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PAN AMERICAN CENTER FOR RESEARCH AND TRAINING
IN LEPROSY AND TROPICAL DISEASES

(Item proposed by the Government of Venezuela)

PAN AMERICAN CENTER FOR RESEARCH AND TRAINING IN
LEPROSY AND TROPICAL DISEASES

I. Background

Since 1961, a WHO Collaborative Center, which deals with the evaluation of leprosy drugs, histological studies and classification of leprosy, has been operating in the Department of Public Health Dermatology.

The Pan American Health Organization convened an Expert Committee composed of outstanding scientists from Argentina, Brazil, Canada, Colombia, United States of America, Mexico and Venezuela, which met in Washington, D.C., from 29 through 30 July 1971 (See Annex I.) The principal conclusions it reached were as follows:

1. That the real size and extent of the leprosy problem in the Americas has not yet been defined.
2. That the data collection and analysis systems and the leprosy control system itself are not functioning uniformly.
3. That it is necessary to devise and evaluate new methods that can be applied in leprosy epidemiology and control.

Accordingly, the Committee recommended to WHO/PAHO that it make a coordinated effort with all the countries of the Hemisphere to control leprosy and foster training and scientific research in this field through the establishment of a Pan American Center for Research and Training in Leprosy and Related Diseases.

The National Institute of Dermatology in Caracas was selected as the headquarters of the above-mentioned Center. Other similar centers would be established later in additional American countries as and when favorable circumstances arose.

As a first step, the Director of the Pan American Sanitary Bureau and the Minister of Health and Social Welfare of Venezuela signed an agreement providing for cooperation in the future operation of the Center, and appointed an Advisory Committee of the Center to assist the Director of the National Institute of Dermatology (Annex II).

At its first meeting held from 11 through 15 June 1973 (Annex III) the Advisory Committee of the Center, composed of leading scientists from Argentina, Brazil, United States of America, Mexico and Venezuela, recommended that the Center serve as a focal point for research and training in leprosy and related diseases, on the basis of the purposes set forth in Section II.

Beginning in June 1973, CIALEA was organized as recommended by the Advisory Committee, and has received material support and technical advisory services from PAHO/WHO through project AMRO-0500.

Since 1973 steps have been taken to complete the organization of the Center. New fields of action have been added to those originally defined, and new research sections have been established covering a) molecular biology; b) clinical pharmacology; c) physiopathology aimed at the study of Chagas' disease; d) immunohematology; and e) bioengineering. In response to the needs of the country, a multidisciplinary group was organized to study enteric diseases. This expansion, which was made possible by the entry into the Institute of a group of professionals trained abroad in the above-mentioned disciplines, went beyond the limits initially conceived and transformed the Center and the Institute into a Pan American Center for Research and Training in Leprosy and Tropical Diseases, which name might replace that of "Pan American Center for Research and Training in Leprosy and Related Diseases."

The possibility of this name change is submitted to the PAHO Directing Council for consideration, it being understood that the emphasis would still be on leprosy.

II. Purposes of the Center

1. Technical advisory services to the countries of the American Hemisphere that request it in the fields of activity of the Center.
2. Development of effective administrative methods for the control of leprosy and tropical diseases within a coordinated and/or integrated public health system, including:
 - a) Collection, analysis and use of epidemiological data
 - b) Improvement in methods for the early diagnosis of leprosy and other diseases, and consequently in the detection of new cases
 - c) Development of methods for the prevention and treatment of the disabilities caused by leprosy, based on the use of simple techniques as part of the comprehensive care of patients
3. To provide practical and meaningful training for medical and auxiliary personnel intended for control programs, and to evaluate the effectiveness of training programs.
4. To prepare and disseminate specialized technical information.
5. To use the available facilities for field and laboratory studies on selected aspects of leprosy and the other diseases mentioned, the results of which may be applied to control programs.

6. Conduct of multidisciplinary projects for the study of enteric diseases of childhood, including the organization of a team of pediatricians, epidemiologists, microbiologists, virologists, biochemists, physiologists, and sociologists.
7. Conduct of applied and basic research on the various aspects of cellular biology based on models of parasitic agents that produce the diseases prevalent in the tropical area.
8. Establishment of a section for the production of audiovisual materials for use in the training of undergraduate, graduate, and paramedical personnel.

III. Resources and Organization

1. The resources of the Center are as follows:

- 1.1 Physical facilities:

The Center has a 6-story modern building with a terrace, the space distribution being as follows: a basement for storerooms and maintenance workshop; first floor: rehabilitation; 2nd floor: clinical center; 3rd floor: library, files and secretariat; 4th and 5th floors: scientific research laboratories; and terrace: animal facilities.

The surface area per floor is 1,100 m² or a total of 5,500 m² in all. The organizational chart (Annex IV) shows the organization of the Center by section.

- 1.2 Personnel:

Full time scientific personnel, who are chiefs or deputy chiefs of the various sections shown in the organizational chart:

36

Technical personnel working in the different sections:

24

Secretariat personnel:

3

Manual workers:

12

- 1.3 The overall budget of the Center is at present Bs.1,993,072.

The budgetary funds are provided by the Ministry of Health and Social Welfare, the Central University of Venezuela, and the Public Charity Board of the Federal District.

For the Pan American Health Organization the conduct of the future programs of the Center would only involve an increase proportionate to the use made of the services of the Center by the various countries of the Hemisphere.

- 1.4 The funds allocated by PAHO/WHO, including those from private institutions, channeled through PAHEF.
- 1.5 The funds from other institutions, as agreed upon, for the cooperative research to be conducted.
2. Organization:
 - 2.1 The Director of the Center is responsible for the planning and supervision of all the activities conducted in accordance with the general policy adopted, plans of operation, and approved budget.
 - 2.2 The program activities of the Center are executed by the personnel of the sections that are not hierarchically arranged but are coordinated.
 - 2.2.1 Epidemiology and Control Sections:

The chief is a medical epidemiologist who is in charge of the research planned in the fields of epidemiology and operational methodology for the control of the various diseases covered by the action program of the Center. These sections include the Aragua demonstration area with a vector research section.
 - 2.2.2 Education Section:

The chief will be a medical educator who will be responsible for the direction and coordination of personnel training: courses, clerkships, seminars, and the development of audiovisual aids for self-teaching.
 - 2.2.3 The research sections have appropriate laboratories, the location of which may be seen in the above-mentioned organizational chart.

IV. Activities Report

This report exemplifies the activities carried out by CIALEA, beginning in June 1973:

1. Education Unit
 - 1.1 Courses
 - a) Pan American Seminars on the Histopathology and Immunopathology of Leprosy (December 1972, 1973, and 1974), each with 12-14 participants, the majority of which were professors of pathology in medical schools.

