students from abroad, that is, universities, hospitals, foundations, and government bureaus, but the Pan American Sanitary Bureau and WHO, as international organizations, are not eligible for their own numbers, However, when a fellowship has been granted for study

Fellowships Awarded in the Americas in 1954 and Participants in Seminars, 1954, by Country of Origin, Field of Study and Type of Training

Field of Study and Type of Training	Country of Origin																								
	TOTAL	Argentina	Bolivia	Brazil	Canada	Chile	Colombia	Costa Rica	Cuba	Dominican Republic	Ecuador	El Salvador	Guatemala	Haiti	Honduras	Mexico	Nicaragua	Panama	Paraguay	Peru	United States	Uruguay	Venezuela	British Territories	French Territories	Netherlands Terr.
Total, Fellows and Participants	319	10	9	36	2	9	7	17	6	17	6	12	12	13	9	31	8	14	25	11	14	14	7	27	1	2
Subtotal, Fellows	282	10	6	33	2	9	3	15	4	15	2	10	10	13	7	31	8	14	25	8	12	14	6	23	1	1
Public Health Administration:	(30)																									
Academic courses	23	1	-	-	1	-	-	-	-	3	1	-	1	3	-	1	-	1	4	2	-	2	1	2	-	-
Travel grants	7	-	-	1	-	-	-	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	2	-	-
Sanitation:	(49)																									
Courses organized or assisted by WHO/PASB	41	1	-	-	-	-	-	6	1	4	-	2	2	-	5	3	3	7	2	2	-	2	1	-	-	-
Academic courses	5	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	1	1	-	-	-
Travel grants	3	-	-	-	-	-	-	-	-	1	-	-	1[b]	-	-	-	1[b]	-	-	-	-	-	-	-	-	-
Nursing:	(48)																									
Courses organized or assisted by WHO/PASB	15	-	-	-	-	-	-	2	-	-	-	1	-	1	-	8	1	2	-	-	-	-	-	-	-	-
Academic courses	27	-	2	1	-	-	1	2	-	1	-	-	3	1	-	2	1	2	5	2	-	4	-	-	-	-
Travel grants	6	-	-	1	-	-	-	3	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Maternal and Child Health:	(3)																									
Travel grants	3	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Health Service:	(39)																									
Courses organized or assisted by WHO/PASB	28	3	1	1	-	-	-	-	1	1	-	1	-	1	-	1	-	-	3	1	-	1	1	11	-	1
Academic Courses	9	-	-	3	-	-	-	2	-	-	-	2	-	-	-	1	-	-	1	-	-	-	-	-	-	-
Travel grants	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
Communicable Diseases:	(94)																									
Courses organized or assisted by WHO/PASb	59	1	2	24	-	2	-	-	-	1	-	2	3	-	1	4	-	2	4	-	5	3	1	4	-	-
Academic courses	11	2	-	1	-	-	1	-	1	2	-	1	-	-	-	1	1	-	1	-	-	-	-	-	-	-
Travel grants	24[a]	-	-	-	1	-	1	-	1	2	-	-	-	3	-	6	-	-	4	-	-	-	1	4	1	-
Medical Sciences and Education:	(16)																									
Academic courses	2	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Travel grants	14	1	-	1	-	3	-	-	-	-	-	-	-	-	-	1	-	-	1	-	7	-	-	-	-	-
Clinical Medicine:	(3)																									
Travel grants	3	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Subtotal, Participants	37	-	3	3	-	-	4	2	2	2	4	2	2	-	2	-	-	-	-	3	2	-	1	4	-	1
Sanitation: *AMRO-64.1, San Eng.-Venezuela*	16	-	3	3	-	-	3	-	-	-	4	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
Communicable Diseases: *AMRO-77.4, Fourth Aftosa Course-Panama*	21	-	-	-	-	-	1	2	2	2	-	2	2	-	2	-	-	-	-	-	2	-	1	4	-	1

[a]Includes one person for AMRO-26, Brucellosis Training Course, held in Mexico from 1-13 March 1954. With this exception (awarded out of PASB general fellowships funds) all other AMRO-26 awards (15 in number) were made in 1953 from the funds established for this Course.

[b]These two attending 9 months course for sanitary inspectors in El Salvador given as a part of El Salvador-5.

at a university or institution which has a number, it has generally been possible to arrange for its use in obtaining the visa. The problem of traveling fellowships has presented more serious difficulties.

Health Education of the Public

Basic Principles

As indicated in preceding sections, the Bureau puts great stress on adequate professional education for health workers. The educational needs of the doctor, the nurse, and auxiliary personnel are taken care of through publications, through fellowships and through undergraduate and postgraduate courses in many subjects covering the medical field. As these specially trained persons, both the beginners in public health and the advanced students, profit from these courses they strengthen the personnel actively engaged in promoting health work.

None of this work of technically trained personnel will, however, come to fruition unless it is accepted by the public. The strengthening of central and local health departments cannot be stressed too much, but if these departments are to do effective work, they must in the end find a public that cooperates with them.

For example, of what use is a baby clinic unless mothers go to baby clinics and, after going there, put into practice the various things that the public health nurse and other health officials advocate? In the field of sanitary engineering, if new sanitary conveniences are installed or new wells dug, the public must be trained out of old habits into the new habits which make use of these helps to health.

This business of establishing a link between the public and the public health officer, by which health practices are carefully implanted into the daily habits of the people, is the purpose of education of the public.

The final aim of all health work is to bring health to the people, but bringing health is not just bringing a package into the home. It is, in effect, making an effort to change the living habits of a population. As such, health education of the public is never an easy matter.

It has been pointed out that the health officer is not doing things *for* people but working *with* people to help them solve their own problems. Where this involves a change in dietary customs or infringes on old but harmful habits, the problem is one that calls for patience, perseverence, and much sympathetic understanding. It will not do to say that the public is uncooperative or disinterested. The problem is to create interest and to gain cooperation. For this reason health education of the public is, or should be, an art or science of equal standing with other well known public

The aim of a large part of all public health endeavour, and of all public health education, is to influence for the better the health of children such as these young Peruvians who are waiting their turn as they peer through the doorway of a rural health clinic.

Mid morning cups of milk are well received, as is clear from the happy expressions on the faces of these two Costa Rican children.

health professions such as those of preventive medicine, nursing, sanitary engineering, laboratory work, or biostatistics.

Although high-powered publicity campaigns utilizing to the full the resources of radio, television, and other tactics of showmanship have their legitimate uses, especially in gaining the mass reactions that will put across a much needed piece of legislation or a long-delayed social reform, the quiet day by day missionary work in rural areas or among underprivileged city populations is, in the end, the kind of work that counts. For permanent results, health practices must permeate into the byways. The final test is: are the educational recommendations transplanted into new attitudes toward healthful living? Does the audience not only listen, but, is it led to adjust its pattern of living?

Field Projects

Because of its intrinsic importance, the whole subject of health education of the public must be taken very seriously. Questions similar to those in preceding paragraphs were taken up at a seminar on health education held in September of 1953 in Mexico City. In these discussions participants from 11 countries took an active part. Between them they represented nearly every field of public health endeavour. The meeting was considered most successful. Larger cooperative ventures of this sort are in the planning stage.

Meanwhile a limited number of basic projects are also making slow but steady progress. Brief mention has been made elsewhere of certain projects in cultural anthropology that have a close connection with health education of the public. To make any health program fit an indigenous population requires a careful preliminary study. The anthropological approach, based on a thorough survey of living conditions and needs, has proved to be a useful one.

A Joint Field Mission on Indigenous Populations in the Andean Highlands of Bolivia, Ecuador, and Peru started with United Nations, International Labor Organization, and UNESCO support in 1952 to make a study of the indigenous populations of this area with the avowed purpose of enabling these populations to become part of the national community and thus share in the economic, social, and health benefits enjoyed by the main population of the area (AMRO-6).

It is of interest that the first session of the Joint Field Mission of technical assistance to the indigenous populations of the Andean High Plateau was held in La Paz as far back as January 1951. Specific studies were initiated in 1952. Special attention was given to Bolivia because that country has in recent years been planning an agrarian reform to redress the balance between dispossessed Indian populations and minority landholders. The Mission also concentrated on Bolivia because in this country it was possible to shape up a pilot project based squarely on the Indian tradition for communal activity.

In 1954 a short-term consultant in public health, working as part of the Joint Field Mission on Indigenous Populations, in which the United Nations

Sick persons awaiting medical attention at a rural health center in Bolivia

Technical Assistance Board, the International Labor Organization, and other agencies collaborated, submitted to the Bureau a carefully prepared report on the Andean indigenous area of Bolivia. Although a three-fold study of agriculture, education, and colonization of the Andean indigenous areas of Bolivia, Ecuador, and Peru is needed, the present report limits itself largely to a study of the public health aspect of this work.

The report advocated that SCISP, the Inter-American Cooperative Public Health Service, cooperate closely with the Bolivian Ministry of Hygiene and Public Health in establishing a new center of rural health at Pillapi. It was also considered advisable that a full-time medical man be appointed as the head of this center and that he have a staff composed of a public health nurse, a public health nursing assistant, and a sanitary engineer. Such a rural health center should function in close cooperation with the other health work of the country. An attempt should be made to have this become a model rural health center, eventually receiving its support from the population served. Initially such support would have to come from the central health department and from the local farming residents who are benefitted. The health program

should be subject to constant appraisal and revision and continue to receive technical assistance from the Pan American Sanitary Bureau.

Another cultural anthropology project, dating from January 1953, covers the region of Central America and Panama (AMRO-29). The aim of this project is to help countries adjust their health programs to meet the special requirements of their peoples. This is done by first of all obtaining basic cultural data on the indigenous population of the area. The results of these anthropological surveys can then be applied to current problems of health education.

Engaged on this project since 1953 is a cultural anthropologist and a public health educator. Preliminary surveys have been completed for El Salvador, Guatemala, and Honduras. In addition to the report published on Panama, 1953, another was published on Nicaragua along entirely similar lines in 1954.

When surveys are completed, findings are submitted to national and local authorities. Throughout, references are made to problems that offer the best hope of solution and to techniques most likely to be effective. Subjects studied included agriculture, home and local industries, travel, transportation and commerce, family life, beliefs and practices, recreations and diversions, ideas of sickness, and healing practices.

In the active projects of this region this background information is taken into account. Emphasis is placed on having health education of the public carried out by all grades of public health personnel and not merely by one special appointee, the health educator. Special training is given to personnel in charge of the health demonstration area in the San Andrés Valley of El Salvador, the aim of which is to provide integrated health services in a selected rural community (El Salvador-5).

The same applies to the project by which aid is given to rural public health services in Panama and where the problem is one of extending public health services to selected rural communities. By giving in-service training to the personnel at rural health centers it is hoped to develop a public health administration closely adapted to the needs of the population (Panama-1).

During 1954 the Bureau cooperated with the Asunción School of Medicine by enabling a visiting professor to conduct courses in preventive medicine to sixth year medical students (Paraguay-6). Short courses were also given in biostatistics, venereology, malariology, and other subjects to students in other school years as well as to postgraduate groups. Emphasis was given to field practice and to control activities in hookworm disease, venereal diseases and tuberculosis, which form part of the program in which the Bureau and other agencies are cooperating with local health authorities. In this way practical training was combined with university teaching.

Conferences and Publications

Technical Discussions

In preceding sections there have been numerous references to conferences, seminars, and workshops, all of them educational in character and used chiefly to raise to a higher level the cooperative activities in some one domain of public health.

In addition to these means of stimulating specialized activities, there was held on October 7-22, 1954, at Santiago, Chile, the scheduled quadrennial meeting which goes down in history as the XIVth Pan American Sanitary Conference. This Conference, as usual, functioned in the double capacity of supreme governing body of the Pan American Sanitary Organization, and secondly as a forum for the interchange of information and ideas relating to the prevention of disease, the promotion, preservation and restoration of mental and physical health, and the advancement of socio-medical measures and facilities for the prevention and treatment of physical and mental diseases in the Western Hemisphere.

The interchange of information on health conditions among the nations attending the Conference was done chiefly through the presentation of a narrative and statistical four-year report on health conditions in the Americas, mention of which has already been made on pages 1, 5, 71, 72.

There were also present at the Conference many carefully prepared papers by delegates, giving an account of health conditions in each country. Finally, in the technical discussions by working groups some of the subjects deliberated upon were methods of improving the reliability of raw statistical data required for health programs, control of infant diarrheas in the light of recent scientific progress, and application of health education methods in rural areas in Latin America. There were extensive discussions on eradication of malaria and treponematoses in the Americas. All these discussions led to formal resolutions recommending the improvements suggested and urging that headway be made in eradication work.

Approved for technical discussions at the VIIIth Meeting of the Directing Council, VIIth Meeting of the Regional Committee of the WHO, to be held in September 1955 in Washington, were two subjects: 1) Methods of improving the education of public health personnel, and 2) Medical care in rural areas.

Participation in Other Conferences

During 1954 the Pan American Sanitary Bureau was well represented at intergovernmental conferences relating to public health and at other meetings of international, nongovernmental organizations of interest to the Bureau.

Work Session, XIVth Conference of the Pan American Sanitary Organization.

Important functions attended during 1954 were the thirteenth session of the WHO Executive Board, January 12 to February 2, in Geneva, Switzerland; the Seventh World Health Assembly, held from May 4 to May 21, and the fourteenth session of the WHO Executive Board, May 27 to May 28, also in Geneva. In the Americas an important intergovernmental meeting was the Tenth Inter-American Conference in Caracas, Venezuela, from March 1 to 27. In these meetings the Pan American Sanitary Bureau participated through its Director and other officers.

Other conferences, assemblies, meetings, seminars, and symposiums attended by one or more staff members of the Bureau and WHO Regional Office during 1954 are presented in Appendix II, page 177.

Publication Duties

Article I of the Pan American Sanitary Code calls for "the stimulation of mutual interchange of information which may be of value in improving public health and combating the diseases of man" in the American Republics. The Bureau is designated as the central coordinating agency and the collecting and distribution center of health information (Article LV).

In addition, the Bureau is required to supply the health authorities of the signatory governments, through its publications, all available information relating to current studies of the communicable diseases of man, progress in the control or eradication of such diseases, scientific advances in any of the branches of preventive medicine, and other pertinent information relating to sanitation and public health (Article LVI).

Periodical Publications

In fulfillment of its publication duties, the Bureau, through its Editorial Section, issued in 1954 the monthly *Bulletin of the Pan American Sanitary Bureau*. The first edition of this Bulletin appeared in May 1922. After 32 years of uninterrupted publication the Bulletin remains the outstanding public health and medical journal in the Americas.

The contents of the Bulletin consist of original articles as well as translations of carefully selected articles, published in either English, Portuguese, or Spanish, frequently with a brief summary in an alternate language. In its publication program the Bulletin gratefully acknowledges assistance from the health workers in the Americas, the staff of the technical Divisions in Washington, and the Zone Offices.

The Bulletin has been steadily improved and expanded. One department regularly carried news and information with citation of references on historical and scientific developments in Bureau work. In a sense, therefore, the numbers of this journal constitute the historical archives of the organization.

In 1951 the Bulletin was divided into two annual volumes, one for each semester. This division into two annual volumes was the result of natural growth. The annual contents by 1950, if put between single covers, gave a book too large to be handled. By improving paper and typography, and slightly changing the format, it was possible to increase the number of illustrations, leave room for future expansion, and still enable the annual output to be bound in two handy volumes.

As in previous years, occasional issues were dedicated in whole or in part to some one special subject. The policy initiated in 1953 of simultaneous publication in Spanish of selected articles appearing in French or English in the *Bulletin of the World Health Organization* was continued. The same policy, by special permission, applies to articles in English published in the *American Journal of Public Health* and the *Public Health Reports*.

A further step in the plan to provide health workers in the Americas with up-to-date information appearing in other journals was taken when permission was obtained from the editors of *Tropical Diseases Bulletin*, *Abstracts of World Medicine*, the *Journal of the American Medical Association*, *The American Journal of Public Health*, and *Public Health Reports* to translate and publish selected summaries in the *Bulletin of the Pan American Sanitary Bureau*. Full credit is given in each case.

SPECIAL PUBLICATIONS--1954

Type of Publication	Serial Number	Pages	Copies Printed
Official Documents			
Documentos Básicos de la Oficina Sanitaria Panamericana. *Segunda Edición*	5	78	1,000
Basic Documents of the Pan American Sanitary Bureau. *Second Edition*	6	80	1,000
Informe Final de la VII Reunión del Consejo Directivo de la Oficina Sanitaria Panamericana y V Reunión del Comité Regional de la Organización Mundial de la Salud	7	22	1,000
Final Report of the VII Meeting of the Directing Council of the Pan American Sanitary Organization and V Meeting of the Regional Committee of the World Health Organization	8	23	1,000
Acta Final de la XIV Conferencia Sanitaria Panamericana	9	49	1,000
Final Act of the XIV Pan American Sanitary Conference	10	47	1,000
Scientific Publications			
Reglamento Sanitario Internacional (Reglamento No. 2 de la Organización Mundial de la Salud). *Segunda Edición*	2	103	3,000
Certificación Médica de Causa de Defunción. *Segunda Edición*	3	21	2,000
Comité de Expertos en Higiene Mental, Subcomité de Alcoholismo, Segundo Informe	7	38	1,000
Procedimientos Básicos para la Notificación de las Enfermedades Transmisibles	8	32	4,000
Basic Procedures for the Reporting of Communicable Diseases	9	31	1,000
Comité de Expertos en Educación Profesional y Técnica del Personal Médico y Auxiliar, Segundo Informe	10	25	1,000
Principios de Administración Sanitaria, Dr. John J. Hanlon	11	590	2,000
Tercera Conferencia sobre los Problemas de la Nutrición en la América Latina	12	54	10,500

SPECIAL PUBLICATIONS--1954

Type of Publication	Serial Number	Pages	Copies Printed
Scientific Publications, cont'd.			
Aspectos Psiquiátricos de la Delincuencia Juvenil	13	107	1,000
Los Cuidados Maternos y la Salud Mental	14	215	1,000
Miscellaneous Publications			
Guía para la Preparación de los Informes sobre la Campaña de Erradicación del *A. aegypti* en las Américas	7	13	200
Guide for the Preparation of Reports on the *A. aegypti* Eradication Campaign in the Americas	8	13	100
XI Curso Internacional de Malaria y Otras Enfermedades Metaxénicas	9	9	600
Informe Anual del Centro de Fiebre Aftosa, 1952	10	16	350
Annual Report of the Pan American Foot and Mouth Disease Center, 1952	11	15	500
Relatório Anual do Centro Pan Americano de Febre Aftosa, 1952	12	16	200
Conferencia Regional de Educación Higiénica, Ciudad Mexico, septiembre de 1953	13	66	1,000
Regional Conference on Health Education, Mexico City, September 1953	14	66	500

SUMMARY

Type of Publication	Serial Number	Pages	Copies Printed
Official Documents	6	299	6,000
Scientific Publications	10	1,216	26,500
Miscellaneous Publications	8	214	3,450
Total	24	1,729	35,950

In view of the growing activities of the Bureau and the interest of all countries in public health and medical education, from April 1954 on, a new section in the Bulletin has been devoted to Education and Training.

