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PLAN OF ACTION FOR THE ERADICATION OF INDIGENOUS TRANSMISSION OF WILD POLIOVIRUS FROM THE AMERICAS BY 1990

This progress report by the Director reviews the actual situation for the Expanded Program on Immunization (EPI) in the Americas and the efforts being made by Member Countries to eradicate the transmission of wild poliovirus from the Western Hemisphere by 1990. It points out that less than three years are left before the target date and considerable efforts should be made if the goals are to be met.

It is emphasized that momentum, interest and commitment on the part of many countries appear consistent with meeting the goal of eradication of polio by 1990. However, such commitment is not present in all countries and some critical program elements have not been adequately implemented.

The report indicates that overall program strategy for the eradication of polio remains unchanged: a) achieving and maintaining high vaccination coverage; b) intensive surveillance and active case investigation; and c) aggressive outbreak control.

It summarizes the recommendations of the PAHO-EPI Technical Advisory Group (TAG), which stresses that for achieving high vaccination coverage, the Plan of Action for the Eradication of Polio from the Americas by 1990, approved by the XXXI Meeting of the PAHO Directing Council in 1985, is still appropriate. The Plan of Action indicates that those countries that are still endemic for polio should hold, routinely, at least twice a year with intervals of 6 to 8 weeks, national vaccination days with trivalent oral poliovaccine (OPV), to assure rapid increase in coverage and interruption of wild poliovirus transmission. This opportunity should be used for inclusion of other EPI vaccines, such as DPT, TT and measles, so that overall EPI coverage is increased.

Finally, the report suggests that surveillance systems must be designed to obtain information from all health units where polio cases are likely to be seen and that they should report on a weekly basis, regardless of whether or not cases have been seen, and stresses the role of laboratory support in order that specimens that are timely and properly collected and shipped are adequately processed and analyzed.

Thus, the progress achieved so far indicates that the goals of EPI of universal childhood immunization and polio eradication are achievable as set forth by Resolution CD31.R22 of the XXXI Meeting of the PAHO Directing Council, but that concerted efforts by Member Countries will be necessary if the target is to be met by 1990. Given this situation, the 101st Meeting of the Executive Committee is requested to review carefully this progress report; to consider how best to encourage each Member Country to strengthen its efforts; and to recommend to the Directing Council that it endorse the recommendations of the Technical Advisory Group (as presented in Section 4 of this report).

CONTENTS

PLAN OF ACTION FOR THE ERADICATION OF INDIGENOUS TRANSMISSION OF WILD POLIOVIRUS FROM THE AMERICAS BY 1990

1. Introduction

The Expanded Program on Immunization in the Americas continues to make progress towards the 1990 target of providing immunization to all children of the Region and eradicating the indigenous transmission of wild poliovirus from this Hemisphere by that date.

Major activities being implemented at country and regional levels are related to the acceleration of immunization programs and the strengthening of surveillance systems for prompt detection of suspected cases of poliomyelitis, case investigation and immediate institution of control measures.

Coordination amongst the agencies that are supporting the program in the Americas, namely PAHO, UNICEF, USAID, IDB and Rotary International, and, since the end of 1987, the Canadian Public Health Association (CPHA), have provided the setting for smooth implementation of the programs at regional and country levels. Intensive efforts at country level in the area of program planning and financial analysis produced national work plans for the five-year period 1987-1991 for every country in the Region. These work plans are now the framework for program implementation and interagency coordination in support of the country programs.

2. Progress to Date

2.1 Vaccination Activities

2.1.1 Vaccination Coverage

In the Region of the Americas vaccine coverage rates for BCG vaccine in children less than one year of age increased between 1986 and 1987 and remained at approximately the same levels for DPT, polio and measles vaccines during the same period (Figure 1 and Table 1). Coverage with trivalent oral poliovaccine (OPV) reached nearly 80% for the first time in 1986 and remained at the same level for 1987.

In the Caribbean subregion, the majority of the country coverage rates for DPT and trivalent OPV are equal to or above 80% (Figure 2). For measles vaccine, Jamaica, Guyana, Trinidad and Tobago, and Turks and Caicos Islands reported rates lower than 50%.

In Central America, vaccine coverage rates with all the EPI antigens, with the exception of BCG, registered a decline between 1986 and 1987.

In Central America, vaccination coverage varies from above 80% for DPT and polio in Belize, Costa Rica and Nicaragua, to below 40% in Guatemala. However, in the Andean subregion OPV, measles, BCG and DPT

Table 1

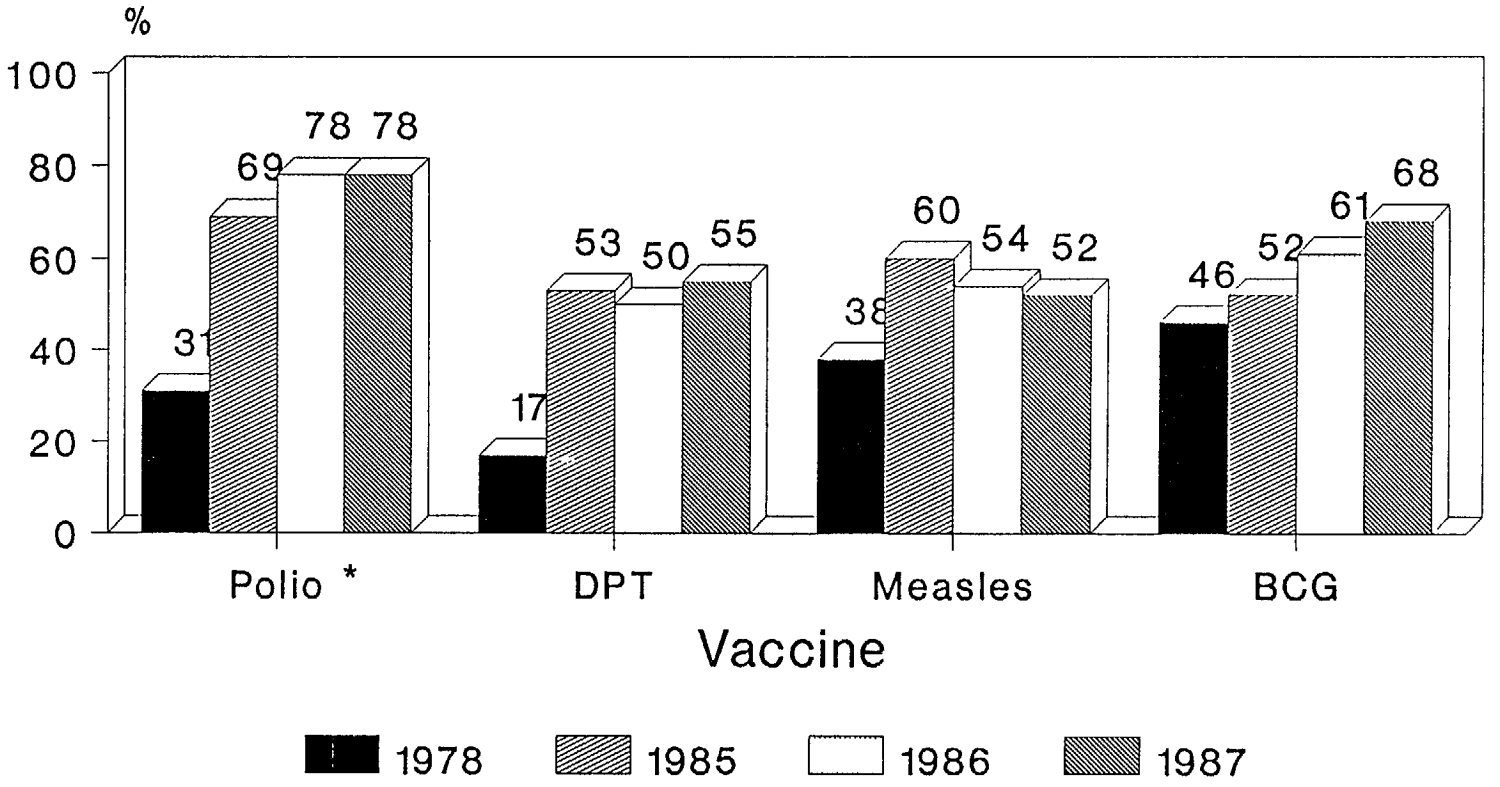
VACCINATION COVERAGE IN CHILDREN UNDER ONE YEAR OF AGE
REGION OF THE AMERICAS, 1987

