

EPI Newsletter

Expanded Program on Immunization in the Americas

Volume IV, Number 1

IMMUNIZE AND PROTECT YOUR CHILD

February 1982

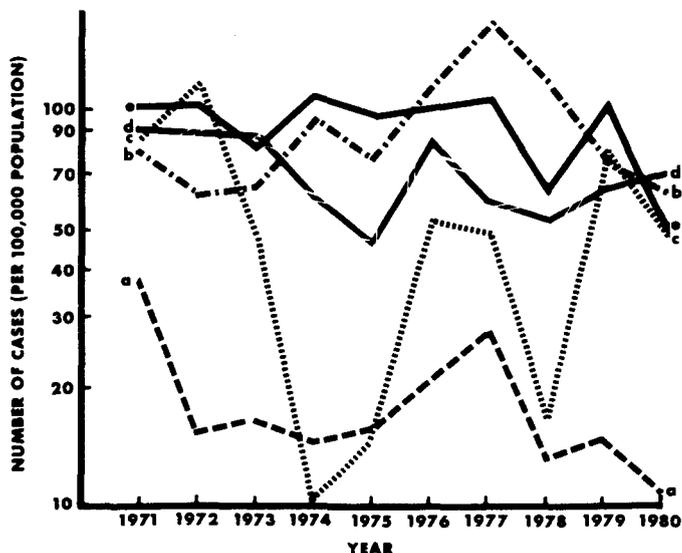
Measles in the Americas, 1971-80: A 10-Year Review

Only a few of the hemisphere's countries were able to reduce their annual measles mortality to less than one death per 100,000 population during the 1970s. That reduction was the goal for measles control in the Ten-Year Health Plan for the Americas which came to an end last year.

Information on the annual occurrence of measles cases during the 1970s was received from 30 to 32 of the countries in the Americas, depending on the year. The total number of cases reported annually ranged from 177,178 in 1975 to 313,512 in 1971, with a mean of 254,161 cases.

Measles incidence in the Americas ranged from a high of

FIGURE 1. Annual incidence of measles (per 100,000 population) by geographic region in the Americas, 1971-80.



- a. Northern America: Canada and the United States.
- b. Caribbean Middle America: the Bahamas, Barbados, Cuba, Dominica, the Dominican Republic, Grenada, Haiti, Jamaica, Saint Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago.
- c. Continental Middle America: Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama.
- d. Tropical South America: Bolivia, Brazil, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, and Venezuela.
- e. Temperate South America: Argentina, Chile, and Uruguay.

169.4 cases per 100,000 population in 1977 in the Middle American Caribbean to a low of 10.4 cases in 1974 in continental Middle America (Figure 1).

Though the magnitudes of the incidences and the years varied, the Middle American Caribbean and tropical and temperate South America showed increased incidence patterns every two to three years. Continental Middle America exhibited larger variations in incidence between peak years, with low-incidence periods of three to four years, and Northern America had a five-year interval between major rises in incidence.

A total of 101,807 measles deaths were reported in the Americas during the decade (Figure 2). Annual mortality reporting was incomplete for this period; depending on the year, mortality figures were received from 19 to 24 of the 32 countries in the Americas from 1971 through 1978. Reports for 1979 covered four countries.

Northern America was the only region to have reported measles mortalities below the Ten-Year Health Plan goal during the entire period. The Middle American Caribbean region had a low of 0.7 in 1978 and a high of 1.8 in 1976. Temperate South America experienced mortality increases every two to three years; its low mortality years (1972, 1975 and 1977) were below the Ten-Year Health Plan objective. The highest mortalities were reported from continental Middle America and tropical South America.

Countries reporting mortalities of less than 1.0 per 100,000 population during the entire period were the Bahamas, Barbados, Canada, Cuba, and the United States.

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FIGURE 2. Measles mortality (per 100,000 population) by geographic region in the Americas, 1971-80.