- b) Working group on histopathological techniques for histopathological technicians from universities in Venezuela.
- c) Cooperation with the Immunology Course (PAHO/WHO, São Paulo)
- d) In 1975 the staff of the Center collaborated closely with PASB personnel in organizing the IV Pan American Seminar on Leprosy Control.

1.2 Clerkships and Fellowships

18 fellows (PASB/WHO and private institutions) observed for periods of 2-3 months the administrative systems for the control of leprosy in Colombia, Costa Rica, Curaçao, St. Lucia, French Guiana, Bolivia, Brazil, Cuba, and Dominican Republic.

1.3 Direct technical assistance provided by advisors to other countries (Brazil, Cuba, Ecuador, Bolivia, Peru, Argentina, Paraguay, Colombia, Jamaica, Costa Rica, Guatemala, Nicaragua, St. Lucia, Dominica, St. Vincent, Surinam) for programs for:

- a) Prevention and treatment of disabilities caused by leprosy
- b) Planning of leprosy control programs
- c) Onchocercosis control

1.4 Production of Audiovisual Material

A start was made on the production of several units on clinical immunology, leprosy rehabilitation, and leishmaniasis.

1.5 Short-term Consultants

The Institute receives advisory services from 12 PAHO short-term consultants in the fields of administration, microbiology, education, biochemistry and rehabilitation.

V. Relations with PAHO/WHO

The Government of Venezuela is formally offering its National Institute of Dermatology to serve as the PAHO/WHO Pan American Center for Research and Training in Leprosy and Tropical Diseases, while retaining its present status as the National Institute of Dermatology attached to the Department of Public Health Dermatology of the Ministry of Health and Social Welfare, and its standing as a University Institute coordinated with the teaching system of the José María Vargas Medical School of the Central University of Venezuela.

In this regard the Center can offer the countries of the American Hemisphere services in three areas:

- a) Direct assistance in planning and executing programs for the control of leprosy and other diseases
- b) Training of professional, technical and auxiliary personnel
- c) Collaboration in cooperative research projects on aspects of immunology, microbiology, biochemistry, epidemiology and control, etc. (For a list of articles published, see Annex V.)

The Center is also capable of providing its service activities in English.

Annexes



PAN AMERICAN HEALTH ORGANIZATION
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FINAL REPORT

ADVISORY COMMITTEE FOR LEPROSY

Washington, D.C.
29-30 July 1971

I. Introduction

The Advisory Committee for Leprosy met in Washington, D.C., on 29 and 30 July 1971. Dr. Jacinto Convit served as Chairman and Dr. Robert Parlett as Rapporteur.

The meeting was opened with an address by Dr. Abraham Horwitz, Director of the Pan American Health Organization, who emphasized the current needs for revitalization and improvement of PAHO leprosy control programs in the Americas. The long-term goal of PAHO remains the eradication of leprosy (referring to incidence) from the Western Hemisphere. It was Dr. Horwitz's opinion that the present needs appear to be for a clearer definition of the total leprosy problem as it exists; for improved earlier diagnosis and more effective case finding, and these to culminate in more totally effective and humane leprosy control. By what courses of action these PAHO goals can be met were the concerns of this Advisory Committee.

II. Leprosy in the Americas: An Overview

Leprosy is a problem of significant magnitude in the Americas, into which it was introduced, there being no evidence that it existed in the New World before the coming of the conquistadores and settlers from Europe, Africa and Asia. This fact probable accounts in part for the focal distribution of this disease, but does not explain the failure to ignite in epidemic fashion in the indigenous populations of the Hemisphere. Other factors undoubtedly are climatic and ecological in character. The conditions of national origin, the mingling of different populations, the variety of geographic conditions, ranging from the islands of the Caribbean to the mountains and valleys, jungles and plains of the continents of the Hemisphere, all offer a variety of environmental conditions conducive to spread or containment of the disease.

In working to control leprosy we must first ask ourselves what are the parameters by which we can determine the exact level of leprosy in a community, and by what parameters we can measure effectiveness of control programs. Can we use these parameters by combining them into a theoretical model which will accurately predict what action or alternatives of action will produce the desired effect--the reduction of this disease to an absolute minimum.

Total number of cases are essential for us to know as these tell us the extent of the problem and give a basis for comparison with other more refined epidemiological features of the disease.

The type index when accurately known and related to other factors can give us an idea where we are in the epidemic or endemic phase of the disease.

Whether the disease occurs in foci, or is disseminated throughout the population, compared with the age spread, the type index can give us insight into the community experience with the disease (and perhaps other mycobacterioses as well) and the influence this is having or has had on the endemia or epidemia.

There are some encouraging signs. Certain islands of the Caribbean provide an opportunity to effectively control and ultimately eliminate the disease if we diligently persist and pursue carefully calculated goals. Panama reported only two new cases in 1970. Both were imported. Costa Rica appears to have most if not all of its cases under treatment or surveillance, and if the program is continued as faithfully and forcefully as it has been during the past decade or so, and if drug resistance does not become a problem of greater magnitude, that country should see the incidence of the disease remarkably diminished in another decade. There are other good programs. We point with pride at Venezuela where a truly comprehensive program is operated, but there are other programs that give us grave concern. There are some countries with essentially no effective leprosy control program.

Reports were presented which outlined what is factually known about the present status of leprosy in the six Zones of PAHO. For the sake of brevity these reports have been abstracted for this report.

III. The Problem

From the presentation of the committee reports, and looking at the total leprosy problems, the Committee agreed with the concept expressed that the statistics now available would seem to be like the visible tip of an iceberg with the larger body invisible below the surface. Therefore, measures must be taken to develop a more accurate assessment of the true magnitude of the leprosy problem in the Americas.

If one is to seriously consider control of leprosy to the degree that ultimate eradication will result, it will be essential to develop a more precise appraisal of the total problem. This opinion was expressed by the Committee following the reviews of the zonal conditions. Therefore, a number of difficult questions must be answered, in the nature of:

1. What must be done to develop earlier and more accurate diagnosis of leprosy?
2. What must be done to greatly improve the quality and quantity of case reporting and hence develop more precise epidemiologic knowledge?
3. What are the human resources now available for total leprosy control programs? How are these personnel currently organized and used? What can be done to improve both quality and quantity of health personnel needed in leprosy programs?