COUNTRY	DPT 3rd dose %	POLIO 3rd dose %	BCG %	Measles %
LATIN AMERICA				
Argentina	...	...	...	...
Bolivia	24	28	31	33
Brazil	56	88[1]	67	54
Chile	93	95	97	92
Colombia	58	82	80	59
Costa Rica	91	89	81	43[3,4]
Cuba	87	86[1]	96	99
Dominican Republic	80	79	...	71
Ecuador	51	51	85	46
El Salvador	53	57	55	48
Guatemala	16	18	34	24
Haiti	28	28	45	23
Honduras	58	61	66	57
Mexico	62	97[1]	71	54
Nicaragua	43	85	93	44
Panama	73	74	89	78
Paraguay	58	42	66	56
Peru	42	45	61	35
Uruguay	...	...	...	...
Venezuela	...	...	...	...
CARIBBEAN				
Anguilla	92	99	99	81
Antigua & Barbuda	97	99	--	89
Bahamas	...	...	...	...
Barbados	79	68	...	...
Belize	69	69	92	64
Bermuda	89	89	--	83[2]
British Virgin Islands	96	99	77	80
Cayman Islands	90	90	76	91[2,4]
Dominica	95	95	98	87
Grenada	80	81	--	77
Guyana	67	77	69	52[4]
Jamaica	81	82	92	62
Montserrat	96	96	99	78[2]
St. Christopher/Nevis	96	98	--	91
St. Lucia	85	86	89	81
St. Vincent/Grenadines	97	96	90	91
Suriname	71	70	--	70[2]
Trinidad & Tobago	79	80	--	68
Turks & Caicos Islands	99	99	99	92

Source: Country reports to PAHO
... Data not available
-- Vaccine not given in the National Program
1 Coverage based on two doses of OPV
2 MMR vaccine is used
3 MR vaccine is used
4 Measles data correspond to children one year of age

