directing council | *regional committee*

PAN AMERICAN HEALTH ORGANIZATION

WORLD HEALTH ORGANIZATION

XXXVII Meeting | XLV Meeting

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EXPANDED PROGRAM ON IMMUNIZATION

The 111th Meeting of the Executive Committee reviewed the report of the Director regarding the achievements of the Expanded Program on Immunization.

The report underscored the fact that almost two years had passed without detecting a single case of paralytic poliomyelitis from the transmission of indigenous wild poliovirus in the Western Hemisphere. The process to certify the eradication of the indigenous virus is well underway, as country after country strives to meet the stringent surveillance criteria of the International Certification Commission on Polio Eradication. Intensive efforts to contain any potential poliovirus importation from other areas of the world have been successful. Moreover, despite the economic hardship that has led to setbacks in other regions of the world, the countries of the Americas once again have maintained or surpassed previous immunization coverage levels among children under one year of age.

Some striking results of this effort are already being detected. The number of cases of two significant vaccine-preventable diseases--neonatal tetanus and measles--has been declining steadily. The American Region has already met the 1995 goal for the reduction of neonatal tetanus established at the World Summit for Children, and, at this rate of progress, the disease could be eliminated as a public health concern by 1995. Morbidity and mortality due to measles has also been greatly reduced, largely as a result of the rapid increase in coverage through mass vaccination campaigns. Interruption of indigenous transmission already may have been achieved in the Caribbean.

The Executive Committee noted its satisfaction with the program's progress, registered its concern about the risk of importation of wild poliovirus, and recognized that securing definitive success requires further commitment by the governments and agencies that have collaborated in the endeavor to date.

The XXXVII Meeting of the Directing Council is requested to examine the attached reports and consider the following resolution proposed by the 111th Meeting of the Executive Committee:

RESOLUTION XVI

EXPANDED PROGRAM ON IMMUNIZATION

THE 111th MEETING OF THE EXECUTIVE COMMITTEE,

Having considered and reviewed the report on the status of the Expanded Program on Immunization presented by the Director (Document CE111/16 and ADD. I),

RESOLVES:

To recommend to the Directing Council that it adopt a resolution along the following lines:

THE XXXVII MEETING OF THE DIRECTING COUNCIL,

Having considered and reviewed the report of the Director on the Expanded Program on Immunization (Document CD37/___);

Noting with great satisfaction that more than two years have passed since detection of the last case of poliomyelitis, on 23 August 1991 in the district of Pichinaki, department of Junín, Peru; that there has been tremendous progress made toward securing the control and definitive elimination of measles, as well as notable achievements in the control of neonatal tetanus; and that in most of the countries the levels of vaccination coverage have been maintained or increased;

Recognizing that the consolidation of these achievements requires further commitment on the part of all the governments and agencies that are collaborating with the program, as well as the strengthening of ties between the public and private sectors; and

Noting with concern that in Alberta, Canada, an importation of wild poliovirus from the Netherlands has been detected,

RESOLVES:

1. To congratulate all the health workers of the Region for their dedication and their outstanding achievements toward securing control of diseases preventable by vaccination.

2. To commend the health authorities of Canada for their prompt detection and apparent containment of the spread of wild poliovirus following its importation from the Netherlands, as well as the authorities of other countries that acted swiftly to investigate and vaccinate all communities potentially at risk.

3. To urge all the Member Governments to intensify their surveillance among groups potentially at risk for transmission of poliovirus associated with the aforecited or future importations.

4. To recommend to all the Member Governments that they establish national certification commissions to collect and analyze the data on the eradication of poliomyelitis, which are then to be reviewed by the international commission.

5. To call on all the Member Governments to increase their support for activities aimed at achieving control and the definitive elimination of measles and at achieving increased control of neonatal tetanus; this will require allocation of resources in the national budgets to support vaccination programs, including national campaigns, expansion of national surveillance systems, and support for diagnostic laboratories.

6. To thank all the collaborating governmental and nongovernmental agencies, bilateral as well as multilateral, for their ongoing support, and to call on them to maintain and increase this support.

7. To request the Director:

a) To continue his efforts to mobilize additional resources for the EPI and its disease control and elimination initiatives;

b) To establish a special fund for the control and elimination of measles.

(Adopted at the seventh plenary session, 1 July 1993)

Annexes

EXPANDED PROGRAM ON IMMUNIZATION

TABLE OF CONTENTS

1. Introduction

By the time the Executive Committee meets in June 1993, nearly two years will have elapsed since the last confirmed case of wild polio virus was detected in a two year old boy on 21 August 1991, in the town of Pichinaki, Department of Junin, Peru. Similarly seventeen months will have elapsed without detection of a laboratory confirmed indigenous case of measles in the English-speaking Caribbean since the mass campaign carried out in May 1991 to immunize all children between the ages of 1 and 15 years, undertaken as part of the strategy to eliminate measles in that subregion of the Americas by 1995. Provisional 1992 immunization coverage levels for children under one year of age for all the vaccines included in the program remained at the same as in 1991 or increased. Actually, it is estimated that when final figures are available, these levels will be above 80% for all the vaccines included in the program. Immunization coverage of women of childbearing age with tetanus toxoid in the areas at risk for neonatal tetanus continues to increase.

These facts are of historical significance in the annals of public health in the Americas and demonstrate the improvements in the immunization programs in the Region and the degree of their sustainability by the continuing increase in immunization coverage in the Americas. This progress report by the Director highlights the advancements being made by the Member Governments in their effort to build up the health systems that will allow the delivery of cost-effective public health measures for protecting the children of the Region, and to help assure their healthy development and survival.

2. Progress to Date

2.1 Immunization Coverage

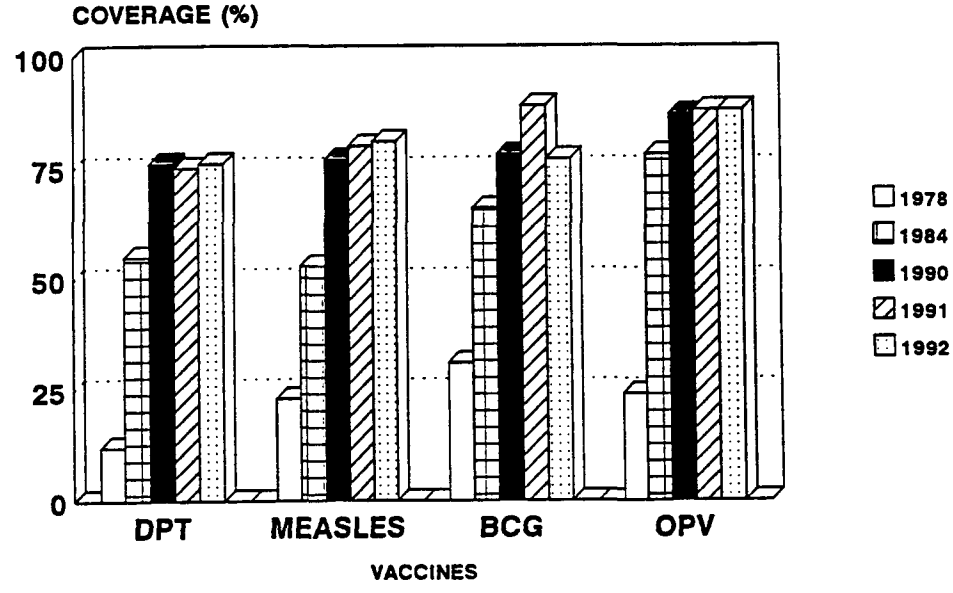
Immunization coverage rates for the vaccines included in the national immunization programs have increased steadily since the program's inception in 1977. Preliminary data available for 1992 show that immunization coverage continued to increase or was maintained at roughly 1991 levels. Rates were not uniform throughout the Region and local variations existed within countries as well. However, the ability to sustain high immunization coverage over time is an accomplishment in itself and holds promise for further disease control and other health interventions.

In 1992 oral poliomyelitis vaccine (OPV) coverage again reached nearly 90% of the children of the Americas (excluding the U.S. and Canada). Vaccination against measles hit 80% for the first time, while DPT rose from 74% to 76%. The BCG coverage rate declined slightly during 1992 from 79% to about 77%. When final data become available, it is expected that coverage for all these vaccines will be near or above

80%. Coverage with tetanus toxoid in those areas at highest risk for neonatal tetanus also continues to increase, being much higher than the average national coverage, indicating that these resources are being targeted to the areas most in need.

These coverage rates (see Figure 1 and Table 1) confirm that the vast majority of the Region's children are being protected against common childhood diseases which contribute significantly to increased infant and childhood morbidity and mortality. Yet, all countries have remaining pockets of youngsters that even the best national vaccination programs have not been able to reach, and there remain individual countries that have not yet managed to raise their national coverage levels against poliomyelitis or measles vaccination to 80%.