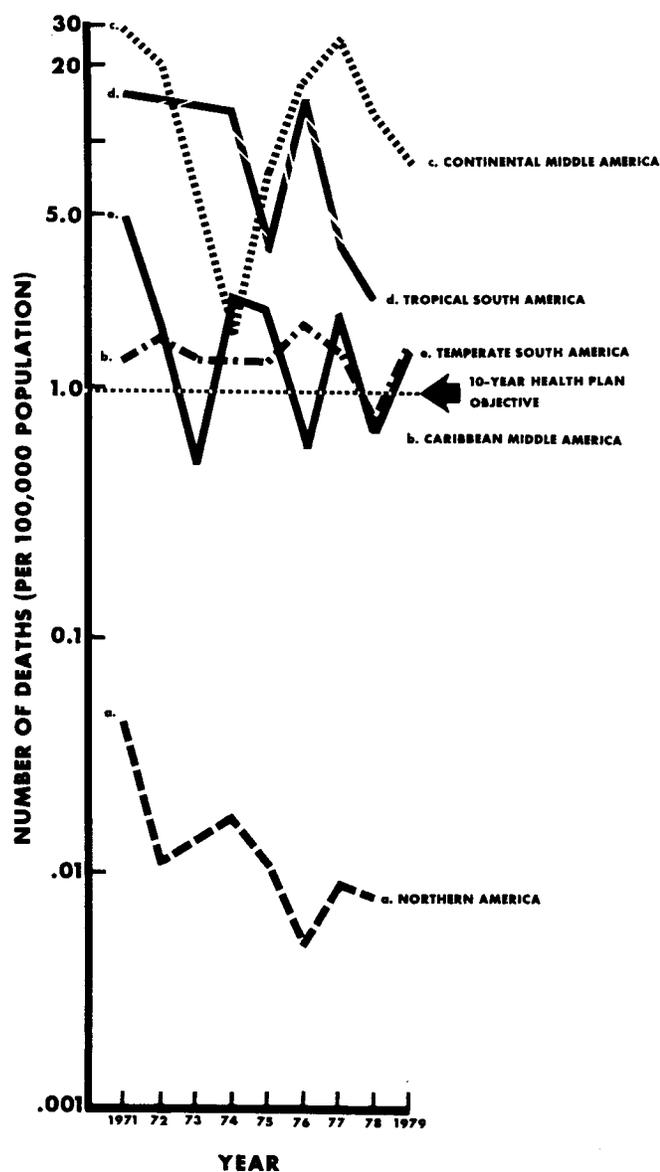


Table 1 shows the age distribution of reported measles cases and deaths and age-specific mortalities per 100,000 population by region. Information on age distribution came from 31 countries and represented 157 country-years of measles experience. In all regions except Northern America the highest proportion of cases occurred in the 1- to 4-year age group; in Northern America the highest proportion of cases occurred in the 5- to 9-year group.

In all regions except temperate South America the highest proportion of deaths occurred in the 1- to 4-year group. In temperate South America infants under 1 year represented the highest proportion of measles deaths.

In all regions there was an inverse relationship between age and age-specific mortality, with the highest age-specific mortalities seen in infants less than 1 year old. These data support the need to immunize such infants.

Information on patient vaccination histories was seldom available. Table 2 is a review of patients' vaccination histories during outbreaks in three countries. The percentage of patients who had been vaccinated ranged from a low of 10.5 percent in Panama to a high of 63.8 percent in Talca, Chile.

TABLE 2. Vaccination histories of measles cases during outbreaks in three countries, 1978-80

Country (years)	Vaccinated		Unvaccinated		Unknown	
	No.	%	No.	%	No.	%
Chile (1978-79)						
Curicó	53	54.6	32	33.0	12	12.4
Talca	197	63.8	32	10.4	80	25.9
Canquenes	135	33.5	110	27.3	158	39.2
Brazil (Nov. 1979- Jan. 1980)						
	24	17.1	96	68.6	20	14.3
Panama (1978)	11	10.5	56	53.3	38	36.2

The high proportion of measles in vaccinated patients in Chile did not in itself reflect failure of the vaccine, but illustrated the need to ascertain data required to calculate actual vaccine efficacy during outbreaks.