From Committee discussions it became evident that answers to these questions related directly to the basic need for more intense applications to the problem of more sophisticated medical and epidemiological personnel of various types. Further, that comprehensive involvement of government organizations, private agencies and private physicians must be accomplished, and that if we are to make real progress in the future, many of the current attitudes toward leprosy now held by large segments of both the general public and the private medical community must also be changed. This kind of change can best be brought about through bringing leprosy work (particularly at the patient level) more into the mainstream of good quality general medicine and away from the single purpose clinic and personnel which tend to be stigmatizing to patients. Many of the apparent failures of past programs have been due not solely to inadequate funds and efforts but to the unwillingness of many patients to tolerate the stigmatizing that frequently results from their associations with leprosy clinics and programs. In many areas this attitude is also found in the private doctor population, where physicians are reluctant to accept leprosy patients in their offices and clinics for fear of becoming publicly known of as a "leprosy doctor." These are real and serious medical and public attitudinal problems which will require long-ranging, broad, intensive educational efforts to overcome, but this goal must be ultimately achieved.

It is the concern of this Advisory Committee that measures should be taken, now, to turn away from "single disease" type of leprosy programs which result in a low involvement of medical and research personnel in leprosy. It is the consensus of this Committee that, beginning with the medical student, attractive and prestigious opportunities must be provided for professional involvement in leprosy at an early stage of medical education. This can best be accomplished through effectively linking many aspects of leprosy programs directly to medical educational centers in such a manner that both faculty and students become involved. Once the physician, highly respected in his community, demonstrates his own willingness to involve himself with leprosy patients and thereby leaves the general public with the impression that this is simply another disease among many which must be treated, then considerable progress will have been made toward diminishing the stigma of being a leprosy patient-- or his physician. This in turn will lead to improvement and sophistication in general medical practice in general, and the "improvements" we wish to see in leprosy will follow, such as:

1. More effective integration of national leprosy programs within the overall public health programs of the country.
2. More and better qualified medical personnel working in leprosy (along with their day-to-day general medical efforts).
3. Improved earlier diagnosis of new leprosy cases and more accurate and complete reporting of these cases.

4. Improved national and Continent-wide epidemiological statistics.

During the deliberations of the Committee, another serious emerging problem directly related to leprosy control programs was discussed. This newer problem focused upon the development of apparent bacillary resistance to DDS. In the past, considerable optimism was placed in this drug as a means for mass control of leprosy both through treatment and prophylaxis. Clearly this optimistic hope must be abandoned now, and this means that both laboratory and field research efforts must be intensified. In reality, we are close to an emergency situation. It has been approximately 10 years since the widespread introduction of this drug to leprosy control. Other newer drugs have been used on a less extensive scale for lesser periods of time, and there is every likelihood that at some future date apparent bacillary resistance to these other drugs also will begin to emerge. Therefore, the need for new drugs, development of multiple drug regimens, and development of specific immunological prophylactic measures, etc., are greater than ever. Thus, research must continue strongly as a major effort of the total leprosy picture in the Americas.

IV. Review of Leprosy in the Americas

It was reported that there are 46,320 cases registered in the three Zones--II (Mexico, Haiti, Dominican Republic and Cuba), III (British Honduras, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama) and IV (Peru, Ecuador, Colombia, Bolivia), with almost 30% of them in Colombia and 0.008 per 1,000 in Belize (British Honduras), where only one case is known. These figures represent the "known cases," but it is a realistic estimate of the total cases in an area at least threefold the registered number, that is to say, possibly 138,960 patients, or a prevalence rate of 1.4 per 1,000.

The geographical distribution is far from being uniform. The cases are concentrated in foci, the main ones being:

a) Mexico: 70% of the total of cases come from four states of the Central Pacific Coast (Guanajuato, Jalisco, Michoacán and Sinaloa), where 13% of the population of the country live.

b) Dominican Republic: 75% of the patients live in Santo Domingo (capital of the country).

c) Cuba: The main foci are the Provinces of Camagüey and Oriente Sur, with 50% of all the cases.

d) Haiti: Very few cases are registered (178), almost all from the larger cities of the country, with 85% from Port-au-Prince, the capital.

e) Central America and Panama: Almost 30% of the cases come from a small area--those provinces of Honduras, Nicaragua and El Salvador bordering the Gulf of Fonseca on the Pacific Coast. In Costa Rica the occurrence of cases has a scattered pattern.

The only focus on the Atlantic Coast is represented by the Provinces of Limón (Costa Rica) and Bocas del Toro (Panama), which are contiguous and where many of the initial cases come from French Caribbean territories and Jamaica (1920 - banana work).

f) Colombia: Leprosy was known from the colonial times (first leprosarium in Cartagena founded in 1580). Actually, 67.7% of the patients are concentrated in four Departments (North of Cundinamarca, Boyacá, Santander and North Santander), an area where only 13.2% of the population of the country live, and is located on the Eastern chain of the "Cordillera de los Andes."

g) Ecuador: 67.1% of the cases are groups in the three Provinces of the Southern Pacific Coast (Guayas, Los Rios and El Oro).

h) Peru: Almost all cases come from the Amazon Region, mainly Ucayali River.

i) Bolivia: Two main foci were identified: a) the north of the Department of Santa Cruz and the south of Chuquisaca, started in the colonial times; b) the North Orient or "Amazonia," a recent focus contiguous with the Brazilian (Acre) and Peruvian (Madre de Dios) ones.

All countries in the area, with the exception of Haiti, Nicaragua, Guatemala, and El Salvador, have programs of control, with distinctive grades of development.

It was reported that in Brazil up to 1940 the actual number of leprosy patients was not known precisely and was largely based on estimates.

At the beginning of this century there were 434 leprosy patients hospitalized in about 20 small lazarets in the whole country.

In 1925, the number of leprosy patients in Brazil was estimated at 10,000. In 1927, an estimate submitted to the Legislature placed the number of known leprosy patients at 34,000.

In 1940, the first official statistics on leprosy patients in the active register put them at 44,396; in 1941, at 48,028; and in 1942, at 53,071. In 1959, when the National Leprosy Service began a regular and continuous registry of data, the number was 87,513 patients in the whole country.

On 31 December 1969, the active register contained 123,883 leprosy patients. Of those, 72,489 (58.5%) lived in the Great Southeastern Region, 16,981 (13.7%) in the Great Southern Region, 14,186 (11.5%) in the Great Northern Region, 11,036 (8.9%) in the Great Northeastern Region, and 9,196 (7.4%) in the Great Western Central Region. The prevalence in 1969 was 1.3 per 1,000 for the country.

The Great Northern Region has the highest endemicity, and the 10 Units with the highest prevalence are as follows: Acre¹, 10.2 per 1,000; Amazonas, 6.3; Rondonia, 4.6; Pará, 2.6; São Paulo, 21; Mato Grosso, Minas Gerais and Amapa, 2.0; Goiás, 1.9; and Paraná, 1.5, all with a higher prevalence than the national average, which is 1.3 per 1,000 population.