FIGURE 1: VACCINATION COVERAGE OF CHILDREN < 1 YEAR OF AGE, AMERICAS*, 1978, 1984, 1990, 1991, 1992



SOURCE: COUNTRY DATA
* EXCLUDING CANADA AND USA

TABLE 1

VACCINE COVERAGE IN CHILDREN UNDER ONE YEAR OF AGE IN THE REGION OF THE AMERICAS, 1991-1992

SUBREGION/COUNTRY	CHILDREN <1 YR OF AGE		DPT		OPV		MEASLES		BCG	
	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992
ANDEAN REGION	2,435,297	2,399,601	71.16	76.32	77.01	80.75	66.20	72.59	83.77	86.26
BOLIVIA	218,874	190,332	58.33	77.33	66.76	83.49	72.85	79.77	66.69	85.79
COLOMBIA	773,351	812,210	84.22	77.00	90.76	84.00	77.74	74.00	95.17	86.00
ECUADOR	327,138	276,201	59.26	83.39	61.77	83.06	53.73	66.31	82.56	99.00
PERU	603,700	610,250	71.04	80.25	74.35	81.73	59.73	80.75	78.52	82.53
VENEZUELA	512,234	510,608	64.65	66.32	73.50	72.16	61.53	61.31	80.82	81.84
BRAZIL	4,020,070	3,764,655	73.01	68.76	95.00	96.21	79.62	83.68	81.16	62.68
CENTRAL AMERICA	1,022,522	1,033,215	72.50	73.40	76.33	77.20	62.90	68.09	67.98	71.74
BELIZE	7,328	7,839	82.61	77.36	80.21	71.10	77.61	72.10	90.67	99.47
COSTA RICA	80,296	80,296	89.51	91.43	89.31	91.48	95.78	85.08	80.93	82.94
EL SALVADOR	190,636	191,119	59.87	60.65	60.13	61.67	52.87	55.38	66.13	62.25
GUATEMALA	346,092	355,718	63.13	64.48	69.26	68.72	49.49	57.82	42.93	55.48
HONDURAS	184,450	184,564	93.88	92.75	93.31	94.50	85.82	88.73	99.00	91.49
NICARAGUA	151,095	151,635	70.93	73.42	83.04	85.80	53.84	72.59	75.12	79.41
PANAMA	62,625	62,044	81.73	82.48	81.87	83.41	79.69	71.32	86.86	99.00
ENGLISH CARIBBEAN	130,870	92,828	85.30	84.53	85.69	79.64	79.95	68.41	93.36	86.16
ANGUILLA	154	168	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
ANTIGUA AND BARBUDA	1,262	-	93.98	-	96.99	-	87.00	-	-	-
BAHAMAS	6,000	-	92.00	-	91.00	-	93.00	-	-	-
BARBADOS	4,310	4,192	82.00	90.00	83.99	89.00	92.00	90.00	-	-
CAYMAN ISLANDS	456	562	96.93	96.98	96.05	96.98	89.91	98.93	80.92	80.07
DOMINICA	1,619	-	98.02	-	94.01	-	98.02	-	99.01	-
GRENADA	2,585	2,429	84.99	90.00	82.01	90.00	96.02	72.99	-	66.98
GUYANA	17,000	18,137	81.00	79.00	81.00	87.00	76.00	73.00	89.00	88.00
JAMAICA	59,606	59,879	85.00	84.00	85.67	74.00	77.00	63.00	94.37	85.00
MONTSERRAT	173	203	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
SAINT KITTS AND NEVIS	976	898	100.00	100.00	100.00	100.00	100.00	99.00	-	-
SAINT LUCIA	3,652	3,652	96.00	94.00	94.99	94.99	96.99	71.99	-	98.00
SAINT VINCENT AND THE GRENADINES	2,457	2,108	98.98	100.00	98.98	100.00	100.00	100.00	100.00	100.00
SURINAME	9,000	-	75.00	-	72.00	-	84.00	-	-	-
TRINIDAD AND TOBAGO	20,980	-	82.00	-	81.00	-	93.00	-	-	-
TURKS AND CAICOS ISLANDS	290	300	100.00	76.00	100.00	77.00	100.00	79.00	100.00	100.00
BRITISH VIRGIN ISLANDS	350	300	98.00	100.00	95.14	100.00	84.00	69.00	90.00	100.00
LATIN CARIBBEAN	400,601	231,586	70.26	48.08	78.51	63.40	82.70	75.30	67.70	48.10
CUBA	173,896	-	100.00	-	96.91	-	100.00	-	97.94	-
DOMINICAN REPUBLIC	226,705	231,586	47.45	48.09	64.40	63.40	69.43	75.30	44.50	48.10
HAITI	-	-	-	-	-	-	-	-	-	-
MEXICO	1,933,394	2,122,711	77.90	91.30	94.60	92.00	91.00	91.50	67.70	84.80
NORTH AMERICA	-	-	-	-	-	-	-	-	-	-
BERMUDA	883	-	82.45	-	82.33	-	84.03	-	-	-
CANADA	-	-	-	-	-	-	-	-	-	-
UNITED STATES OF AMERICA	-	-	-	-	-	-	-	-	-	-
SOUTHERN CONE	1,209,248	1,164,722	83.78	83.08	87.12	85.01	94.95	82.82	96.62	97.56
ARGENTINA	710,511	719,550	80.78	79.70	86.03	82.50	99.00	88.80	99.00	99.00
CHILE	300,827	300,827	93.27	90.00	93.35	90.00	95.49	67.00	92.48	93.40
PARAGUAY	141,723	144,345	78.68	85.49	79.38	87.14	73.50	86.01	93.45	99.08
URUGUAY	56,187	-	93.65	-	93.65	-	93.76	-	98.76	-
TOTAL	11,152,885	10,809,318	74.67	76.54	87.76	88.08	79.57	80.86	79.58	77.05

- NO DATA AVAILABLE
Data as of 30 March 1993

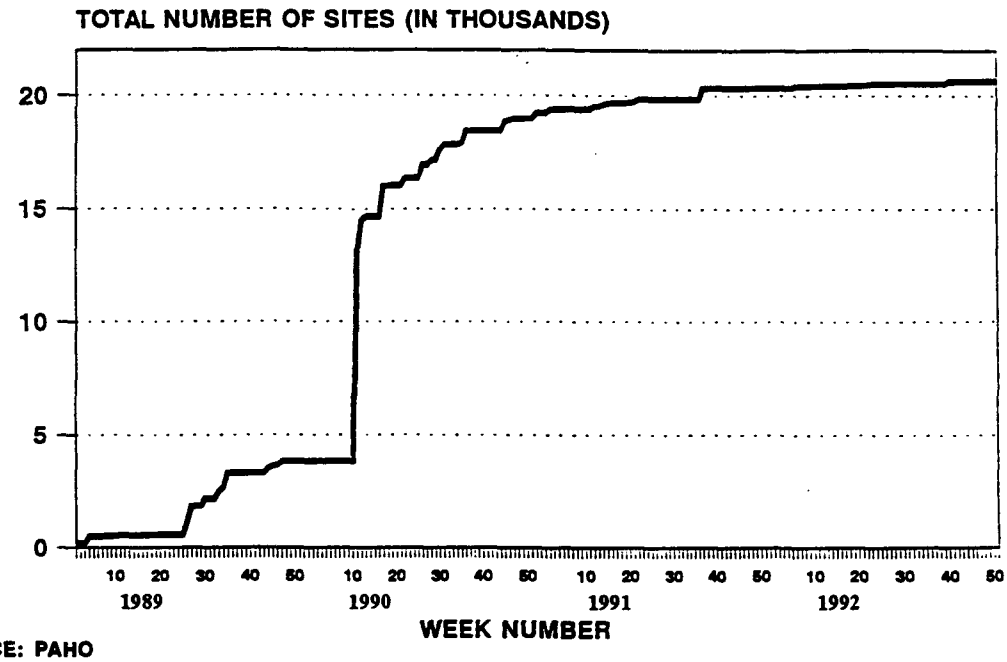
2.2 Poliomyelitis Eradication

2.2.1 Interruption of the indigenous transmission of wild poliovirus

The last confirmed case of paralytic poliomyelitis due to wild poliovirus had onset of paralysis on 23 August 1991 in the town of Pichinaki, Department of Junin, Peru. By the time the Executive Committee meets in June 1993, nearly two years will have elapsed since this historic event. Over this period, nearly 9,000 stool specimens from throughout the Americas have been tested without detection of wild poliovirus. This represents a considerable increase from the 5,200 stool samples investigated in 1991 and indicates the aggressiveness and dedication of all countries in search of the wild poliovirus in their efforts to assure its eradication.

The decade of the nineties will require that the health infrastructure not only maintain surveillance activities at the present levels but that the programs continue their advancement towards the certification of the eradication of polio. Therefore, it is critical that the current network of reporting units, which is over 20,000 health units covering all districts and municipalities, continues to improve its compliance with reporting requirements every week (See Figure 2).

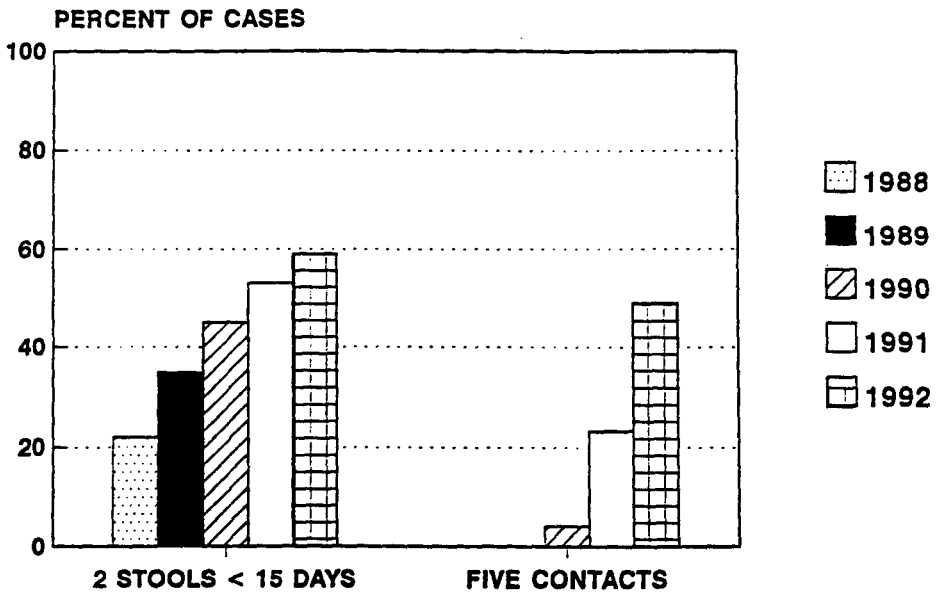
FIGURE 2: NUMBER OF AFP NOTIFICATION SITES REPORTING WEEKLY, LATIN AMERICA, 1989-1992



SOURCE: PAHO

In spite of the progress made over the last four years, the principal obstacle to certification will be the adequate collection of two stool specimens within 14 days of onset of paralysis from every case of acute flaccid paralysis (AFP) and the collection of stools from at least five of their contacts. Figure 3 shows the progress achieved with these indicators over the last few years, but much remains to be done to achieve the desired level of at least 80% as recommended by the International Certification Commission on Poliomyelitis Eradication (ICCPE).

FIGURE 3: PERCENT OF AFP CASES WITH TWO STOOL SAMPLES TAKEN WITHIN 15 DAYS OF ONSET OF PARALYSIS AND AT LEAST FROM 5 CONTACTS LATIN AMERICA, 1988 - 1992

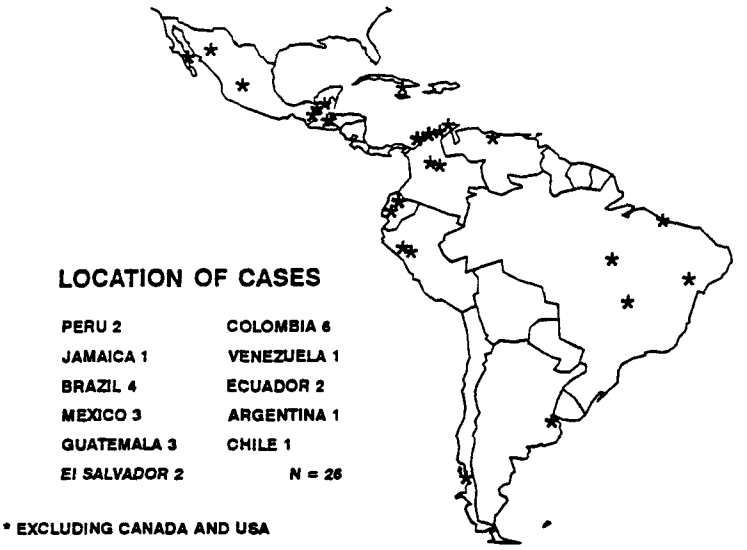


SOURCE: PESS/PAHO

Surveillance of AFP in the countries of the Region during 1992 showed that from the reported 3605 cases of AFP, 26 cases were classified as polio compatible cases because of inadequate investigation and stool specimens for laboratory testing. This represents a failure of the surveillance systems in these countries, and these cases can not be discarded (See Map 1.)

These twenty-six cases clearly underscore the necessity to improve further the surveillance of AFP, the immediate investigation of paralytic illnesses, and the implementation of the necessary measures to prevent further spread of a possible wild poliovirus.