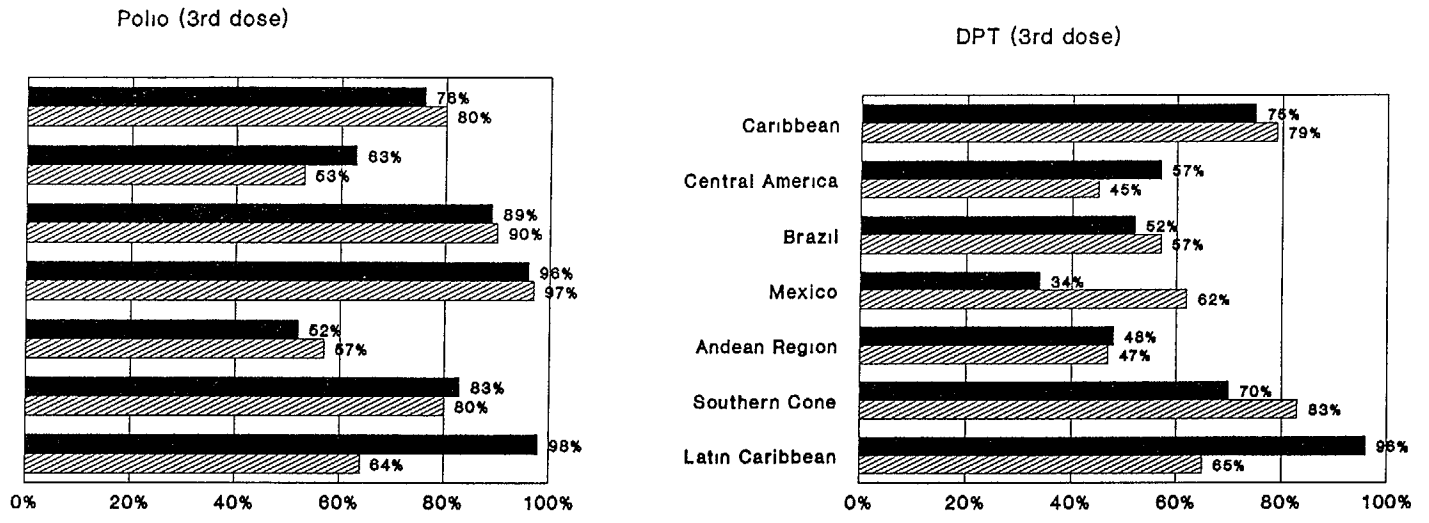
Figure 1

VACCINATION COVERAGE IN CHILDREN <1 YEAR OF AGE - 1978 AND 1985 TO 1987 REGION OF THE AMERICAS

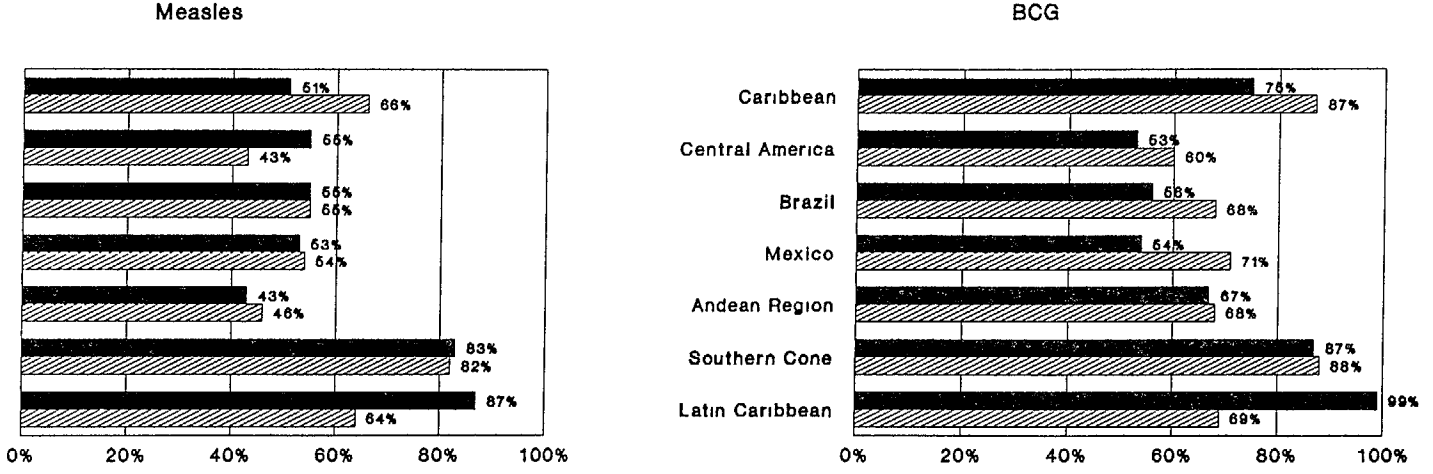


Source: PAHO
* Note: BRA, CUB, MEX & PAR coverage based on two doses.

Figure 2



Vaccination Coverage in Children <1 Year of Age, 1986 & 1987



BRA,CUB & MEX OPV cov based on 2 doses
COR,NIC,CAY,GUY & SUR measles-1 yr old
Source PAHO (1987 data provisional)

coverage figures have remained the same and range from below 30% for Bolivia to approximately 60% for Colombia and Venezuela.

In Brazil and Mexico, OPV coverage rates have improved considerably in 1987, in comparison with 1986. The countries of the Southern Cone (Argentina and Uruguay data not available for 1987) show approximately the same level of coverage with measles, DPT and polio vaccines.

In general, the countries of the Region are improving vaccination coverage as a result of EPI acceleration and the implementation of national vaccination days (NVDs). Yet much remains to be done if national immunization programs are to reach the EPI goal of provision of immunization services to 100% of children and of women of childbearing age by 1990 and the eradication of poliomyelitis by that date. Data for vaccination coverage with tetanus toxoid in women of childbearing age or pregnant are still not available at regional level.

2.1.2 National Vaccination Days

During 1987, 13 countries utilized the strategy of national vaccination days (Table 2).

For 1988, 14 countries have planned national vaccination days, and as seen in Figure 3 there was an increase in the number of countries utilizing this strategy since the polio eradication effort was initiated in 1985.

This strategy is recommended by the EPI Technical Advisory Group (TAG) for those countries that are endemic for polio. During these national vaccination days the opportunity is taken to include the other EPI antigens, thereby increasing immunization coverage for the overall EPI. This positive effect is already being observed in several countries, as shown in Figures 4 and 5, in which coverage has also increased for measles and DPT vaccines in some subregions, and also in Figure 6, in which dropout rates from 1st to 3rd dose of polio vaccine were reduced in El Salvador to less than 20% from a high of 75% before the NVDs were initiated.

2.2 Disease Surveillance

The continuous downward trend that was observed in the incidence of polio until 1984 was interrupted starting in 1985 when, due to increased surveillance activities, there was an increase in the number of reported cases (Figure 7 and Table 3).

By the end of 1987, 795 cases of poliomyelitis were reported from 12 countries, as compared with 535, 869 and 933 cases in 1984, 1985 and 1986 for 13, 15 and 13 countries, respectively (Table 3).

This decrease in reported poliomyelitis cases is attributed to a significant decrease in poliomyelitis activity in Brazil even though, with the exception of Guatemala and Haiti, all countries of the Region