Owing to shortcomings in the collection of data, it is estimated that in Brazil there is an equivalent number of patients who are unknown and that these are responsible for the maintenance and increase of the state of endemicity, together with the 75.6% of registered patients who are considered to be potentially contagious.

This group of unknown cases may in actual fact be much greater, since samplings in areas with a high endemicity in the Region indicated that, of every 12 cases found in the survey, only one was currently on the active register.

The present situation is due to ecological factors which influence the spread of the endemic disease in the Region and to the fatality rate which produces an accumulation of cases. Little chemotherapeutic treatment is available; control measures are incorrectly and insufficiently applied; and there is a large group of unknown patients, all of which contributes to the unchanged status of the endemic disease.

In Argentina, the activities for the control of leprosy were, until some years ago, included among "the great fights" and in the charge of the ex-Dirección de Lucha Dermatológica. As a consequence of the changes introduced in the structure of the Secretaría de Estado de Salud Pública, the program was incorporated into the Departamento de Atención Médica de la Dirección de Normalización Médica y Sanitaria, where its development was to be carried on through general health services. The activities were previously directed towards the detection and following of cases, under the responsibility of services strategically placed in the endemic area, by means of mobile units, and resulted in a satisfactory outcome. These results were included in a report handed by the ex-Dirección de Lucha Dermatológica to the Seminar on Administrative Methods on Leprosy Control Programs, held in Guadalajara, Mexico in July 1968. It is interesting to note that Argentina was one of the three countries of the Continent to offer, at that meeting, information regarding the successful application of the modern methodology to be used, which had been accepted at the earlier Seminar on Leprosy at Cuernavaca, Mexico, in August 1963. The activities had been aimed, until the moment of the mentioned change, to the following targets: a) active search of cases through observation of contacts, verification of the notification, dermatological examination, and checking-up of organized groups in the endemic area; b) location of the cases which were out of medical control by means of

¹ During discussion subsequent to this paper it was pointed out that Acre represents a good possibility as a field study area.

domiciliary visits and verification of notifications; c) regular and continuous ambulatory treatment of the cases, according to the schemes which had proved most efficient; d) rehabilitation of cases; e) health education of patients and contacts in order to make easy the application of control techniques and prevent disabilities; and f) training of professional and technical auxiliary staff in proportion to the needs of the program. Within the mentioned context, the activities were carried out on a peripheral level with the purpose of integrating them, progressively and gradually, with the local health services, provided these met the necessary requisites to that end. A permanent supervision of the activities was carried out in order to secure fulfillment according to objectives and recommended techniques. Every stage of the program had been evaluated. The study of a budget to finance this campaign completed the program, as was reported in the communication presented to the Guadalajara Seminar. As a consequence of the changes in the planning of the program, the activities were notoriously restricted. According to the latest information received in 1969, in Tucumán and Entre Ríos work continued at an acceptable level of action; a decreasing level in Misiones and Formosa, reaching only a discrete level in Santa Fé, Paraná, and Buenos Aires.

Available information in 1969. With the conclusion of the Argentina-0500 project (Leprosy Control), and with the end of PAHO participation, we only have information up to the sixth month of 1969. At that time, the provinces where the active search for cases continued to go on, although in a limited way because of the scarcity of human and material resources, were Entre Ríos, Tucumán, Misiones and Formosa; because of the communications difficulties, work was possible only in urban areas and adjacent places.

Among 2,038 cases registered up to 30 June 1969, within the area of the above-mentioned provinces, only 1,268 (82.2%) were under control, and of 7,213 recorded contacts 3,594 (49.8%) were controlled. This is the latest epidemiological information available.

In the same year, a national meeting was held with the participation of the State Secretary of Public Health, several provinces, and the national universities. In it the technical rules and those necessary to enforce leprosy control activities in the programs of medical assistance were brought up to date. The results of the efforts within the new orientation are still not known.

Some current epidemiological data is available from Argentina. With regard to incidence, out of the 2.8 million population, 15 new cases have been reported--an incidence of 0.6 per 100,000 population. With the exceptions of years 1961, 1962, 1965 and 1966, this percentage has remained relatively stable. During the years mentioned, the incidence was approximately twice the 1969 figure (e.g., 1.0-1.2 per 100,000).

The Ministry of Public Health provides prevalence of registered leprosy cases by departments. Those departments with prevalence data of 1.0 or greater are Corrientes, Chaco, Formosa, and Misiones. The total prevalence for all departments equals 0.58 per 1,000.

In Paraguay, control of leprosy was, until 1963, in the charge of a specified department.

With the transference of leprosy responsibilities to the Department of Epidemiology, as well as the incorporation of its camp staff and material resources to the urban services, the control program has slowed down. From 1969 on, the new work policy was revised and a special section for leprosy was set up with the responsibility to plan, guide, supervise and evaluate the control activities in Paraguay and, in a special way, in five districts (Central, Paraguairí, Itapúa, Misiones and Mombucú), where an agreement in material collaboration with a German group is being completed. It should be mentioned that, between 1965 and 1968, the Government developed an active program in two of the five health zones then existing, with the guidance of PAHO/WHO and the material collaboration of UNICEF.

During the period 1948-1969, 6,130 leprosy cases were recorded, of which 4,612 were still active in December 1969, which means a prevalence of 2.1 per one thousand inhabitants. The rest, 1,518 patients, are counted among emigrants, dead, and cured (765). It was possible to get this information through the action of a central registry of cases.

In Chile, leprosy is confined to the Pascua Island, which belongs to the Province of Valparaíso. The island has a surface of 182 square meters and is 3,780 kilometers off the coast in the Pacific Ocean. The number of inhabitants in 1969 was estimated at 1,278. Leprosy is one of the most serious health problems on this island, with a prevalence figure of 24.25 per 1,000 (31 cases).

In Uruguay, during the decade 1960-1970, there was an average of 21 cases and a rate of 0.5 to 1.2 per 100,000 inhabitants. The number of cases known up to 31 December 1969 was 475, distributed in 17 of the 19 districts of the country. There is no formal control program for leprosy.

Leprosy was recently studied in the West Indies. It was reported that preliminary observations show that leprosy is not generally a major public health problem in the West Indies. But this statement should be qualified by saying that the potential for leprosy to become a serious public health threat may be present. This survey was confined to Dominica and St. Lucia, with short stops at Barbados and St. Kitts. Other islands of the Caribbean have reported great variations in the problem.