MAP 1: COMPATIBLE POLIO CASES, AMERICAS*, 1992



2.2.2 Certification of interruption of indigenous transmission of the Wild Poliovirus in the Americas

At this moment, the most important challenge for the countries of the Americas is to undertake the activities related to the process of certification of poliomyelitis eradication. The International Certification Commission on Polio Eradication (ICCPE) has defined four basic components that are critical for the purposes of certification: 1) surveillance of AFP, 2) surveillance of wild polio virus, 3) active searches for AFP cases, and 4)mop-up vaccination campaigns in high risk areas. Countries will be considered for certification only if they have been free of poliomyelitis for a period of at least three years in the presence of adequate surveillance. To facilitate the process of certification each country will organize its own "National Commission" to review and oversee the certification process.

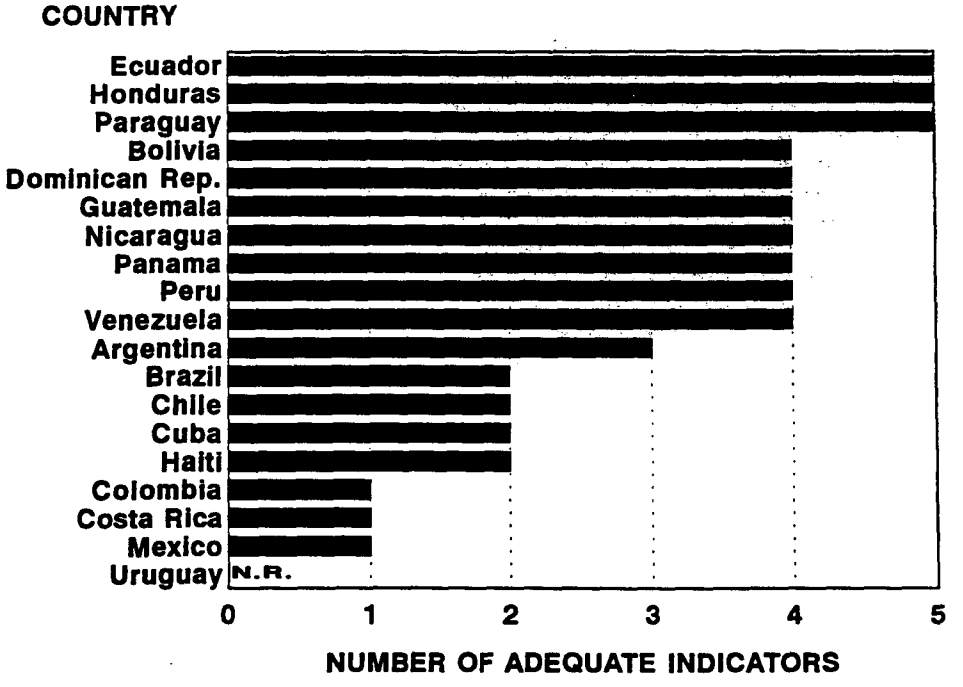
The ICCPE has established criteria for each of the four components. First, for the surveillance of AFP the following five indicators must be met: a) at least 80% of all the health units included in the reporting network should be regularly reporting each week the absence or presence of AFP; b) the expected rate of AFP should be at least 1.0 case per 100,000 children less than 15 years of age in any country ; c) at least 80% of all AFP cases reported should be investigated within 48 hours of reporting; d) at least 80% of all AFP cases reported should have two stool specimens taken for virus culture within 2 weeks of the onset of paralysis; and e) at least 80% of all AFP cases reported should have stool investigations of at least 5 contacts.

The situation of these indicators in several countries of the Region is presented in Figure 4, which clearly indicates the need of additional efforts by most countries in improving their surveillance activities.

Second, for the surveillance of wild polio virus, stool surveys of normal children and sampling and testing of sewage for virus will be carried in few selected areas of the Americas. However, because of the inherent difficulties with this approach the ICCPE has underscored the necessity to investigate the five contact stools collected for each case of AFP that would be a good surrogate of stool surveys in normal children. Therefore, the regional network of laboratories, which has been critical in supporting eradication efforts, increases its importance during the certification phase of the program.

Third, for active searches in all identified areas of high risk, there should exist a standardized methodology for the collection of data and analysis. The purpose of the searches would be to assure that no case of AFP that is clinically compatible with polio has not been reported.

FIGURE 4: SURVEILLANCE INDICATORS MEETING CERTIFICATION CRITERIA BY COUNTRY, LATIN AMERICA, 1992



SOURCE: EPI Managers and PESS

Finally, for "Mop Up" campaigns, it is expected that in the event of an occurrence of "high risk" compatible polio case(s) the countries should undertake special mop-up immunization campaigns. These "Mop-Up" campaigns should be well documented with the description of their geographic extent, the population targeted for vaccination and the results of the number of children vaccinated, as well as the number of houses visited, for example.

To stimulate the community to report suspect cases of polio it is recommended that information on the current PAHO reward of US$100.00 be further disseminated in all countries. This reward, established in 1987 by PAHO has not been uniformly implemented in all countries. The experience to date in those countries that have implemented the award has shown that when the communities are more involved the surveillance reporting of AFP has increased. Ecuador, with support from the private sector, has already raised its reward to US$1000.00 and it is suggested that such an increase be considered by other countries.

2.3 Measles Control/Elimination Initiatives

In 1988, the Health Ministers of the English-speaking countries of the Caribbean declared their commitment to the goal of eliminating the indigenous transmission of measles by 1995. Their belief that this was possible was based on the successful effort launched by Cuba in 1986. In May 1991, these countries conducted mass immunization campaigns that vaccinated well over 90% of all children between 9 months and 14 years of age. Subsequently surveillance for fever and rash illnesses was initiated and all the countries in that area now report on a weekly basis to the Caribbean Epidemiological Center (CAREC) on the occurrence or not (negative reporting) of fever and rash illnesses (suspected measles cases). No laboratory confirmed measles cases have been detected in nearly two years in the English-speaking Caribbean.

Table 2 shows that of the 374 suspected cases reported in 1992, only 95 were classified as compatible due to loss to follow up. CAREC now produces a weekly bulletin on measles surveillance, which is fed-back to all countries.

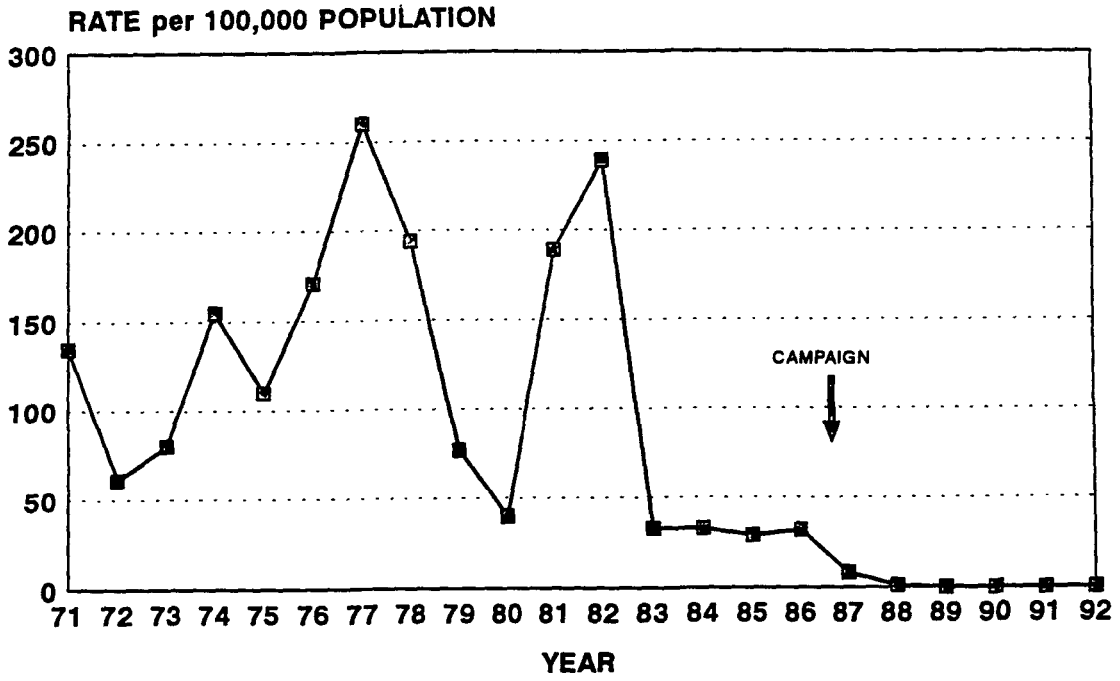
Chile and Brazil followed suit in April-May 1992 holding mass campaigns to immunize all children between 9 months or 1 year of age and 14 years. Figures 5-8 shows the impact of these initiatives. In Peru, where there had been a measles epidemic in 1991, the government vaccinated almost 70% of the children 9 months old to 15 years of age between September and November 1992 to stop the epidemic.

TABLE 2: REPORTED CASES OF MEASLES, BY CLASSIFICATION ENGLISH-SPEAKING CARIBBEAN, 1992

SITE	TOTAL CASES	COMPATIBLE (x)	DISCARDED	UNDER INVESTIGATION
ANGUILLA	0	0	0	0
ANTIGUA	3	0	2	1
BAHAMAS	17	0	17	-
BARBADOS	20	0	12	8
BELIZE	25	21	1	3
BERMUDA	-	-	-	-
BVI	2	0	2	0
CAYMAN ISLANDS	4	0	3	1
DOMINICA	8	3	4	1
GRENADA	10	4	6	0
GUYANA	43	4	35	4
JAMAICA	89	38	42	9
MONTSERRAT	5	0	4	1
ST. KITTS & NEVIS	9	1	4	4
ST. VINCENT	8	0	6	2
SURINAME	19	0	12	7
ST. LUCIA	37	19	16	2
TURKS AND CAICOS	1	0	0	1
TRINIDAD & TOBAGO	74	5	62	7
TOTAL	374	95	228	51