Starting in July, a list of selected international scientific meetings was published monthly. Through correspondence, efforts are made to obtain articles, summaries, and resolutions pertaining to the meetings. The November and December issues contain material from the technical discussions held during the XIVth Pan American Sanitary Conference.

Since 1951, the Bureau has taken care of translating and printing in Spanish the monthly *World Health Organization Chronicle*. This arrangement has now been changed and, from January 1955 on, the World Health Organization will take charge of the Spanish edition.

Two other periodical publications are the *Weekly Epidemiological Report* (27th year) and the quarterly *Health Statistics* (Volume III), published in English and Spanish. The *Monthly Calendar of Selected International Meetings* (Volume III, numbers 1-12) also appeared during 1954.

Four thousand persons requested that their names be added to the *WHO Newsletter* mailing list during the year. In addition, the United States Department of State has increased its request for monthly supplies in bulk from 3,400 to 4,000. These are distributed by the Department to a selected list of civic leaders throughout the country. Several issues have proved so popular that large increases in printings were made. These were sold at cost prices in lots of 1,000 or more. Particularly in demand were those devoted to alcoholism (30,000 extra copies distributed), mental health (15,000 extra) and the use of dieldrin (25,000 miniature reprints were made by a chemical firm and distributed by them). Twenty-five thousand extra copies of the September issue were distributed in connection with the American Public Health Association meeting and United Nations Day (October 24).

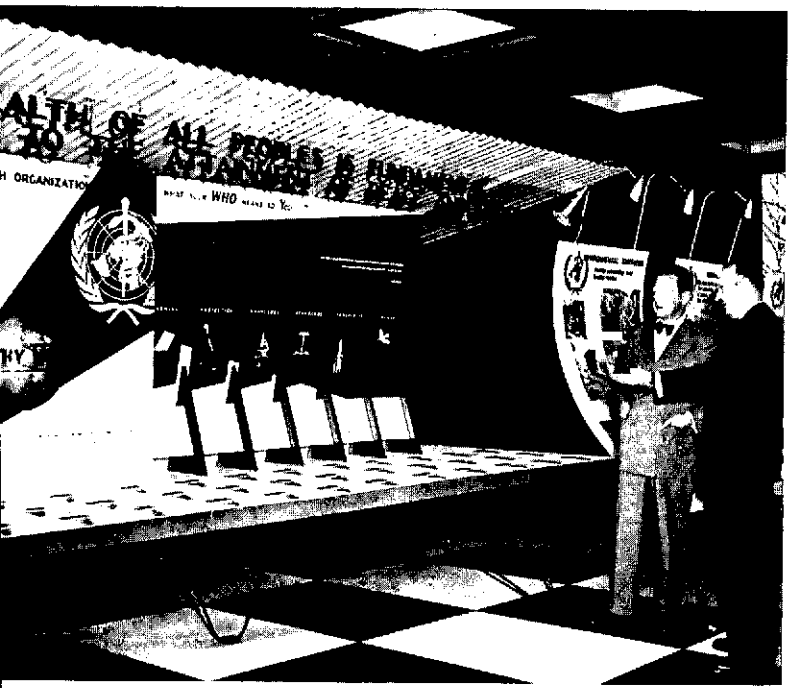
Monthly Distribution of the *WHO Newsletter*

Language	*Individuals*	*Bulk*
English	6,747	8,340
Spanish	2,498	4,895
Portuguese	1,910	457
French	244	129
	11,399	13,821

A further 4,500 copies were used on the average to meet requests for back numbers.

Special Publications

During the year there were also published 10 scientific and eight miscellaneous publications as well as six official documents. Details are given in the table on pages 122 and 123.



United Nations Exhibit

Exhibits and Other Media

Books, periodicals, and miscellaneous publications do not exhaust the means by which the Pan American Sanitary Bureau seeks to educate both the public and its own staff regarding Bureau work and programs. A variety of visual education material and channels of communication are pressed into service.

The term exhibits, therefore, includes the complete spectrum of standard educational and publicity media. Operating as a single unit, the Pan American Sanitary Bureau and the World Health Organization, throughout the year, make considerable use of press, radio, television, films, film strips, photographs, visual exhibits, speeches, personal conferences, and direct mail material. Attempts are made to channel exhibit material not only in response to requests but also routinely to health departments of Member Governments, technical associations, civic groups, universities, and teaching organizations.

Special Displays

Displays were supplied to Mexico, Guatemala, and to the Field Office in Kingston, Jamaica, the latter with interchangeable captions in English and French. Practically all Zone Offices now have lightweight, easily transported exhibits. Thanks to the construction of new exhibits each year there is on hand a valuable reserve of parts which reduces the cost of preparing new exhibits.

The San Francisco chapter of the Citizens Committee for WHO was supplied with a large but manageable exhibit which the Committee, at its own expense, showed at meetings, hospitals, and civic centers throughout the West Coast. Before being taken to the meeting of the WHO Citizens Committee, the display was shown, last August, at the American Veterinary Medical Association meeting in Seattle, Washington. Here, as in the previous year, the Bureau exhibit received a certificate of merit. This exhibit was also shown at the Northern California Mental Health Conference in Asilomar in September. A similar display is in preparation for circulation in the eastern part of the United States.

Three fifteen-panel wall charts illustrating the work of WHO, now in constant circulation, are to be supplemented by three more sets from Geneva, one in Spanish for use in Latin America.

Bureau exhibits continue to attract considerable attention, especially when at meetings they are used as centers for the distribution of literature. At the American Public Health Association meetings they were used as aids to recruitment. Civic groups and organizations, often at their own expense, help to display and circulate these exhibits.

One of the major exhibits continues to be on display in the main lobby of the headquarters of the United Nations, which probably receives more visitors than any other single location in the world. The story of WHO forms a part of the regular talks by UN guides who daily conduct several thousand visitors past this exhibit. The United Nations has agreed to have the Bureau replace this exhibit with a new one early in 1955. An important exhibit was sent to the XIVth Pan American Sanitary Conference, Santiago, in October.

School children are frequent visitors to the PASB/WHO exhibit at UN building in New York.

An exhibit on zoonoses, prepared for viewing at the Canadian Veterinary Association meeting held in 1954 in Toronto, Canada, was lent to WHO headquarters in Geneva for showing during the Seventh World Health Assembly in May.

A Pan American Sanitary Bureau exhibit, showing Bureau organization, sources of funds, and field work was used at the Tenth Inter-American Conference at Caracas in March, and another at the American Public Health Association meeting in Buffalo, N.Y., in October, 1954. The same exhibit immediately thereafter was taken to Cleveland, Ohio, for a two weeks showing in connection with United Nations Week.

An exhibit of PASB/WHO literature drew over 200,000 visitors at the Library of Congress, Washington, D.C., during November and December.

Most of the Zone Offices have reported increased use of exhibit material during the year and have announced larger schedules for showings in 1955. The Bureau renews the pictures and captions from time to time and supplies suitable materials for use at lectures and seminars in specialized fields.

Press, Radio, and Television

Some 500 persons asked to have their names added to the news release mailing list during 1954. Besides going to the Zone Offices, United Nations

Information Centers, and the health departments of Member Governments, these releases were sent to the press, radio, and TV stations in Latin America; to leading newspapers, news agencies, columnists, and radio commentators in the United States and Canada, and to technical and semitechnical publications in the field of health. Releases are, for the most part, reissued at United Nations headquarters and made available to the world press.

Press release distribution now is about 3,000 copies per issue, English over 900, Spanish 800, and Portuguese 1,350.

On April 7, World Health Day was celebrated more widely throughout the Hemisphere than during any previous year. Five thousand kits of information were distributed in English, 4,000 in Spanish, 3,000 in Portuguese, and 500 in French. Five thousand additional booklets containing articles on public health nursing were also distributed. The theme The Nurse--Pioneer of Health attracted the cooperation of numerous nursing organizations, hospitals, schools (through school nurses), clinics, schools of nursing, and public health department nursing sections.

Many meetings were organized in 1954 by civic groups. There was excellent radio and press coverage. Over 200 pages of press clippings were received by the Office of Public Information, including many from Latin America where the Bureau had no press clipping service. Reports received by the Bureau indicated hemispheric response with outstanding participation in Uruguay, Mexico, Cuba, Brazil, Panama, Argentina, and Venezuela.

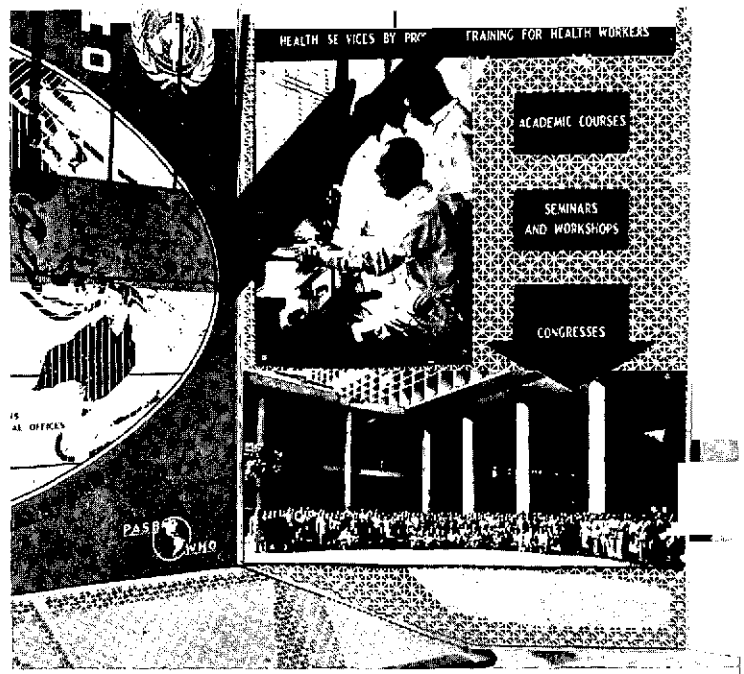
In response to letters sent to various associations about United Nations Day (October 24), many replies were received from United Nations civic associations in Latin America, the United States, and Canada. Events connected with United Nations Day continued for two weeks in Cleveland, Ohio, where the Pan American Sanitary Bureau placed a major exhibit, visited by an average of 2,500 people per day. In Baltimore a similar three-day exposition, inaugurated by the Governor, filled the State armory and was attended by 30,000 people.

At the 82nd Annual Meeting of the American Public Health Association, in Buffalo, in October, the National Citizens Committee for WHO held an enthusiastic all-day session the first day of the conference. The interest which APHA delegates from all over the United States showed was highlighted by the adoption of a resolution urging increased United States support for the World Health Organization.

Preparations for World Health Day in 1955 (theme: Clean Water means Better Health) were well advanced before the end of 1954. Letters promoting its celebration were sent to health departments of Member Governments, engineering societies, leading sanitary engineers, and engineering publications. Posters were designed by the Bureau and reproduced in the four official languages. Collaboration was freely given by the United States Public Health Service as well as other government agencies and civic organizations.

The United Nations radio network (shortwave in 33 languages) made broadcasts on PASB/WHO work a part of its regular program, The United Nations Today.

There was good coverage on WHO and World Health Day over the UN network, the Voice of America, and other national stations. Featured speakers throughout the Hemisphere included several Health Ministers and Directors, the Surgeon General of the U. S. Public Health Service, and others. A half-hour interview program prepared by Bureau officials for the National Association of Educational Broadcasters went out over 163 stations in the United States. During the year there was a considerable increase in requests for information for preparing broadcasts.



Speakers

The Pan American Sanitary Bureau helped to make arrangements for 28 speakers in 1954. As usual, the lectures were accompanied by free literature. In some cases exhibit material was also supplied. There was a marked increase in requests from individuals, schools, and civic groups for informational and other assistance for the preparation of talks and discussions on the work of the Pan American Sanitary Bureau and World Health Organization.

Films

Films were made this year of the Seventh World Health Assembly, held in Geneva, and of the XIVth Pan American Sanitary Conference, in Santiago. Interest in both was strong among personnel of the organizations and delegates who attended the meetings.

The limited number of film prints on PASB/WHO work were available for continual circulation. These are given on the following page.

Details of West Coast Exhibit.

World Health Assembly, Seventh, 1954, (Geneva). Spanish print.

Pan American Sanitary Conference, XIVth, 1954, (Santiago). Spanish print.

World Health Organization at Work: Rabies Control in Mexico/United States Border and in Israel, and Tuberculosis Control in Istanbul. English print.

Somewhere in India: Malaria Control. English, Spanish, and French prints.

The Ancient Curse: Malaria Control. English print.

Rural Nurse. The Work of the Rural Nurse in El Salvador. English and Spanish prints.

To meet the numerous and increasing requests, the Pan American Sanitary Bureau referred inquiries to the United Nations film section, which sells or rents all the films. The UN-made film Rural Nurse was in constant demand during the year.

Requests for Information

There were three sources of requests: those sent directly to the Bureau from all over the Americas, those referred to this office from United Nations headquarters in New York (a great number from Latin America in response to the UN broadcasts in Spanish and Portuguese on the work of PASB/WHO), and a large number referred from WHO headquarters in Geneva. These requests reflect a growing interest in international health.

Intelligent handling of these requests constitutes a major opportunity for spreading direct knowledge of Pan American Sanitary Bureau work. Many requests come from writers and speakers who use the replies for preparing articles, speeches and broadcasts.

During 1954 there were distributed 3,500 kits of information, each containing some seven items. Other items, 103,116 in number, were also mailed out in reply to queries.

Photographs

The Bureau now has several thousand pictures and negatives on file, most of them randomly acquired. Many more could be used if there is to be ample selection to meet the constant demand for good pictures.

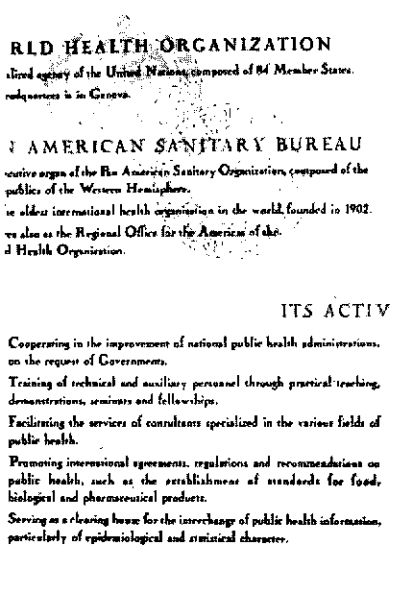
The United Nations rendered collateral assistance on World Health Day, 1954, by issuing a set of two photo picture sheets in four languages, and supplying several thousand large glossy prints free on request.

Educational Campaigns

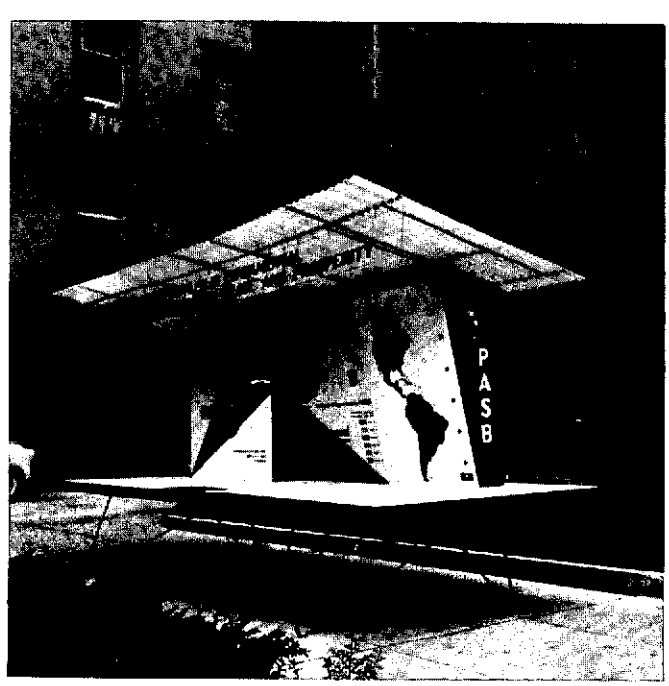
The success or failure of public health projects often depends on the extent to which the governments have taken the men, women, and children who constitute the public into their confidence and, through meetings and press or radio campaigns, prepared them to cooperate on local levels in the public health work. To a certain extent, in the campaigns in which it cooperates, the Bureau furnishes public information assistance in the same way that it offers technical orientation. It is recognized that the preparation of local public opinion is an integral part of the planning stage of successful public health campaigns. Since it is by no means always true that even a successful project is capable of advertising itself far beyond the bounds of the village, it is considered advisable that the educational techniques and materials remain at the disposal of the government after completion of a project.

