directing council

PAN AMERICAN HEALTH ORGANIZATION

XXVI Meeting

regional committee

WORLD HEALTH ORGANIZATION

XXXI Meeting

Washington, D.C.
September-October 1979

Provisional Agenda Item 34

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31 July 1979
ORIGINAL: SPANISH

LEPROSY CONTROL IN THE AMERICAN REGION

I. INTRODUCTION

Leprosy was introduced into the Americas by Spanish, Portuguese and other settlers. The historical evidence indicates that the indigenous population was, and still is, free of the disease.

The first cases were described at the beginning of the VI century (Colombia) and the first leprosarium was established in Cartagena in 1530; at that time most of the patients were negro slaves.

During the last four centuries many foci appeared and were always connected with land settlement and migratory flows. However, the most important focus in the Americas--the Amazonian region--is of recent origin. The first cases were diagnosed at the end of the XIX century.

The control measures used in the past were based on case detection and compulsory isolation, and it is only since the 1950's, with the advent of sulfone therapy, that the ambulatory treatment of patients has begun.

II. MAGNITUDE AND EXTENT OF THE PROBLEM

Leprosy is endemic in all the countries of the Americas, with the exception of continental Chile. In most cases the problem is of average seriousness compared with the African and Asiatic foci. The geographical distribution of the cases varies but there is a tendency for them to be concentrated in well-defined foci, in some of which the morbidity amounts to 20-30 per 1,000 inhabitants.

The outstanding epidemiological characteristics of the disease is as follows:

a) With few exceptions, half the cases diagnosed are multibacillary forms (lepromatous and dimorphous).

b) The prevalence in children (age group 0-14 years) is less than 15 per cent.

c) Up to the 1950's most of the cases detected (around 70 per cent) came from rural areas (communities with fewer than 2,500 inhabitants or dispersed population). At the present time, there is a reversal in the situation because of the phenomenon of accelerated urbanization in Latin America.

The tables and map attached show the prevalence and incidence of the disease in 41 countries or territories of the Americas, in accordance with the most recent information compiled by PASB/WHO. The purpose of the following comments is to give an overall view of the problem in each of the countries.

1. North America

In Canada there are 64 registered cases; in the period 1972-1976, the average annual number of new cases was 13.

In the United States of America, the present register contains 1,705 patients, and there is an average of 140 new cases each year; the principal foci are in Louisiana, Florida, and the states bordering on Mexico (Texas and California, primarily), Hawaii and Puerto Rico.

In Mexico 70 per cent of the patients are located in the states on the Pacific coast (Guanajuato, Sinaloa, Nayarit, Jalisco).

2. Central America

This area has the lowest morbidity rates in the Americas, with the exception of Canada and the United States of America. The principal foci are located on the Pacific coast around the Gulf of Fonseca, territories of El Salvador, Honduras and Nicaragua, and on the Azuero Peninsula (Panama). Only two foci have been identified on the Atlantic coast: Limones in Costa Rica and Bocas del Toro in Panama.

3. Caribbean Region

The epidemiological situation varies: some countries have relatively high morbidity rates, from 9 to 25 per 1,000 (Guyana, Guadeloupe, Martinique and Suriname). However, in these countries the proportion of multibacillary cases (lepromatous and dimorphous) is much lower than the average in the Americas. In the English-speaking countries/territories, the highest rate is in St. Lucia (higher than 4 per 1,000). In Grenada, Guyana and Trinidad and Tobago the morbidity rate is higher than 2 per 1,000. In the other countries or territories the problem appears to be less serious.

In Cuba, more than half the patients live in the Eastern provinces (Camaguez, Guantánamo, Santiago) and Oriente Sur.

In the Dominican Republic, two epidemiological characteristics are of interest: more than 50 per cent of the patients live in Santo Domingo (the capital) and most of the cases (55 per cent) are females.

In Haiti, the situation is virtually unknown, but it appears that there are new cases in the northern departments of Aribonite and Cape Haitien.

4. South America

In Venezuela, the morbidity rate is estimated to be under 2 per 1,000. The incidence (rate of case detection) has been reduced by about 75 per cent in the last 25 years.

In Colombia, approximately 20,000 cases are undergoing treatment. The principal foci are located in the southeastern branch of the Cordillera of the Andes. Many of the patients acquired the disease at altitudes of more than 2,000 meters above sea level.