TABLE 1. Age distribution of reported measles cases and deaths and age-specific mortality by geographic region in the Americas, 1971-80*

Age group (in years)	Northern America			Middle America						South America					
				Caribbean			Continental			Tropical			Temperate		
	% of total cases	% of deaths	No. of deaths per 100,000 pop.	% of total cases	% of deaths	No. of deaths per 100,000 pop.	% of total cases	% of deaths	No. of deaths per 100,000 pop.	% of total cases	% of deaths	No. of deaths per 100,000 pop.	% of total cases	% of deaths	No. of deaths per 100,000 pop.
less than 1	5.0	19.8	0.195	10.8	25.8	13.895	13.2	21.6	70.653	16.0	23.9	75.044	13.1	45.4	32.113
1-4	16.1	36.6	0.088	48.6	61.5	7.540	54.3	58.0	52.809	54.3	62.7	54.080	38.5	42.9	7.868
5-9	32.1	15.4	0.027	25.1	9.1	0.879	23.4	13.6	11.286	20.8	10.4	7.913	30.1	6.7	1.049
10-14	29.8	13.9	0.021	10.1	2.2	0.238	5.8	3.7	3.605	5.3	1.9	1.639	11.8	2.4	0.382
15-19	14.0	4.4	0.007	2.9	0.3	0.041	1.5	1.2	1.483	1.9	0.5	0.491	3.6	1.0	0.172
20 or older	2.9	9.9	0.002	2.5	1.1	0.028	1.8	1.8	0.547	1.6	0.6	0.146	2.9	1.6	0.045
Total	99.9	100.0	0.015	100.0	100.0	1.372	100.0	99.9	12.766	99.9	100.0	11.357	100.0	100.0	1.656

*Where the ages were reported as unknown, the age distribution of the knowns was calculated, and the cases were distributed accordingly.

Argentina's EPI Evaluation

A multidisciplinary evaluation team has concluded that Argentina's EPI, though suffering from a few problems, is so far generally succeeding in implementing its program.

The 10-day evaluation performed in 1981 consisted of four distinct activities: a study of EPI's current operation at all levels of the national health system, identification of its successes and limitations, plans and recommendations to resolve identified problems, and establishment of a program and timetable for applying the recommendations.

The group comprised five physicians in the health ministry's epidemiologic surveillance and immunization program, including its chief: three physicians from the maternal and child health, primary care, and planning directorates, three physicians responsible for the immunization programs in Catamarca, Córdoba, and Neuquén provinces, and three physicians and a nurse from PAHO. In addition, a senior planning officer from Brazil's national immunization program acted as an observer.

The evaluation team was divided into five groups which visited four provinces (Buenos Aires, Chubut, Mendoza, and Tucumán). These provinces were chosen as being representative of the country's various regions and for their ease of access so that group members might have three working days to make their on-the-spot evaluations.

The groups first visited the health secretariat in the provincial capitals or metropolitan Buenos Aires wards to which they went and then inspected urban and rural health facilities. In all, the team members visited 24 local facilities.

Immunization program administration varied from province to province. Provinces with larger populations are divided into areas to decentralize administrative responsibilities to provincial and local governments, and in Buenos Aires Province area administration is especially well developed.

In each of the health facilities visited, the evaluation team examined available documents and reports, interviewed supervisors, and observed immunization practices. They used a standard questionnaire in conducting the interviews and a checklist while watching immunizations.

Argentina's immunization policy

Immunization against polio, diphtheria, tetanus, whooping cough, measles and tuberculosis is required by law in Argentina. An epidemic of paralytic poliomyelitis at the beginning of 1971 caused national authorities to establish a special program of immunization against that disease through twice-yearly campaigns carried out by primary school teachers. An annual national campaign conducted by health workers against measles was also initiated in the early 1970s. As a result of these campaigns, morbidity and mortality from polio and measles in Argentina dropped substantially.

For the semiannual polio immunization campaigns,

most provinces have established immunization posts in schools to which parents bring their children, though in some provinces teachers make house-to-house visits. In 1979 a third annual campaign was added, so that immunization was conducted in March, June, and August. Polio vaccine is administered to children aged 2 months to 3 years, regardless of the vaccine dose they may have received previously. Vaccinations given during national campaigns are not recorded in EPI immunization certificates.