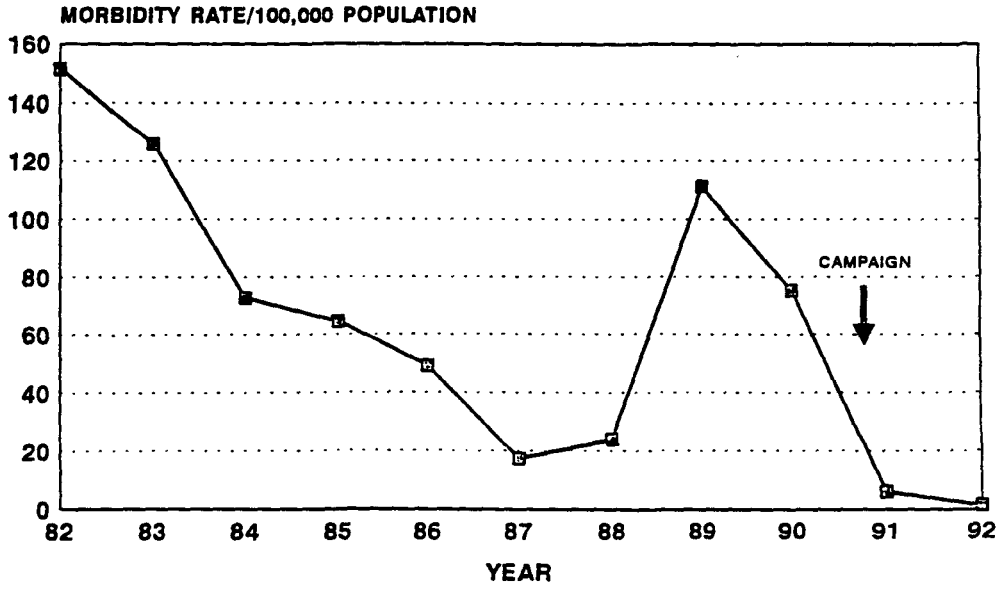
(x) LOST TO FOLLOW-UP

FIGURE 5: MEASLES MORBIDITY RATES BEFORE AND AFTER NATIONAL CAMPAIGN, CUBA, 1971 - 1992



SOURCE: PAHO/EPI

FIGURE 6: MEASLES MORBIDITY RATE PER 100,000 POPULATION, ENGLISH SPEAKING CARIBBEAN, 1982 - 1992

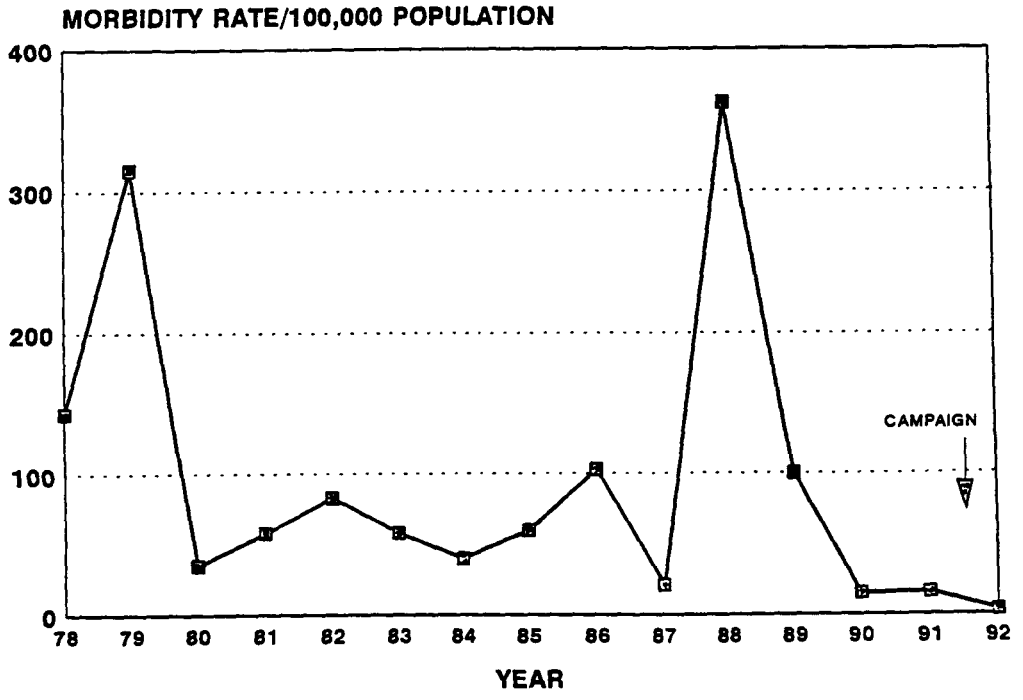


SOURCE: PAHO/EPI

FIGURE 7: MEASLES ELIMINATION CAMPAIGN 6 APRIL TO 7 MAY 1992, AND ITS EFFECTS ON MEASLES MORBIDITY, CHILE

AGE GROUPS	TARGET POP.	VACCINATED*	%
9 - 11 mos.	79 373	76 244	96.1
12 - 23 mos.	302 027	295 254	97.8
2 - 5 years	1 118 694	1 103 608	98.7
6 - 14 years	2 369 293	2 379 398	100.4
TOTAL	3 869 387	3 854 504	99.6

* Preliminary data

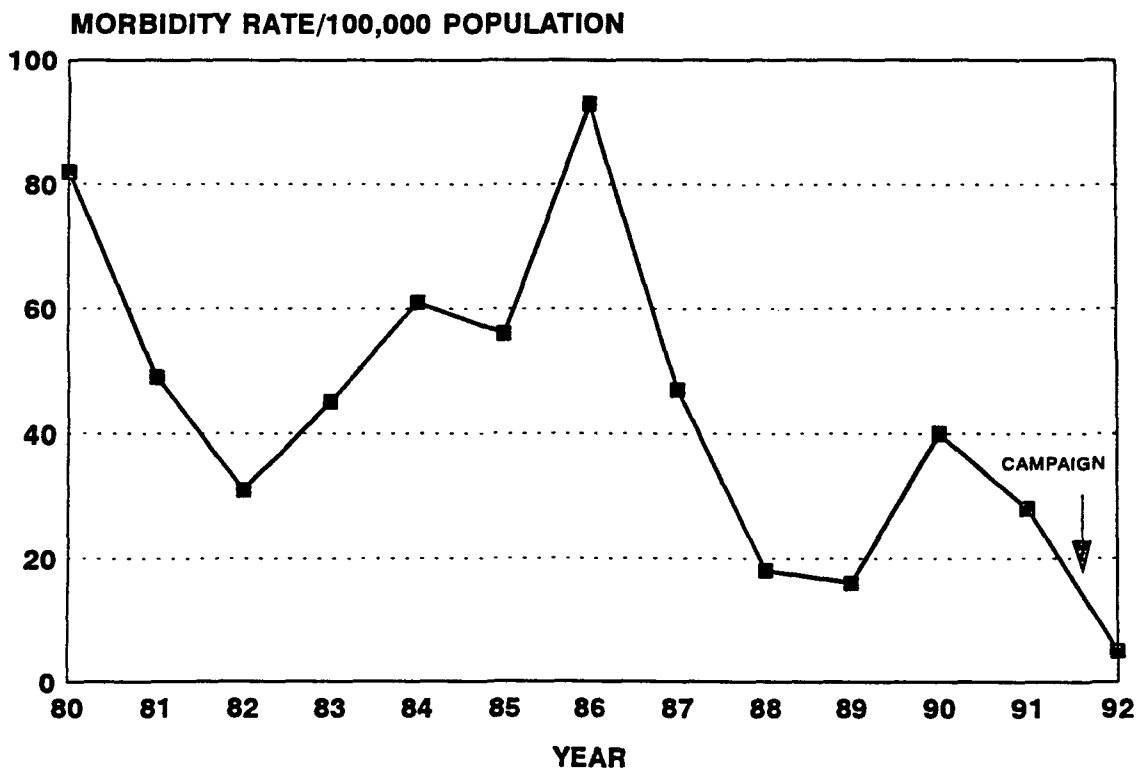


SOURCE: PAHO/EPI

FIGURE 8: MEASLES ELIMINATION CAMPAIGN 25 APRIL TO 12 JUNE 1992, AND ITS EFFECT ON MEASLES MORBIDITY, BRAZIL

	POPULATION (9 mos. - 14 yrs. of age)		
REGION	TOTAL	VACCINATED*	%
NORTH	4 285 085	4 240 247	99
NORTHEAST	16 757 101	15 664 190	93
SOUTHEAST	19 014 895	18 206 981	96
SOUTH	6 626 272	6 301 933	95
WEST CENTRAL	3 452 594	3 410 306	99
TOTAL	50 135 947	48 023 657	96

* Preliminary Data



SOURCE: PAHO/EPI

The Presidents of Central America, in December 1991, declared the goal of eliminating measles from Central America by 1997 and mass campaigns were begun in late 1992 to vaccinate all children between 9 months and 14 years of age. These campaigns were completed in March-April 1993. The Governments of Brazil, France and Sweden provided support to the Central American effort to eliminate measles. Brazil donated 7,000,000 doses of measles vaccine, loaned 800 jet injectors and provided technical assistance to the effort. France contributed US$127,282 for logistical support, and Sweden donated US$1,000,000 toward vaccine procurement and logistical support.

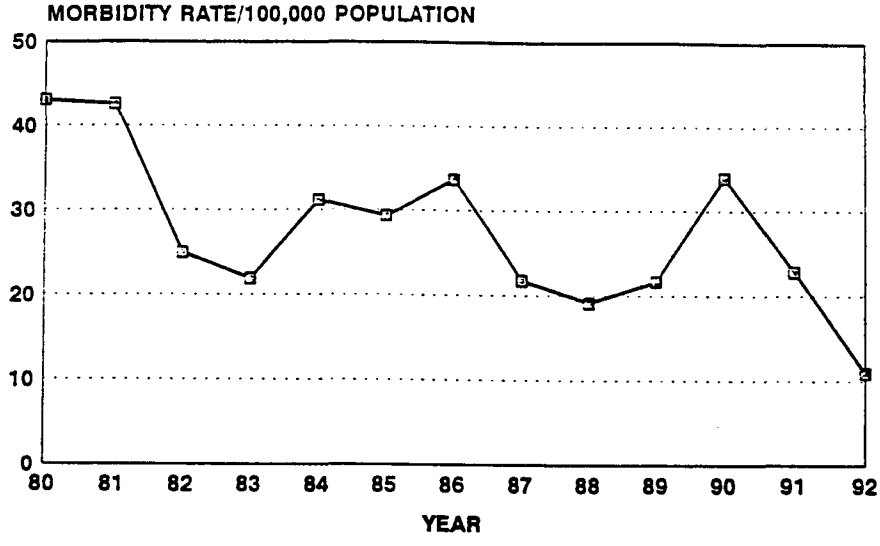
Dominican Republic completed similar campaign in March 1993. Argentina and Colombia have planned similar campaigns for May-June 1993 and Mexico is considering ways to accelerate its efforts to control further or eliminate measles.

Experience gained thus far indicates that the strategy recommended by PAHO may give very positive results in the fight against measles. It consists in undertaking a one-time effort to vaccinate all children between 9 months and 14 years of age, regardless of their previous immunization or disease history, and subsequently ensuring that high measles vaccination coverage rates are maintained in each new cohort of infants. Subsequent vaccination campaigns may be needed to catch up with children that do not get vaccinated at the proper recommended age.

The frequency and target group for these subsequent campaigns will have to be determined by the accumulated surveillance data. Countries that have implemented these measles immunization catch- up campaigns have moved into an elimination mode and will have to adjust their strategies accordingly. Once the mass campaigns have been carried out, existing surveillance systems will have to be fine-tuned to enable the national immunization programs to make quick adjustments and focus control activities on eliminating pockets of transmission. It is therefore recommended that in addition to the immunization campaigns, a sensitive and aggressive surveillance system be established to detect any remaining chains of transmission and to deal with imported cases. This surveillance system will have to be based on the routine reporting and follow up of fever and rash illnesses, which will serve as the surrogate for suspect cases of measles. In those countries that have implemented this strategy transmission was considerably curtailed or was temporarily interrupted in all age groups; therefore the children under one year of age are now at a considerably lower risk of infection. Consequently, it is advisable that national immunization schedules be adjusted to this new phase of the program, with the increase in the age for vaccination from 9 months to one year of age, bringing the added benefit of increased vaccine efficacy.