Such public information campaigns, supplementary to standard health education, reduce initial resistance to locally unfamiliar public health measures. They also help to assure a greater measure of continuity in the development of health programs and keep the public health movement growing.

Details of several exhibits



Caribbean Exhibi

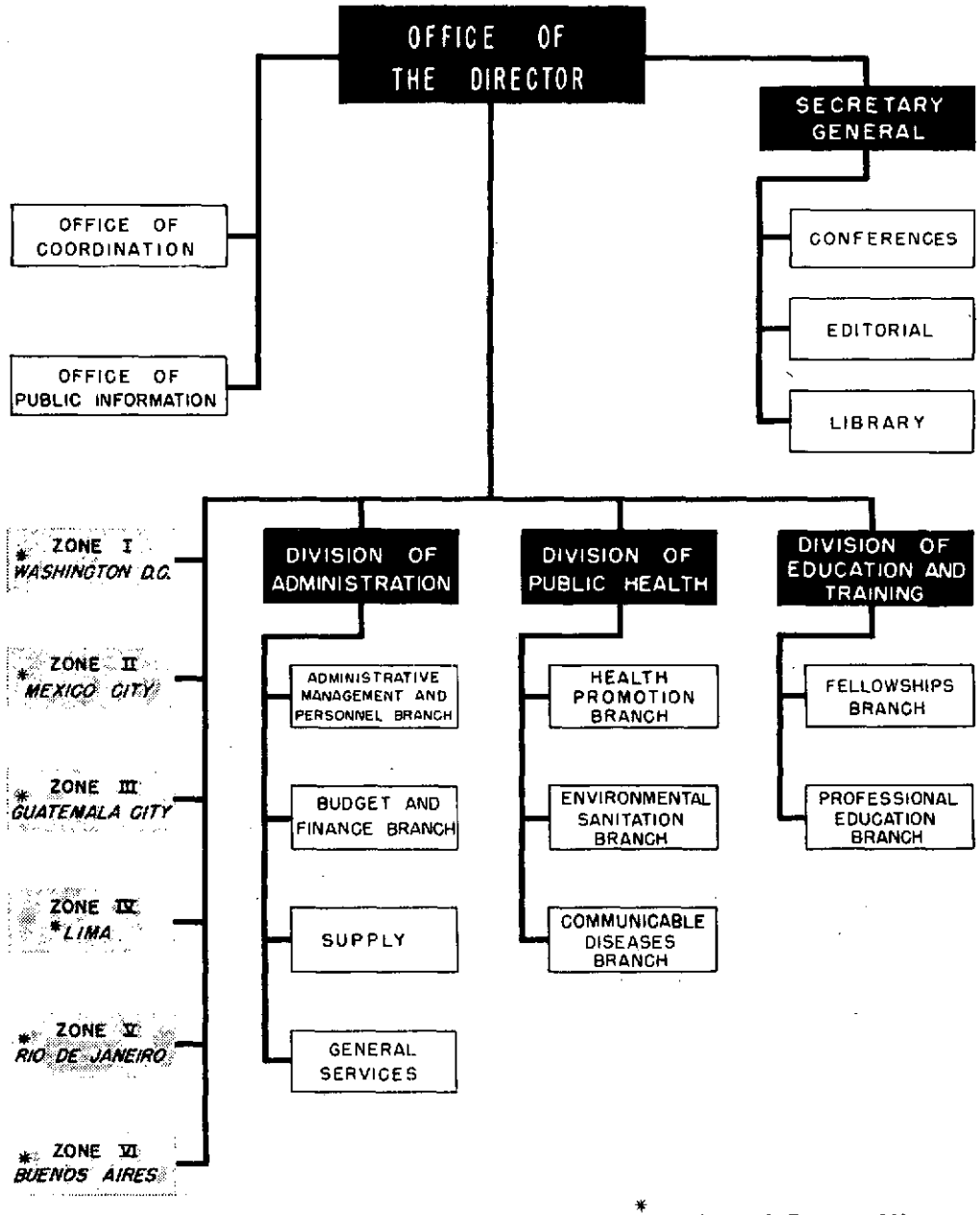


American Public Health Association Exhibit

Zoonoses Exhibit

PAN AMERICAN SANITARY BUREAU
REGIONAL OFFICE OF THE
WORLD HEALTH ORGANIZATION

ORGANIZATION CHART



* Location of Zone Office

ORGANIZATION AND ADMINISTRATION

ORGANIZATION AND ADMINISTRATION

ORGANIZATION AND ADMINISTRATION

Official Meetings and Transactions

As noted in the Introduction of this Report, the Pan American Sanitary Conference held its most recent quadrennial and fourteenth meeting in October 1954 at Santiago, Chile.

The Pan American Sanitary Conference was attended by Delegations from all the American Republics, with the exception of Honduras, at that time suffering from damages by tropical storms; other countries represented were France, the Netherlands, and the United Kingdom in behalf of their territories in the Western Hemisphere; and Canada through an observer. The opening session took place in the "Salon de Honor" of the National Congress of Chile on October 7, and the closing session was held on October 22. (See photograph page 24).

The resolutions, totalling 44, may be divided into four groups, dealing respectively with:

1) Reports,
2) Administration and Finance,
3) Technical discussions, and
4) Legal Matters.

In Group 1, two resolutions approved the reports of the Chairman of the Executive Committee and of the Director of the Pan American Sanitary Bureau, for 1953, and the 1950-53 four-year Report to the Member Governments.

In Group 2, 14 resolutions covered the program and budget of the Pan American Sanitary Bureau for 1955, the proposed program and budget of the Region of the Americas of the World Health Organization, Working Capital Fund, expenditures of the Emergency Revolving Fund, budget appropriations, the utilization of surplus funds from 1953, program of economies and decentralization, and utilization of funds for the intensification of antimalaria activities.

Resolution IX referred to the financial participation of France, the Netherlands, and the United Kingdom on behalf of their territories in the Region of the Americas, in the budget of the Pan American Sanitary Organization.

In Group 3, 15 resolutions referred to the technical discussions on the following subjects:

1) Health statistics,
2) Application of health education methods in rural areas in Latin America,
3) Control of infant diarrheas,
4) Treponematoses, and
5) Eradication of malaria in the Americas and utilization of funds for intensification of malaria activities.

PARTICIPANTS AT ORGANIZATIONAL MEETINGS HELD IN 1954

	22nd Meeting Executive Committee, Wash., D. C. April 22-27	23rd Meeting Executive Committee, Santiago, Chile October 4-7	XIVth Pan American Sanitary Conference, VIth Meeting Regional Committee, Santiago, Chile October 7-22.		24th Meeting Executive Committee, Santiago, Chile October 22.
	Members Argentina Brazil Ecuador Haiti Mexico Panama United States PASB *Observers* Colombia Cuba France Guatemala Netherlands OAS	**Members** Argentina Ecuador Haiti Mexico Panama United States PASB (Absent: Brazil) *Observers* Chile Colombia Cuba Dominican Republic El Salvador France Netherlands Paraguay United Kingdom Uruguay WHO FAO	**Members** Argentina Bolivia Brazil Chile Colombia Costa Rica Cuba Dominican Republic Ecuador El Salvador France Guatemala Haiti Mexico Netherlands Nicaragua Panama Paraguay Peru United Kingdom United States Uruguay Venezuela PASB WHO (Absent: Honduras)	*Observers* Canada *Intergovernmental Organizations* OAS UN FAO ILO UNICEF *Nongovernmental Organizations* Amer. College of Chest Physicians Int'l. Council of Nurses Int'l. League against Rheumatism Int'l. Society for the Welfare of Cripples Int'l. Union against Cancer Int'l. Union against VD and Treponematoses League of Red Cross Societies Pan Amer. Medical Confederation Rockefeller Foundation World Federation for Mental Health World Medical Association	**Members** Argentina Colombia Panama Paraguay United States PASB (Absent: Brazil and Haiti) *Observers* Chile Cuba El Salvador Mexico Uruguay
Topics of the Agenda	28	10	40		7
Working doc's. Presented by Director	26	8	41		1
Sessions	Plenaries: 7	Plenaries: 5	Plenaries: 12 Gen. Com.: 10 Committees I and II: 16		Plenaries: 1
Resolutions approved.	23	9	44		4

In Group 4 legal resolutions, four in number, covered subjects as follows: relations between the Pan American Organization and nongovernmental organizations, functions of the Executive Committee in the preparation of Pan American Sanitary meetings, policy on accepting amendments to the Constitution of the Pan American Sanitary Organization, and proposed modifications to the Constitution of the Pan American Sanitary Organization, which after discussion was rejected.

The Conference elected the Governments of Paraguay and Colombia to membership on the Executive Committee for a period of three years, replacing Ecuador and Mexico whose terms expired immediately following the Conference (Resolution XV).

The Conference re-elected Dr. Fred L. Soper as Director of the Pan American Sanitary Bureau for the period beginning February 1, 1955, and nominated him as Regional Director of the World Health Organization for the same period (Resolution XIV).

Resolution XXXVIII designated San Juan, Puerto Rico, as the site for the XVth Pan American Sanitary Conference in 1958.

The Conference approved (Resolutions XI and XII) the 1955 Program and Budget in the amount of $2,100,000, of which $2,000,000 will be covered by assessments of Member States.

At this Conference the Director-General of the World Health Organization was present, and many intergovernmental and nongovernmental agencies and institutions designated observers (see chart page 139).

In addition to the quadrennial Conference, there were held during the year three meetings of the Executive Committee. The 22nd Meeting of the Executive Committee took place in Washington, D.C., April 22-27, 1954; the 23rd Meeting, October 4-7, and the 24th Meeting on October 22 in Santiago, Chile.

In April the Executive Committee approved 23 resolutions, the majority related to matters of administration and finance, such as approval of the 1953 Financial Report of the Director and of the External Auditor, status of the quota contributions, report of the Permanent Sub-Committee on Buildings and Installations, Proposed Program of the Pan American Sanitary Bureau for 1955, Working Capital Fund, and revision of the Pan American Sanitary Bureau Staff Rules.

The Committee also approved the appointment of Dr. Carlos Luis González as Assistant Director of the Pan American Sanitary Bureau.

The meeting was attended by representatives from the seven countries comprising the committee, Argentina, Brazil, Ecuador, Haiti, Mexico, Panama, and the United States. Observers were present from Colombia, Cuba, France, Guatemala, the Netherlands, and the Organization of American States. The Director (as *ex-officio* member), Assistant Director, Secretary General, the Chiefs of the Divisions of Administration, and of Education and Training attended the meeting.

The 23rd Meeting of the Executive Committee, October 4-7, was attended by the representatives of Argentina, Ecuador, Haiti, Mexico, Panama, and the United States. Brazil was absent. There were observers from Chile, Colombia,

ATTENDANCE AT MEETINGS OF THE DIRECTING COUNCIL
REGIONAL COMMITTEE OF THE WHO

MEMBER COUNTRIES	MEETINGS							
	I BUENOS AIRES 24 SEPT.– 2 OCT. 1947	II MEXICO, D.F. 8-12 OCT. 1948	III LIMA, PERU 6-13 OCT. 1949	IV C. TRUJILLO 25-30 SEPT. 1950	V WASHINGTON, D.C. 24 SEPT.– 3 OCT. 1951	VI HAVANA, CUBA 15-24 SEPT. 1952	VII WASHINGTON, D.C. 9-19 OCT. 1953	XIV * PAN AMERICAN SANITARY CONF. Santiago, Chile 7-22 OCT., 54
ARGENTINA	■	■	■	■	■		■	■
BOLIVIA	■	■	■		■			■
BRAZIL	■	■	■	■	■	■	■	■
CHILE	■		■	■	■	■	■	■
COLOMBIA	■	■	■		■	■		■
COSTA RICA	■	■	■	■	■	■		■
CUBA	■	■		■	■	■		■
DOMINICAN REPUBLIC	■	■	■	■	■	■	■	■
ECUADOR		■	■	■	■	■	■	■
EL SALVADOR	■	■	■	■	■	■		■
FRANCE		■	■	■	■	■	■	■
GUATEMALA	■	■		■	■	■	■	■
HAITI	■		■	■	■	■	■	■
HONDURAS	■	■		■	■			
MEXICO	■	■	■	■	■	■	■	■
NETHERLANDS		■	■	■	■	■	■	■
NICARAGUA		■			■	■	■	■
PANAMA	■	■	■	■	■	■	■	■
PARAGUAY	■	■	■	■	■	■	■	■
PERU	■	■	■	■	■	■		■
UNITED KINGDOM		■	■	■	■	■	■	■
UNITED STATES OF AMERICA	■	■	■	■	■	■	■	■
URUGUAY	■	■		■	■	■	■	■
VENEZUELA	■	■	■	■	■	■	■	■

■ ATTENDING □ ABSENT

** In accordance with Resolution VIII of the XIII Pan American Sanitary Conference (Ciudad Trujillo, 1950), meetings of the Directing Council are held only in those years in which the Conference does not meet.*

ATTENDANCE AT MEETINGS OF THE DIRECTING COUNCIL REGIONAL COMMITTEE OF THE WHO

OBSERVERS	MEETINGS							
	I BUENOS AIRES 24 SEPT.– 2 OCT. 1947	II MEXICO, D.F. 8-12 OCT. 1948	III LIMA, PERU 6-13 OCT. 1949	IV C. TRUJILLO 25-30 SEPT. 1950	V WASHINGTON, D.C. 24 SEPT.– 3 OCT. 1951	VI HAVANA, CUBA 15-24 SEPT. 1952	VII WASHINGTON, D.C. 9-19 OCT. 1953	XIV * PAN AMERICAN SANITARY CONF. Santiago, Chile 7-22 OCT., 54
CANADA			▒	▒	▒	▒	▒	▒
INTERGOVERNMENTAL ORGANIZATIONS								
ECONOMIC COMM. FOR LATIN AMERICA			▒					
FOOD AND AGRICULTURE ORGANIZATION							▒	▒
INTERNATIONAL LABOR ORGANIZATION						▒		▒
ORGANIZATION OF AMERICAN STATES			▒	▒	▒	▒	▒	▒
UNESCO						▒		
UNICEF				▒	▒	▒	▒	▒
UNITED NATIONS					▒	▒		▒
WORLD HEALTH ORGANIZATION	▒	▒	▒	▒	▒	▒	▒	▒
NONGOVERNMENTAL ORGANIZATIONS								
AMERICAN COLLEGE OF CHEST PHYSICIANS					▒	▒		▒
BIOMETRIC SOCIETY					▒			
INTERNATIONAL COUNCIL OF NURSES					▒	▒	▒	▒
INTERNATIONAL DENTAL FEDERATION							▒	
INTERNATIONAL HOSPITAL FEDERATION							▒	
INTERNATIONAL LEAGUE AGAINST RHEUMATISM								▒
INTERNATIONAL PEDIATRIC ASSOCIATION						▒		
INTERNATIONAL SOCIETY FOR THE WELFARE OF CRIPPLES						▒		▒
INTERNATIONAL UNION AGAINST CANCER					▒	▒		▒
INTERNATIONAL UNION AGAINST TUBERCULOSIS					▒	▒	▒	
INTERNATIONAL UNION AGAINST VENEREAL DISEASES AND TREPONEMATOSES					▒		▒	▒
LEAGUE OF RED CROSS SOCIETIES					▒	▒	▒	▒
PAN AMERICAN MEDICAL CONFEDERATION					▒	▒		▒
ROCKEFELLER FOUNDATION								▒
WORLD FEDERATION OF MENTAL HEALTH					▒			▒
WORLD FEDERATION OF UNITED NATIONS ASSOCIATIONS					▒			
WORLD MEDICAL ASSOCIATION					▒	▒		▒

ATTENDING ▒ ABSENT

** In accordance with Resolution VIII of the XIII Pan American Sanitary Conference (Ciudad Trujillo, 1950), meetings of the Directing Council are held only in those years in which the Conference does not meet.*

COMPOSITION OF THE EXECUTIVE COMMITTEE FROM 1947 TO 1955

COUNTRY	TERMS								
	FROM JANUARY 1947 TO OCTOBER 1947	FROM OCTOBER 1947 TO OCTOBER 1948	FROM OCTOBER 1948 TO OCTOBER 1949	FROM OCTOBER 1949 TO SEPTEMBER 1950	FROM SEPTEMBER 1950 TO OCTOBER 1951	FROM OCTOBER 1951 TO SEPTEMBER 1952	FROM SEPTEMBER 1952 TO OCTOBER 1953	FROM OCTOBER 1953 TO OCTOBER 1954	FROM OCTOBER 1954 TO SEPTEMBER 1955
ARGENTINA	■		■	■	■			■	■
BOLIVIA									
BRAZIL	■	■	■				■	■	■
CHILE	■				■	■	■		
COLOMBIA									■
COSTA RICA	■	■	■						
CUBA	■	■							
DOMINICAN REP.					■	■	■		
ECUADOR						■	■	■	
EL SALVADOR				■	■	■			
GUATEMALA			■	■	■				
HAITI							■	■	■
HONDURAS									
MEXICO	■	■	■			■	■	■	
NICARAGUA									
PANAMA							■	■	■
PARAGUAY									■
PERU				■	■	■			
UNITED STATES	■	■		■	■	■		■	■
URUGUAY		■	■	■					
VENEZUELA		■	■	■					

Cuba, Dominican Republic, El Salvador, France, the Netherlands, Paraguay, the United Kingdom, and Uruguay. The Director-General of the World Health Organization, and the Director, Assistant Director, Secretary General, Chief of the Division of Administration, and Zone Representatives of the Pan American Sanitary Bureau were present at the meeting.