In Dominica there is no organized leprosy control program; no central registry of the patients or contacts or follow up; and no program for case finding. The facilities for hospitalization of leprosy patients are minimal. No laboratory diagnosis of leprosy is available.

Dominica is one of the largest islands in the West Indies, with a population of 70,032 in the 1970 census, with 35,550 males and 36,752 females. Age distributions have not been compiled yet, but well over 50% of the population is below the age of 25 years.

Information from leprosy studies done in 1968-1969 by a PAHO consultant were available and were very helpful. These two outside studies were the only attempts at case finding and follow up.

A selective prevalence study was done. In Dominica, 499 people were examined. Smears, biopsies and lepromin testing were done where indicated. Another 1,200 people were superficially screened. No new cases of lepromatous leprosy were found. Six new tuberculoid case suspects were found. Of the 22 already established cases, 14 are active and eight arrested. Three active cases were out of the country and one active case was not a Dominican.

With a larger population of 90,000, St. Lucia has more leprosy cases than Dominica, and has an organized, well-run leprosy control program. There is a current leprosy registry of cases and contacts. A very efficient public health inspector has chief responsibility for follow up and dispensing of drug prophylaxis. There is no case finding, nor is there anyone to whom the health inspector can go for help on diagnosis, treatment, or rehabilitation work.

In summary then, the total leprosy problem in the West Indies is not great, but it is necessary to establish ongoing control programs.

V. Control Measures

The isolation of leprosy as a disease separated from other clinical entities has been due to prejudice and false interpretations which have been promoted, not only by the general public but also by the lack of interest of the medical profession. These negative aspects are what have kept this disease outside the stream of progress and influencing other areas of public health activities.

To establish a leprosy control program it is necessary first to have an approximate estimate of the magnitude of the problem. This estimate is very difficult to reach because there is no tuberculin-type test of infection available. Data have to be assembled through morbidity surveys, with all the problems they signify.

The importance of leprosy as a public health problem does not arise from its condition of being a cause of death, but fundamentally from the characteristics of the disease, with its chronic development and its tendency to provoke a high percentage of incapacities in varying degrees, due to the tropism of M. leprae for peripheral nerve structures. The problems which arise from these incapacities affect not only the patient himself but also his family and the community within which he lives.

The establishment of a control program in areas where leprosy is a public health problem has to be carried out through dynamic epidemiological centers, with well-trained medical and auxiliary personnel, who should be prepared to carry on their duties even in the most distant regions of the area they have under their control.

Personnel training is the first stage of a well organized leprosy control program. The planning of personnel training activities for leprosy control programs has to be done according to the general public health organization of the country. The needs for personnel which must be covered should be ruled by both the economical and teaching resources available.

Three points should be considered in relation to training of personnel for leprosy control programs: (a) undergraduate training; (b) postgraduate training; (c) training of paramedical personnel and provision of information to voluntary workers (schoolteachers, community leaders, religious workers, etc.).

Leprosy, with its numerous unknowns, is a very interesting field of work for researchers of different disciplines, such as biochemists, microbiologists, immunologists, and pharmacologists. Special attention should be paid to giving this group of people the basic concepts regarding clinical, pathological, immunological, diagnostic and therapeutic aspects of leprosy, since this knowledge is essential for a fruitful labor.

VI. Leprosy Research, Training and Administration

The remaining presentations at this meeting were essentially informational and relevant to leprosy research, administration of control programs, and training and education. The presentations related to the advances being made in animal inoculations and pharmacological research were particularly emphasized. The need for very basic, definite research into the inherent biochemical, immunological and micro-anatomical characteristics of the leprosy bacillus was emphasized.

The need for epidemiological field research was noted and the fundamental basis for such studies introduced (incorporated in the recommendations). These discussions reemphasized the fact that the recommendations from the Guadalajara conference have yet to be fully implemented.

Other discussions following presentations of the leprosy situations in the various zones developed the fact that there are several discrete regions of relatively high endemicity which would serve as excellent demonstration study areas if and when such areas are desired. Specifically these included the West Indies, Acre and Brasília in Brazil, and Corrientes-Chaco in Argentina.

VII. Recommendations

A total of eight firm recommendations were forthcoming from this Committee meeting. These recommendations all relate to the concept of a coordinated Hemispheric-wide effort in leprosy control, training and research through the development of a PAHO International Center for Training and Research in Leprosy and Related Diseases. The most appropriate locale for the proposed PAHO center would be Caracas, Venezuela. Venezuela is a country that has already developed a good integration between leprosy and other health problems. Several leading professors in the universities of both South and North America are already availing themselves of the Venezuelan facilities to productively study leprosy as it relates to their own fields of specialization. Note is made of the fact that the División de Dermatología Sanitaria, Ministry of Health, Caracas, has been named by the World Health Organization as a WHO Reference Center for Histological Identification and Classification of Leprosy. The development of a PAHO International Center and the WHO Reference Center should provide complementary activities of benefit to both the regional and worldwide scope of each other.

Specific recommendations are as follows:

1. That a PAHO center for leprosy and other endemic diseases be established in Caracas, Venezuela, in relation with the Instituto Venezolano de Dermatología.
2. That the composition of this Venezuelan center be such that the following activities can be facilitated:
 - (a) Basic research
 - (b) Epidemiological research and analysis
 - (c) Development of methods and means to be applied to:
 - i. Administration of medical programs
 - ii. Collection of epidemiological statistics

- iii. Practical methods of disease control (effective diagnosis and treatment)
 - iv. Effective educational training of medical and paramedical personnel
 - v. Experimentation and development of sociological aspects directed toward improvement of the patients' status in the community
3. That this center serve as a focal point for collection and dissemination of information, using as one of its channels for communication the PAHO Regional Library in São Paulo.
 4. That besides funds from the Organization, resources for support of this center be sought from multiple sectors, to include governmental, university and private agencies.
 5. That several collaborative field demonstration areas be established ancillary to the Venezuelan center but in other countries, which would possess the following minimal identifying characteristics:
 - a) Be a relatively small, discrete land area
 - b) Have a population that is characteristically stable and of low mobility
 - c) Have a relatively high incidence of leprosy
 - d) Have the capability for delivering good general medical care
 6. That an international advisory board be established to provide details of planning, policy making and operation of the Venezuelan PAHO center.
 7. That PAHO fulfill a long-term goal of establishing other centers, similar to this described in Venezuela, in other countries of the Western Hemisphere, as needs and opportunities dictate.
 8. That this present PAHO Advisory Committee meeting of 29 and 30 July 1971 be reconvened at some future date to evaluate progress made toward implementation of these eight recommendations.