In Ecuador most of the cases diagnosed are on the Pacific coast (provinces of Guayas, Los Rios and El Oro). There are few cases in the Sierra.

In Peru, more than 80 per cent of the cases are infected in the Amazon region, primarily in the Rio Ucayali and its tributaries.

In Bolivia, leprosy apparently is not transmitted in the Andean altiplano but the situation is serious in the departments of Santa Cruz and Chuquisaca and in the Amazon basin in the north-western part of the country. In 1974 an intensive investigation of 32,000 inhabitants in the province of Vallegrande (Department of Santa Cruz) disclosed a morbidity rate of 40 per 1,000.

Brazil. More than 65 per cent of the cases registered in the Americas are in this country, but the geographic distribution of the disease is not uniform. The distribution of morbidity rates by region in 1975 was as follows:

Amazonia	2.94 per 1,000
Northeast	0.30 per 1,000
Southeast	1.68 per 1,000
Central West	2.01 per 1,000
South	0.97 per 1,000

The Amazon region contains 6.9 per cent of the general population of the country and 15.6 per cent of the registered cases of leprosy, whereas the southeastern region, which has 42.4 per cent of the population, has 55.1 per cent of the cases.

In 1978, approximately 12,000 new cases were diagnosed, i.e., 10 per 100,000 population (49 per cent multibacillary forms).

In Argentina the known cases are concentrated in the northeastern provinces of the country and in Greater Buenos Aires, where approximately 70 per cent of the patients are not autochthonous but are immigrants from endemic areas.

In Uruguay, 514 patients are registered and for the most part come from the northeastern provinces (Paisandú, Salto and Artigas).

Paraguay has the highest estimated morbidity rate in South America (3.3 per 1,000 population); almost all the cases diagnosed are in the eastern provinces and in the capital (Asunción).

Chile represents a peculiar epidemiological situation. Apparently there is no transmission of leprosy. Easter Island, located 5,000 km from the Pacific coast, with a Polynesian population, has a morbidity rate of 30 per 1,000.

III. ORGANIZATION, RESOURCES AND ACTIVITIES FOR LEPROSY CONTROL

Table III summarizes the principal aspects of the status of leprosy control programs in the Americas.

1. Structure of the Programs

In six countries (Argentina, Guatemala, Guyana, Panama, Trinidad and Tobago and Uruguay) the control programs are vertically organized, i.e., have their own organization and personnel for executing control activities.

In another three countries, the programs, although vertical and direct programs, execute activities for control of other diseases. In the Dominican Republic the program is also responsible for the control of tuberculosis in one area of the country (eastern region); in Paraguay there is coordination with the regular health services, primarily in case detection activities; and in Venezuela the programs are decentralized to the state level, and their regular staff are responsible for other problems of public health dermatology, onchocerciasis, leishmaniasis (both cutaneous and visceral) and mycosis.

In another 21 countries and territories, control activities are the responsibility of the general health services, but only in a few of them is there a central policy-making and supervisory agency as, for example, in Bolivia, Colombia, Ecuador and Peru, which may also coordinate other activities--hemorrhagic fever (Bolivia) and tuberculosis (Colombia).

2. Patients Under Surveillance

The data in Table III should be interpreted with some caution, since there is no uniform definition of what is meant by "a case of leprosy" and what is considered a "patient under surveillance" or "under regular treatment."

3. Technical Policy

In 20 countries or territories there are administrative standards or procedures that guide leprosy control activities. An examination of these documents shows a great difference in the criteria used, and there is a need to make them uniform.

4. Leprosaria Patients

Although it is generally agreed that isolation is useless as a measure for controlling the disease, there are still a number of leprosaria in operation in the Region. There are about 26,000 patients interned in specialized institutions, of which 20,000 are in Brazil.

5. Assistance of International and Private Organizations

In most of the countries of the Americas the leprosy problem is the responsibility of the general medical care services that must obtain resources from the ministries of health, and it is not assigned the priority warranted by its relative importance.