This Executive Committee, acting also as Working Party of the Regional Committee of the World Health Organization, studied the WHO Proposed Program and Budget for the Region of the Americas and the Summary of the Proposed Program and Budget of the Pan American Sanitary Bureau for 1956, the future form of presentation of the Pan American Sanitary Bureau Budget, and other administrative and financial matters.

At the 24th Meeting of the Executive Committee on October 22, the representatives of Colombia and Paraguay, elected by the Conference for three years, replaced those of Mexico and Panama who completed their term. The Committee accepted, with thanks, Mexico's invitation to hold the 25th Meeting in Mexico City in 1955 and authorized the Director to decide upon the attendance of Zone Representatives at certain meetings of the Executive Committee. A table presenting the attendance at organizational meetings held in 1954 is presented on page 136. On pages 138 and 139 are charts showing attendance by member countries and observers at meetings of the Directing Council from 1947 to 1954.

During the year, services were provided by the Secretary General to the Permanent Committee on the Revision of the Constitution formed by representatives of Chile, Dominican Republic, and the United States. The Committee held 30 meetings to examine the complete text of the proposed revised Constitution and to prepare a report which was presented to the Conference (CSP14/18).

This report was studied by a special group which prepared a further report (Document CSP14/85, Rev. 1). The Conference resolved not to approve the proposed amendments to the Constitution of the Pan American Sanitary Organization (Resolution XL).

The dates of ratification of the Additional Protocol to the Pan American Sanitary Code, enacted in the city of Havana, Cuba, on September 24, 1952, and the dates of deposit in the Pan American Union are as follows:

Country	Date of Ratification	Date of Deposit in Pan American Union
Dominican Republic	May 9, 1953	May 19, 1953
El Salvador	July 3, 1953	August 11, 1953
Ecuador	March 11, 1954	April 21, 1954
Cuba	March 17, 1954	April 8, 1954
Haiti	April 3, 1954	August 31, 1954
Mexico	June 30, 1954	August 11, 1954

The Basic Agreement establishing the Institute of Nutrition of Central America and Panama (INCAP), signed in Guatemala on December 17, 1953, by Costa Rica, El Salvador, Guatemala, Honduras, and Panama, was accepted in 1954 by Nicaragua. The Bureau will continue in charge of the administration,

coordination, and execution of INCAP's programs and activities for five more years till December 31, 1959. On that date this function might then be taken over by the person or agency designated by the INCAP Council under terms and conditions that this Council may establish.

New INCAP Building (Guatemala)

Two phases of inauguration

Office of the Director

As can be seen from the organizational chart on page 132, the Pan American Sanitary Bureau heads up in the Office of the Director. This office coordinates both the administrative and the technical services; through it are directed both the home office activities and the work of the outlying Zones. It also, in its official capacity, represents the organization both to the public and to other agencies.

In this section of the report on the Office of the Director there will be discussed not only the functions of the Director but also those of the Assistant Director, the Secretary General, and certain offices directly dependent on the Director's Office. These are the Office of Coordination, and the Office of Public Information.

Outside of projecting and executing major policies, in line with goals set by the governing bodies, general supervision of the divisions and offices at headquarters, although now shared by the Assistant Director, still constitute a substantial portion of the duties of the Office of the Director. These include decisions on documents and general arrangements for conferences of governing bodies, publications, appointment of personnel, and awarding of procurement contracts. The Director, or, the Assistant Director, participates in many committees which consider problems and recommend action, in connection with buildings, contracts, exhibits, library, personnel selection, and reports.

Although field program operation has been decentralized to Zone Offices, the Director's office makes decisions at key points, approves allotment of funds, and works out agreements with governments and cooperating agencies. Operational matters to keep Zone work at top efficiency still require guiding decisions on the Director's part.

Assistant Director

The appointment of the Assistant Director in May, after that office had been vacant for slightly over a year, was significant in that for the first time since the organization of the Bureau that this post and the recently created top posts including Chiefs of Divisions have been filled. Thus the formative period of the expanded organization came to an end. Staffing of principal posts in each major unit, both Division and Zone Offices, made it easier to devote reasonably adequate attention to over-all supervision of the work of the Bureau, to relationships with governing bodies and Member Governments and with other agencies, as well as to general policy matters.

The Director and Assistant Director both need to keep well informed on current situations so that maximum flexibility is achieved in adapting the work to current needs. However, for efficient division of labor, the Director

generally concentrates on relationships with governing bodies, Member States, and other agencies, as well as major policy matters. The Assistant Director tends to pay special attention to program planning, especially the preparation of the program and budget, and to the coordination and direction of the operating program and the supporting services.

The Assistant Director assists the Director in the exercise of all his functions and duties, but especially in directing, coordinating, and stimulating program planning. He also supervises the execution of all major operations of the Bureau.

The Director, Assistant Director, Secretary General and Division Chiefs form a Policy Board to advise the Director on current formulation of policy and on general program and operational matters. The Zone Representatives are also included in consultations on field programs and policy matters through individual contacts and through meetings which are convened twice each year. Since many organizational and procedural matters now require less attention, it is possible to give more consideration to long-term policy and program planning. The last meeting with the Zone Representatives, December 1954, was held away from the Washington office and was devoted to planning.

Secretary General

The Secretary General of the Bureau assists the Director in duties relating to governing bodies and Member States, and more especially in arranging conferences, maintaining records of proceedings, and in consulting officials of Member States. He assists the Director in external relationships, especially with international governmental and non-governmental organizations, by representing the Bureau at conferences, functions, and ceremonies. He also supervises the conference, editorial, and library services.

A fairly extensive account has already been given of the editorial activities of the Secretary General in the sections of this report dealing with publications (see pages 120-125).

In 1954 the Secretary General assisted the Director and Assistant Director in the preparation and conduct of the XIVth Pan American Sanitary Conference, Santiago, Chile, and 22nd, 23rd and 24th Meetings of the Executive Committee of the Directing Council, Washington and Santiago, the Annual Meeting of the INCAP Council, and the United States-Mexico Border Public Health Association Meeting. It is part of the duties of the Secretary General to arrange for the official reports of important conferences.

The Secretary General's Office assisted in arrangements for interviews between specialists in Central and South America and a North American expert on radioisotopes who visited several countries in 1954. The handling of this

service to Member Governments is divided into two parts. The first or technical part, which involves relations with specialists in charge of official radiological services and with the medical profession, is taken care of in the Secretary General's Office; and the second part, the actual purchasing, is done by the Administration Division of the Bureau which also obtains export licenses and arranges for rapid shipment within the limited number of days corresponding to the "life" of the particular radioisotope requested.

Information was provided to the doctors and consignees designated by the countries, and the clinical reports on the results obtained were transmitted to the responsible office of the Atomic Energy Commission.

The Secretary General also has supervision of the Bureau Library. During 1954 the Library supplied information to the staff in the Field Offices as well as to the staff at Headquarters.

Library Statistics 1950-54

Activities	1950	1951	1952	1953	1954
Acquisitions					
Books, pamphlets and subscriptions ordered and requested	929	1472[1]	426	380	463
Books received	1067	882	515	516	1026
Pamphlets received	1575	2067	1100	1211	510
Periodicals					
Exchanges established	83	30	14	24	31
New titles	87	83	46	37	51
Documents					
WHO	8593	6225	4321	1523	2228
Other international organizations	528	179	81	27	0
Processing					
Cataloguing					
Works catalogued	2652	1974	1576	1535	1681
Cards prepared for catalogues	4093	11019	15304	8523	7396
Cards prepared for Zone Offices and WHO, Geneva, Library	2832	3676	7513	8606	7081
Periodicals					
Issues filed	3060	5865	7041	6017	6676
Duplicates and discards	1752	7313[2]	3330	7147[2]	4180
Volumes bound	592	537	425	353	277
Indexing					
Documents and articles	1783	1470	1156	1144	1180

[1] A reference collection comprising basic texts and important periodicals was established in the offices of Zones II, V, and VI.

[2] This figure includes issues of periodicals discarded at the time the collection was reviewed, first, on moving to a smaller area in permanent headquarters, and, second, to conform with the policy of the Library Committee.

Priority was given to the requests from the Zone Offices for information and pamphlets required to facilitate the work of technicians in various projects. This year 2,217 pieces of literature, 848 pages of microfilm, and 2,099 pages of photoprints were forwarded. In addition, subscriptions to 124 periodicals were renewed.

In 1954, 42.2 percent of the Library budget was spent for materials for the Zone Offices. Interest in the Pan American Sanitary Bureau and the World Health Organization is growing as measured by inquiries for data received from students and public health workers in the Americas. Careful attention was given to each request. These requests are handled by library staff.

The Library, with its limited space, specializes in public health information of the Americas. Through cooperative arrangements with medical schools, government departments, and other libraries in the Washington area, it has at its disposal extensive resources far beyond its own indispensable reference material.

Also under the supervision of the Secretary General is the Conference Section, consisting of a small group of experienced and well-trained specialists, which attended to the essential services and the thousand and one details necessary for the successful organization and functioning of the 22nd Executive Committee Meeting in Washington, the XIVth Pan American Sanitary Conference and 23rd and 24th meetings of the Executive Committee in Santiago, Chile, and of the Vth Meeting of the INCAP Council in Nicaragua.

This section supervises a translating unit, which produced a total of over 8,000 pages of translations in the four official languages of PASO at the request of all Bureau offices throughout the year, as shown in the adjoining table. However, these figures do not reflect the entire picture, as the unit has the additional function of performing special Secretariat assignments during conference periods, including preparation of minutes, interpreting service, and translating and editorial work required in connection with the documentation of the meetings. It also supervises the arrangements for contract translations done outside the Bureau, the most outstanding of these during the year being the translation of John J. Hanlon's P r i n c i p l e s o f Public Health Administration, of which the Spanish edition runs to 590 pages. Some of the 1954 publication work including translation is displayed in the photograph on page 124. The extensive publication program from English to Spanish, in constant operation, is designed to make available to Latin American countries much of the professional literature originally published in English.

Translations Delivered, 1954

Language	Jobs	Pages
Spanish	460	5,816
English	346	1,370
Portuguese	132	916
French	82	126
Total	1,020	8,228

Office of Coordination

The Office of Coordination works under the immediate supervision of the Director and Assistant Director. The main function of the Office of Coordination is to assist and facilitate the work of other offices. Much of its attention in the immediate past has been given to decentralizing the work of the Bureau and aiding the smooth operation of the Zone Offices, of which a description will be given later. It also pays a great deal of attention to Bureau cooperation with other agencies, on which a special section is presented later, and to detailed planning of program targets which extend far into the future.

One function of the Office of Coordination is to assist the Office of the Director in coordinating the efforts of Zone and Headquarters in the preparation of the program and budget. An important function is to provide information on the status of each project and, where appropriate, call the attention of the responsible office to the next procedural step which needs to be taken. The Office of Coordination issues a Monthly Project List giving summary information on the status of projects. It prepares special lists of projects as may be needed from time to time. It also responds to the numerous daily inquiries from all offices on the status of individual projects.

The Office of Coordination is responsible for the preparation and processing of agreements of all types dealing with programs. It periodically reviews projects to determine when an original agreement, an extension, or a modification is needed and informs the Zone or Headquarters office as appropriate. On the basis of drafts prepared by the Zone Offices and reviewed by technical branches, the Office of Coordination prepares the final draft. When agreements are signed, the Office of Coordination arranges for reproduction and makes distribution. During 1954 the agreements prepared included 27 new project agreements, 13 tripartite plans of operation with UNICEF, 34 extensions, and eight amendments.

The Office of Coordination assists the Director and cooperates with the budget office and other offices in periodic reviews of project requirements and need for rescheduling and revising cost estimates. The field program is peculiarly subject to frequent changes due to numerous factors such as unavailability of technical personnel, prior commitments, or changes in governmental plans. Also the uncertainty of Technical Assistance funds has often delayed planning until too late for implementation in the same year. Thus in the past, substantial funds remained unspent at the end of the year although countries were in need of additional technical advice and service.

This problem is met in part by planning short-term activities to be implemented as fast as funds became available. Starting in November 1953 the Office of Coordination prepared a list of proposed new activities and assisted the Director's Office in coordinating a review by technical Divisions and Branches to establish which activities should be approved and the priority order of implementation as funds became available. This process was repeated during every one or two months of 1954 as savings accumulated.

Project files were maintained for 109 country and intercountry projects which operated during the year, plus six inter-regional projects. Project files also were maintained for projects in the planning stage.

Office of Public Information

The head of this office acts as a public relations officer to the Director. One of the chief functions of the Office of Public Information is to issue press releases as occasion demands. The office is also active in preparing and distributing a great deal of other informative literature on the activities of the Pan American Sanitary Bureau. For a description of these activities see pages 125-131 where details are given under various headings.

The Office of Public Information in 1954 continued to carry out its function of providing information on the Pan American Sanitary Bureau. All routine requests for information on the functions and activities of the Bureau were given prompt attention. In addition it acted as an internal clearinghouse, working closely with the library and the editorial service in seeing that full use is made of Bureau publications. Letters with inserts, kits of publicity material, reprints, and booklets on Bureau activities were widely distributed.

Headquarters Divisions

Division of Administration

What remains of the large area of central administration, especially the mass of administrative detail connected with budget preparation, personnel management, records, communication, and graphic presentation, falls to this Division. Here also sustained supervision is given to budget control, policies of economy, and decentralization plans.

From 1950 through 1953, emphasis was placed on decentralization which affected all phases of the Bureau operations. During this period, programs changed, the amount of funds available fluctuated, and the organization structure of the Bureau was recast. By 1952 the strongly centralized organization had given way to the present system of Zone Offices, and the task of building up the operating mechanism to handle the decentralized activities was begun. Through 1952 and 1953 this program accelerated, and by the end of 1953 the decentralization phase was nearly completed.

At the XIVth Pan American Sanitary Conference in 1954 the Director's report that the decentralization had been substantially accomplished was approved by the Conference. During the year 1954 the concentration was on economy, improved operations, and better utilization of manpower and money.

The problems of improving operations to render more effective and yet economical service are complicated by the nature of the organization as well as by the difficulties inherent in any decentralized operation.

The differences in cultural and educational background of the members of the staff are other factors affecting operations.

Further, the comparative newness and the too often short life of international organizations has meant that there is little background of experience in operations and still less of a reservoir of personnel skilled in international agency operations. Neither national government nor commercial administrative practices are completely suitable for use in an international organization; the methods which have been evolved in the Bureau are the products of extended planning and experimentation.

The administration of Bureau programs is even more complicated by the great area of the Americas. The actual time for mail to move between Headquarters and the more remote offices, and the cost and time of travel between them, slow the administrative process and cause inconveniences and delays. This has meant that rules of procedure must be clear so that, within the guidelines of Bureau policy, field personnel will be free to act without time-consuming recourse to Washington for instruction.

Reducing the cost of operation has meant careful measurement of the purpose and size of each expenditure with emphasis on effective utilization of personnel. The latter covers training of personnel, assignment of staff to the jobs for which they are best fitted, and evaluation of performance.

In the last months of 1953 and into the first months of 1954, a careful study was made of the budget and allotment process which resulted in definite improvements in method and procedure.

Two other steps in the decentralization process are of note: increased participation by the field staff in the preparation of budget data, and the transfer of increased payment responsibilities to the field offices. In the case of the budget preparation, the field staff had participated to some extent in earlier years, but in 1954 for the first time formal instructions for detailed preparation were issued, and the Zone personnel prepared all estimates for project and other activities in their areas.

A continuing scrutiny was undertaken of obligations against which complete expenditures had not been made. If examination indicated that the unspent portion was not likely to be used immediately, it was released for other purposes. These analyses involve close collaboration between fiscal and technical personnel, with the result that maximum amounts are made available for program activities.

A number of other technical improvements in the fiscal area were made. As an illustration we may cite the adoption of a Letter of Credit for consultants. Prior to its adoption, consultants had been paid from Washington with the inevitable delays in receipt of checks while in travel. With the adoption of the internal letter of credit, in effect a drawing account, any Zone Office at which a consultant stops is authorized to make the payment and a burdensome monthly payroll job in the Washington Office is eliminated.

The procurement of supplies and equipment for the Bureau and for Member Governments continued to play an important part in administrative activities.

Demands for these services, which cannot be easily reflected in statistical form, continued to increase during 1954. The volume of requests from Member Governments for cost estimates, assistance in compiling lists of supplies and equipment, developing specifications, and related information, is indication of the value which governments place on these services. One important service has been the procurement and shipment of radioisotopes. The volume of requests has steadily increased and in 1954 the number of such purchases amounted to 101 as compared with 54 in 1953.