VIII. Summary and Conclusions

In summary, then, the fact that the leprosy problems of the Americas are not yet fully and precisely defined is clearly evident. Further, it is becoming obvious that our past approaches to (1) data collection and analyses, and (2) leprosy control are not functioning uniformly well and that, therefore, there is a real need for developing and evaluating new methodologies. The Committee is in unanimous agreement that single disease programs in leprosy will fail as they have largely in the past because they are stigmatizing in every respect, that is to say, to the country, the region and, most importantly, to the patient. Leprosy control programs of the future must be integrated into public health medical programs. In achieving this integration, however, care must be taken that they are not buried in the great mass of public health efforts. The best defense against leprosy being buried is to develop interested, enlightened public health physicians, private physicians, and a tolerant, understanding society. These are long-term educational matters.

Great strides have already been taken in the above-desired direction by Venezuela. Therefore, all of the basic ingredients for a South American center for basic research, education, and developments of pragmatic realistic control programs (for applications in other countries) are now in Caracas, and this could feasibly be developed into an international center.

Speaking only on the matter of leprosy control programs, by way of an example of how the proposed center might function, a pattern of control could be designed in Caracas using all of the multidisciplinary expertise that can be made available, and then be given a preliminary field trial in an area near to Caracas. When such a trial program had been so "tested" by the Caracas center, it could then be tried in one of the ancillary demonstration areas outside of Venezuela. After a practical demonstration of any degree of success, for example in a region like Acre in Brazil or Chaco in Argentina, local governments in other countries might be more easily persuaded to apply this new program in their own problem areas.

Speaking on the matter of education, medical student and faculty involvement in both the major Caracas center as well as the field areas would be a means by which young physicians of the future might be "raised" with a healthier perspective toward leprosy as a disease to be treated along with all others. Particularly, this would be true if the recommendation (1) is implemented as "...leprosy and other endemic diseases."

Finally, now that we are about to end the era of one drug regimens for leprosy treatment, we will soon be into the far more complicated business of multiple drug treatments. There will, then, soon be an imperative need for a sophisticated expert center to develop and evaluate results of such regimens.



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

525 TWENTY-THIRD STREET N.W., WASHINGTON, D.C. 20037, U.S.A.

CABLE ADDRESS: OFSANPAN

TELEPHONE 223-4700

IN REPLY REFER TO: ST-AGR
AMRO-0500 (Venezuela)

22 September 1972

Sir:

I have the honour to address you for the purpose of establishing by means of this Letter-Agreement the bases for cooperation between the Government of the Republic of Venezuela and the Pan American Health Organization/World Health Organization for the establishment and operation of an International Center for Research and Training in Leprosy and Related Diseases.

1. The purpose of the Center, which will operate in the National Institute of Dermatology, attached to the Division of Public Health Dermatology of the Ministry of Health and Social Welfare of Venezuela, is to foster in the countries of this Hemisphere coordinated research on leprosy and other diseases whose etiology, immunology, pathology and course are similar, in the aspects of training, administrative methods for control and epidemiological surveillance.
2. The objectives of the Center are as follows:
 - 2.1 To include in the curricula of health sciences educational institutions in the Americas teaching on leprosy as a model of chronic communicable diseases in the immunological and clinical context with skin, nerve and visceral manifestations.
 - 2.2 To establish pilot areas in Venezuela and other countries for research on and application of new methods of teaching on research, design and operation of control programs.

Dr. José de Jesús Mayz Lyon
Ministro de Sanidad y Asistencia Social
Caracas, Venezuela

2.3 To foster, coordinate and conduct basic and applied research activities, including epidemiological studies on leprosy, especially relating to other pathological states and immunological phenomena as well as operational research.

2.4 To promote national and international programs of epidemiological surveillance and to develop a data collection system that would provide information about the status of leprosy in the Americas.

2.5 To establish a system specializing in information on leprosy and related diseases for the countries of the Americas with direct dissemination and orientation on how to obtain it. The Center will collaborate with the Regional Library of Medicine in São Paulo in this information service.

3. The Center will operate in the National Institute of Dermatology, attached to the Division of Public Health Dermatology of the Ministry of Health and Social Welfare of Venezuela, and will be directed and managed by the Director of that Institute.

3.1 An advisory Committee will be established and its members will be designated by the Pan American Health Organization/World Health Organization. The Director of the National Institute of Dermatology will be a member of the Advisory Council of the Center.

3.2 The Advisory Council will be responsible for drawing up the annual plans of work, within the first three months of each year, and the priorities, activities to be undertaken, and goals to be accomplished will be defined in those plans.

4. Subject to financial availabilities, the Pan American Health Organization/World Health Organization will provide the following:

4.1 Technical advisory services through consultants from Headquarters, Zone I Office, and permanent or short-term specialized consultants.

4.2 Fellowships for the training abroad of national professionals and for the training in the Center of professionals from other countries.

4.3 Bibliographical and reference services through Headquarters and the Regional Library of Medicine in São Paulo, Brazil.

4.4 Equipment, supplies and materials, as mutually agreed upon.

5. The Government of the Republic of Venezuela will be responsible for ensuring the necessary budgetary resources for the operations of the Center and, subject to its financial availabilities, will provide the following:

5.1 The premises, equipment, materials, furniture and fittings, and transportation and communications in the National Institute of Dermatology that are necessary for the proper operation of the project.

5.2 Physical and operational facilities in the pilot demonstration area in the State of Aragua and in other demonstration areas and subareas, as agreed upon in the plan of operations, and facilities for diagnosis, treatment, and teaching on cases available in the Maracay Subregional Hospital, in local health centers, and in the José Ignacio Baldo Rural Education Center.

5.3 The following national professional, technical, auxiliary and secretarial personnel:

5.3.1 In the pilot demonstration area in the State of Aragua:

- 1 full-time medical officer specialized in dermatoleprology
- 1 entomologist
- 3 inspectors of whom 1 will be engaged full time in personnel training activities
- 5 field auxiliaries
- 1 graduate social worker
- 1 auxiliary social worker
- 1 nursing auxiliary
- 2 auxiliary secretaries

5.3.2 In the National Institute of Dermatology: 1 secretary

5.3.3 Transportation for the activities of the Center, which consists of two vehicles and two motorcycles.

6. During this project, the Pan American Health Organization/World Health Organization and the consultants will enjoy in Venezuela such privileges and immunities and such protection vis-a-vis third parties as the Government of this country grants to international agencies, in accordance with the Basic Agreement signed between the Government and the organizations represented on the United Nations Technical Assistance Board, dated 19 August 1954.

7. This Letter-Agreement, which may be amended, extended, or rescinded upon three months' notice, will remain in force until 31 December 1977. If the Minister is in agreement with the terms of this Letter-Agreement, I should be grateful if he would indicate his acceptance of it by returning a signed original through our Zone Office.