However, extrabudgetary resources are provided by private organizations that make up ILEP, and these resources are channeled to the countries through three different mechanisms:

a) Direct financial assistance to programs with a limited purpose: leprosaria, workshops for shoe-making and/or physiotherapy, social assistance to groups of patients and their families.

b) Financial aid to Governments for implementing control programs (Bolivia, Argentina, Paraguay, Colombia, Guatemala).

c) Funds provided to PAHO/WHO for the formulation and implementation of programs in some countries and for personnel training (Table IV).

IV. PAHO/WHO TECHNICAL COOPERATION

Technical cooperation is provided through project AMRO-0500 (Leprosy Control) which comes under the Communicable Diseases Unit, Division of Disease Prevention and Control. At the local level, the regional project is coordinated with projects in the 5000 series (Country Representatives) and 3400 series (Area Epidemiologists).

Another resource available to PAHO/WHO is its associated Pan American Center for Research and Training in Leprosy and Tropical Diseases (CEPIALET), which is located in Caracas, Venezuela.

The policy that forms the basis of PAHO/WHO cooperation is that established in Recommendation 10 of the III Special Meeting of Ministers of Health, Santiago, Chile, 1972:[1]

"10. Reduce the incidence and prevalence of leprosy, with a view to the consequent decrease in disabilities resulting therefrom.

In this connection the following will be necessary:

- Develop and improve programs for the control and epidemiologic surveillance of leprosy, as well as for the specialized training of personnel, both professional and auxiliary, in this field.

- Develop and improve clinical services, including rehabilitation, personnel training, and research development.

- Improve the diagnosis and classification of leprosy, thus facilitating the compilation of more accurate epidemiologic data.

- Establish a regional training and research center with a view to defining a uniform methodology for leprosy control.

- Establish pilot field units to carry out epidemiologic research on the disease.

[1] Ten-Year Health Plan for the Americas, PAHO Official Document 118, pages 31 and 32

- Treat, as far as possible, up to 100 per cent of the infectious (lepromatous, dimorphous or indeterminate) cases.

- Promote epidemiologic surveillance and treatment of at least 75 per cent of all contacts.

All these activities will need to be integrated in properly qualified general health services."

In addition, the PAHO/WHO leprosy control policy is in accordance with the recommendations of the 5th Meeting of the WHO Expert Committee[1] approved by the World Health Assembly in May 1977.

Table V shows the countries that have received assistance from PAHO/WHO in the period 1973-1978, in accordance with the principal forms of assistance programmed.

V. PAN AMERICAN CENTER FOR RESEARCH ON LEPROSY AND TROPICAL DISEASES (CEPIALET)

The XXIV Meeting of the Directing Council of PAHO (1976) recognized the importance of the Center and accepted the offer of the Government of Venezuela to make its National Institute of Dermatology an institution associated with the PAHO/WHO technical cooperation program.

In its capacity as associated center, CEPIALET has executed the following programs in the period 1973-1978:

1. Research

1.1 Laboratory

a) Experimental transmission of leprosy to the armadillo. The animal facility of the Center has about 100 animals, most of which belong to the species Dasypus sabanicola; about 25 per cent of the animals inoculated are susceptible to the (disseminated) disease. The construction of an animal facility capable of accommodating about 700 armadillos is near completion, and it is expected to continue studies on the experimental transmission of leprosy and the reproduction and breeding of armadillos in captivity.

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[1] WHO Technical Report Series No. 607, 1976

b) Purification of Mycobacterium leprae. Studies are going ahead to obtain purified material which can be used for determining the antigenic fractions of the bacillus and for preparing a specific vaccine. The project is receiving assistance from the Armand Frappier Institute (Canada), the Scientific Research Council (England), and the Armed Forces Institute of Pathology (USA).

1.2 Operational

a) Field test of a protein antigen extracted from Mycobacterium leprae from experimentally infected armadillos. The first results (test in endemic areas and in non-endemic areas such as Chile) indicate that it is a specific biologic product that could be used to ascertain the infection rates in the population investigated.

b) Experiment on the method of joint control of tuberculosis and leprosy, Apure state, Venezuela.

c) Evaluation of high-yielding methods of case detection: selection of extradomiciliary contacts for systematic dermatological examination based on an order of priority in accordance with the degree of exposure to sources of infection.

1.3 Assistance to the countries of the Americas in formulating and implementing control programs. CEPIALET has assisted PAHO in this field and, in addition, its technical personnel have provided assistance (short-term consultant services) to control programs in Cuba, Dominican Republic, Bolivia and the less-developed countries of the Caribbean.