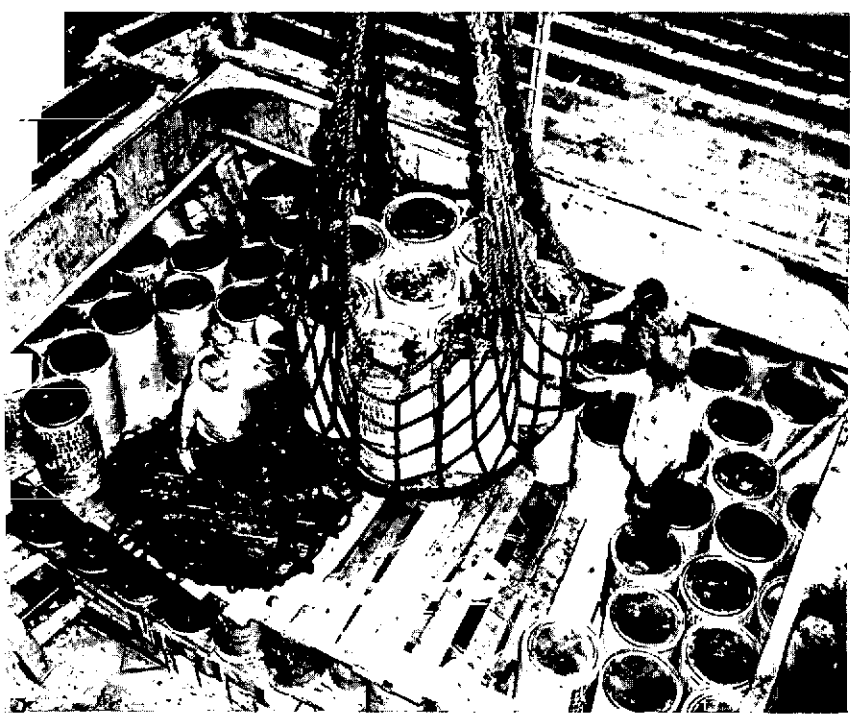
The volume of purchases for 1954 was 1,408 orders, consisting of 6,230 line items with a gross value of $1,500,461. Additionally, cost estimates were furnished on 2,761 line items amounting to $2,672,166.

During the year, a large part of the staff of the Bureau was enrolled in the group life insurance plan used by the United Nations, and progress was made for admitting the remainder. This supplements the accident insurance plan which is jointly paid by the Bureau and the individual staff member and extends life insurance coverage to individuals who might otherwise find it difficult to obtain such insurance.

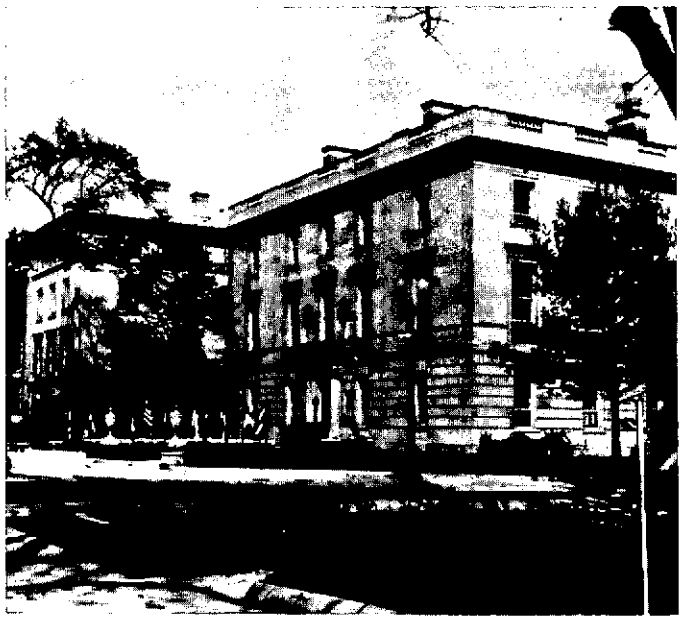
Action has been taken to produce an orientation manual and staff handbook which will acquaint incoming staff members with information of interest regarding the Bureau's purposes, officials, and other matters of individual entitlement. The manual is currently under review and will be published early in 1955.

The total staff strength, including consultants, at the end of 1954 was 421; of this, 193 were stationed in Washington and 228 in the field; comparable figures for 1953 were 400 total, 196 in Washington and 204 in the field. The turnover in 1954 was 14.8 percent as compared with 17.4 percent in 1953.

Large quantities of DDT are shipped to regions where this important insecticide is needed



The action of the XIVth Pan American Sanitary Conference in fixing the level of the Working Capital Fund at $1,200,000 is an indication of the degree of fiscal stability which has been attained. This level, first set in 1952 by the VIth Meeting of the Directing Council, at Havana, has been renewed in 1953 and 1954. The Conference, acting on the recommendation of the Executive Committee, decided that the level should remain fixed at that amount until developments forced reconsideration, and that year-to-year approval no longer was required. Additionally, the Conference gave approval to establishment of the tentative budget ceiling for 1956 at $2,200,000;



PASB office buildings, Washington, D. C. Final payment on these buildings and extensive renovations were completed in 1954; value $500,000.

this amount, if approved after submission by the Executive Committee, will mark the first increase of the assessment budget in four years.

Another development of interest was the completion of the program of renovation of the buildings at Washington, bringing the total value of the physical properties of the Bureau to approximately $500,000.

One problem engrossing attention of officers in the Bureau has been that of recruiting competent and experienced personnel. Recruiting activity has been increasingly successful despite difficulties such as the over-all shortage of technicians which makes a government reluctant to release certain specialists for service outside of its country. Less than a dozen major positions are now vacant. Careful analysis has been made of applications, rosters of available skills have been circulated within the Bureau, and intensive effort has been made through exhibits and other media to interest qualified personnel in service with the Bureau. Schools of public health and other institutions have been urgently and frequently requested to refer to the Bureau any qualified and interested candidates. In all, there has been close collaboration between the administrative and technical personnel, both in Washington and in the field. It is planned, in 1955, to continue to stress the need for smooth and efficient operations, effective utilization of personnel, close collaboration between all organizational elements, and concentration on fostering *esprit de corps* among the staff.

Division of Public Health

As will be seen by reference to the organizational chart on page 132 this Division has three Branches dealing respectively with Communicable Diseases, Environmental Sanitation, and Health Promotion.

In general the year 1954 was a year of consolidation for the Division of Public Health. Chief interest was to provide realignment following the decentralization of activities which became fully effective in 1954. High-

lights in this process of consolidation during the year were: a clearer definition of the functions of the Division, progress in building up team spirit through divisional meetings, careful analysis of field reports, and improved coordination of the work of divisions, zones, and agencies. The consistent goal in 1954 was the best possible service to field program operations.

Every attempt was made to organize the Division so as to give effect to the increasing desire to integrate the basic activities of disease control, environmental sanitation, and maternal and child health programs into a strong health service supported by a full-time, well-trained health officer.

The organization was also shaped up so as to give increased recognition to eradication as a basic concept for promoting both achievement and morale in the realm of public health administration.

During 1954 there has been no basic change in the structure of the Division which, as has been noted, includes the Office of the Chief and the three Branches enumerated as follows with brief mention of subjects of interest.

Health Promotion Branch: Public health administration, integrated health service programs, maternal and child health, health education, nursing, mental health, public health laboratories, nutrition, and public health dentistry.

Communicable Diseases Branch: Quarantinable diseases, tuberculosis, treponematoses, diseases transmitted from animals to man, and other communicable diseases and veterinary public health problems. The Branch includes a unit which is responsible for the collection and dissemination of statistical information relating to health conditions, and consultant service on statistical phases of projects of the Bureau.

Environmental Sanitation Branch: Municipal and rural sanitation, house and town planning, insect, rodent and other vector control, food sanitation, and environmental phases of occupational health. For administrative purposes, as the *Aëdes aegypti* campaign was intensified and a regional malaria eradication program was approved for implementation, the insect control activities were placed under the immediate responsibility of the Office of the Chief.

One important accomplishment has been the gathering of information on country health problems and the initial development of forms for the systematic collection of such information. These forms are intended to meet an essential requirement for long-range planning by the Bureau and especially by national health workers. Its development was stimulated by the analysis of the reports presented by 21 countries and 24 territories to the XIVth Pan American Sanitary Conference. These reports with information on demographic conditions and health programs covering 326 million people are put to use in day-to-day national and regional planning.

Another important step has been the development of guides and standards for the implementation of programs. These guides are undergoing field trials. Similar guides are under preparation for the eradication of malaria and the prevention and control of the diarrheal diseases, and are being planned for smallpox, rabies, environmental sanitation, nutrition, nursing, health education and other field trials.

Finally, the responsibility of the Division for the study and approval of programs and projects proposed by the Zone Offices has continued to call for a considerable amount of effort. The table on page 154 gives the distribution of projects assigned to the Branches of the Division by geographical and field area.

The need for better planning is continuous. As the Bureau became a central coordinating agency and a more stable factor in planning, the responsibility of the Division for promoting well-balanced national and regional programs became greater.

Most projects involve services in addition to the specific field of activity. The international consultants give general advice and assistance to national workers and authorities in strengthening health services. This is done within the public health administration projects by a team of consultants covering the various public health fields. The staff weighs every existing and proposed activity against their contribution to the well-balanced health development in each country.

As the Zone Representatives assumed full responsibility for the actual direction and administration of country projects, the Division has progressed

PUBLIC HEALTH PROJECTS OPERATING IN 1954, BY FIELDS OF ACTIVITY[1/]

Country or Zone	SANITATION BRANCH			COMMUNICABLE DISEASES BRANCH						HEALTH PROMOTION BRANCH					
	Malaria-Insect Control	Environmental Sanitation		Quarantinable Diseases	Other Diseases	Treponematosis	Tuberculosis BCG	Statistics		Public Health Administration	Maternal and Child Health	Nursing	Nutrition	Others[2/]	TOTAL
Cuba	1														1
Dominican Republic	1	*				1				2		*			4
Haiti	1					1				1				1	4
Mexico	1				1						1				3
Intercountry					1										1
British Honduras							1								1
Costa Rica					1		1								2
El Salvador		*						*		1	1	*			2
Guatemala		1								1					2
Nicaragua		1								1					2
Panama		*								1		*		*	1
Intercountry	1			1									1	1	4
Bolivia	1	1													2
Colombia	1			1			1				1	*			4
Ecuador				1	1	1	1				1	*	1		6
Peru				1	1					2	1	*			5
Intercountry				1						1					2
Brazil				1	3						1				5
Argentina	1														1
Chile					1		1				1	*			3
Paraguay	1	*		1	1	1	2			1	1	*		*	8
Uruguay	1									1					2
Caribbean Territories	1					1	4								6
United States						1									1
Inter-Zone	2			2	3		1	2		1			1		12
Inter-Region					6										6
TOTAL	13	3		9	19	6	12	2		13	8		3	2	90

[1/] In this table numbers indicate projects in major subjects and asterisks indicate specialized professional services in addition to major subject.

[2/] Includes health education, laboratory, mental health, and social and occupational health.

in developing adequate methods for review and appraisal of over-all accomplishments, both through study of reports and visits to the field.

A summary project card was introduced to give the technical staff readily available information and thus make possible prompt attention to requests for service by the field and sufficient time to plan in an orderly way the systematic review of program activities.

Analyses of project reports were carried out by the Branches at Division meetings, followed by recommendations concerning objectives, techniques, and accomplishments for the field. This system has been applied on an experimental basis during the year to 18 projects. It is planned to cover all of the long-range projects during 1955.

The visits to the field constitute a second mechanism of assessment, providing at the same time an interchange of information and experience. By limiting the number of visits it has been possible to plan them carefully and to develop procedures for proper interchange of information among the various branches, both prior to the visit and in jointly discussing the findings. On the basis of this experience it has been possible to plan and advise Zone Representatives well in advance of the travel in 1955. A major step in promoting the full use of the staff of the Division has been their assignment to project activities for limited periods. This is to be expanded as the need for consultants becomes critical.

The functions of the Division of Public Health, which in large part apply also to other Divisions of the Bureau, may be briefly summarized as follows:

Planning

Development of plans for collecting data on country health conditions and requirements; and the continuous analysis and use of this information for planning purposes.

Formulation of broad program objectives, including determination of regional requirements, and the planning of interzone projects.

Development of guiding principles, standard methods and techniques for implementation and evaluation of programs.

Study of proposed programs and projects in terms of budgetary implications, technical practicability, and conformance to over-all aims.

The periodic study and recommendation on budget allocations for project activities proposed by Zone Offices.

Review of program and project accomplishments through the analysis of project and Zone Office reports, field visits by Divisional staff and through other means of measuring progress toward stated objectives.

Recommendations on project objectives, techniques and accomplishments stemming from review of reports, field visits, or consultation with other officials of the Bureau.

Review of expenditures for approved activities and the recommendation for issue, increase or decrease, of allotments for approved projects in the area of responsibility of the Division.

Development of guides for assessment and the continuous and periodic evaluation of project and program activities.

Advisory Services by arrangement with Zone Representatives as appropriate

Provision of advisory services to officials of the Washington Office and Zone Offices regarding policies, plans, standard methods and procedures.

Provision of direct assistance to field activities including the assignment of Division staff for limited periods to Zone or project activities.

Provision of advisory services to national government officials on matters relating to standard methods and information on over-all Bureau policies and objectives.

Analysis and dissemination of statistical data, including basic conditions and requirements, morbidity, and mortality data, application of International Sanitary Regulations, and other related statistical data.

Operational activities

Analysis and dissemination of information and material on technical and administrative developments in the field of public health.

Promotion of research as a by-product of Bureau-assisted activities and through recommendations for assistance to individuals or institutions engaged in research on problems affecting health.

Direction of interzonal or intercountry projects or programs not specifically assigned to the jurisdiction of a Zone.

Assistance in the planning, development, and contact of seminars and special courses in public health subjects; and assistance in the follow-up of the activities of Bureau fellows.

Assistance in the recruitment, appointment, and placement of personnel through the interviewing or referral of candidates and the submission of professional recommendations concerning suitability of candidates or appropriateness of proposed assignment.

Preparation of special documents incorporating technical reports for presentation to meetings of governing bodies; and the review of proposed publications or exhibits of the Bureau for conformance to policy and technical correctness.

Division of Education and Training

The importance of the educational factor has, from the start, so permeated all activities of the Bureau that it would be incorrect to say that any one division is exclusively occupied with education and training. All public health work instigated by the Bureau has an educational underpinning in the sense that it is an attempt by the democracies of the New World to educate themselves in the techniques of working together in the promotion of better living conditions.

It is well known that international health work has been the entering wedge, and the most successful effort thus far, in promoting world-wide peaceful cooperation between national units. In the face of calamitous natural threats to life the human race seems to draw together to absorb the lesson of cooperation as it does at no other time.

The idea of a protective union which takes measures against invading diseases is itself a grand experiment in defensive cooperation, and as such is an educational undertaking. The succeeding idea of inaugurating extensive eradication campaigns is an attempt to prove a thesis, namely, that eradication is not only cheapest in the long run but is also a great builder of morale.

At every point of its career the activities of the Pan American Sanitary Bureau have attempted to change the frontiers of knowledge by broadening the area of application of health principles. When in addition to eradication campaigns the Bureau undertook to help strengthen the health departments of the various nations in America, it acted on the idea that it is better to integrate effort than to scatter effort. Here also the chief components are strictly educational in character.

It is realized that people can not be forced into better health habits but must be educated into acceptance of these habits. To put into effect enlightened health practices it is necessary to make common cause with other educational forces such as have been exerted for centuries by churches and schools. The entire thrust of even the most varied program in public health is essentially one of the application of such new knowledge as has been demonstrated to be efficient in health promotion.

Because education is so pervasive in character, and because it is never entirely absent from any part of the work of the Bureau, the educational techniques employed are scattered throughout the organization. Reference to the organizational chart at the beginning of this section will show that this Division of Public Health has a Health Promotion Branch. Sections of this Branch are definitely concerned with education of the public. In a more general way, the Office of Public Information, directly subordinate to the Office of the Director, has a great deal to do with the educational effort required to make clear to the public, especially the public that reads the press, the aims and purposes of this international health organization.

It has already been pointed out that a large element of all conference activities is admittedly educational in character. People learn by coming together to talk about common aims and common goals. The publication of journals and the distribution of literature, which like the conference activities comes directly under the Office of the Secretary General, has distinctly educational proclivities. Under the Division of Administration is a service that has for years been supplying valuable visual aids and exhibits to help stimulate the international spirit and promote cooperative efforts in health work.

In spite of this scattering of educational effort throughout the organizational structure of the Bureau, there are certain phases of education, especially the technical aspects, that are actively cultivated in the single and coherent Division of Education and Training.

The Division was originally built up around the nucleus of the fellowship program. One of the earliest and best established activities in all public health work has been the awarding of international fellowships. Such a fellowship program has been in operation for many years in the Bureau.

The selection of fellows, their placement, their travel arrangements, and the technical aid in helping them put their time to best possible use calls for special skills and a great deal of administrative effort. Fellowship programs now operate very smoothly. Hundreds of fellowships are active each year and these individual fellows change from year to year almost with the regularity of classes in a university. The program of having students put in time under teachers who can best instruct them, and of paying these fellows so that they can travel and live abroad, has turned out to be a most rewarding operation. Fellowships are now relied upon to keep up a steady infusion of new strength in the national departments.

The Bureau gives special attention to the training of auxiliary personnel. One key problem in many parts of the Americas is to make full use of the limited trained force available and to give a certain amount of supervised schooling to hitherto untrained help so that urgent health needs can be met. In addition to its aid to professional education and its fellowship plans the Division of Education and Training devotes a great deal of its effort to these programs of preparing auxiliary personnel.

Special courses are provided in environmental sanitation, statistics, and in specific communicable diseases such as malaria and brucellosis. There is also close collaboration with other organizations, especially international ones, such as the Institute of International Education (New York) and the Inter-American Foundation for Post Graduate Medical Education (Chicago).

Recent efforts have sought to establish a seminar in sanitary engineering in Costa Rica, a waterworks training course in Central America, and special attention was given to nursing congresses. All this work is given in greater detail in preceding sections. Now in the planning stage are seminars on preventive medicine, sanitary engineering, and pediatric education. The particular nature of the work in this Division is concerned with technical improvements in methods of conducting public health work.