Measles vaccination has been carried out among children 9 months to 10 years old during one week each year. Since this kind of immunization requires injection, it is given at health posts, which suspend most of their other activities during each annual campaign. In contrast to polio vaccination, measles vaccinations are noted in individual immunization certificates.

DPT vaccine is administered routinely by the general health facilities.

State health services customarily administer tetanus toxoid to pregnant women between the fifth and seventh month of gestation, and a second measles vaccination to children vaccinated against the disease before their first birthday.

Cold chain and vaccine supply

In its final report the group found vaccine storage and distribution conditions to be generally acceptable.

The provinces all have vaccine storage facilities, some in the form of cold rooms and others as refrigerators and freezers. In general the teams thought the provincial installations they visited were well managed and had good temperature monitoring.

Locally, vaccine handling and storage were generally acceptable. Most of the health facilities requisitioned vaccine on the basis of available stocks and not according to programming, so that in some cases they had too much or too little for program needs. It was also found that nurses occasionally did not keep vaccine on ice during immunization sessions.

In 1980, Argentina bought 25 million doses of EPI vaccine. National authorities ship it to the provinces free of charge including transportation. Although the Malbrán Institute has produced bacterial vaccines, foreign manufacturers continue to meet all requirements. About half of the EPI vaccines used in Argentina in 1980 were bought through PAHO's Revolving fund, resulting in savings of 30 to 40 percent. The Institute systematically tests all vaccines used in Argentina to determine their potency and safety, and none is shipped to the provinces until it meets national standards.

Epidemiologic surveillance

A national epidemiologic surveillance system was organized in Argentina in 1969 and 1970. One of its bases was National Law 15,465, which made notification of cer-

tain diseases obligatory. Morbidity data about the six EPI diseases come from weekly reports prepared by all health facilities in the country. Reports from local health centers and posts are sent to the provincial epidemiologic section except in the Buenos Aires metropolitan area, where they go through ward and area offices before reaching the provincial office.

After provincial consolidation and analysis, the information is sent to the epidemiologic surveillance and immunization unit in the Ministry of Social Welfare's public health secretariat in Buenos Aires for final consolidation and analysis. The unit publishes weekly and monthly bulletins covering reported communicable disease cases as well as patients hospitalized with such diseases.

A significant shortcoming the evaluation group found was that health centers and often the provinces did not keep cumulative registries of communicable disease cases. Weekly reports of such cases are regularly submitted, but especially at the operating level the number of cases recorded during 1980 and the early months of 1981 was not known by the local level personnel.

The evaluation group thought this problem could be solved by including in the country's standard communicable disease notification form a column showing the cumulative number of cases of each disease recorded during the year.

Immunization information

One of the areas in Argentina's immunization program in which the evaluation group found most progress had been made was vaccination reporting. In 1977 relatively little information on immunizations performed was available and that was almost entirely limited to the total number of doses by age groups. Another problem was the differing report forms in use.

The following year national and provincial health authorities met several times to devise a national vaccination reporting form. The form was put into use in 1979, during which only 14 provinces (with 20 percent of the country's population) adopted it. Twenty-two provinces and national territories representing almost 90 percent of the population used it in 1980.

Despite the considerable improvement in information to which the form's adoption has led, the group reported that cumulative immunization data—like cumulative case data—were not maintained locally. At the time the evaluation group made its visits, for instance, most of the health facilities studied did not know the total number of persons they had vaccinated or their ages, nor did they have figures on the number of doses administered in 1980 and early 1981.

The group pointed out that without such cumulative totals it is hard for health services to evaluate the results they are achieving. The group recommended that all services keep cumulative registries of immunizations performed during the year.

Immunization promotion and its community acceptance

Many of the country's public health officials believe that Argentine public accepts immunization much more now than it did 10 years ago, the report said. Generally speaking, this change in the public's attitude is attributed to the fact that vaccination is done systematically in both the national campaigns and regular programs. The participation of elementary school teachers in the campaigns has also been important in getting the community to accept immunization.

Popular acceptance of the need for immunization could be still further improved, the evaluation group concluded. That need applies especially to infants since about half of those given their first DPT vaccination do not receive their third. The group recommended that a study be made of the reasons why the complete immunization schedule is not adhered to so that corrective measures can be taken. It also suggested that immunization promotion strategies suitable to local conditions be established.