1.4 Training

CEPIALET holds two annual courses on public health dermatology for international fellows (4.5 months' duration) and a course on the prevention and treatment of disabilities caused by leprosy (two months's duration) and, in addition, accepts fellows for various types of training, both medical personnel and auxiliary personnel.

Table VI summarizes the types of training provided, the number of personnel trained, and the beneficiary countries.

ANNEXES

TABLE I Leprosy cases on the active register by country, estimated number of patients, prevalence rates and cases under surveillance, 1976 or most recent year. American Region

FIGURE 1 Reported cases (new) of leprosy in the Americas per 100,000 population, 1976 or most recent year available

TABLE II Reported cases of leprosy in the Americas with rates per 100,000 population, 1972-1976 (annual average), 1976 and 1977

TABLE III Status of leprosy control programs in the Americas

TABLE IV Extrabudgetary contributions to PAHO/WHO leprosy control, 1974-1979

TABLE V PAHO/WHO assistance to leprosy control programs in the Americas, 1973-1978

TABLE VI Pan American Center for Research and Training in Leprosy and Tropical Diseases (CEPIALET). Training Program, 1973-1979

TABLE I

LEPROSY CASES ON THE ACTIVE REGISTER BY COUNTRY, ESTIMATED NUMBER OF PATIENTS, PREVALENCE RATES AND CASES UNDER SURVEILLANCE, 1976 OR MOST RECENT YEAR
AMERICAN REGION

	Country or Territory	Estimated Population (in 1000's) 30 June 1976	Registered Cases		Total Estimated		Cases Under Surveillance	
			Year	Number	Number	Rate per 1000	Number	%
COUNTRIES	Venezuela	11,632	1975	12,734	19,101(a)	1.6	8,923	46.7
	Suriname	411	1973	2,311	4,044(b)	9.8	2,311	57.2
	Guyana	774	1976	665	1,164(b)	1.5	642	55.2
	Trinidad/Tobago	1,070	1976	906	1,359(a)	1.3	869	63.9
	Barbados	244	1975	33	66(c)	0.3	33	50.0
	Grenada	96	1975	94	282(d)	2.9	94	33.3
	Jamaica	2,008	1975	366	549(a)	0.3	348	63.4
	Bahamas	197	1974	1	3(d)	0.0	1	33.3
BRITISH TERRITORIES	St. Vincent	96	1968	13	39(d)	0.4	13	33.3
	St. Lucia	107	1973	204	408(c)	3.8	204	50.0
	Montserrat	12	1975	2	6(d)	0.5	2	33.3
	Antigua	70	1976	48	144(d)	2.1	10	6.9
	St. Kitts-Nieves-Anguilla	65	1975	4	12(d)	0.2	4	33.3
	British Virgin Islands	10	...	...	10(e)	1.0	...	...
	Dominica	74	1975	11	33(d)	0.5	11	33.3
	Cayman Islands	11	...	...	10(e)	0.9	...	...
	Turks and Caicos Islands	-	1974	...	10(e)	-	...	...
	Bermuda	55	1975	2	6(d)	0.1	2	33.3
FRENCH TERRITORIES	French Guiana	58	1971	957	1,436(a)	24.8	749	52.2
	Guadaloupe	349	1975	2,033	3,050(a)	8.7	1,802	59.1
	Martinique	358	1973	2,180	3,270(a)	9.1	1,204	36.8
	Netherlands Antilles	238	...	...	20(e)	0.1	...	...
	Subtotal	58,118		14,775	25,867	0.4	10,742	41.5

FIGURE 1

Reported cases (new) of leprosy in the Americas per 100,000 population, 1976 or most recent year available.