Zone Offices

Although certain field offices of the Pan American Sanitary Bureau have been in existence in more or less rudimentary form for many years, it is only recently that a thorough reconstruction of the outlying network of branch offices was undertaken. Zone Offices, in the modern sense considered as an integral part of a closely knit but decentralized organization, date back less than five years.

In the latter part of 1951 Zone areas were redefined, present locations of Zone Offices established, and adequate staffs began to be assembled. The Zone II office was established in Mexico City in the early part of 1952. In 1952 there were promulgated general principles governing the extent and method of decentralization and outlining the respective responsibilities of Headquarters and Zone Offices.

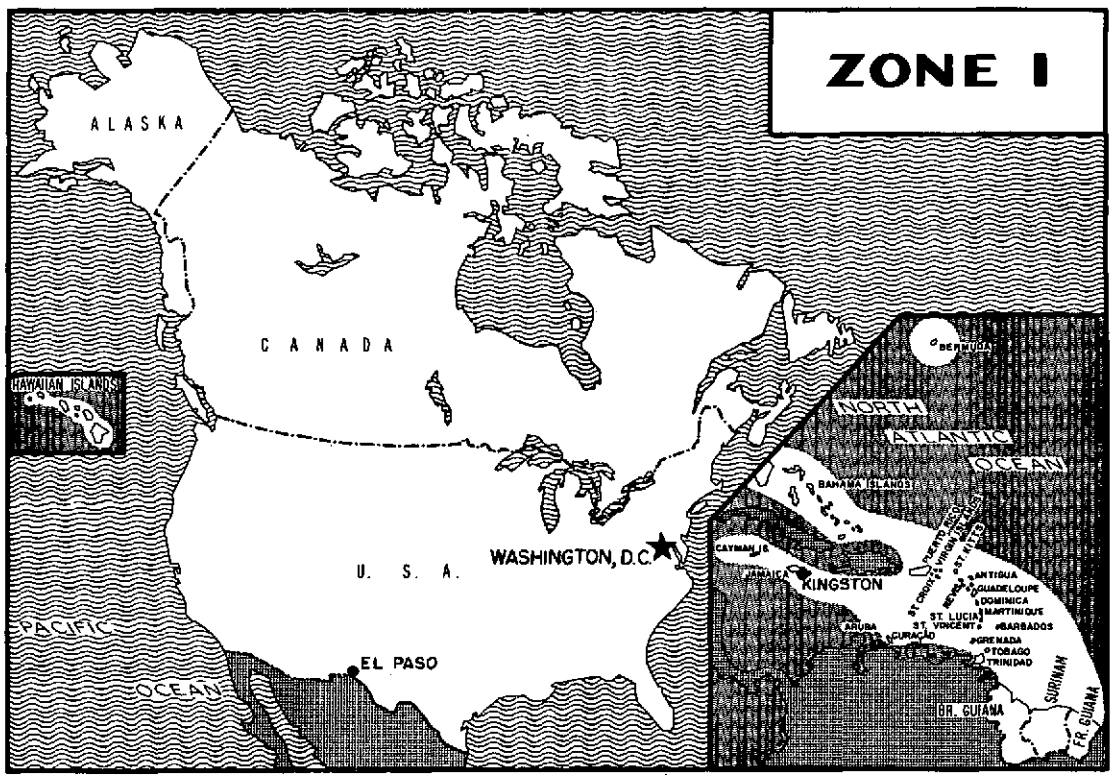
The Zone Offices were made responsible for operational program activities, both in giving direct technical advice to health administrations and in field planning and operation of projects. This system has the advantage of making technical advice of Zone staff continuously available to governments. Further, it assures that projects will be planned in cooperation with the national health personnel and in a manner appropriate to local conditions.

Zone personnel collect basic information on health needs and resources to be used for long-range planning. As a fundamental part of decentralization, Zone Offices propose the field activities to be included in the program and budget, after consultation with the respective national health authorities and the cooperating agencies.

With the creation of each Zone, responsibility for the appointment of local personnel was fully delegated to the Zone Representative. As the staffing of the Zone Offices was completed, more and more functions, especially those connected directly with Zone personnel, were transferred from the Washington office to the Zones.

Headquarters reserves the responsibility for technical and administrative services. The responsibility and authority for relations with the governing bodies are retained by the Director who also maintains relations with international organizations, both governmental and nongovernmental. He also establishes policies, procedures, and regulations for operation of the Bureau and for over-all direction of its activities. The Washington office is responsible for technical and administrative services, such as procurement, fellowship placement and supervision, collection and dissemination of statistical and epidemiological information, library service, publication of material for public information, financial control, and general administrative services; the development of general and long-term program planning; evaluation of program accomplishments; technical information and advice; and the operation of intercountry projects involving more than one Zone.

Health work in the various Zone areas has been described in detail in foregoing sections of the report. The half-page summaries which follow are offered as expanded highlight titles to the maps.



Zone I

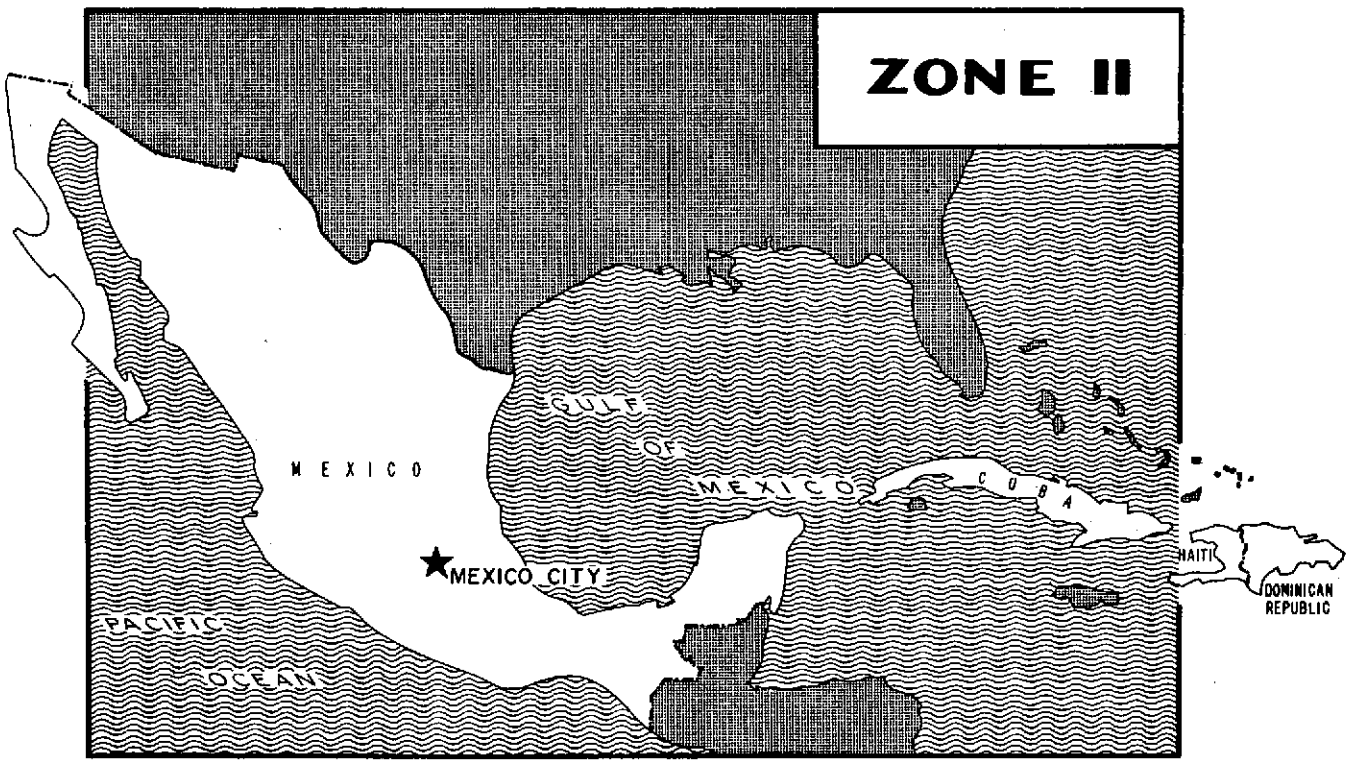
The Washington office retained jurisdiction over Zone I. Within it and located at Kingston, Jamaica, the Field Office for the Caribbean was responsible for the coordination of Bureau activities with the twenty-one Health Departments of the Dutch, English, French, and American Caribbean.

The outbreak of yellow fever in Trinidad, a highlight of 1954, resulted in the acceleration of activities to eradicate *A. aegypti* from the entire Caribbean area.

During the year other regional programs included malaria eradication, treponematoses eradication, environmental sanitation, leprosy control and regional health training. Although the picture in 1954 was somewhat dominated by communicable disease problems, progress was also made in the strengthening of integrated programs of public health.

The other Zone I Field Office, at El Paso, Texas, was continued as an intercountry program concerned with stimulating cooperation and coordination of activities among the border health officials of Mexico and the United States.

The El Paso Field Office concentrates on health problems in four States of the U.S. and six Mexican border States with a population of 23,000,000 and between them a common border almost 2,000 miles long. Close working relationships with Border organizations in public health and related fields were maintained. An important liaison agency is the United States-Mexico Border Public Health Association, for which the El Paso office continued to act as Secretariat.



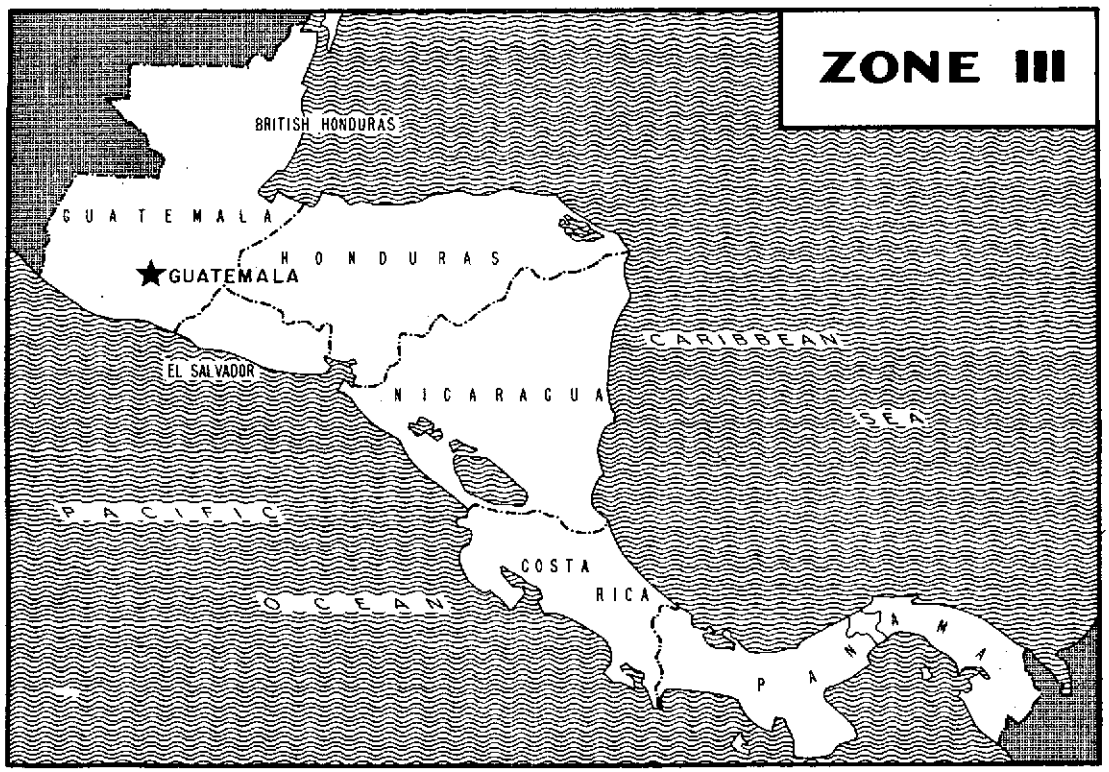
Zone II

Although Zone II is the youngest of the Zone Offices, it had in operation during 1954 a full-fledged program of activities. With the health problems of the four countries of the Zone firmly in mind it seemed desirable to push ahead on the already well-advanced programs of health education and training. One of these programs, aimed at eradication of *Aëdes Aegypti* in Cuba, has served for training of personnel of nine countries of the Americas, including the United States.

In 1954 the Zone helped to start a well-rounded program of integrated public health services in the Dominican Republic, and plans are advanced to have a program of this kind, extension of public health services to rural areas, in operation in all of the four countries of the Zone.

In veterinary public health, Zone activities have enlarged from a single rabies project to activities related to encephalitis, brucellosis, and zoonoses in general. In the field of environmental sanitation stress was put on appropriate training and use of sanitary inspectors.

This year has seen a great expansion in the field of nursing education, the highlights being the successful seminar on nursing curriculum held in Mexico, the promulgation of a law on nursing education in Cuba, and the beginning of the project to assist the School of Nursing of the National University of Mexico in its complete reorganization, by means of four consultants already in the country.



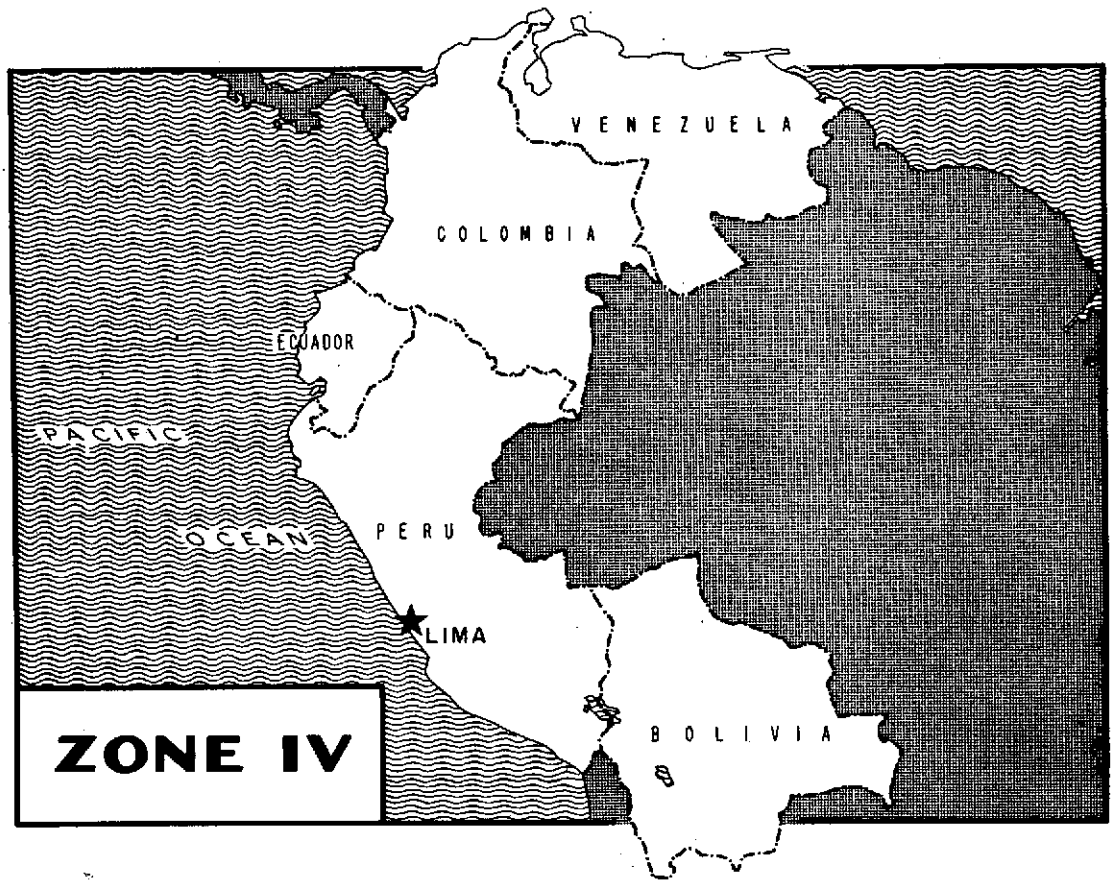
Zone III

The development of integrated health services, first in El Salvador in 1951, then in Panama in 1952, have had a decided impact on the health services of the other countries in the Zone. The policies and programs of all of the countries of the Zone are pointed towards the strengthening of national health services, control of communicable diseases, and the eradication of those diseases which are subject to this mode of attack. Without exception, the budgets of the national health services for strictly preventive medicine are higher than they have been in any time in the histories of the countries. Expenditures by the national governments for hospital and curative medical services have likewise gone up.

During the year, cooperative work among the countries in the field of public health has been outstanding. This type of intercountry cooperation has continued even though political unrest in several of the countries has interfered with other types of intercountry cooperation.

One of the high points within this area of activity was the establishment of INCAP on a permanent basis with a new building. (See pages 21, 90-91, 141).

The intercountry projects have been very successful. Each of the projects in operation strengthens the integration of the health services within each specific country.