Planning and programming

Planning and programming immunization activities are now basically a national and provincial responsibility. The group recommended that local services participate actively in programming, which they could do more effectively if they had better estimates of the populations they have to serve and maintained cumulative case and immunization registries.

Staff training

In their visit to health services, the evaluators observed that local staff were well abreast of existing standards governing immunization and vaccine storage. This already acceptable level of knowledge is to be improved still more through an ambitious training program which is underway.

Supervision and evaluation

During 1980 the immunization unit's staff visited all of Argentina's provinces and national territories. However, immunization supervision and evaluation were still not well developed, the group concluded, recommending that they be made a regular part of immunization activities.

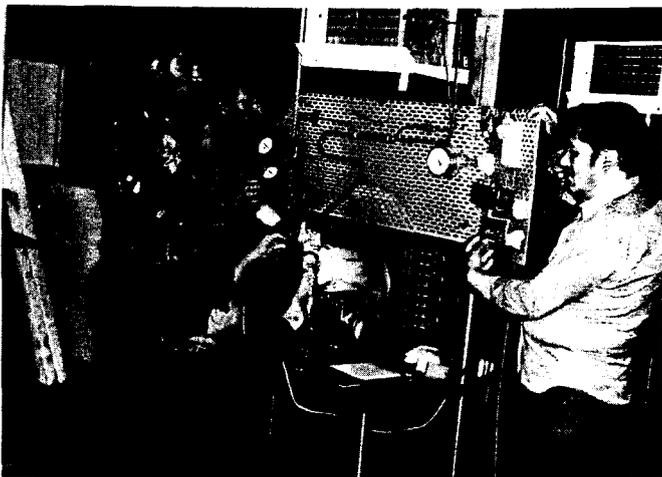
The national members of the evaluation team were: Drs. Norma Pía del Punta, María Elena Vega de Pérez, José Luis Urrusuno, Matilde V. Bensignor, Felicitas Lewis de Arengo, Héctor Gambarini, Gloria Gómez, Pablo Luquet, Osvaldo Grenón, Marta Susana Siracusa, and Jorge Velázquez. The PAHO team members were Drs. Ciro de Quadros, Arturo Romero, T. Stephen Jones, and Lydi Díaz. Dr. Amaro Luis Alvez, of the Brazilian Ministry of Health, was the observer.

Cold-Chain Refrigerator Repair and Maintenance Course Held in Peru

The first regional EPI refrigerator repair and maintenance course was held at Chiclayo, Peru, from 3 August to 11 September 1981.

It was developed by Peru's National Industrial Training Service (SENATI) to teach health personnel how different types of refrigerators work and their basic repair and maintenance. Thirteen participants from Bolivia, Colombia, Costa Rica, Ecuador, and Peru, as well as three PAHO/WHO staff members, attended the six-week course.

The training was more practical than theoretical and included both laboratory and classroom work. The following topics were covered: basic thermodynamic concepts of refrigeration, basic mechanics of absorption and compression refrigeration systems, refrigerator servicing and maintenance, procedures for detecting refrigerator failure, and repair and replacement of electrical and mechanical parts.



Laboratory exercises formed the core of SENATI's refrigerator maintenance and repair course.

Each student's progress was evaluated throughout the course to ensure that he understood each topic's concepts and tasks. In general, all students were able to develop a basic understanding of refrigeration mechanics and perform repairs necessary to keep refrigerators in operation.

An analysis of course results concluded that further training in refrigerator repair and maintenance could be carried out more efficiently at country rather than regional level. Since most American countries already have technical schools suited to this kind of training, there appears to be no real need for additional regional or subregional courses, which involve high travel costs for participants.

To assist countries which may wish to hold courses similar to SENATI's, PAHO/WHO is developing materials to train health personnel in refrigerator repair and maintenance. These manuals, to be published in English

and Spanish, will be made available to each country in the region for use in meeting its cold-chain training needs.

New Cold-Chain Management Tool is Field-Tested

PAHO and ten American countries have begun field-testing a vaccine temperature monitor to determine its suitability for use as a management tool in evaluating the EPI cold chain.