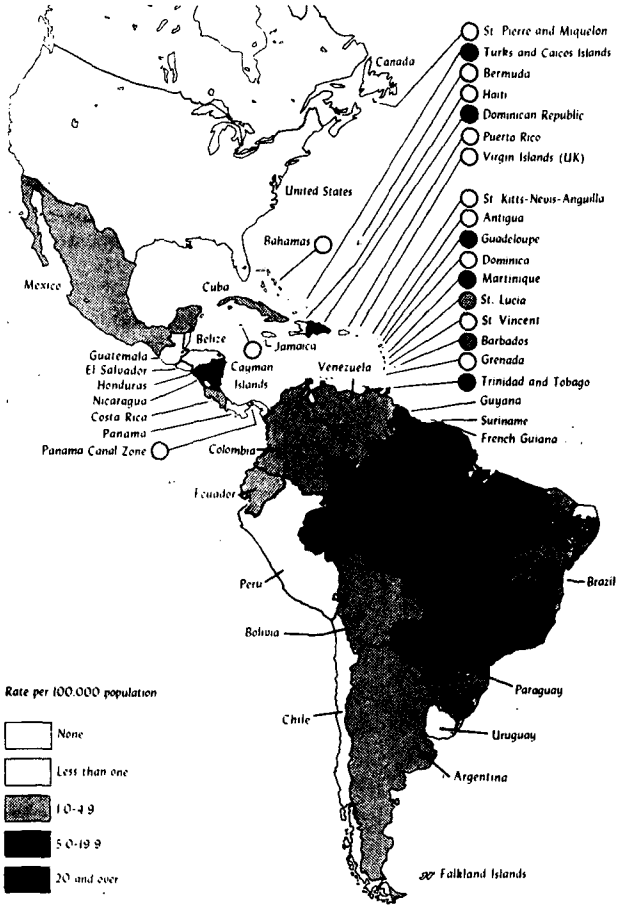

TABLE II

REPORTED CASES OF LEPROSY IN THE AMERICAS WITH RATES PER 100,000 POPULATION, 1972-1976 (ANNUAL AVERAGES),1976 AND 1977.

Country or other political unit	Cases			Rates		
	Annual average 1972-1976	1976	1977[a]	Annual average 1972-1976	1976	1977[a]
Antigua	2	—	—	2.9	—	—
Argentina	608	616[a]	743	2.4	2.4	2.9
Bahamas	1	—	...	0.5	—	...
Barbados	2	3	3	0.8	1.2	1.2
Bermuda	—	...	...	—	...	...
Bolivia	56	75	65	1.0	1.3	1.1
Brazil	8,078	9,647	6,032	7.8	8.8	5.4
Canada	13	17[a]	16	0.1	0.1	0.1
Chile	...	—	...	...	—	...
Colombia	1,029	950	...	4.5	3.9	...
Costa Rica	30	25	26	1.6	1.2	1.3
Cuba	321	377[a]	334	3.5	4.0	3.5
Dominica	1	—	2	1.3	—	2.6
Dominican Republic	400	470[a]	399	8.8	9.7	8.0
Ecuador	126[b]	87	...	1.8	1.2	...
El Salvador	3	3	2	0.1	0.1	0.0
French Guiana	57	57	42	96.6	91.9	65.6
Grenada	6	...	...	6.1	...	...
Guadeloupe	83	67[a]	37	23.8	18.6	10.1
Guyana	51	58	...	6.6	7.4	...
Haiti	7	12	10	0.2	0.3	0.2
Honduras	7	8	...	0.3	0.3	...
Jamaica	18	...	27	0.9	...	1.3
Martinique	32	...	...	9.1	...	...
Mexico	693	714	...	1.2	1.1	...
Nicaragua	...	—[a]	—	...	—	—
Panama	1	—	5	0.1	—	0.3
Paraguay[b]	187	87	...	13.4	5.8	...
Peru[b]	35	52	...	0.4	0.5	...
Puerto Rico	7	...	...	0.2	...	...
St. Kitts-Nevis-Anguilla	—	—	...	—	—	...
St. Lucia	2	2	...	1.9	1.8	...
St. Pierre and Miquelon	...	—	...	...	—	...
St. Vincent	...	1[a]	...	...	0.9	...
Suriname	...	...	—	...	...	—
Trinidad and Tobago	93	66	...	8.7	6.0	...
Turks and Caicos Islands	...	...	5	...	...	83.3
United States of America	140	145	131	0.1	0.1	0.1
Uruguay	10	4	...	0.3	0.1	...
Venezuela[b]	316	...	...	3.5	...	...
Virgin Islands (UK)	...	—	...	...	—	...

— None.
... Data not available.

[a] Incomplete or provisional data.
[b] Reporting area.