Zone IV

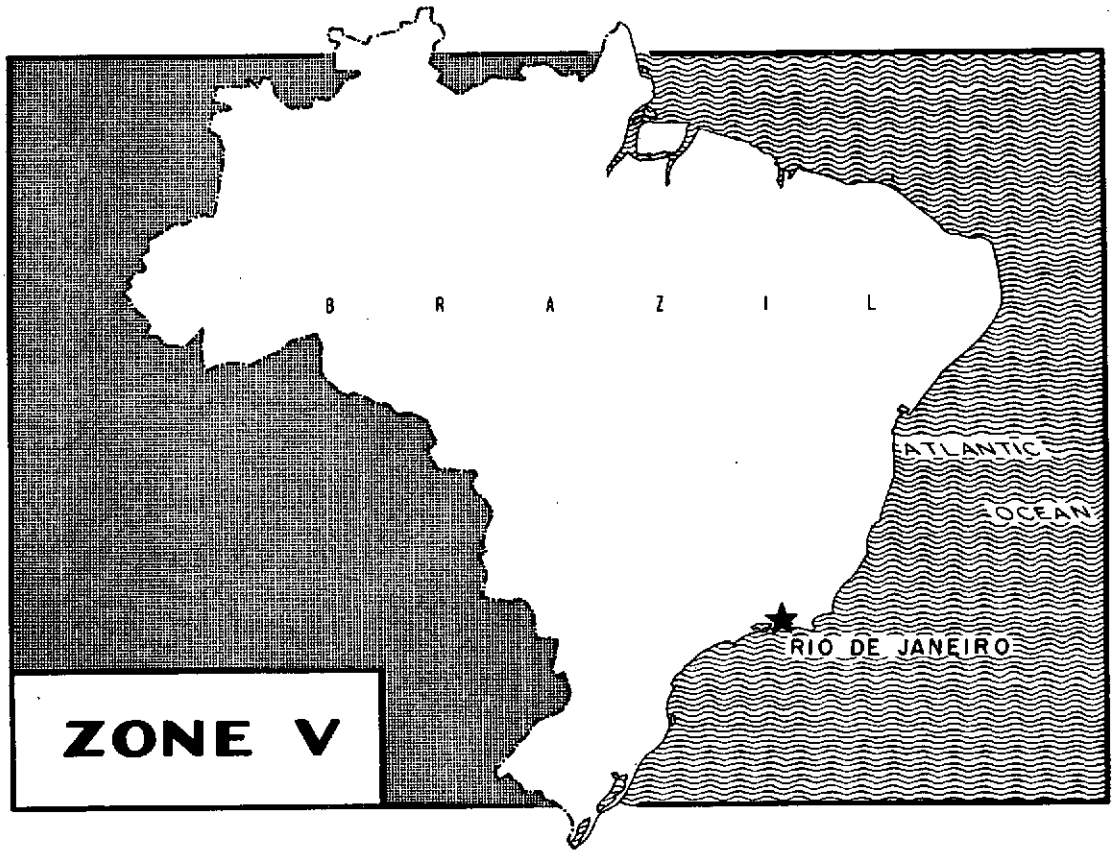
During 1954, in all five countries of the Zone, through direct advisory services to the governments and health authorities and through specific project activities, some with international project personnel and others supervised by the staff of the Zone Office, interest in public health was kept at a high pitch.

Very good working relationships have been established with the UNICEF Latin America Regional Office staff, and an increasing number of meetings have been held to discuss problems related to joint activities.

Much attention was given to the 24 specific projects already in operation in 1954. Five of these were inter-regional.

In the field of education and training, the Zone Office has been instrumental in making possible 46 fellowship awards.

Close contact with national and international nursing and allied personnel has been established in all five of the Zone countries, and nursing assistance was given to over-all public health planning and to specific projects.



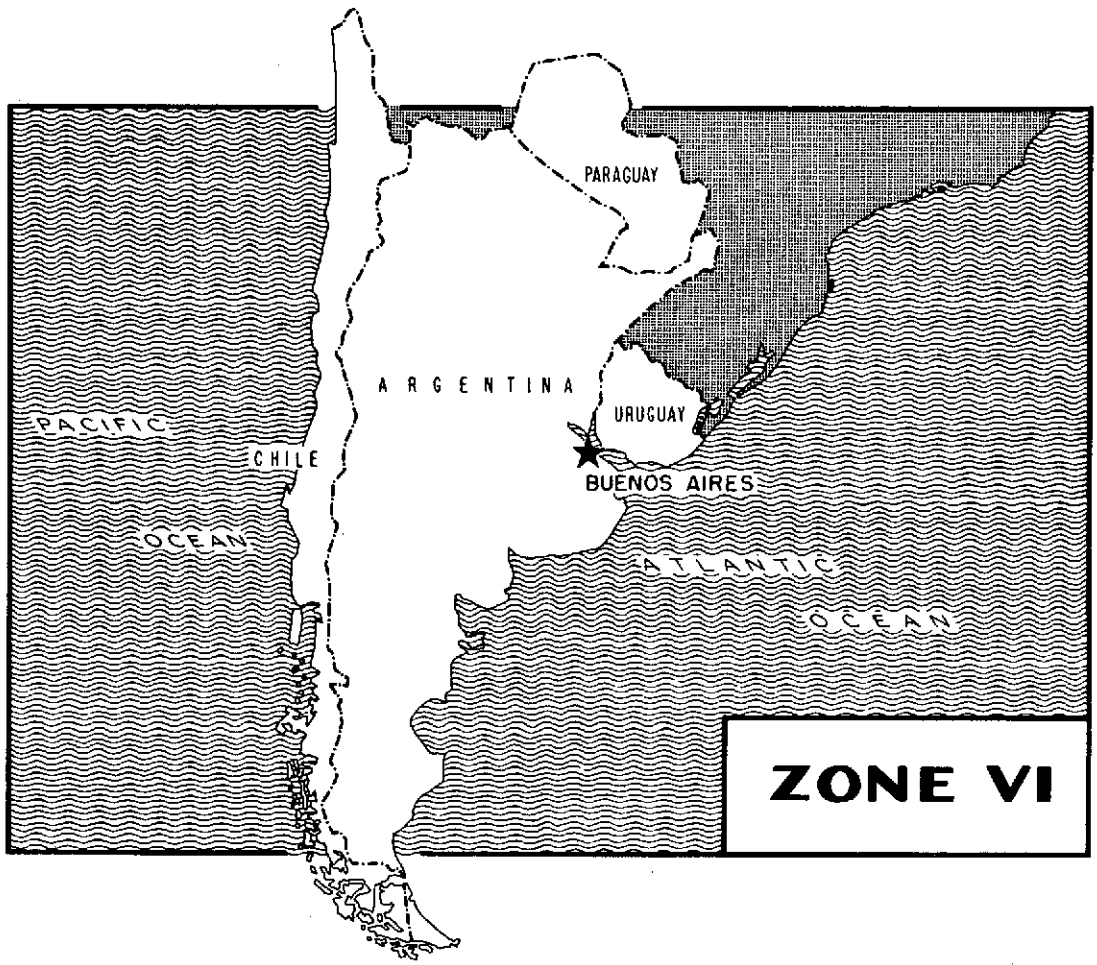
Zone V

This Zone Office, first established in 1950, has made rapid gains both in responsibilities and resources. Its primary duty is to assist the Government of Brazil in the organization of health services and in the execution of specific health programs.

Two 1954 happenings of direct interest to the Zone Office were the signing of an agreement between the Bureau and the Government of Brazil, legalizing the establishment of the Zone Office, and the formation of a separate Ministry of Health in the executive branch of the Brazilian Government.

For some time it has been felt in Brazil that a national department for rural endemic diseases is necessary to reach the large percentage of the population which is not now attended by health centers. The Bureau supplied the Ministry during 1954 with the services of a consultant to study the organization and functions of such a division. A bill creating this division within the Ministry has already passed one of the houses of the Congress.

Outstanding as an experiment in international service is the Pan American Foot and Mouth Disease Center, begun in 1951 as a Technical Cooperation Project of the Organization of American States. The Center, planned as an international service by the Bureau in collaboration with the Inter-American Institute of Agricultural Sciences, operates under Bureau responsibility. The Center maintains liaison with other Centers throughout the world, and does research on foot and mouth disease and its control.



Zone VI

Progress has been made in maintaining good working relations with the technical personnel and public health authorities of the four countries of the Zone. The excellence of these relations has been one of the most valuable and gratifying aspects of the year's work.

Agreements have been made with leading universities of three Zone countries for the improvement of medical education. An indication of the extent to which existing public health services have been strengthened is the fact that in three countries public health services were reorganized during 1954.

During the year, Argentina not only paid its outstanding contribution to the Pan American Sanitary Bureau and the World Health Organization but, in addition, made a voluntary contribution of $1,500,000 Argentine pesos.

Advantage was taken of the relatively highly developed stage of Chilean public health and educational institutions for training purposes. Programs in that country have been primarily concerned with assisting in the further development of these institutions so that greater use can be made of them for demonstration and training purposes.

Source of Funds

Quota Contributions

During 1954 the work of the Pan American Sanitary Bureau called for expenditures of over four million dollars. The amount spent was $4,305,075.

Over two million dollars of this amount came in the form of regularly assessed annual quota contributions to the Pan American Sanitary Bureau from countries and territories in the Americas. A little less than another million came from World Health Organization funds raised by similar quota contributions, country by country, to the WHO. The list of quotas for each country is given in the attached table.

PASB 1954 Quota Assessments and Similar WHO Assessments in the Americas

Country	Amount	
	PASB	WHO
Argentina	$ 148,400	$ 155,134
Bolivia	7,400	6,988
Brazil	176,200	155,134
Canada*		268,340
Chile	40,200	37,735
Colombia	42,600	
Costa Rica	4,800	3,494
Cuba	41,400	24,458
Dominican Republic	6,000	4,193
Ecuador	4,800	4,193
El Salvador	6,000	4,193
France**	4,647	
Great Britain**	15,000	
Guatemala	7,400	4,193
Haiti	4,800	3,494
Honduras	4,800	3,494
Mexico	85,000	53,109
Netherlands**	2,695	
Nicaragua	4,800	3,494
Panama	6,000	4,193
Paraguay	4,800	3,494
Peru	21,800	16,771
United States	1,320,000	2,987,667
Uruguay	20,200	15,374
Venezuela	42,600	22,362
Total	$2,022,342	$3,781,507

These regularly assessed quotas paid each year are a striking example not only of continental solidarity but also of the interest of the Americas in world health work. The active participation of all countries in raising the level of health on the Continent and in the world constitutes an acceptance of the principle that what in the way of health is beneficial to one country is beneficial to all.

Cooperating Agencies

In addition to the funds described in the preceding section the Pan American Sanitary Bureau cooperates with other agencies sharing in funds distributed by them or giving technical supervision to projects in the health field for which supplies and equipment are made available. The table on the following page gives pertinent facts and figures.

In addition, in 1954 the sum of $496,000 was allocated by the UNICEF Executive Board for purchases of supplies and

*Does not belong to the Pan American Sanitary Organization.

**On behalf of its territories in the Western Hemisphere.

PASB Expenditures in 1954 by Source of Funds	
Pan American Sanitary Bureau	$2,099,424
World Health Organization	925,586
U.N. Technical Assistance	685,093
OAS Technical Assistance	205,326
Other Extra Budgetary Funds	389,646
	$4,305,075

equipment to international health joint projects of which the Bureau had technical approval and supervision. In a sense, therefore, this $496,000 should be added to the total of $4,305,075 to give a fair picture of total funds entering into Pan American Sanitary Bureau operations during 1954.

In all the above figures no account is taken of funds administered by the Bureau on behalf of Member Governments for purchase of supplies and equipment. These funds do, however, involve a certain degree of attention by the technical and administrative staff and a consequent higher proportion of overhead costs. The figures indicating the total of actual purchases for 1954 was $1,500,461 and for *proforma* quotations submitted to governments in 1954, $2,672,166. For additional details see pages 149-150.

The United Nations Technical Assistance Program is financed by a special fund collected by the United Nations through voluntary government contributions, operated by respective participating agencies, coordinated and controlled by the Technical Assistance Board and the Executive Chairman, and governed by the United Nations Economic and Social Council (UN-ECOSOC). It represents the largest and most widespread experiment yet attempted in interagency coordination and control. Its implications are far-reaching, not only for the technical assistance program but also for the regular operation of agencies. Two principal points of interest are stability of the program as indicated by the financial situation, and interagency relationships as well as relationships with countries as affected by organization structure, program planning, policies, and procedures.

Stability of the operating Technical Assistance Program depends upon the extent to which three factors correspond. These factors are the amount of contribution pledged by governments, the amount of funds collected and available for allocation, and the amount of program planned. The wide discrepancy among these three factors, principally the excess of planned programs on the level of pledges and available funds, in its first four years of operation resulted in great instability of the Technical Assistance Program. However, by the end of 1954 a fair degree of stabilization was reached, the three factors with resulting operations proceeding on more or less parallel lines.

The Technical Assistance health program of the World Health Organization on a world-wide basis, and of the Pan American Sanitary Bureau on a regional basis, has followed the general trend of the over-all Technical Assistance Program. The pressure in 1951 and 1952 to plan projects and get them started, followed in 1953 by "freezes" and then reductions, with a series of upward revisions in 1954, produced hectic administrative situations. In several cases it adversely affected relationships with governments.

On the whole, however, the actual effect on the operating program was not as drastic as might be expected. There were two reasons for this. One was that in the pressure to plan projects many were put on paper which were

not practical for operation, so that these could be discarded without hurting the program. The other, and more important reason, was that the regular programs of the Pan American Sanitary Bureau and the World Health Organization were used to cushion the shocks. Stranded projects in operation and urgent projects ready to be launched were transferred to the regular program. Thus no operating project had to be stopped, and the best planned and most urgent projects were able to start in spite of lack of Technical Assistance funds. The chronology of the Technical Assistance situation is shown below.

United Nations Technical Assistance Financial Cooperation, 1954

Date and Action	Total Allocations to all Agencies	Regional Office of the Americas (AMRO)		
		No. of Projects	Allocations	Adjustment
Dec. 1953 TAB 27th session	$12,000,000	11	$472,528	Reduction effected by 8 projects ended in 1953 and 6 transferred to WHO regular program
Mar. 1954 TAB 28th session	$14,500,000	15	$580,716	2 projects retransferred to TA and 2 previously approved initiated
May 1954 TAB 29th session	$16,000,000	14	$580,716	1 project completed April 30
July 1954 Chairman action	$18,000,000	14	$617,000	Fellowships provision for 3 projects transferred to TA
Nov. 1954 Further action	$18,000,000	20	$780,000	3 projects retransferred in full to TA, 3 short-term projects initiated

The Pan American Sanitary Bureau, in its role as a specialized agency of the Organization of American States, also participates in the Technical Assistance Program of the latter. This includes participation in the Coordinating Committee for Technical Assistance (CCTA), and involves operating projects financed by OAS/TA funds. The sole such project in operation in 1954 was the Pan American Foot and Mouth Disease Center in Rio de Janeiro, Brazil, for details on which see page 65 (AMRO-77). A further project, a Pan American Zoonosis Center, has been approved by the CCTA and the Inter-American Economic and Social Council (IA-ECOSOC), subject to availability of funds. No funds were available in 1954.

The basic principle governing cooperation with the United Nations International Children's Fund (UNICEF) in health projects did not change during 1954. UNICEF finances the obtaining of supplies and equipment for health projects developed jointly with WHO Member Governments, technically approved by WHO, and approved by the Executive Board of UNICEF. All projects must come within fields approved by the WHO/UNICEF Executive Board's Joint Committee on Health Policy (JCHP). Although UNICEF may also reimburse WHO for the cost of international personnel who are beyond the financial availability of WHO, such reimbursement in the Americas has been limited to BCG tuberculosis vaccination projects.

Of the country projects operating in 1954 over half involved UNICEF support. During the year the UNICEF Executive Board approved allocations for health projects in the Americas totalling $496,000.

Up to 1953 the number of fields in which UNICEF could assist included maternal and child health, nutrition, rehabilitation of the handicapped, malaria, such communicable diseases as treponematoses, tuberculosis, smallpox, diphtheria, and pertussis. Environmental sanitation, approved for inclusion in the UNICEF program during 1953, first received economic support in 1954.

During 1954 the JCHP gradually extended the UNICEF fields of assistance to include trachoma and to endorse aid to hospitals under certain conditions. It also renewed the principle of assistance in leprosy. UNICEF support in the basic field of environmental sanitation as well as for maternal and child health aspects of integrated public health projects, has greatly strengthened its close relationships with PASB/WHO.

The chief program policy matter pending at the end of 1954 was reclassification of malaria with a view to support for conversion of control projects to eradication projects which would open the way to substantial support for eradication work.

A vital factor in developing and maintaining effective working relationships with the UNICEF Latin America Regional Office (LARO), Lima, Peru, was the assignment, in February 1954, of a WHO medical adviser to LARO. The medical adviser serves as a liaison officer between the Bureau, both the Washington and Zone offices, and LARO to stimulate and facilitate joint planning and implementation of health projects.

In 1954 it was possible for the first time to establish target figures for specific projects for future years. Potential UNICEF participation is now considered and estimated jointly with UNICEF for health projects presented in the WHO/PASB Program and Budget. For presentation of specific projects to the UNICEF Executive Board for allocation, a standard time schedule has been agreed upon. This schedule, developed in 1953 and first applied in 1954, has resulted in substantial improvement in the timely preparation of projects.

APPENDIX I

Project List

The pages which follow present in alphabetical and numerical order certain essential information on projects in operation during 1954.