Table 2

1987 NATIONAL VACCINATION CAMPAIGNS

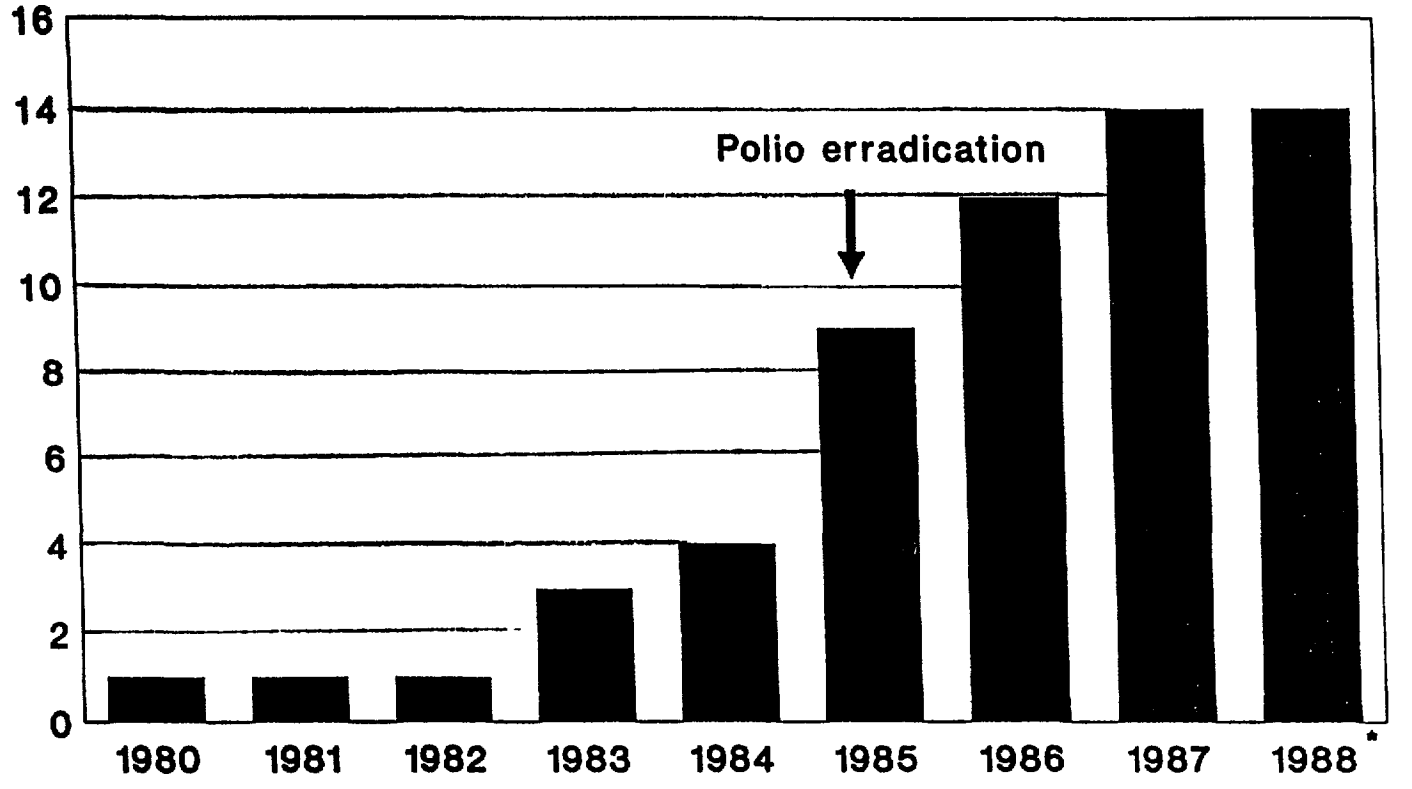
	MONTHS											
COUNTRY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Bolivia				12		12			4			
Brazil		21			23			15			14	
Colombia							25		26		9-14[a]	
Dominican Republic					22-30		21-25[b]				20-24[c]	
Ecuador						7		2		•[d]		
El Salvador		1	1	3								
Guatemala												
Honduras				25						9		
Mexico	24[e]		28[e]							•[d,f]		
Nicaragua		14-15		4-5	16-17							
Paraguay									26	7		
Peru									6	25		
Venezuela		9-13		27 to 8		15-19						

[a] Accelerated activities.
[b] Polio and DPT (<2 years).
[c] Measles (<2 years).
[d] Each province will determine a particular date.
[e] Polio and DPT.
[f] Measles.

Source: Telexes to PAHO.