TABLE III

STATUS OF LEPROSY CONTROL PROGRAMS IN THE AMERICAS

Country or Territory	Program Structure(1)	% Patients Under Surveillance	Policy Expressed in Standards	Patients in Leprosaria	Financial Aid Private Agencies (2)
Antigua	I	20.8	NO	15	E.S., JSIF
Argentina	V	63.6	YES	350	O.M., DAHW
Bahamas	-	...	NO	-	E.S.
Barbados	-	...	NO	-	-
Belize	-	1	NO	-	-
Bermuda	-	100.0	NO	-	-
Bolivia	I,COT	64.9	YES	60	DAHW, JSIF, F.D.
Brazil	I	61.0	YES	20,000	JSIF, DAHW, A.L.M., LEPRA
Canada	I	78.1	NO	-	-
Cayman Islands	-	...	NO	...	E.S., JSIF
Chile	I	90.0	NO	7	DAHW
Colombia	I,CTB	89.0	YES	2,600	DAHW, JSIF, N.A.
Costa Rica	I	77.8	YES	-	JSIF, F.D.
Cuba	I	98.9	YES	450	JSIF
Dominica	-	...	NO	4	JSIF, F.D.
Ecuador	I	90.8	YES	115	-
El Salvador	-	100.0	NO	-	F.D.
Falkland Islands	-	-	NO	-	-
French Guiana	I	96.7	YES	-	-
Grenada	I	100.0	NO	-	JSIF, F.D.
Guadalupe	I	88.6	YES	-	-
Guatemala	V	38.8	NO	40	O.M., F.D.
Guyana	V	100.0	YES	130	A.L.M.
Haiti	-	34.8	NO	-	F.D.
Honduras	I	15.8	YES	-	F.D.
Jamaica	I	95.1	YES	25	-
Martinique	I	55.2	YES	-	-
Mexico	I	71.9	YES	110	-
Montserrat	-	0.0	NO	-	F.D., JSIF
Netherlands Antilles	-	...	NO	-	-
Nicaragua	-	48.1	NO	55	F.D., JSIF
Panama	V	100.0	NO	65	F.D., JSIF
Panama (Canal Zone)	-	...	NO	-	-
Paraguay	V, COT	61.2	YES	150	DAHW, JSIF
Peru	I	60.5	NO	170	-
Puerto Rico	I	...	NO	-	-
Dominican Rep.	V, CTB	89.6	YES	75	F.D., DAHW
St. Kitts-Nevis-Anguilla	-	...	NO	-	-
St. Lucia	I	100.0	NO	-	F.D., JSIF
St. Pierre	-	...	NO	-	-
St. Vincent	I	100.0	NO	4	F.D., JSIF
Suriname	I	100.0	YES	-	-
Trinidad and Tobago	V	96.0	YES	95	A.L.M.
Turks and Caicos	-	...	NO	-	F.D., JSIF
United States of America	I	...	YES	350	-
Uruguay	V	100.0	NO	35	O.M.
Venezuela	V, COT	71.3	YES	250	DAHW, JSIF, A.L.M.
Virgin Islands (U.K.)	-	...	NO	-	F.D. JSIF
Virgin Islands (U.S.)	-	...	NO	-	-

(1) V: Vertical
I: Integrated
CTB: Combined with tuberculosis
COT: Combined with other endemic diseases

(2) O.M: Knights of Malta
JSIF: Japanese Shipping Industry Funds
DAHW: German Association for Assistance to Leprosy Patients
E.S: Emmaus-Swiss
F.D: Damién Foundation
LEPRA: Leprosy Relief Association (England)
A.L.M: Dutch Aid

TABLE IV

EXTRABUDGETARY CONTRIBUTIONS TO PAHO/WHO
LEPROSY CONTROL
1974-1979
(in US$)

Donor Institution	Purpose		Total	Beneficiary Country
	Program Formulation	Training		
American Leprosy Mission	-	20,000	20,000	CEPIALET (Venezuela)
Japanese Shipbuilding Industry	270,152	55,336	325,488	Caribbean area, Bolivia, Brazil, Colombia, Costa Rica, Chile, Guatemala, Paraguay, Dominican Republic, Venezuela
Emmaus-Swiss	49,525	-	49,525	Caribbean area (LSD)
Damién Foundation	15,000	-	15,000	Central America