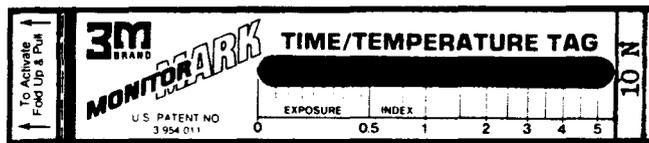
The testing is being carried out in Barbados, Brazil, Costa Rica, Guyana, Honduras, Jamaica, Nicaragua, Panama, Peru, and Suriname. The study is to end in June 1982.

The cold-chain monitor is attached to a vaccine box at the central warehouse. It stays with the box throughout the cold chain, recording cumulative exposures of the vaccine to temperatures above +10°C.

The monitor contains a blue chemical which spreads across a calibrated window as the vaccine is exposed to temperatures above the +10°C threshold. The chemical stops migrating if the temperature falls below the threshold and advances more quickly at higher ambient temperatures. Its spread cannot be reversed, thus preserving information needed for a cold-chain manager's analysis. Vaccine handling has been good if the chemical does not migrate, while any migration across the calibrated window indicates the vaccine has not been handled properly.

At each point in the cold chain the amount of exposure, if any, should be recorded on the chart to which the monitor is attached. The monitor's calibrated window can provide information to locate failures in the cold chain and alert the manager to take corrective steps to ensure that vaccines are kept at correct temperatures.

Readers who desire additional information on this product should request document CCIS/81.8 from the editor of the *EPI Newsletter*.



Time/Temperature Tag monitors cumulative exposures of vaccine to temperatures above +10°C.

Cold-Chain Testing Center Readied for Operations

The Center for Multidisciplinary Research (CIMDER) and the Thermal Sciences Laboratory at the University of Valle in Cali, Colombia, have completed construction of an environmental chamber to test cold-chain equipment used for vaccine storage and transportation. The chamber meets all PAHO/WHO design and performance specifications.

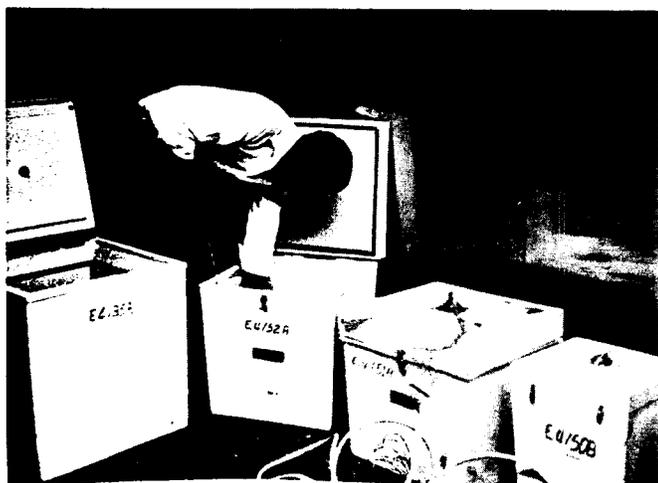
The test chamber is fully equipped, with an instrument panel that can monitor temperatures through up to 100 channels during any testing cycle. This allows simultaneous testing of up to 12 cold boxes or six refrigerators, depending on their size. Relative humidities of between 45 and 85 percent can also be controlled with an accuracy of ± 2 percent. The chamber is equipped with voltage stabilizers and regulators which allow electric refrigerators and freezers to be tested above and below their rated voltages.



Environmental testing chamber is used to monitor internal temperatures of vaccine cold boxes and refrigerators.

PAHO/WHO recommend that equipment now being used or being considered for use in the cold chain be evaluated to assure its effectiveness in keeping vaccines at proper temperatures. Equipment that meets PAHO/WHO performance criteria can be listed in the WHO/UNICEF Product Information Sheets periodically sent to all EPI program managers.

Further information about the testing program may be obtained from each country's EPI program manager.



Technician prepares cold boxes for testing chamber.

PAHO Directing Council Approves HFA-2000 Plan of Action

PAHO's 28th Directing Council, meeting in Washington from 21 September to 2 October, approved a plan of action for carrying out hemispheric strategies to achieve health for all in the Americas by 2000.