For 1992 the Americas reported the lowest number of measles cases ever reported in its history (Figure 9). Should these efforts succeed, the Americas will again lead the way to a global effort to the eventual global elimination of this major killer of children. These national and subregional initiatives to control and/or eliminate measles attest to the governments' confidence in the sustainability of their immunization programs, and to their unswerving commitment to the goals of the World Summit for Children.

FIGURE 9: MEASLES MORBIDITY RATES IN LATIN AMERICA AND THE CARIBBEAN, 1980-1992



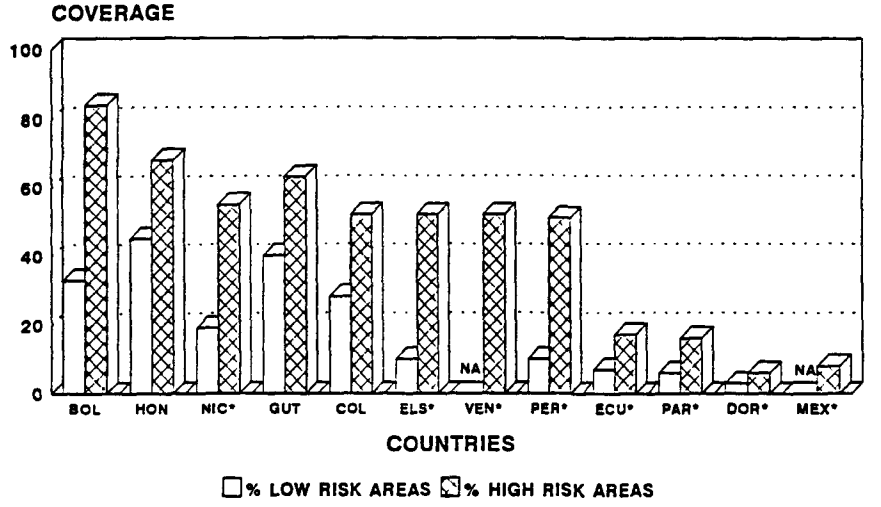
SOURCE: PAHO/EPI

However, despite the marked progress, problems still remain. There are a number of countries that have not reached 80% vaccination coverage rates. Furthermore, many reported cases are not yet properly investigated. Crucial epidemiologic information and blood samples necessary to classify the cases accurately are not being routinely collected and the laboratory network is not yet prepared to respond to the new program needs. It is therefore of paramount importance that continued support be given to the follow up of these initiatives.

2.4 Neonatal Tetanus Control

As can be seen in Figure 10, the proportion of women of child bearing age that received at least two doses of TT is considerably higher in the higher risk areas when compared with coverage in the lower risk areas. This data demonstrates that countries are giving priority to those areas in which the majority of cases are occurring, which in turn will increase the impact of the intervention in terms of cases prevented.

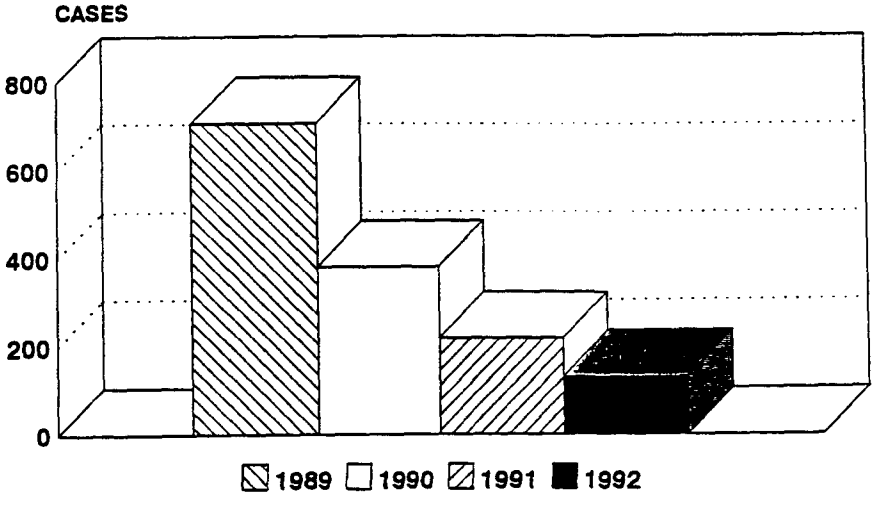
FIGURE 10: TT2 COVERAGE IN HIGH-RISK AREAS OF SELECTED COUNTRIES IN THE AMERICAS 1990 - 1992



* PROVISIONAL DATA
NA DATA NOT AVAILABLE

Targeting those areas was done with great precision and there has been a marked decline in the incidence of this disease in those areas since 1988, when the concerted effort to vaccinate all the women of childbearing age was begun (Figure 11).

FIGURE 11: NEONATAL TETANUS INCIDENCE IN 527 HIGH-RISK COUNTIES* OF THE AMERICAS 1989 - 1992



SOURCE: PAHO
* IDENTIFIED AS SUCH IN 1988-1989

Case investigations have improved when comparing 1992 and 1991 with 1990, when only 35% of the cases were investigated (Figure 12).

FIGURE 12: PROPORTION OF NNT CASES INVESTIGATED 1990 - 1992

SOURCE: PAHO

In 1992, 79% (614 cases) of the 778 cases reported in the Region were investigated (excludes Argentina, Haiti and Paraguay for which data is not available at the time of this report). The mothers' vaccination status was obtained for 40% (311 cases) of the investigated cases, similar to the 39% observed in 1991.

Both the low reporting and low coverage rates that still are found in some areas point to insufficient resolve on the part of the governments to tackle this preventable disease. If additional resources are assigned to this activity, the Region of the Americas could reach its target of controlling neonatal tetanus by 1995.

A positive development was the declaration of the Summit of First Ladies held in Cartagena in September 1992, which stated that the elimination of neonatal tetanus by 1995 is one of their priorities. This declaration was already followed-up by action by several First Ladies, particularly in the Andean countries, in which they have generated additional national resources for program operations. Yet a greater effort must be made or the Region will fail in its commitment to eliminate this disease as a public health problem by 1995.

2.5 Hepatitis Control

In 1992 Cuba and the United States of America adopted policies of universal vaccination of newborns against hepatitis. Argentina, Brazil, and Colombia maintained their policies of vaccinating in areas of risk while Argentina decided to vaccinate health workers and other high risk groups. PAHO maintains its recommendation of targeting vaccination against Hepatitis B in those areas that are identified as at high risk for the disease. Expansion to all children should be considered only when this initial goal has been reached and when sufficient resources are available for a long term vaccination program. Vaccination coverage data is not available for 1992 and priority for the next year should be the monitoring of immunization coverage data and, most importantly, surveillance activities to ascertain the impact of the program in reducing disease incidence in the targeted areas.

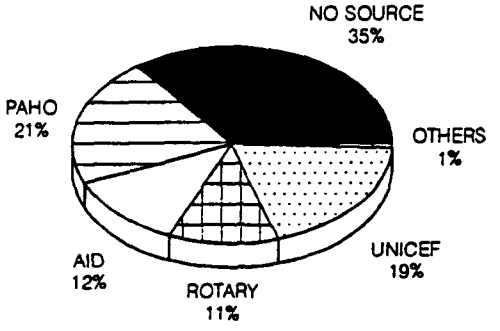
2.6 National Planning and Interagency Coordination

When PAHO, the Inter-American Development Bank (IDB), Rotary International, UNICEF, and USAID joined forces in 1985 as the Interagency Coordinating Committee (ICC) to launch the campaign to eradicate poliomyelitis in the Americas they did so on the basis of a Regional Plan of Action. That Plan called for the creation of an ICC in each country, which would in turn develop national five-year plans of action to program its EPI activities and plan its resource requirements. The first National Plans of Action (NPA) were developed by the newly created national ICCs (which subsequently also included the Canadian Public Health Association-CPHA) for the 1987-1992 five-year period. They serve as the basic instrument through which the host government, the ICC, and other organizations, including non-governmental organizations (NGOs) that support EPI coordinate their activities. They simultaneously permit national EPI managers to plan and budget their use of resources in detail, including cost analyses of activities by type (capital/recurrent) and source (national/external).

The NPAs furthermore make it possible to assess the sustainability of national immunization programs within the larger health service infrastructures. The likelihood of financial sustainability to ensure that adequate personnel and supplies are available over time can be measured by the analysis of the NPA data. Comparing the budgets of the first and second five-year work plans allows the ratio of national and external resources to be compared. In the first five-year plan (1987-91), 80% percent of the total cost of US$544.8 million was covered by national sources and 20% by external sources. Data reported by 17 countries for the second five-year plan, 1992-1996 (seventeen countries only) indicate that a total of $774.9 million has been projected, of which nearly 90% will be provided by national sources and 10% sought from external sources. The projected budget of $774.9 million represents a 42% increase over the first five-year plan and shows a significant increase in the level of national commitment to their programs.

This indicates growth in sustainability, since the bulk of the vaccine costs are now covered by the national budgets. Simultaneously, the proportion being requested from external sources decreased by 25% relative to the earlier period (US$84.1 million for 1992-1996 compared with US$113.8 million for 1987-1991). However, a closer examination of the portion expected to be covered by external sources, reveals that there remain US$29.4 million (35%) of the requested US$84.1 million for which no specific source has been yet been identified (See Figure 13). Unless the external sources of support for this portion are guaranteed, the drop in external support from the 1987-1992 to the 1992-1996 NPAs could have a sobering impact on the national programs.

FIGURE 13: PROJECTED DISTRIBUTION OF EXTERNAL CONTRIBUTIONS, EPI NATIONAL PLANS OF ACTION 1992-1996, US$ MILLIONS



TOTAL COST: $84.1 MILLION
SEVENTEEN COUNTRIES REPORTING

Very encouraging is the participation of non-traditional partners such as NGOs or other bilateral donors. These organizations and governments have added an estimated US$3.6 million to various national programs. The list of NGOs and other bilateral donors to the 1992 NPAs is a lengthy one. A few of them appear in support of more than one country, including the UN Refugee Program (PRODERE in its Spanish acronym, in El Salvador and Guatemala), Project Hope (Guatemala, Honduras and Nicaragua), Christian Children's Fund (Colombia, Honduras and Mexico), the European Economic Community (Honduras, Mexico and Nicaragua), the Swedish International Development Agency-SIDA (Peru and Central American Countries), the government of Spain (Guatemala, Honduras and Nicaragua), the Italian Government (Guatemala and Nicaragua), the Government of France (Costa Rica and Nicaragua), and the Government of Brazil

(Ecuador and Central American Countries). Their contributions ranged from Brazil's donation of 7 million doses of measles vaccine to six Central American countries, to the Christian Children's Fund mini-projects in Colombia and Mexico which identified specific EPI activities targeted at special segments of the population. More often than not these contributions were in-kind, rather than in cash.