TABLE V

PAHO/WHO ASSISTANCE TO LEPROSY CONTROL PROGRAMS
IN THE AMERICAS, 1973-1978

FIELD OF ACTIVITY	COUNTRY OR TERRITORY
Assistance in formulating leprosy control programs	Argentina, Antigua, Bolivia, Brazil, Chile (Easter Island), Colombia, Cuba, Dominican Republic, Grenada, Guatemala, Mexico, Peru, St. Lucia, Uruguay and Venezuela
Training	Antigua, Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Grenada, Guatemala, Panama, Peru, St. Lucia, St. Vincent, Uruguay and Venezuela
Promotion of applied research	Argentina, Brazil, Colombia, Mexico, Paraguay, Peru and Venezuela

TABLE VI

PAN AMERICAN CENTER FOR RESEARCH AND TRAINING IN LEPROSY AND TROPICAL DISEASES (CEPIALET)

TRAINING PROGRAM, 1973-1979

Countries or Territories	Fields of Training					
	Diagnosis and Control Methods		Prevention and Treatment of Disabilities		Laboratory Techniques	
	Physicians	Auxiliary Personnel	Physicians	Auxiliary Personnel	Physicians	Auxiliary Personnel
Antigua	1	2	1	2	-	-
Bolivia	3	4	3	4	-	2
Brazil	-	-	4	-	-	-
Colombia	2	-	1	-	4	-
Costa Rica	1	-	1	-	-	-
Cuba	4	-	3	-	1	-
Dominican Republic	3	4	2	4	-	2
El Salvador	1	-	-	-	-	-
Grenada	1	2	1	2	1	-
Guatemala	3	-	3	-	-	-
Guyana	-	-	-	2	-	-
Mexico	1	-	1	-	-	-
Montserrat	1	-	1	-	-	-
Peru	2	3	2	3	-	3
St. Lucia	-	2	-	2	-	2
St. Vincent	-	2	-	2	-	2
Venezuela	8	42	6	39	4	36
Total	31	61	29	60	7	47

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14 September 1979
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LEPROSY CONTROL IN THE AMERICAN REGION

Corrigendum

- Page 1, paragraph 2, first line: Please change "VI century" to read "XVI century."

- Page 6, paragraph 2, fourth and fifth lines should read: "regional project is coordinated with projects in the 5100 series and with the 0100 and 4300 series (Area epidemiologists)."

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CD26/17, Corrig. 2 (Eng.)
27 September 1979
ENGLISH/SPANISH

LEPROSY CONTROL IN THE AMERICAN REGION

Corrigendum

Please substitute Table I, annexed, for that appearing in Document CD26/17.

Annex

TABLE I

LEPROSY CASES ON THE ACTIVE REGISTER BY COUNTRY, ESTIMATED NUMBER OF PATIENTS, PREVALENCE RATES AND CASES UNDER SURVEILLANCE, 1976 OR MOST RECENT YEAR
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	Suriname	411	1973	2,311	4,044(b)	9.8	2,311	57.2
	Guyana	774	1976	665	1,164(b)	1.5	642	55.2
	Trinidad/Tobago	1,070	1976	906	1,359(a)	1.3	869	63.9
	Barbados	244	1975	33	66(c)	0.3	33	50.0
	Grenada	96	1975	94	282(d)	2.9	94	33.3
	Jamaica	2,008	1975	366	549(a)	0.3	348	63.4
	Bahamas	197	1974	1	3(d)	0.0	1	33.3
BRITISH TERRITORIES	St. Vincent	96	1968	13	39(d)	0.4	13	33.3
	St. Lucia	107	1973	204	408(c)	3.8	204	50.0
	Montserrat	12	1975	2	6(d)	0.5	2	33.3
	Antigua	70	1976	48	144(d)	2.1	10	6.9
	St. Kitts-Nieves-Anguilla	65	1975	4	12(d)	0.2	4	33.3
	British Virgin Islands	10	...	...	10(e)	1.0	...	...
	Dominica	74	1975	11	33(d)	0.5	11	33.3
	Cayman Islands	11	...	...	10(e)	0.9	...	...
	Turks and Caicos Islands	-	1974	...	10(e)	-	...	...
	Bermuda	55	1975	2	6(d)	0.1	2	33.3
FRENCH TERRITORIES	French Guiana	58	1971	957	1,436(a)	24.8	749	52.2
	Guadaloupe	349	1975	2,033	3,050(a)	8.7	1,802	59.1
	Martinique	358	1973	2,180	3,270(a)	9.1	1,204	36.8
	Netherlands Antilles	238	...	...	20(e)	0.1	...	...
	Subtotal	17,935		22,564	35,012	1.9	17,222	49.1

TABLE I (Cont.)