The plan's objectives include restructuring and expanding health care systems to improve their equity, effectiveness, and efficiency; fostering and bettering intersectoral linkages and cooperation; and promoting and improving regional and interregional cooperation. These three objectives aim at ensuring the health sector's contribution to reducing social and economic inequalities.

The plan's minimal health goals are to ensure that in no country will life expectancy at birth be less than 70 years, infant mortality be higher than 30 deaths per 1,000 live births, or deaths among children under 4 be more than 2.4 per 1,000.

The plan also states that by 1990 immunization services against diphtheria, whooping cough, tetanus, tuberculosis, measles, and poliomyelitis will be available to all children. In addition, tetanus toxoid will be made available to all pregnant women in areas where neonatal tetanus is endemic.

EPI's inclusion in the plan's health goals reflects the prevailing tradition in the Americas of giving high priority to controlling immunizable diseases.

Donations to EPI Revolving Fund

Panama and the Cayman Islands have made the latest donations to PAHO's EPI Revolving Fund for vaccine procurement. The governments of the two countries donated \$5,000 and \$1,500, respectively, in response to resolutions by PAHO's 28th Directing Council calling on member governments to help capitalize the Fund fully.

In Port-of-Spain, Trinidad and Tobago, the East Leo Club also contributed to the Fund. The club, formed of sons and daughters of Lions' Club members, collected \$1,500 in their community for the donation.

Previous contributions included donations from Barbados, Cuba, Mexico, and the Netherlands. The Fund is now capitalized at \$2.314 million, and an additional \$1.7 million is still being sought to assure its smooth operation in the years to come.

New EPI Revolving Fund Member

Trinidad and Tobago is the newest member of the EPI Revolving Fund. As of the beginning of 1982, 31 countries and territories were using the Fund to fill their vaccine requirements.

NUMBER OF REPORTED CASES OF MEASLES, POLIOMYELITIS, TETANUS, DIPHTHERIA AND WHOOPING COUGH. 1981 AND 1980, BY COUNTRY AND DATE OF LAST REPORT.

COUNTRY	DATE OF LAST REPORT	MEASLES		POLIOMYELITIS		TETANUS		DIPHTHERIA		WHOOPING COUGH	
		1981	1980	1981	1980	1981	1980	1981	1980	1981	1980
ARGENTINA	12 DEC. 81	15,899	13,127	6	41	184	196	57	67	19,823	23,985
BAHAMAS	31 DEC. 81	45	483	—	—	2	3	—	—	8	15
BARBADOS	12 DEC. 81	1	27	—	—	7	11	9	10	8	—
BOLIVIA	12 SEP. 81	4,267	1,660	7	39	127	122	13	25	2,764	1,264
BRAZIL	29 AUG. 81	33,232	45,434	121	1,222	1,576	1,804	2,485	2,980	23,079	25,448
CANADA	28 NOV. 81	2,156	13,064	—	—	2	1	8	60	2,242	2,455
CHILE	19 DEC. 81	6,162	3,709	...	—	20	23	197	238	2,043	2,690
COLOMBIA	18 MAY 81	6,507	3,106	82	45	192	231	54	148	1,832	2,893
COSTA RICA	28 NOV. 81	161	981	—	—	7	9	—	—	163	897
CUBA	07 NOV. 81	10,864	3,444	—	—	16	23	—	—	263	112
DOMINICA	02 JAN. 82	27	—	—	—	—	2	—	—	6	1
DOMINICAN REP.	No 1981 data										
ECUADOR	25 JUL. 81	3,210	1,222	9	5	42	34	11	4	394	599
EL SALVADOR	12 DEC. 81	11,419	2,094	46	44	110	88	1 ^a	1	3,756	976
GRENADA	02 JAN. 82	9	53	—	—	3	3	—	1	—	6
GUATEMALA	24 OCT. 81	3,035	2,317	40	62	66	55	16	6	1,005	1,406
GUYANA	31 OCT. 81	31	457	...	...	...	...	...	1	28 ^b	...
HAITI	12 DEC. 81	527 ^c	348	1	6	35	276	6	35	89 ^d	516
HONDURAS	26 DEC. 81	5,681	4,188	18	3	23	31	—	2	1,726	2,503
JAMAICA	10 OCT. 81	5,152	25	—	—	9	10	7	9	12	10
MEXICO	28 FEB. 81	2,687	3,686	28	149	71	83	—	—	836	609
NICARAGUA	No 1981 data										
PANAMA	01 AUG. 81	1,492	1,288	—	—	21	19	—	—	78	397
PARAGUAY	19 DEC. 81	586	1,169	50	7	181	189	6	12	577	888
PERU	02 JAN. 82	4,619	8,721	143	175	202	276	56	194	4,937	4,747
SAINT LUCIA	28 NOV. 81	132	35	—	—	3	1	—	—	470	10
ST. VICENT AND THE GRENADINES	19 SEP. 81	2	257	—	—	—	—	—	—	1	—
SURINAME	05 DEC. 81	715	66	—	—	...	...	2	—	...	...
TRINIDAD & TOBAGO	02 JAN. 82	3,600	384	—	—	14	30	3	—	9	10
U.S.A.	02 JAN. 82	3,032	13,506	6 ^e	9 ^f	60	95	4	3	1,189	1,730
URUGUAY	28 NOV. 81	13,494	129	—	—	11	20	—	—	420	162
VENEZUELA	19 DEC. 81	27,677	8,761	18	—	...	...	6	12	3,641	2,844