The zones referred to are the six Zone Offices of the Pan American Sanitary Bureau. Zone designation for the Inter-Regional projects is left blank because these are world-wide projects with PASB giving general supervision insofar as they touch on the Americas. The administration section of the Washington office in charge of the project is given in the next to the final column which makes use of the following abbreviations:

HOC	Division of Public Health
HCD	Communicable Diseases Branch
HES	Environmental Sanitation Branch
HHP	Health Promotion Branch
EFS	Fellowships Branch
EPE	Professional Education Branch
FOC	Field Office Caribbean Area
WO	Washington Office

For convenience we are repeating here certain general abbreviations used in this table:

UNICEF	United Nations Children's Fund
USPHS	United States Public Health Service
KF	Kellogg Foundation
ILO	International Labor Organization
FAO	Food and Agriculture Organization
UNESCO	United Nations Educational, Scientific and Cultural Organization
GML	Gorgas Memorial Laboratory
UN/TA	United Nations Technical Assistance
OAS/TA	Organization of American States Technical Assistance

APPENDIX I

Project List

Code	Title	Starting Date	Funds	Cooperating Agency	Technical Branch	Zone
Argentina-6	PHA Fellowships	1954	WHO		EFS	VI
Argentina-51	*A. aegypti* Eradication	1950	PASB		HOC	VI
Bolivia-4	Insect Control	1953	PASB	UNICEF	HOC	IV
Bolivia-5	Nursing Education	1953	WHO		EPE	IV
Bolivia-6	Study of Water Supply	1953	WHO		HES	IV
Brazil-3	Maternal and Child Health	1951	PASB	UNICEF	HHP	V
Brazil-4	Diphtheria and Pertussis	1951	WHO	UNICEF	HCD	V
Brazil-15	Department of Endemo-Epidemic Diseases	1954	PASB		HCD	V
Brazil-16	PHA Fellowships	1954	WHO		EFS	V
Brazil-51	Yellow Fever Laboratory	1950	PASB		HCD	V
Brazil-52	Venereal Diseases Laboratory and Training Center	1951	PASB		EPE	V
Brazil-53	Schistosomiasis	1951	PASB	USPHS	HCD	V
British Guiana-1	Tuberculosis Control	1954	WHO	UNICEF	HCD	I (FOC)
British Honduras-2	BCG Vaccination	1953	WHO	UNICEF	HCD	III
Canada-1	Public Health Laboratories	1954	WHO		EFS	I
Chile-10	Tuberculosis Control	1954	WHO	UNICEF	HCD	VI
Chile-12	Demonstration Center for Care of Prematures	1954	WHO	UNICEF	HHP	VI
Chile-14	Rabies Control	1954	PASB		HCD	VI
Colombia-4	Rural Public Health Services (formerly Maternal and Child Health)	1951	WHO	UNICEF	HHP	IV
Colombia-5	Insect Control	1951	UN/TA	UNICEF	HOC	IV
Colombia-15	Tuberculosis Control (BCG)	1954	WHO	UNICEF	HCD	IV
Colombia-52	Yellow Fever Carlos Finlay Institute	1950	PASB		HCD	IV

Project List - Continued

Code	Title	Starting Date	Funds	Cooperating Agency	Technical Branch	Zone
Costa Rica-3	Nursing Education	1951	UN/TA		EPE	III
Costa Rica-5	BCG Vaccination	1952	WHO	UNICEF	HCD	III
Costa Rica-11	Poliomyelitis Rehabilitation	1954	PASB		HCD	III
Cuba-1	*A. Aegypti* Eradication	1953	PASB		HOC	II
Dominican Republic-2	Insect Control	1952	UN/TA	UNICEF	HOC	II
Dominican Republic-4	Reorganization of Local Health Services	1953	PASB	UNICEF	HHP	II
Dominican Republic-5	Preparation of Sanitary Code (Short Term Consultant Survey)	1954	PASB		HHP	II
Dominican Republic-52	Venereal Disease Control	1953	PASB		HCD	II
Ecuador-4	Rural Public Health Services	1954	PASB	UNICEF	HHP	IV
Ecuador-5	Tuberculosis Teaching Center	1951	WHO	UNICEF	EPE	IV
Ecuador-6	BCG Laboratory	1952	WHO	UNICEF	HCD	IV
Ecuador-7	Venereal Disease Control (Bahia)	1952	UN/TA		HCD	IV
Ecuador-11	National Institute of Health	1952	UN/TA		HHP	IV
Ecuador-52	Plague Control	1950	PASB		HCD	IV
Ecuador-53	National Institute of Nutrition	1950	PASB	KF*	HHP	IV
El Salvador-5	Health Demonstration Area	1951	UN/TA	ILO/FAO UNESCO	HHP	III
El Salvador-6	Maternal and Child Health	1952	WHO	UNICEF	HHP	III
Guatemala-8	Rural Public Health Services	1954	WHO	UNICEF	HHP	III
Guatemala-10	Garbage Disposal	1954	WHO		HES	III

*Grant for equipment from Kellogg Foundation.

Project List - Continued

Code	Title	Starting Date	Funds	Cooperating Agency	Technical Branch	Zone
Haiti-1	Yaws Eradication and Syphilis Control	1950	WHO PASB	UNICEF	HCD	II
Haiti-2	Local Health Services	1954	UN/TA		HHP	II
Haiti-4	Insect Control	1953	UN/TA	UNICEF	HOC	II
Haiti-9	Public Health Laboratory	1953	PASB		HHP	II
Jamaica-5	PHA Fellowships	1954	WHO		EFS	I (FOC)
Leeward Islands-1	BCG Vaccination (St. Kitts, Nevis)	1953	WHO	UNICEF	HCD	I(FOC)
Mexico-11.3	Course for Nursing Instructors	1952	PASB		EPE	II
Mexico-12	National University School of Nursing	1954	PASB		EPE	II
Mexico-13	Venereal Disease Training Course	1953	PASB		EPE	II
Mexico-15	Survey Rural Health Services	1954	WHO	UNICEF	HHP	II
Mexico-18	PHA Fellowships	1954	WHO		EFS	II
Mexico-20	Virus Center	1954	PASB		HCD	II
Mexico-53	Insect Control	1949-1952 1954	UN/TA	UNICEF	HOC	II
Nicaragua-3	Rural Public Health Services	1954	UN/TA PASB	UNICEF	HES	III
Nicaragua-51	Environmental Sanitation	1953	PASB	UNICEF	HES	III
Panama-1	Rural Public Health Services	1952	UN/TA	UNICEF	HHP	III
Paraguay-1	Insect Control	1948	UN/TA	UNICEF	HOC	IV
Paraguay-2	Tuberculosis Control	1952	UN/TA		HCD	VI
Paraguay-3	Maternal and Child Health	1951	WHO	UNICEF	HHP	VI
Paraguay-4	Venereal Disease Control	1952	UN/TA		HCD	VI
Paraguay-5	Hookworm and Smallpox Control	1951	UN/TA		HCD	VI

Project List - Continued

Code	Title	Starting Date	Funds	Cooperating Agency	Technical Branch	Zone
Paraguay-6	Department of Preventive Medicine	1953	WHO		EPE	VI
Paraguay-7	BCG Vaccination	1954	WHO	UNICEF	HCD	VI
Paraguay-9	Leprosy Control Survey	1954	PASB		HCD	VI
Paraguay-11	Blood Bank Survey	1954	PASB		HHP	VI
Peru-10	Maternal and Child Health	1951	UN/TA	UNICEF	HHP	IV
Peru-13	Public Health Demonstration and Training Center (Callao)	1952	UN/TA	UNICEF	HHP	IV
Peru-14	Ica Health Center	1951	WHO	UNICEF	HHP	IV
Peru-16	Diphtheria-Pertussis Vaccination	1953	WHO	UNICEF	HCD	IV
Peru-21	PHA Fellowships	1954	WHO		EFS	IV
Peru-54	Typhus Vaccination Field Investigation	1953	PASB	Tulane University	HCD	IV
Trinidad-1	BCG Vaccination	1952	WHO	UNICEF	HCD	I(FOC)
United States-6	Treponema Immobilizing Test	1953	PASB		HHP	VI
Uruguay-51	Control of Arthropods	1948	PASB		HOC	VI
Venezuela-4	PHA Fellowships	1954	UN/TA		EFS	IV
Windward Islands-1	BCG Vaccination	1954	WHO	UNICEF	HCD	I(FOC)
AMRO-1	Environmental Sanitation Training (Mexico, Brazil, Chile).	1952	WHO		EPE	WO
AMRO-6	Joint Field Mission of Indigenous Populations	1952	UN/TA	ILO UNESCO	HHP	WO
AMRO-7	Insect Control (Central America and Panama)	1950	UN/TA	UNICEF	HOC	I(FOC)
	Insect Control (Caribbean)	1949	UN/TA	UNICEF	HOC	I(FOC)

Project List - Continued

Code	Title	Starting Date	Funds	Cooperating Agency	Technical Branch	Zone
AMRO-10	Inter-American Center of Biostatistics	1952	UN/TA	UN Statistical Office/ FOA	HCD	WO-VI
AMRO-13.2	Seminar on Sanitary Engineering (Central America)	1954	WHO		EPE	III
AMRO-18	Medical and Public Health Education (Mexico)	1953	WHO		EPE	WO
AMRO-21	Venereal Disease Laboratory and Training Center (Central America)	1946	WHO		EPE	III
AMRO-26.2	Brucellosis Training Course	1954	WHO		EPE	II
AMRO-29	Cultural Anthropology	1953	WHO		HHP	III
AMRO-31	BCG Statistician	1952	WHO		HCD	WO
AMRO-35	Fellowships (Unspecified)	1953	PASB		EFS	WO
AMRO-43	Hydatidosis Control	1953	PASB		HCD	VI
AMRO-46.4	Workshop on Nursing Curriculum (Mexico)	1954	PASB		EPE	II
AMRO-47	Yaws Eradication and Syphilis Control (Caribbean)	1954	UN/TA		HCD	I(FOC)
AMRO-54	Assistance to INCAP	1949	PASB	KF	HHP	III
AMRO-57	Yellow Fever Studies	1952	PASB	GML	HCD	III
AMRO-60	Smallpox Eradication	1951	PASB		HCD	WO
AMRO-61	Rabies Control	1952 1953 1954	PASB		HCD	II
AMRO-64.2	Seminar on Sanitary Engineering	1954	WHO		EPE	IV
AMRO-71.2	Training Course in *A. aegypti* eradication techniques	1954	PASB		EPE	II
AMRO-72	Dental Health	1954	PASB	KF	HHP	WO
AMRO-74	Plague Investigation	1954	PASB		HCD	IV

Project List - Continued

Code	Title	Starting Date	Funds	Cooperating Agency	Technical Branch	Zone
AMRO-76	Vaccine Testing	1954	WHO		HCD	WO
AMRO-77	Pan American Foot and Mouth Disease Center	1951	OAS/TA		HCD	V
AMRO-78	Malaria Survey	1954	PASB		HOC	WO
AMRO-79	Training Course for Statistical Clerks	1954	PASB		HCD	I(FOC)
AMRO-83	Typhus Control (Bolivia, Peru)	1954	PASB	UNICEF	HCD	IV
AMRO-87	Endemic Goiter	1950	WHO		HHP	WO
AMRO-88	Advice on *A. aegypti* Eradication	1954	PASB		HOC	WO
AMRO-89	Fellowships in various Health Fields (for study in Brazil per Catalogue of Services)	1954	UN/TA		EFS	WO
Inter-Regional-7	Field Trials in Rabies Treatment	1952	WHO	USPHS	HOC	
Inter-Regional-8	Brucellosis Centers (Argentina, Mexico, U.S.A.)	1951	WHO		HCD	
Inter-Regional-10	Influenza Centers	1948	WHO		HCD	
Inter-Regional-13	International Shigellosis Center	1954	WHO		HCD	
Inter-Regional-14	Poliomyelitis	1954	WHO		HCD	
Inter-Regional-15	Standardization of Virus and Rickettsial Tests	1954	WHO		HCD	

APPENDIX II

Conferences and Meetings Attended by One or More Staff Members During 1954

Date	Place	Meeting
Jan. 11-23	Panama, Panama	Social Security, Seminar on, International Labor Organization (ILO)
Jan. 12-Feb. 2	Geneva, Switzerland	Executive Board, 13th Session, (WHO)
Jan. 19	Washington, D. C.	Leptospirosis, Symposium on, Army Medical Services Graduate School
Feb. 19	Washington, D. C.	Food Supply, Subcommittee on, U. S. National Research Council (NRC)
Feb. 23	Washington, D. C.	Animal Reservoirs and Vectors of Diseases, Subcommittee on, (NRC)
Feb. 23	Washington, D. C.	Insect and Rodent Control, Subcommittee on, (NRC)
Feb. 28-Mar. 1	Chicago, Illinois	Trichinosis, Second National Conference on
Mar. 1-13	Mexico, D.F., Mexico	Brucellosis, Training Course for the Caribbean Area, (PASB/WHO)
Mar. 1-27	Caracas, Venezuela	Xth Inter-American Conference of the Organization of American States (OAS)
Mar. 2	Caracas, Venezuela	Coordinating Committee on Technical Assistance, 24th Meeting of, (OAS)
Mar. 17-24	San José, Costa Rica	Sanitary Engineering, Seminar in Central America, (PASB/WHO)
Apr. 3-10	Saõ Paulo, Brazil	Veterinary Medicine, Second Pan American Congress of
Apr. 7-9	Albuquerque, New Mexico	United States-Mexico Border Public Health Association, 12th Annual Meeting
Apr. 8-9	Cincinnati, Ohio	Control of the Environment for the Health of Mankind, Symposium on the (Dedication Ceremony of the Robert A. Taft Sanitary Engineering Center)
Apr. 21	St. Petersburg, Florida	Inter-American Health, Committee on, American Public Health Association (APHA), Southern Branch
May 4-21	Geneva, Switzerland	World Health Assembly, Seventh, (WHO)
May 13-16	Buenos Aires, Argentina	Pediatrics, Argentine Annual Meeting on

Conferences and Meetings (continued)

Date	Place	Meeting
May 17-22	Paris, France	Office International Des Epizooties, 22nd Annual Assembly
May 17-27	Caracas, Venezuela	Sanitary Engineering, Seminar for South American Countries, (PASB/WHO/Government of Venezuela)
May 24-29	Trinidad	British Caribbean Veterinary Association, Convention Meeting of the
May 27-28	Geneva, Switzerland	Executive Board, 14th Session, (WHO)
May 27-30	Tegucigalpa, Honduras	Venereology, Vth Central American Congress on
Jun. 15-18	Washington, D. C.	Medical Library Association, 53rd Annual Meeting
Jun. 21-25	San Francisco, California	American Medical Association, 103rd Annual Meeting
Jul. 8-16	Panama, Panama	Latin American Branch, Public Health Division, (FOA)
Jul. 21-24, 26	Washington, D. C.	CCTA, 25th Meeting of, (OAS)
Jul. 23-29	São Paulo, Brazil	Cancer, Sixth International Congress on
Jul. 25-31	São Paulo, Brazil	Sanitary Engineering, Fourth Inter-American Congress of
Aug. 1-7	São Paulo, Brazil	Pediatrics, IVth Pan American Congress on
Aug. 14-21	Toronto, Canada	Mental Health, Fifth International Congress on
Aug. 23-26	Sanitago, Chile	Phthisiology, National Conference on
Aug. 23-26	Seattle, Washington	American Veterinary Medical Association 91st Annual Meeting
Aug. 29-Sept. 1	Saskatoon, Canada	Diseases in Nature Communicable to Man, International Conference on
Sept. 1-10	Buenos Aires, Argentina	Agriculture and Nutrition in Latin America, Third Regional Meeting on Programs and Future Plans for Food and Agriculture Organization (FAO)
Sept. 7-12	Quebec, Canada	International Association of Catholic Nurses and Medico-Social Workers, Statutory Congress of the

Conferences and Meetings (continued)

Date	Place	Meeting
Sept. 9	Washington, D. C.	Food Supply, Subcommittee on, (NRC)
Sept. 12-17	Washington, D. C.	Cardiology, Second World Congress of
Sept. 28	Washington, D. C.	Committee on Sanitary Engineering and Environment, (NRC)
Oct. 1-6	Leopoldville, Belgian Congo	Onchocerciasis, African Conferences on, (WHO)
Oct. 7	Washington, D. C.	Influenza Study Programs in the United States, Advisory Committee on
Oct. 11-15	Buffalo, N. Y.	APHA, 82nd Annual Meeting
Oct. 25-Nov. 2	Geneva, Switzerland	International Quarantine, 2nd Session of the Expert Committee on, (WHO)
Oct. 26-Nov. 2	Geneva, Switzerland	Nutrition, 4th Session of the Expert Committee on, (FAO/WHO)
Nov. 3-6	Memphis, Tennessee	Tropical Medicine and Hygiene, Annual Meeting of the American Society of
Nov. 3-11	Montevideo, Uruguay	Executive Board, 39th Session, United Nations Educational, Scientific and Cultural Organization
Nov. 3-Dec. 14	Mexico, D. F.	Nursing Education, Workshop on, (PASB)
Nov. 6-10	Rio de Janeiro, Brazil	Latin American Heads of Missions, Meeting of, (UNESCO)
Nov. 8-13	San Salvador, El Salvador	Labor and Social Welfare, First National Congress on
Nov. 8-30	Montevideo, Uruguay	Inter-American Cooperative Public Health Service (SCISP), Seminar on Programs of Technical Assistance
Nov. 12-Dec. 11	Montevideo, Uruguay	General Conference, 8th Session of the, (UNESCO)
Nov. 18	Washington, D. C.	Water Supply, Subcommittee on, (NRC)
Nov. 26-28	San Salvador, El Salvador	VIth National Health Congress
Dec. 1-8	São Paulo, Brazil	IIIrd Pan American Pharmaceutical and Bio-Chemical Congress

Conferences and Meetings (continued)

Date	Place	Meeting
Dec. 5-7	Managua, Nicaragua	INCAP, Vth Meeting of the Council of
Dec. 6-10	Washington, D. C.	State and Territorial Health Officers, Annual Meeting of the Association of
Dec. 6-17	Lima, Peru	Women's Work, Latin American Technical Meeting on the Utilization of, (ILO)
Dec. 9-13	San Salvador, El Salvador	Pediatrics, Second Central American Congress on

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