Figure 3

NUMBER OF COUNTRIES HOLDING NATIONAL VACCINATION DAYS REGION OF THE AMERICAS, 1983-1988



Source: PAHO
• Planned

Figure 4

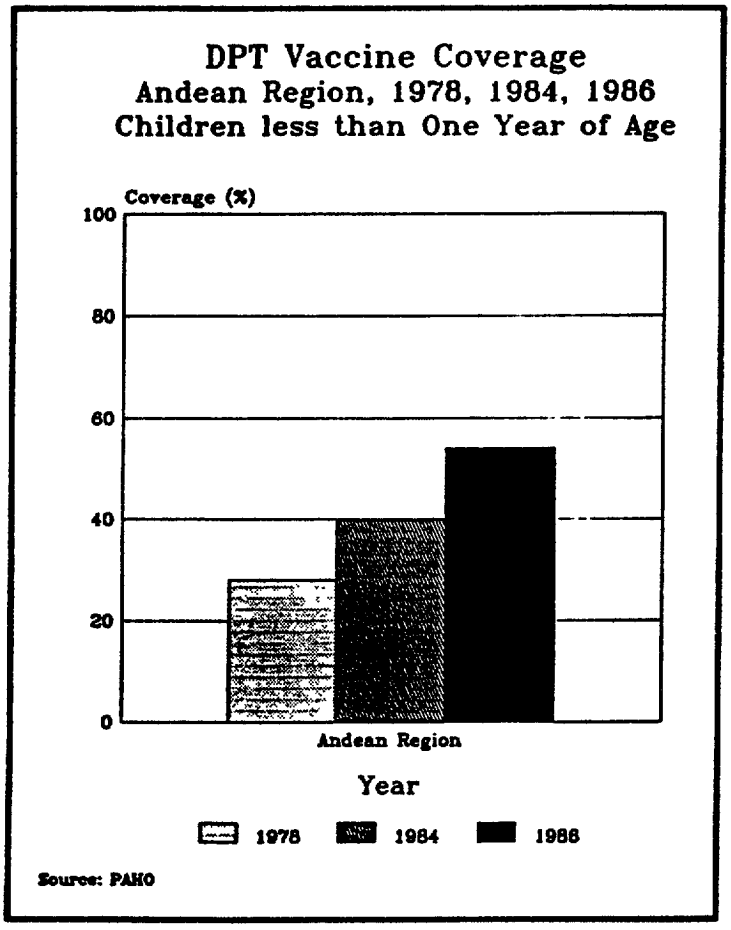


Figure 5

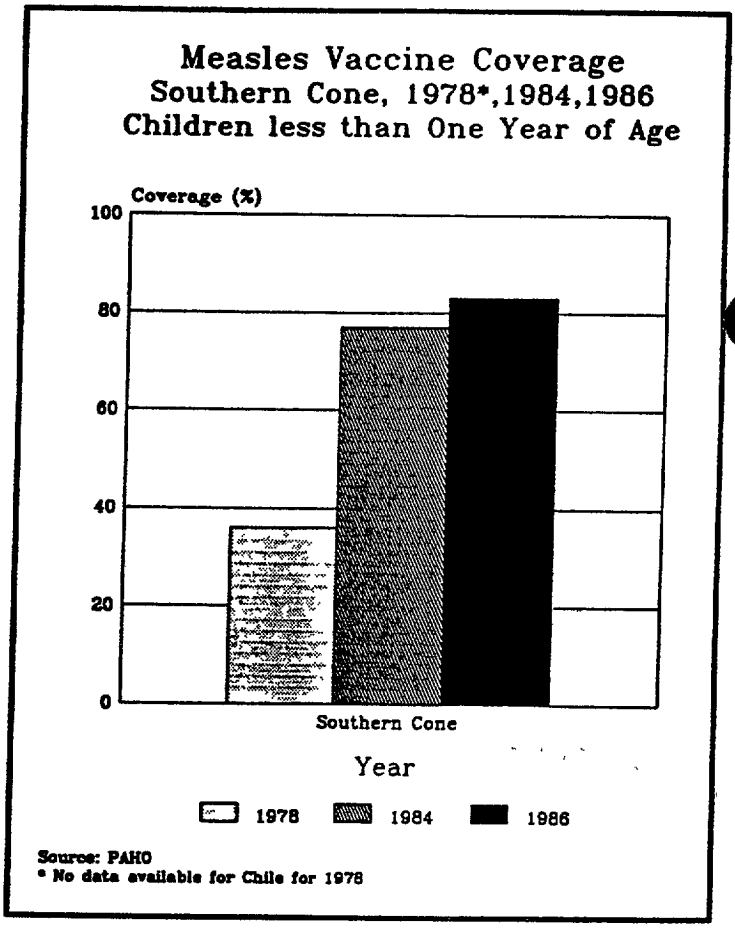
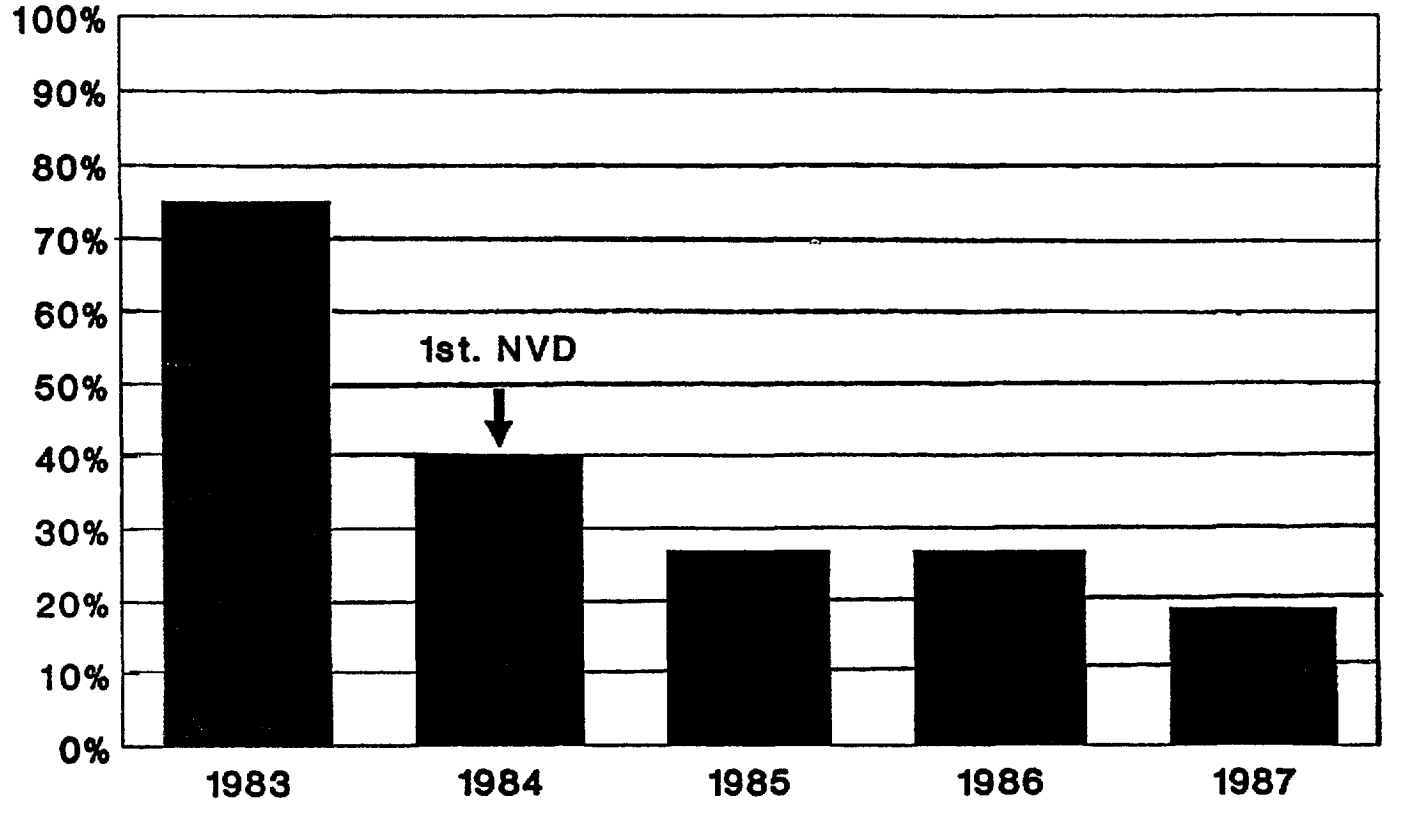