LEPROSY CASES ON THE ACTIVE REGISTER BY COUNTRY, ESTIMATED NUMBER OF PATIENTS, PREVALENCE RATES AND CASES UNDER SURVEILLANCE, 1976 OR MOST RECENT YEAR
AMERICAN REGION

	Country or Territory	Estimated Population (in 1000's) 30 June 1976	Registered Cases		Total Estimated		Cases Under Surveillance	
			Year	Number	Number	Rate per 1000	Number	%
PAHO/WHO AREA II	México	58,118	1975	14,775	25,857(b)	0.4	10,742	41.5
	Cuba	9,090	1975	4,554	6,831(a)	0.8	4,417	64.7
	Dominican Republic	4,562	1976	3,739	6,544(b)	1.4	3,349	51.2
	Haiti	5,414	1974	270	810(d)	0.2	94	11.6
	Subtotal	77,184	-	23,338	40,042	0.5	18,602	46.5
PAHO/WHO AREA III	Guatemala	5,328	1977	186	558(d)	0.1	72	12.9
	El Salvador	3,980	1975	1	300(e)	0.1	1	0.3
	Nicaragua	2,084	1973	291	873(d)	0.4	140	16.0
	Costa Rica	1,921	1976	444	777(b)	0.4	375	48.3
	Panamá	1,618	1975	167	251(a)	0.2	167	66.5
	Honduras	2,933	1974	263	526(c)	0.2	98	18.6
	Belice	136	1971	1	10(e)	0.1	1	10.0
	Subtotal	18,000	-	1,353	3,295	0.2	854	25.9
AREA IV	Bolivia	4,688	1976	1,705	5,629	1.2	1,107	19.7
	Colombia	22,807	1975	18,625	37,250(c)	1.6	16,693	44.8
	Ecuador	6,951	1974	2,801	5,602(c)	0.8	2,542	45.4
	Perú	15,383	1973	2,708	5,416(c)	0.4	1,638	30.2
	Subtotal	49,829	-	25,839	53,897	1.1	21,980	40.8

TABLE I (Cont.)

LEPROSY CASES ON THE ACTIVE REGISTER BY COUNTRY, ESTIMATED NUMBER OF PATIENTS, PREVALENCE RATES AND CASES UNDER SURVEILLANCE, 1976 OR MOST RECENT YEAR
AMERICAN REGION

Country or Territory	Estimated Population (in 1000's) 30 June 1976	Registered Cases		Total Estimated		Cases Under Surveillance	
		Year	Number	Number	Rate per 1000	Number	%
PAHO/WHO AREA V							
Brasil	110,124	1976	150,840	242,273	2.2	91,984	38.0
Subtotal	110,124	-	150,840	242,273	2.2	91,984	38.0
PAHO/WHO AREA VI							
Argentina	26,056	1967	9,627	14,852	0.57	6,122	41.2
Chile	10,655	1975	36	-	-	13	36.1
Paraguay	2,647	1976	5,160	-	1.9	3,157	36.1
Uruguay	2,782	1976	492	556	0.2	492	88.4
Subtotal	42,140	-	15,315	15,408	0.4	9,784	63.5
AREA I-TOTAL	17,935	-	22,564	35,012	1.9	17,222	49.1
AREA II-TOTAL	77,184	-	23,338	40,042	0.5	18,602	46.5
AREA III-TOTAL	18,000	-	1,353	3,295	0.2	854	25.9
AREA IV-TOTAL	49,829	-	25,839	53,897	1.1	21,980	40.8
AREA V-TOTAL	110,124	-	150,840	242,273	2.2	91,984	38.0
AREA VI-TOTAL	42,140	-	15,315	15,408	0.4	9,784	63.5
ALL THE AMERICAS GRAND TOTAL	315,212	-	239,927	389,927	1.2	160,426	41.1

(a) +50%
(b) +75%
(c) +100%
(d) +200%
(e) Estimated - 10 cases.