^a31 October 1981
^b28 March 1981
^c24 October 1981

^d31 October 1981
^e6 paralytic cases
^f8 paralytic cases

— No cases
... Data not available

New Brunswick is First Canadian Province to Pass Compulsory Immunization Law

New Brunswick is the first Canadian province to pass legislation requiring proof of immunization as a condition for school entry. Starting with the 1982 school year, children entering the province's school system for the first time will have to show proof of immunization or a documented history of natural infection by certain diseases as a condition for admission.

Proof of immunization will be required against diphtheria, tetanus, poliomyelitis, measles, mumps, and rubella. Exemptions will be granted in cases where vaccination is contraindicated and for children whose parents have personal or philosophical objection to vaccination.

This legislation was passed under the Schools Act and supported by legislation under the Health Act. All 50 states in the United States have similar legislation.

Source: Dr. C. Devadason, Director, Communicable Disease Control, Department of Health, New Brunswick, Canada.

Bolivia Launches EPI Newsletter

The epidemiology division of Bolivia's Ministry of Public Health and Welfare began publication of a quarterly EPI newsletter in September. The first issue contained general information on the status of Bolivia's EPI program and a table comparing vaccination coverage by health units during the first quarters of 1980 and 1981.

The *EPI Newsletter* is a periodic publication prepared by the Expanded Program on Immunization (EPI) of the Pan American Health Organization, Regional Office for the Americas of WHO. Its purpose is to facilitate the exchange of ideas and information concerning immunization programs in the Region in order to promote greater knowledge of the problems faced and their possible solutions.

References to commercial products and the publication of signed articles in this newsletter do not constitute endorsement by PAHO/WHO, nor do they necessarily represent the policy of the Organization.

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Source: Ministry of Public Health and Welfare, Bolivia.

International Measles Immunization Symposium

An international symposium on measles immunization will take place from 16 to 19 March at PAHO Headquarters in Washington. The symposium is sponsored by the Fogarty International Center of the U.S. National Institutes of Health and several bilateral and multilateral agencies, including PAHO and WHO.

Symposium participants will gauge the impact of measles in the world today, paying particular attention to the status of immunization programs in countries with and without special vaccination programs. They will also discuss the characteristics of currently available measles vaccines, assess the impact and success of measles control efforts, and evaluate prospects for future control. Special attention will be given to strategies for attaining high immunization coverage in various parts of the world, and subjects in measles epidemiology and control requiring further research will be identified.

More than 200 experts from all over the world are expected to attend the symposium. They will include public health officials, epidemiologists, program managers, vaccine manufacturers, and research scientists. All EPI program managers in the Americas will receive invitations to attend.

The symposium's proceedings will be published and readers will be advised as soon as they are available.



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