As the nature of this relationship continues to evolve the make-up of the national ICCs and levels of commitment in the NPAs will change accordingly. Identifying other indicators in the NPA for measuring the sustainability of the EPI will be fundamental to continued success of the program in the future. Among these new indicators it will be important to identify the proportion of funds that are destined to those areas at highest risk, defined as those with low immunization coverage and by higher disease incidence.

PAHO has developed a methodology to evaluate these criteria. This methodology was field tested in one country in early 1993 and preliminary results from that country in the Region indicates that this criteria has not been applied and many high risk areas did not receive their fair share of needed resources. Further studies will be conducted in other countries to help identify the flow of resources and ensure that the high risk areas are receiving the needed attention. This criterion aimed at the achievement of equity among the various populations at the national level.

3. Conclusion

A great threat to this achievement of the certification of eradication of indigenous transmission of wild poliovirus from the Americas will be the complacency that usually occurs when a disease becomes rare and the deterioration of the national surveillance systems that were so meticulously organized. Importations from another region are also possibilities, and the recent poliomyelitis outbreak in The Netherlands is an unpleasant reminder of such a situation. Therefore, it is essential that all organizations (multilateral, bilateral, non-governmental) that have aided the program thus far continue, now more than ever, to support the governments in their efforts to consolidate the eradication of polio and to pursue the other goals. This will be critical to reinforce the national health infrastructure and the national immunization programs in their efforts to sustain what has been achieved and to advance toward the goals and targets set forth in 1990 by the Summit for the World's Children of further reducing the incidence of measles and eliminating neonatal tetanus as a public health problem.

As the sustainability of high immunization coverage in children under one year of age and in the women of childbearing age in the areas at risk for neonatal tetanus becomes established, national epidemiologic surveillance systems have to be enhanced and further expanded, including their laboratory component. These systems may rely on the reporting and investigation of fever and rash illnesses, as a surrogate for measles, and

neonatal tetanus. Just as the AFP surveillance system was essential to the eradication of poliomyelitis, this expanded system will be critical for the attainment of the goals set by the Summit for the World's Children related to reduction of measles incidence by 90% and measles mortality by 95% (or even its elimination in the countries that are pursuing this goal), as well as the elimination of neonatal tetanus as a public health problem by 1995.

Therefore, the greatest challenge facing PAHO Member Countries in regard to their national immunization programs is to ensure that the political and social will demonstrated so far will be maintained in the years to come. Failure to do so will jeopardize the consolidation of polio eradication and will impede the attainment of the other established goals. The success of the polio eradication initiative has led countries to accelerate their efforts to control or eliminate measles and to eliminate neonatal tetanus. Continuing priority to these initiatives will be essential to maintain the momentum, and they will have to be given the required resources, both human and financial, to be successful. Furthermore, these resources will have to be distributed in an equitable way, with a fair share assigned to the areas at highest risk. A proxy indicator of the assignment of such priority is the availability, in national budgets, of sufficient funds for vaccine procurement and an established management structure for program implementation and monitoring of activities.

It remains to be seen if the countries will keep their commitment to the health of their future generations.

executive committee of the directing council

PAN AMERICAN HEALTH ORGANIZATION

working party of the regional committee

WORLD HEALTH ORGANIZATION

111th Meeting
Washington, D.C.
June-July 1993

CD37/16 (Eng.)
ANNEX II

Provisional Agenda Item 4.9

CE111/16, ADD. I (Eng.)
16 June 1993
ORIGINAL: ENGLISH

EXPANDED PROGRAM ON IMMUNIZATION

Update

1. POLIOMYELITIS: WILD POLIOVIRUS IMPORTED INTO THE AMERICAS

No cases of poliomyelitis caused by indigenous wild poliovirus have been detected in the American Region for 22 months, and national health systems have been gearing up to meet the stringent criteria for final certification of the International Certification Commission for Polio Eradication (ICCPE). One of the ICCPE's requirements is that national systems be capable of detecting and containing the spread of any wild poliovirus that may be imported from other parts of the world.

As a result of the outbreak of wild poliovirus polio cases in the Netherlands in late 1992 and early 1993, PAHO/WHO urged Member Countries that have closed, unvaccinated communities to carry out active searches in addition to their routine surveillance, especially if those communities are known to have contact with similar communities in the Netherlands.

Mexico and Canada were the first to carry out active searches, and the United States of America is currently taking measures to determine whether there has been any importation. Imported wild poliovirus was found in Canada; results are still pending in Mexico.

PAHO/WHO meanwhile has alerted all countries of the Hemisphere to strengthen their surveillance systems and make special efforts to contact any closed, unvaccinated communities and enlist their support for the eradication effort by accepting vaccination.

Stool surveys in these and nearby communities and high vaccination coverage levels are also important to ensure that susceptibles are not exposed to imported poliovirus.

The reports that appear below summarize where things stand.

Canada

During September 1992-February 1993, 68 cases of poliomyelitis occurred among members of a religious community in the Netherlands (1). Because members of an affiliated religious community in Alberta, Canada, had direct contact (i.e., travel to and from the Netherlands) with members of the affected community, health authorities in Alberta conducted an investigation during January-February 1993 to determine whether this poliovirus had been imported (2).

The investigation focused on a small rural community in southern Alberta that reported the only case of poliomyelitis from that province during the last outbreak (11 cases) of poliomyelitis in Canada during 1978 (3,4). The community comprises members of a religious group that generally opposes vaccination. Wild poliovirus type 3 (P3) was isolated from stool specimens obtained from 21 (47%) of 45 persons (primarily children). Laboratory investigations conducted by the National Center for Enteroviruses in Halifax, including application of molecular techniques in collaboration with laboratories at the Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, United States of America, determined that this PV3 was virtually identical with the strain that caused the recent outbreak in the Netherlands.

No cases of paralytic poliomyelitis have been identified in Canada since 1988. Provincial epidemiologists in Canada, in collaboration with the Laboratory Center for Disease Control in Ottawa, have enhanced surveillance for cases of acute flaccid paralysis. In addition, poliovirus vaccine has been offered to members of all unvaccinated communities. Studies are under way to determine whether poliovirus is circulating among unvaccinated communities in British Columbia and Ontario.

Adapted from: Canada Communicable Disease Report 1993;19:57-8. Reported by: Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Division of Immunization, National Center for Prevention Services, LCDC.

Mexico

Given that wild poliovirus probably imported from Europe may be circulating in Canada and the United States of America, the national authorities decided to set up an intensive epidemiologic surveillance system in each state to include the direct operational participation of the regional epidemiologists and the health ministry.

The steps that should be taken are as follows:

a) Map the states or areas that have closed, unvaccinated religious communities.

b) Establish contact with state health authorities to inform them of the situation and enlist their collaboration.

c) Choose the largest and most representative of these communities in each state.

d) Contact the authorities in each "governor" colony to inform them of the situation and enlist their collaboration.

e) Obtain information on the age and sex distribution of the population; its traveling habits at home and abroad; its morbidity due to vaccine-preventable diseases and to acute flaccid paralysis; and vaccine coverage rates by age group.

f) Carry out stool sampling especially among children under five years of age and, depending on vaccination status, among other age groups.

Activities carried out

In the first approach, the regional epidemiologists visited two or three communities in each state and interviewed community leaders and members directly. The following information was thus obtained:

The size of closed, unvaccinated religious communities varies; some are several families large, while others are colonies of several thousand inhabitants. Several years ago, these communities were concentrated in the north-central region of the country; today they can be found in almost every state.

Vaccination coverage has increased recently; they generally accept immunization with the Sabin (OPV) vaccine. The incidence of vaccine-preventable diseases among these groups is similar to or lower than it is among the general population.

These groups move among their communities both within national territory and abroad, for commercial purposes and reasons of personal friendship. They are also visited by members of communities in Canada and the United States of America. Of the 98 stool samples taken in four states, 27 were negative for poliovirus, 11 were positive for enteroviruses pending characterization, and 51 are still being processed.

Source: Epidemiology Department, Subsecretariat for Coordination and Development, Ministry of Health, Mexico.

United States of America

The findings in this report represent the first documented importation and circulation of any wild poliovirus in the Western Hemisphere since the apparent eradication of wild poliovirus infection in August 1991 (5). No cases of paralytic poliomyelitis have been reported from the affected community in Alberta; however, because the clinical:subclinical case ratio for PV3 infection may be as low as 1:1000 (6), wild poliovirus can circulate in a population group for several months before paralytic disease occurs. The last outbreak of poliomyelitis in the United States of America occurred in 1979 when 10 paralytic cases were reported from four states (Iowa, Missouri, Pennsylvania, and Wisconsin). That outbreak originated in the Netherlands in 1978 when poliovirus type 1 spread from the Netherlands to Canada and then to the United States of America (3,4,7,8).

In each of these outbreaks, clinical cases of poliomyelitis and asymptomatic infections occurred almost exclusively among religious groups objecting to vaccination. Subgroups of susceptible persons residing within otherwise highly vaccinated general populations can periodically support epidemic transmission of poliomyelitis (3,4,7,8). However, the risk for exposure, infection, and paralytic disease among vaccinated persons in the general population is low. Therefore, persons fully vaccinated with poliovirus vaccine (i.e., three to four doses of vaccine) are not considered at increased risk for poliomyelitis, and special efforts (i.e., additional vaccination) are not recommended. Because of the risk for importation and spread of poliovirus, all persons under 18 years of age who are not fully vaccinated should initiate or complete the primary series of poliovirus vaccine according to the recommendations of the Advisory Commit-tee on Immunization Practices (9,10). In addition, special efforts are necessary to increase acceptance rates of vaccination and to provide poliovirus vaccines to unvaccinated or incompletely vaccinated members of religious groups who do not generally accept vaccination. Oral poliovirus vaccine (OPV) is recommended for all unvaccinated persons residing in these communities, including those 18 years of age or older because of its ability to limit community spread if poliovirus is introduced.

Because of the outbreak in the Netherlands and detection of PV3 in Alberta, surveillance of poliomyelitis in the United States of America has been augmented to include clinical and laboratory investigations of any case of acute paralysis or aseptic meningitis occurring among members of religious groups objecting to vaccination, as well as unvaccinated persons in the general population residing in the vicinity of these religious groups. In addition, studies are under way to document the presence or absence of wild poliovirus in the United States of America among communities that do not accept vaccination.

The documentation of imported wild poliovirus in Alberta--following a period of 18 months during which wild poliovirus was absent in the Americas--demonstrates the potential for reintroduction of poliovirus into areas where poliomyelitis was considered eliminated. Persons belonging to religious communities objecting to vaccination are currently at greatest risk for paralytic poliomyelitis in the United States of America. Although efforts are ongoing to protect these communities, the effectiveness of previous vaccination efforts in these communities has been limited. Only global eradication of poliomyelitis--a health goal for the year 2000 adopted by the World Health Assembly in 1988--will ensure that poliovirus infection will not cause paralytic disease in the United States of America or the rest of the world.