Accept, Sir, the expression of my highest consideration.

(signed)

(for) Abraham Horwitz
Director
Charles L. Williams, Jr.
Deputy Director

ACCEPTED:

FOR THE GOVERNMENT OF THE
REPUBLIC OF VENEZUELA

(signed)

Minister of Health and Social Welfare

Date: Caracas, 30 October 1972



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INTERNATIONAL CENTER FOR TRAINING AND RESEARCH
IN LEPROSY AND RELATED DISEASES

REPORT OF THE FIRST MEETING OF THE
ADVISORY BOARD

Caracas, Venezuela, 11-15 June 1973

Submitted by:

Dr. Oliver Hasselblad, Chairman
Dr. Roger Feldman, Rapporteur
Dr. José J. Arvelo, Secretary

INTRODUCTION

Following the signing in September 1972 of the cooperative agreement between the Government of Venezuela and PAHO concerning the initiation of an International Center for Training and Research in Leprosy and Related Diseases, an Advisory Board was appointed to report to PAHO concerning further specific recommendations relating to the program and plans for the International Center.

The Advisory Board consisted of:

Dr. Luis María Baliña
Profesor Titular de Dermatología
Facultad de Medicina
Universidad del Salvador
Avenida Alvear 1890
Buenos Aires, Argentina

Dr. Luiz Marino Bechelli
Professor Titular de Dermatología
Faculdade de Medicina de Ribeirão Preto
Universidade de São Paulo
Ribeirão Preto, S.P.
Brazil

Dr. Paul W. Brand
Chief, Rehabilitation Department
U.S. Public Health Service Hospital
Carville, Louisiana 70721, USA

Dr. John W. Davies
Director, Epidemiology Service
Department of Health and Welfare
Queensway Towers
Ottawa, Ontario K1A 1B7
Canada

Dr. Eugene Farber (not present)
Professor and Chairman
Department of Dermatology
School of Medicine
Stanford University
Palo Alto, California, USA

Dr. Roger A. Feldman
Chief, Special Pathogens Section
Bacterial Diseases Branch
Center for Disease Control
Atlanta, Georgia 30333, USA

Dr. John Hanks
Leonard Wood Memorial Leprosy
Research Laboratory
Johns Hopkins University
Baltimore, Maryland 21205, USA

Dr. Oliver Hasselblad
President
American Leprosy Missions, Inc.
297 Park Avenue South
New York, N.Y. 10010, USA

Dr. Guillermo Muñoz Rivas
Jefe, Grupo de Investigación de Lepra
Instituto Nacional para Programas
Especiales de Salud
Apartado Aéreo 90594 (Chicó Z.8)
SUBA: Carrera 4a. No. 13-24
Bogotá, D.E., Colombia

Dr. Claude Reich
Microbiologist
Leonard Wood Memorial Research Unit
Johns Hopkins University
Baltimore, Maryland 21205, USA

Dr. Amado Saúl
Centro Dermatológico Pascua
Calle Dr. Garciadiego 21
México, D.F., Mexico

Dr. Carl Taylor (not present)
Professor and Chairman
Department of International Health
Johns Hopkins School of Hygiene and
Public Health
615 North Wolfe Street
Baltimore, Maryland 21205, USA

Also present were:

Dr. Jacinto Convit
Director of the Center
Caracas, Venezuela

Dr. Merlin L. Brubaker
Regional Advisor on Leprosy
Pan American Health Organization
World Health Organization
Washington, D.C., USA

Dr. Celio de Paula Motta
Leprosy Adviser
Zone II Office
Pan American Health Organization
World Health Organization
México, D.F., Mexico

Dr. Humberto García Barrios
Jefe de la División de Enfermedades Crónicas
Ministerio de Sanidad y Asistencia Social
Caracas, Venezuela

Dr. José de J. Arvelo
Jefe, Programa Nacional de Rehabilitación
Departamento de Dermatología Sanitaria
Ministerio de Sanidad y Asistencia Social
Caracas, Venezuela

The agenda of the meeting was:

Monday, June 11

- A.M. Inauguration Ceremony
- Opening Remarks
- a) Dr. Jacinto Convit, Director of the International Center
 - b) Dr. Alfredo Arreaza Guzmán, Assistant Director, Pan American Health Organization/World Health Organization
 - c) Dr. José de Jesús Mayz Lyon, Minister of Health and Social Assistance of Venezuela
- P.M. a) Visit to the Center
- b) General Information Session
- 1) Election of Chairman and Rapporteur
 - 2) Leprosy in the Americas - Dr. Merlin L. Brubaker
 - 3) General purpose of the International Center, demonstration - Dr. Jacinto Convit
 - 4) PAHO/WHO Research Programs - Dr. Humberto Torloni (read in absence)

Tuesday, June 12

A.M.

Visit to the Aragua Demonstration Area
Central Hospital of Maracay, Auditorium

- a) Words of welcome from Dr. Pedro Hernández,
Head Doctor of the Aragua Public Health
Region
- b) Short lecture on the structure of the Aragua
Public Health Region, by Dr. Estebán Cabrera,
Administrative Associate
- c) Short lecture on the demonstration area
Administrative Aspects. Dr. José J. Arvelo,
Dr. Enrique Rassi
- d) Epidemiological Aspects: Dr. F. Hernando,
Dr. M. Rosario
- e) Discussion
- f) Visit to the facilities of the Public Health
Dermatology Service and demonstration of the
registration system

P.M.

Visit to the Study of Vectors Section, Villa de
Cura

- a) Demonstration of registration systems in
onchocerciasis: Dr. E. Rassi, Dr. F. Hernando
- b) Information on vectors of onchocerciasis and
leishmaniasis: Mr. Jaime Ramírez

Wednesday, June 13

A.M.

Discussions by the Advisory Board in relation
to the program of the Center

Training proposals - Dr. Jacinto Convit

P.M.

Research proposals - Dr. Jacinto Convit

Collaborating centers - Dr. Merlin L. Brubaker

Thursday, June 14

A.M.

Visit to the Universidad Central. Principal's
Office

Instituto de Medicina Tropical

P.M.

Visit to the Instituto Venezolano de Investigaciones Científicas (IVIC)

Friday, June 15

A.M.

Presentation of the Final Report

The Board elected Dr. Oliver Hasselblad as Chairman, and Dr. Roger Feldman as Rapporteur. Dr. José J. Arvelo served as Secretary.

The Board had to consider the plans and program of the Pan American Health Organization's International Center in relation to the objectives agreed to by the Venezuelan Government and the Pan American Health Organization.