Figure 6

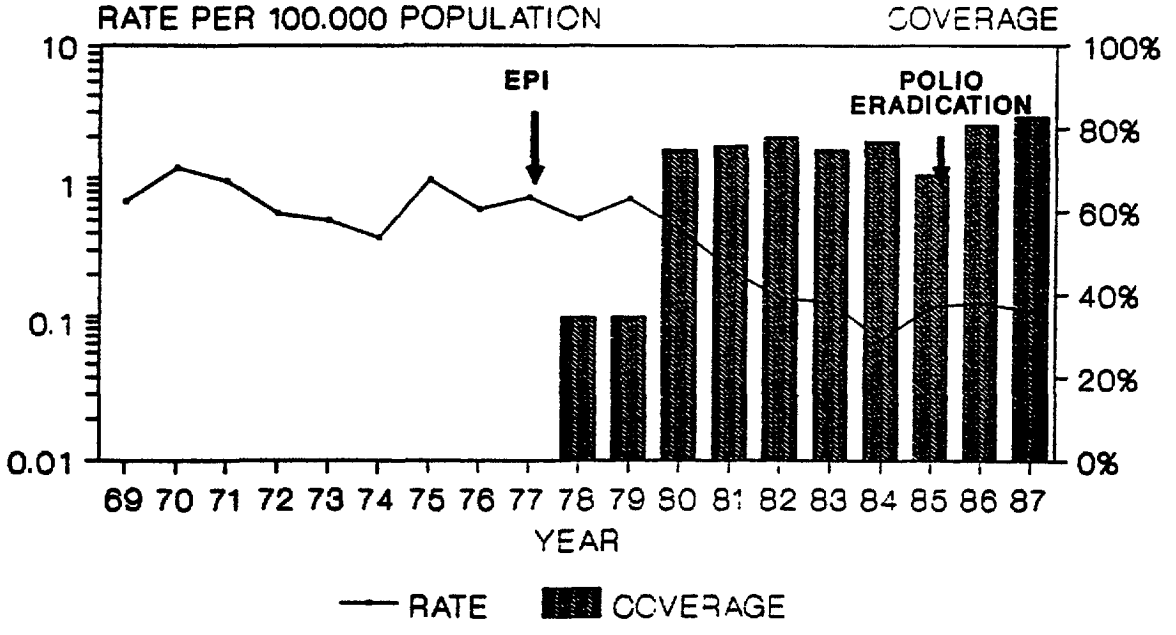
OPV DROPOUT RATES IN CHILDREN < 1 YEAR OF AGE EL SALVADOR, 1983-1987



Source: Ministry of Health, El Salvador

Figure 7

ANNUAL REPORTED POLIOMYELITIS MORBIDITY & OPV COVERAGE IN < 1 YEAR OF AGE AMERICAS, 1969 - 1987



SOURCE: PAHO
* ESTIMATED COVERAGE DATA

Table 3

REPORTED CASES OF POLIOMYELITIS, BY COUNTRY,
1984, 1985, 1986 AND 1987*
REGION OF THE AMERICAS

Country	1984	1985	1986	1987
Argentina	1	1	-	1
Bolivia	0	0	4	5
Brazil	82	461	612	345
Canada	1	1	-	-
Colombia	18	36	64	142
Dominican Republic	-	2	1	-
Ecuador	-	1	20	8
El Salvador	19	10	23	55
Guatemala	17	29	33	19
Haiti	63	90	34	12
Honduras	76	4	6	19
Mexico	137	148	66	67
Paraguay	3	3	0	-
Peru	102	67	39	54
United States	7	8	2	-
Venezuela	9	8	27	68
Total cases	535	869	933	795

- No cases
* Countries not listed have not reported any cases of poliomyelitis since 1984.
Source: PAHO

are reporting more cases than in the previous year (Figure 8). These changes can be observed in the poliomyelitis morbidity rates calculated for each country (Figure 9).

Because surveillance systems are still being developed, the interval between onset of symptoms of poliomyelitis and notification of the case is still above the maximum of two weeks set as an indicator of reporting efficiency. In 1987, the proportion of cases reported within two weeks after onset of symptoms ranged from 38% in Colombia to 60% in Peru (Table 4). For those countries with information available, Ecuador has the smallest average interval (16 days) and Peru has the highest: 44 days (Table 5). The delay in notification is attributed mainly to the reporting of cases found through active search activities, whose onset had not been picked up by the routine information system. The impact of active search on the number of cases reported can be seen in Figure 10, where the average number of cases reported in Mexico in the four weeks before and after active search increased from 1.5 to 3.5 cases.

A key element of the eradication program, in addition to early case notification, is the organization of proper containment activities. Up to now, in most countries containment activities are not performed on time and usually are not extensive enough to have an impact on stopping the circulation of the wild poliovirus. For example, in El Salvador in 1987 containment activities were carried out in only 26% of the probable poliomyelitis cases reported, and usually did not cover more than a small area around the cases.

To date, most of the cases are confirmed by the presence of residual paralysis 60 days after the onset of symptoms. Generally, all reported cases are followed-up for the verification of presence of residual paralysis, but delays in confirmation are frequent. In Peru, where 100% of the reported cases were followed-up in 1986, the average time between onset of disease and confirmation was four months. In Brazil, 38% of the cases were confirmed within two months but 39% were confirmed in three months or longer.

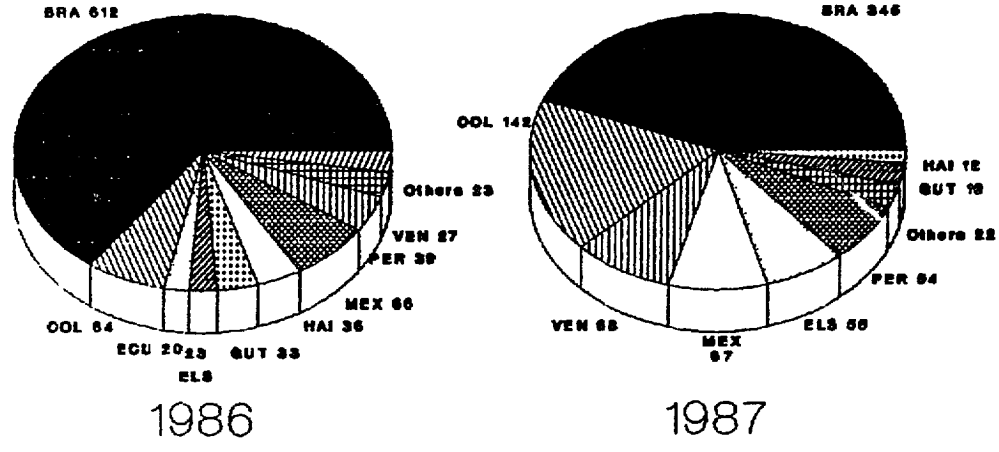
This data suggests that several indicators will have to be utilized simultaneously in order that the real improvements in the surveillance and control systems can be properly assessed.

The disease most frequently confused with poliomyelitis is Guillain-Barré Syndrome (GBS). This diagnosis represents at least one fifth of the discarded poliomyelitis cases occurring in children under five years of age (Table 6). To address this issue, a special task force was convened by the Director, and a research protocol was elaborated for implementation by various Member Countries.

On the other side, the decline in measles and pertussis has continued since 1984, although one has to be more cautious when interpreting the data on these two diseases as surveillance is not so developed as that for polio. However, the decline of cases in all the subregions is consistent with the respective increase in vaccination coverage shown previously (Figure 11).