Source: Monthly Morbidity and Mortality Report, Vol. 42, No. 17, May 1993, Centers for Disease Control and Prevention, Atlanta, Georgia, United States of America.

Other Latin American Countries

Intensive search and vaccination is still going on in several other Latin American countries, particularly in Central America, where several religious communities that may have contact with similar communities in Canada and the Netherlands. So far no cases of poliomyelitis has been found, and in general these communities are accepting vaccination.

Conclusions

In light of the fact that wild poliovirus type 3 is circulating in closed, unvaccinated communities in Canada and given the results obtained during the visits of regional epidemiologists in Mexico, it is necessary to intensify and continue these activities to cover all of these groups. A surveillance system can thus be established that includes monitoring poliovirus until it is no longer circulating anywhere on the continent. The following actions are to be carried out:

- Locate all the closed, unvaccinated religious communities in the country.
- Include them every month in random environmental sampling for poliovirus.
- Make periodic visits to survey morbidity and travel patterns among these groups.

2. MEASLES

Following the initiatives reported in section 2.3 of the progress report (Document CE111/16), Argentina and Colombia also initiated mass-vaccination campaigns against measles during the month of May 1993. These campaigns, targeting all children between 1 and 15 years of age are still under way and due to be completed by the end of June 1993.

With campaigns now being planned to be implemented in the second half of 1993 in Bolivia, Haiti and Mexico, by the end of 1993, there will be only four countries in Latin America (Ecuador, Paraguay, Uruguay and Venezuela) that have not implemented this more aggressive strategy for measles control.

Intensive surveillance for fever and rash illnesses are now being implemented in those countries that have conducted these initiatives, by expanding the acute flaccid paralysis system that was established for poliomyelitis surveillance.

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directing council

PAN AMERICAN HEALTH ORGANIZATION

XXXVII Meeting

regional committee

WORLD HEALTH ORGANIZATION

XLV Meeting

Washington, D.C.
September-October 1993

Provisional Agenda Item 5.8

CD37/16, ADD. I (Eng.)
22 September 1993
ORIGINAL: ENGLISH

EXPANDED PROGRAM ON IMMUNIZATION

Addendum

During 1993, as of week 36, ending 11 September, no cases of paralytic poliomyelitis due to wild poliovirus were detected in the entire Western Hemisphere.

The last case had its onset on 23 August 1991, in Junín, Peru. This is the first time in the history of the Western Hemisphere that no cases of paralytic poliomyelitis due to wild poliovirus have been detected for two years (see Weekly Bulletin on Poliovirus Surveillance, Vol. 8, No. 36, for the week ending 11 September 1993, annexed).

However, wild poliovirus imported into Canada underlined the importance of maintaining strict surveillance for acute flaccid paralysis (AFP) throughout the Region. The number of health units participating in the weekly AFP notification system was around 21,000 for most of 1992-1993 (see graph, annexed). Performance in meeting the five surveillance criteria varied by country (see bar graph, annexed).

Meanwhile, coverage for all EPI vaccines continued to improve in most countries (see Coverage Table, annexed).

Annexes

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

Vol. 8, No. 36

Expanded Program on Immunization
Polio Surveillance in the Americas

Weekly Bulletin for the week ending 11 September 1993

Poliovirus Surveillance

NO INDIGENOUS WILD POLIO VIRUS HAS BEEN DETECTED FOR THE LAST 104 WEEKS
Last wild poliovirus was detected on 5 September 1991, in Peru

Table No. 1a
Status of Case Stool Sample Analysis
Last 52 Weeks (92/38 - 93/36)

LAB.	CNTRY	TOTAL *	WITHOUT RESULTS			ENTEROVIRUS ISOLATION					
			Not yet in Lab	<10 wks	>10 wks	% ISOLATION	NEG.	OTHER ENTERO-VIRUS	Poliovirus Pending	Poliovirus Vaccine	Wild
BKL	BRA	93	6	5	0	15.9	69	13	0	0	0
CAR	DOM	3	0	0	0	33.3	2	1	0	0	0
	DOR	29	0	0	0	34.5	19	10	0	0	0
	GUY	2	0	0	0	0.0	2	0	0	0	0
	HAI	13	0	0	0	7.7	12	1	0	0	0
	JAM	2	0	0	0	0.0	2	0	0	0	0
	SUR	1	0	0	0	0.0	1	0	0	0	0
	TRT	9	0	1	0	0.0	8	0	0	0	0
CDC	COL	3	0	0	0	66.7	1	0	0	2	0
	ECU	3	0	0	0	66.7	1	1	0	1	0
	ELS	9	0	0	0	100.0	0	0	1	8	0
	GUT	1	0	0	0	100.0	0	0	0	1	0
	HON	1	0	0	0	100.0	0	0	0	1	0
	MEX	21	0	0	0	100.0	0	11	2	8	0
	NIC	2	0	0	0	100.0	0	0	1	1	0
FIO	BOL	47	7	1	7	21.9	25	6	0	1	0
	BRA	226	26	8	5	28.3	134	26	2	25	0
	PER	116	6	10	5	37.9	59	26	1	9	0
INC	COR	2	0	1	0	0.0	1	0	0	0	0
	ELS	57	8	1	0	50.0	24	24	0	0	0
	GUT	87	0	2	0	40.0	51	34	0	0	0
	HON	40	1	7	0	40.6	19	13	0	0	0
	NIC	28	2	1	0	28.0	18	7	0	0	0
	PAN	5	2	0	0	0.0	3	0	0	0	0
INDRE	MEX	437	0	31	1	19.8	325	78	2	0	0
INH	VEN	78	6	11	0	29.5	43	17	0	1	0
INS	COL	156	21	5	1	24.0	98	30	0	1	0
	ECU	54	4	8	0	16.7	35	7	0	0	0
	VEN	1	0	0	0	100.0	0	1	0	0	0
MAL	ARG	36	1	0	1	58.8	14	19	0	1	0
	CHI	70	0	24	1	15.6	38	5	0	2	0
	PAR	29	2	0	1	38.5	16	4	0	6	0
	URU	7	1	1	1	75.0	1	3	0	0	0
REC	BRA	70	5	0	1	31.3	44	20	0	0	0
TOTAL		1738	98	117	24	29.0	1065	357	9	68	0

* Each sample relates to an individual

Case samples only

Table No. 1b
Status of Contact Stool Sample Analysis
Last 52 Weeks (92/38 - 93/36)

LAB.	CNTRY	POLIOVIRUS ISOLATION		
		Poliovirus Pending	Poliovirus Vaccine	Wild
BKL	BRA	0	2	0
CAR	BAH	0	0	0
	DOM	0	0	0
	DOR	1	0	0
	GUY	0	0	0
	HAI	0	0	0
	JAM	0	0	0
	SUR	0	0	0
	TRT	0	0	0
CDC	ELS	0	4	0
	GUT	2	15	0
	HON	0	14	0
			0	0
	NIC	1	3	0
	VEN	4	0	0
FIO	BRA	54	68	0
	PER	28	83	0
INC	ELS	0	0	0
	GUT	4	0	0
	HON	2	2	0
	NIC	0	0	0
	PAN	0	0	0
INDRE	MEX	23	0	0
INH	VEN	4	0	0
INS	COL	0	3	0
	ECU	0	0	0
MAL	ARG	2	1	0
	CHI	0	0	0
	DOM	0	0	0
	PAR	0	4	0
	URU	0	0	0
REC	BRA	1	3	0
TOTAL		126	202	0

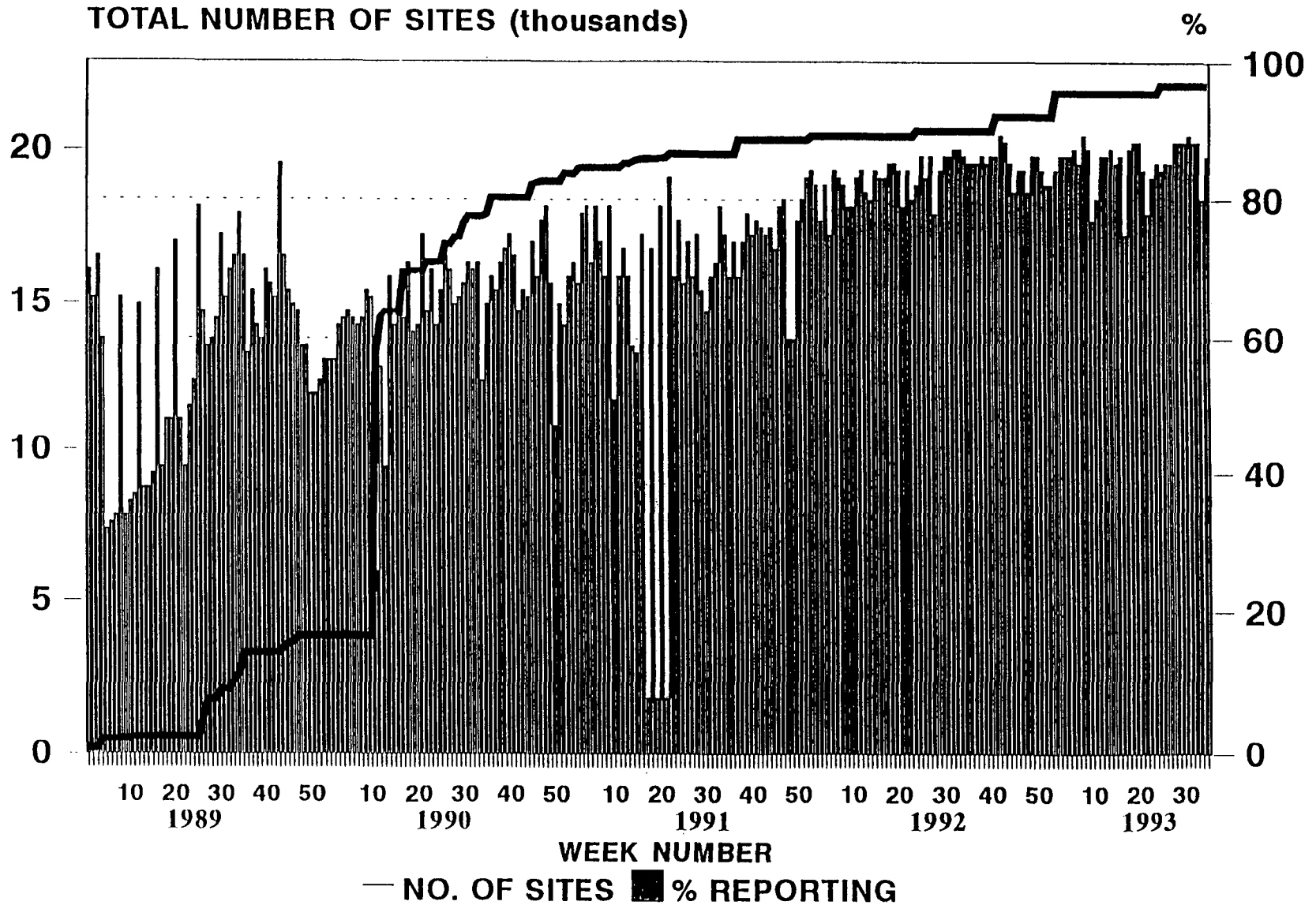
Contact samples only

Table No. 2
Status of Poliovirus Pending Intratypic Differentiation
Last 52 Weeks (92/38 - 93/36)