The group centered its discussions on two major topics: training and research.

I. TRAINING

Regarding training, the group agreed to the following recommendations:

1. That a "Training Officer" with a good knowledge in education and leprosy, and related diseases be designated by the International Center. This Training Officer would assist in the organization of the courses, development of training aids and other educational materials. The Board was pleased to learn of the intention of the Organization to assign its Zone Leprosy Advisor to the International Center as a coordinator of international programs.

2. That the Organization evaluate the needs for special types of training, evaluate the effectiveness of the training programs of the International Center, and that the Organization encourage the utilization of the trainees when they return to their countries.

3. That the Organization initiate a Conference of Health Program Directors and Leprosy Program Directors, for an exchange of ideas concerning the control of leprosy and related diseases, with discussions to include budget and examination of field and laboratory programs.

4. That the International Center establish a relationship with other international training centers for leprosy for the purpose of exchange visits of staff. The training program should continue to utilize personnel from other countries in the Hemisphere and from other continents.

5. That the Organization continue to utilize training opportunities available in other countries.

6. That priority in training be given equally to junior and senior medical personnel working in leprosy and related diseases and that training be offered to other professionals involved in certain aspects of control and treatment of leprosy and related diseases.

7. That course objectives be outlined in sufficient detail to allow a subsequent evaluation of the effectiveness of the training.

8. That the International Center develop programs for training of faculty members of medical colleges in specialties connected with leprosy and related diseases.

9. That the training programs should take into account the WHO policy in leprosy control to include demonstration of:

a) All the basic components of a control program, including early diagnosis, effective treatment, prevention and early treatment of deformity by simple techniques, and methods of case and contact holding;

b) The integration of the leprosy control program into the general public health organization, including rehabilitation of leprosy patients by the general rehabilitation service.

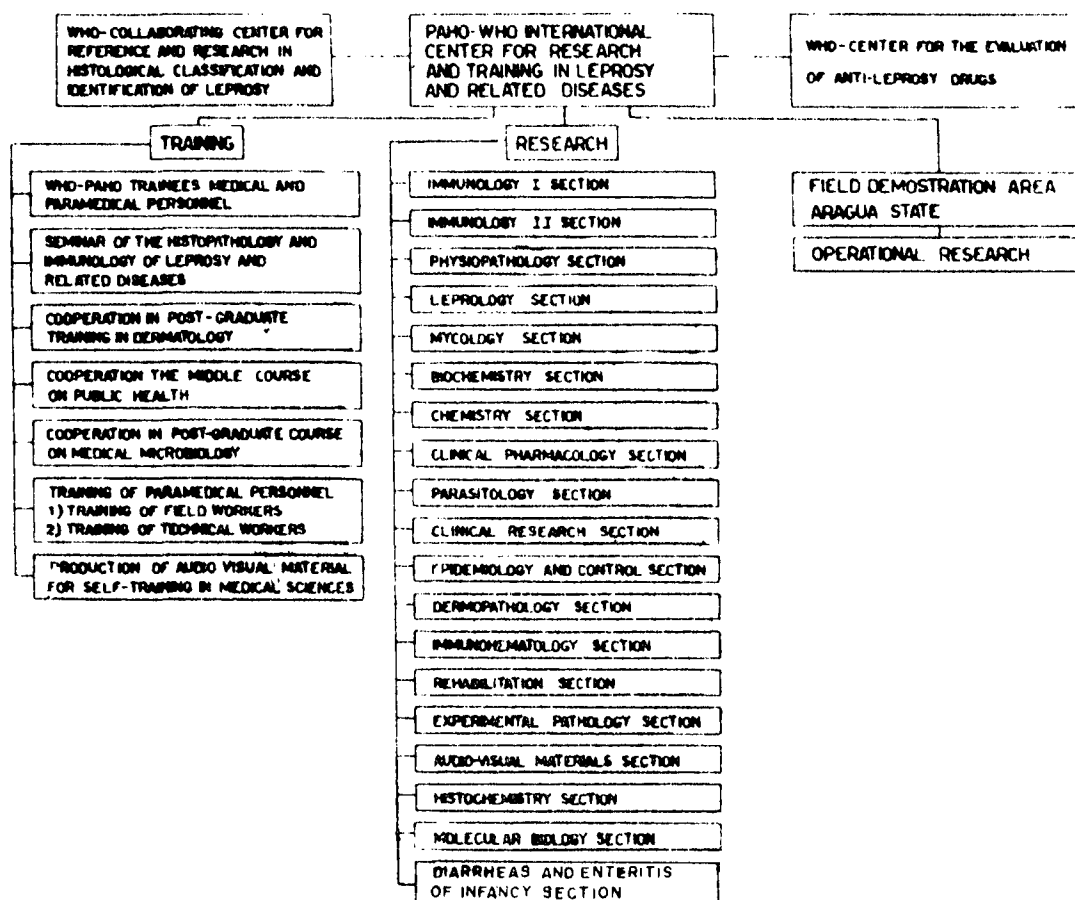
II. RESEARCH

The scope of the program of the Institute of Dermatology was presented covering many aspects of leprosy and related diseases. The Board reviewed them briefly and appreciated the excellence of the whole program. After reviewing many ideas relating to research projects, the group thought it unnecessary to deliver recommendations on current specific research projects. The group encouraged cooperation of the International Center with other research centers, emphasizing those which link studies of leprosy with studies of other medical problems. Finally, the group agreed to the following recommendations:

1. That an effort be made to develop an Epidemiology Unit for analysis of data, teaching, and research in leprosy and related diseases.
2. That research activities relating to the effectiveness of various aspects of the control program should be given high priority. In these studies (e.g., relapse, drug resistance, criteria for release from control) work can be conducted cooperatively with collaborating centers in other countries.
3. That basic research related to the needs of the field program, including delivery of services, should be implemented with high priority.
4. Research on the sociologic aspects of leprosy control, mentioned in the first meeting of the Advisory Committee, should include investigation of the cause of prejudice against leprosy and the problems involved in transforming leprosy sanatoria into hospitals which meet community needs as well as those of modern leprosy control programs.
5. That since entomologic expertise already exists, it might be utilized in studies of vectors in leprosy.
6. That funding be sought, through the Organization or the Pan American Health and Education Foundation, for those aspects of recommended research which are aside from those currently under development.

GENERAL COMMENTS AND RECOMMENDATION

That the Organization assist in establishing a system of communication by which information about the International Center may be circulated to responsible officers of related programs in other American countries, including governmental and private health agencies and medical colleges. These communications should include information about research and training programs and should stimulate response relating to the felt needs of the countries concerned.



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