Figure 8

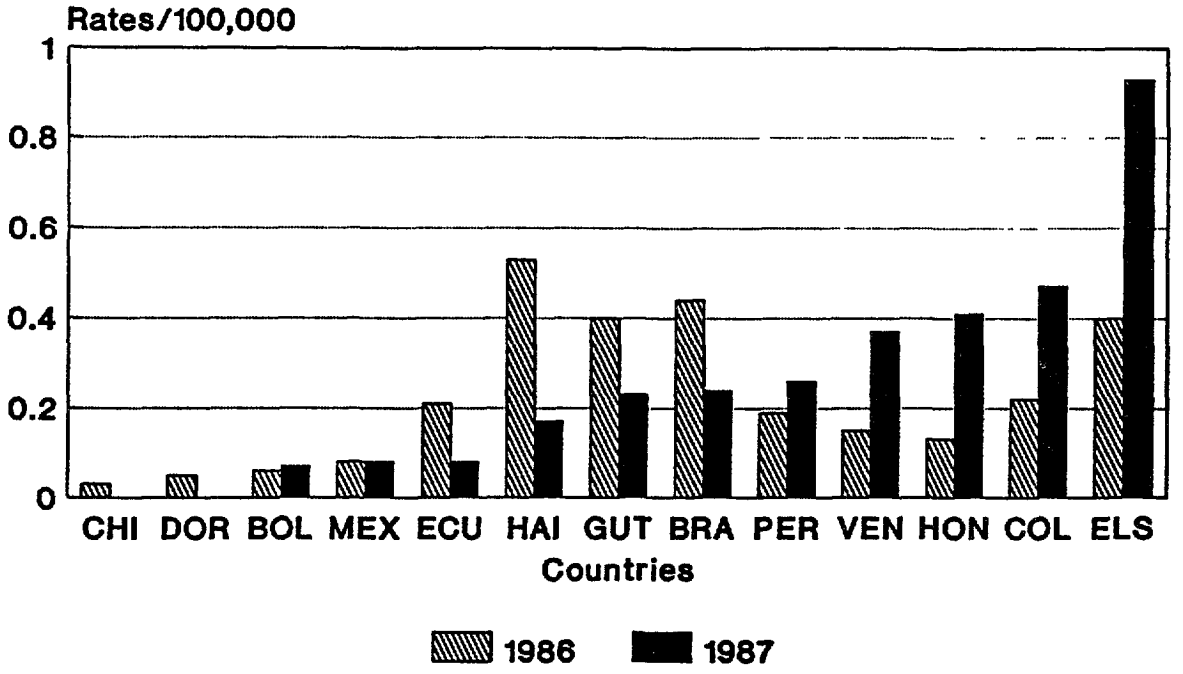
POLIO IN THE AMERICAS
PROPORTION CASES REPORTED BY COUNTRY
1986 and 1987



Source: PAHO

Figure 9

POLIO MORBIDITY RATES
REGION OF THE AMERICAS
1986 and 1987



Source: PAHO

Table 4

PROPORTION OF CASES REPORTED WITHIN 14 DAYS
AFTER ONSET OF SYMPTOMS 1986 AND 1987 (to week 39)
REGION OF THE AMERICAS

	1986 %	1987 %
BRA**	N.A.*	46
COL	46	38
ECU	79	45
ELS	54	41
GUT	60	N.A.*
HON	58	N.A.*
MEX	N.A.*	55
PER	51	60
VEN	47	38

* Data not available
** Proportion of cases reported within 7 days.

Source: PAHO

Table 5

AVERAGE INTERVAL, IN DAYS, BETWEEN ONSET OF SYMPTOMS
AND NOTIFICATION 1986 AND 1987 (to week 39)
REGION OF THE AMERICAS

	1986	1987
COL	25	38
ECU	14	16
ELS	40	26
GUT	25	N.A.*
HON	12	N.A.*
MEX	21	20
PER	58	44
VEN	41	29

* Data not available

Source: PAHO

Figure 10

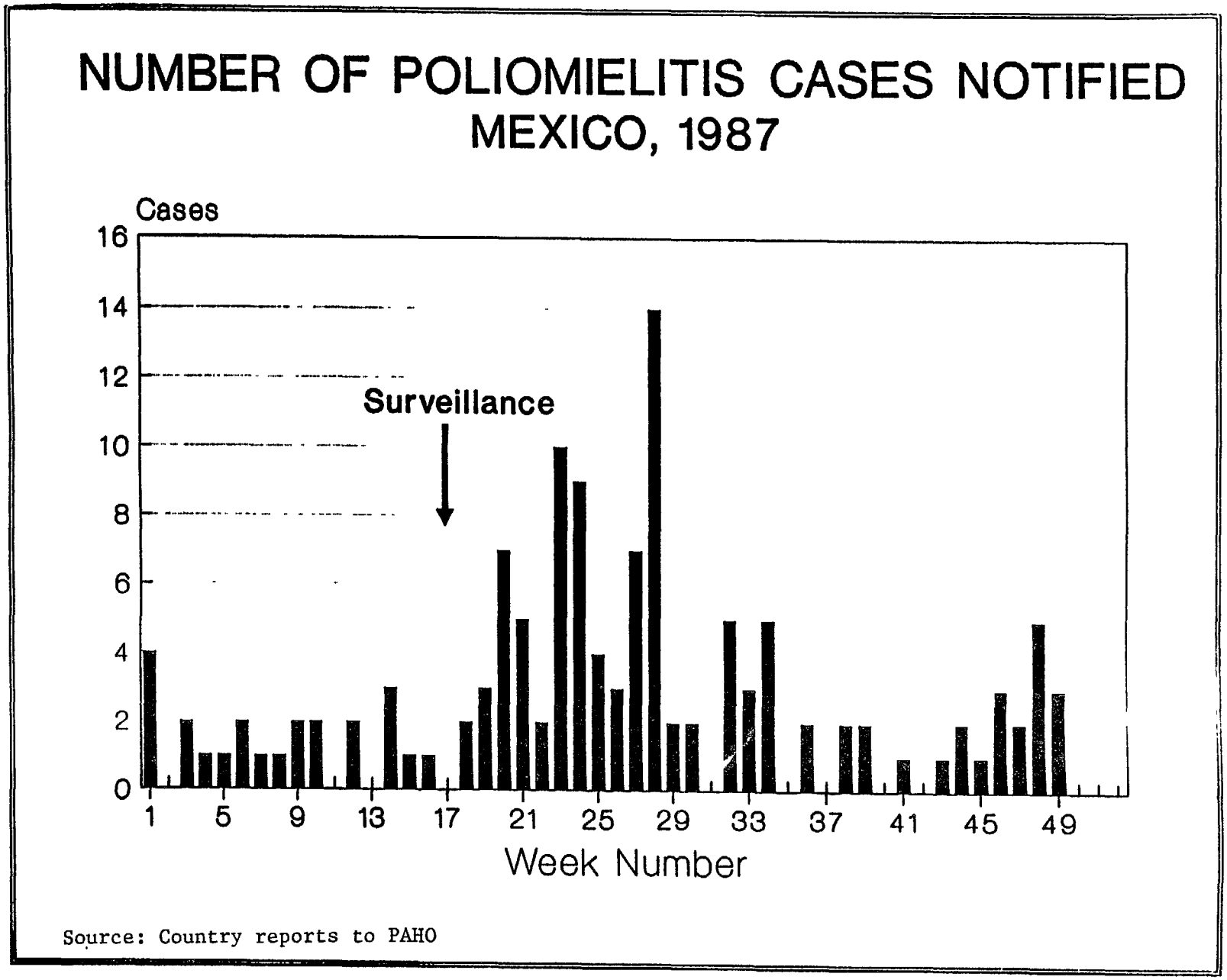

NUMBER OF POLIOMIELITIS CASES NOTIFIED
MEXICO, 1987
Cases
16
14
12
10
8
6
4
2
0
Surveillance
1
5
9
13
17
21
25
29
33
37
41
45
49
Week Number
Source: Country reports to PAHO