LAB	COUNTRY	POLIOVIRUS												TOTAL
		NOT YET IN LAB				IN LAB < 4 Wks				IN LAB > 4 Wks				
		P1	P2	P3	MIX	P1	P2	P3	MIX	P1	P2	P3	MIX	
	MEX	0	0	1	1	0	0	0	0	0	0	0	0	2
	PER	0	1	0	0	0	0	0	0	0	0	0	0	1
CDC	ELS	1	0	0	0	0	0	0	0	0	0	0	0	1
	MEX	0	0	0	0	0	0	0	0	0	0	1	1	2
	NIC	0	0	0	0	0	0	0	0	0	0	1	0	1
FIO	BRA	0	0	0	0	0	0	1	0	0	0	0	1	2
TOTAL		1	1	1	1	0	0	1	0	0	0	2	2	9

Case samples only

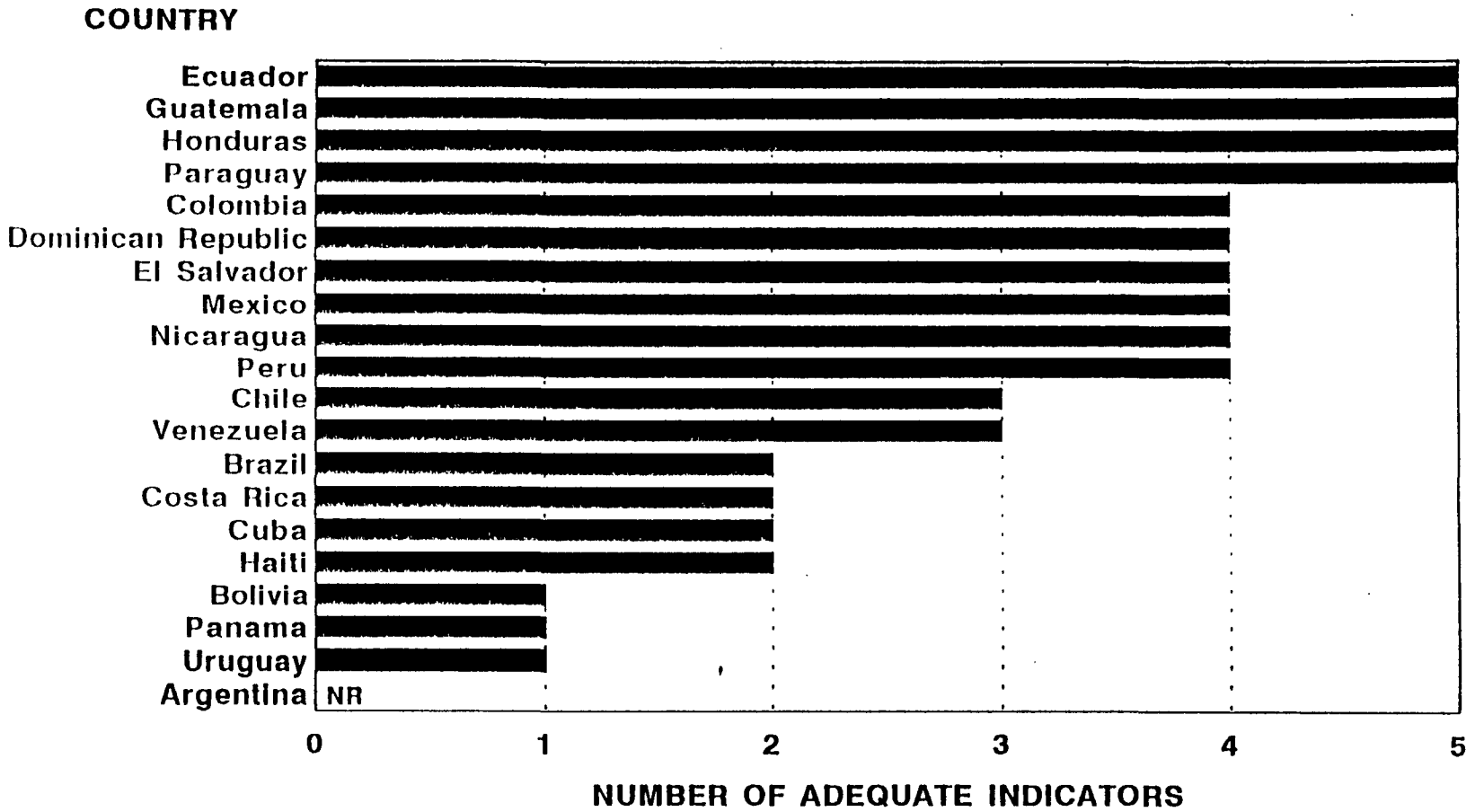
NUMBER OF ACUTE FLACCID PARALYSIS NEGATIVE NOTIFICATION SITES REPORTING WEEKLY, LATIN AMERICA, 1989-1993*



* DATA AS OF 4 SEPTEMBER

SOURCE: PAHO

ACUTE FLACCID PARALYSIS SURVEILLANCE INDICATORS MEETING CERTIFICATION CRITERIA BY COUNTRY, LATIN AMERICA, 1993*



* DATA AS OF WEEK 21 AUGUST
SOURCE: PESS
NR - NO DATA RECEIVED

TABLE 1
VACCINE COVERAGE IN CHILDREN UNDER ONE YEAR OF AGE IN THE REGION OF THE AMERICAS, 1991-1992

SUBREGION/ COUNTRIES	CHILDREN <1 YR OF AGE		DPT		OPV		MEASLES		BCG	
	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992
ANDEAN REGION	2,435,297	2,399,603	71.16	77.00	77.01	81.48	66.20	73.22	83.77	88.07
BOLIVA	218,874	190,334	58.33	77.33	66.76	83.55	72.85	79.78	66.69	85.84
COLOMBIA	773,351	812,210	84.22	77.00	90.76	84.00	77.74	74.00	95.17	86.00
ECUADOR	327,138	276,201	59.26	83.39	61.77	83.06	53.73	66.31	82.56	99.00
PERU	603,700	610,250	71.04	82.94	74.35	84.56	59.73	83.25	78.52	85.22
VENEZUELA	512,234	510,608	64.65	66.32	73.50	72.16	61.53	61.31	80.82	81.84
BRAZIL	4,020,070	3,764,655	73.01	68.76	95.00	96.21	79.62	83.68	81.16	62.68
CENTRAL AMERICA	1,022,522	1,031,747	72.52	73.57	76.30	77.33	62.95	68.23	68.79	72.48
BELIZE	7,328	6,500	82.61	89.45	90.21	89.15	77.61	83.18	90.94	99.47
COSTA RICA	80,296	80,167	88.62	91.58	88.42	91.63	94.82	85.21	80.12	83.07
EL SALVADOR	190,636	191,119	59.87	60.55	60.13	61.57	52.37	55.38	66.13	62.25
GUATEMALA	346,092	355,713	63.13	64.48	69.26	68.72	49.49	57.82	42.93	55.48
HONDURAS	184,450	184,564	93.88	92.75	93.31	94.50	85.82	88.73	100.00	91.49
NICARAGUA	151,095	151,635	70.93	74.00	83.04	85.80	53.94	73.00	75.12	81.00
PANAMA	62,625	62,044	81.73	82.48	81.87	83.41	79.69	71.32	86.36	99.00
ENGLISH CARRIBEAN	130,870	131,468	84.32	84.29	84.94	81.70	85.13	71.78	92.79	89.91
ANGUILLA	154	168	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
ANTIGUA AND BARBUDA	1,262	1,283	94.45	100.00	97.39	100.00	87.00	92.36	-	-
BAHAMAS	6,000	6,297	91.80	89.04	91.17	88.98	93.20	84.75	-	-
BARBADOS	4,310	4,192	82.27	90.63	83.67	89.05	92.00	90.17	-	-
CAYMAN ISLANDS	456	562	96.62	96.98	96.41	96.98	90.06	99.29	80.55	80.07
DOMINICA	1,619	1,652	95.00	98.35	94.01	98.35	98.46	99.27	98.33	98.97
GRENADA	2,585	2,429	84.68	90.45	81.36	89.91	96.02	70.07	-	66.04
GUYANA	17,000	18,137	84.18	79.27	83.62	87.19	80.80	73.37	91.62	87.62
JAMAICA	59,606	59,879	83.39	82.36	85.67	74.19	77.00	63.29	94.37	98.80
MONTSERRAT	173	203	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
SAINT KITSS AND NEVIS	976	898	100.00	100.00	100.00	100.00	100.00	99.22	-	-
SAINT LUCIA	3,652	3,669	95.62	94.99	95.48	94.99	86.53	72.39	92.96	98.69
SAINT VINCENT AND THE GRENADINES	2,457	2,108	99.02	100.00	98.98	100.00	100.00	100.00	100.00	100.00
SURINAME	9,000	9,000	74.47	73.60	71.57	71.46	84.00	54.33	-	-
TRINIDAD AND TOBAGO	20,980	20,351	82.40	86.72	81.35	87.41	99.71	84.92	-	-
TURKS AND CAICOS ISLANDS	290	300	100.00	67.67	100.00	88.67	99.31	59.00	100.00	100.00
BRITISH VIRGIN ISLANDS	350	340	98.00	100.00	95.14	100.00	83.71	76.47	90.00	100.00
LATIN CARIBBEAN	400,601	405,482	70.34	63.99	72.42	63.39	86.97	84.91	76.98	79.62
CUBA	173,896	173,896	100.00	85.28	96.91	90.04	100.00	97.70	97.94	88.45
DOMINICAN REPUBLIC	226,705	231,586	47.45	48.01	53.64	43.39	75.30	75.30	60.90	72.98
HAITI	-	-	-	-	-	-	-	-	-	-
MEXICO	1,933,394	2,122,711	77.90	91.30	94.60	92.00	91.00	91.50	67.70	84.80
NORTH AMERICA	883	960	-	-	-	-	-	-	-	-
BERMUDA	883	960	81.88	76.04	81.88	77.08	83.47	71.04	-	-
CANADA	-	-	-	-	-	-	-	-	-	-
UNITED STATES OF AMERICA	-	-	-	-	-	-	-	-	-	-
SOUTHERN CONE	1,209,248	1,164,722	84.23	83.83	87.42	85.76	100.00	88.79	100.00	98.00
ARGENTINA	710,511	719,550	80.78	79.70	86.03	82.50	100.00	88.80	100.00	99.00
CHILE	300,827	300,827	93.27	92.89	93.35	92.89	95.49	90.09	92.48	95.10
PARAGUAY	141,723	144,345	78.68	85.49	79.38	87.14	73.50	86.01	93.45	99.08
URUGUAY	56,187	-	93.65	-	93.65	-	93.76	-	98.76	-
TOTAL	11,152,885	11,021,348	74.66	76.95	87.54	87.94	79.74	81.91	80.27	78.07

- NO DATA AVAILABLE
Data as of 16 September 1993