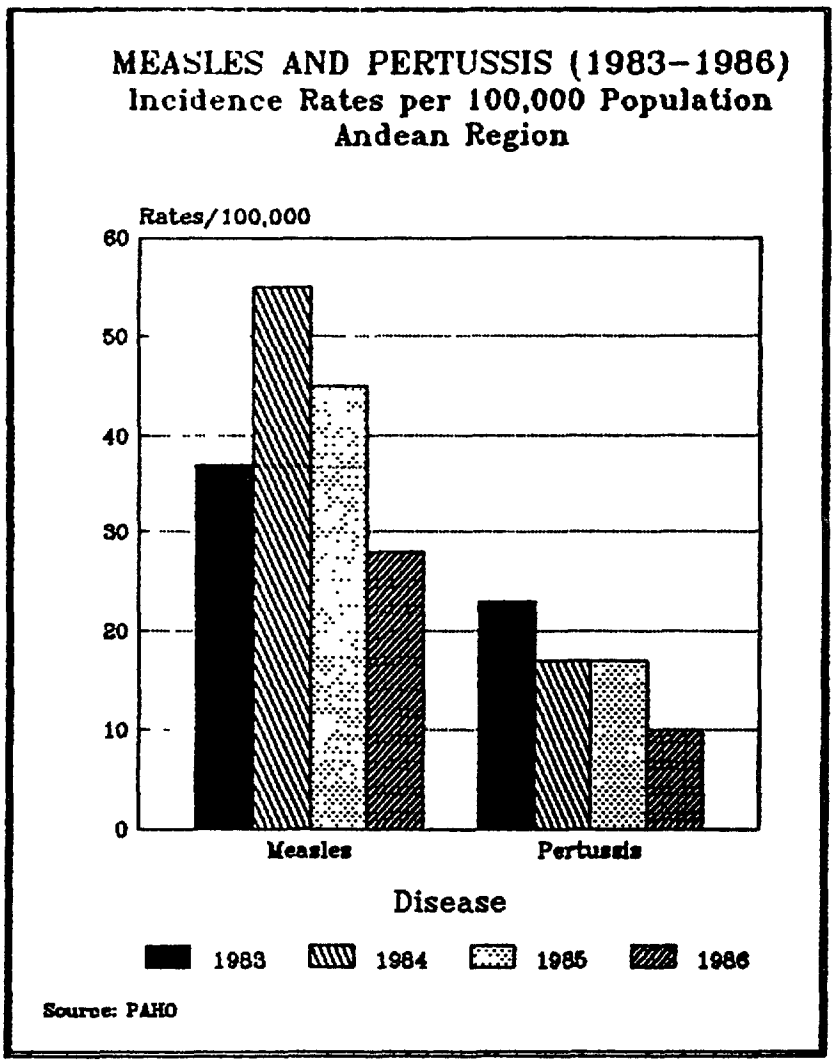
Table 6

PROPORTION OF CASES DISCARDED WITH GUILLAIN-BARRE SYNDROME
BY AGE GROUP
REGION OF THE AMERICAS

	PROPORTION CASES WITH GBS	AGE GROUP (Yrs.) 0-4	5-9	10-14
BRAZIL (1986)	15%	N.A.	N.A.	N.A.
EL SALVADOR (1986)	22%	1	3	0
MEXICO (1986)	25%	7	4	0
COLOMBIA (1987 to week 38)	21%	4	0	0
GUATEMALA (1987 to week 42)	47%	5	1	2

Source: PAHO

Figure 11


MEASLES AND PERTUSSIS (1983-1986)
Incidence Rates per 100,000 Population
Andean Region
Rates/100,000
60
50
40
30
20
10
0
Measles
Pertussis
Disease
1983
1984
1985
1986
Source: PAHO

2.3 National Plans of Action

As the initiative to eradicate polio for the Americas by 1990 got under way, several multilateral, bilateral and private sector agencies pledged strong support to the initiative. Besides PAHO, the agencies that strongly support the program are the Agency for International Development of the United States of America (USAID), UNICEF, the Inter-American Development Bank (IDB), and Rotary International and, since 1987, the Canadian Public Health Association (CPHA). The support is both political and financial, with pledges that total over US$85 million for a five-year period (Figure 12).

In order to assure optimal utilization of these resources and avoid duplication of efforts, these various agencies formed an Inter-Agency Coordinating Committee (ICC) with the aim of overseeing the implementation of the program at the regional level. This Committee met twice, in January and September 1987, to review progress and discuss any problem that may arise at a regional or country level in the process of implementing the Plan. Joint communiques were issued, covering, respectively, overall program coordination, social communication and policy and strategic approaches for the program.

As these additional resources generated by the program were made available, country programming and financial analysis became critical issues. It was evident that if program sustainability was to be assessed, it had to be possible to analyze the impact of a decline over the years in external inputs. For this purpose, a methodology for EPI national country programming that had been evolving in PAHO since 1981 was further elaborated, with inputs from the other ICC agencies. As a result, national plans began to be developed as of January 1987.

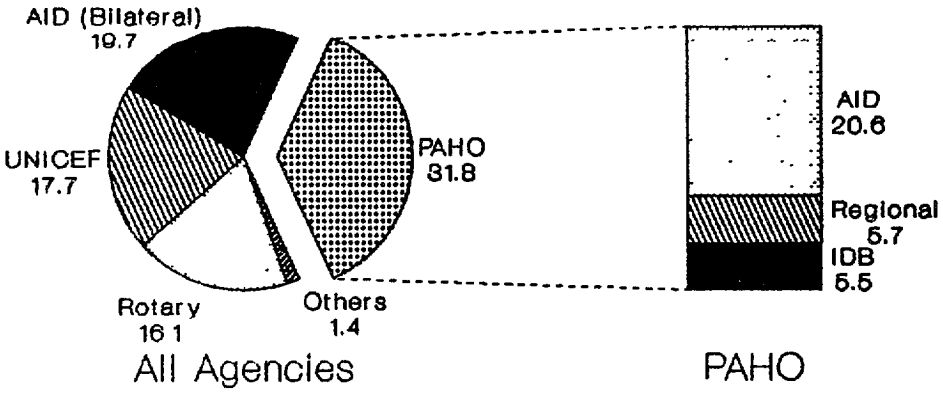
2.3.1 Methodology

The national plans include a narrative report, covering a five-year period (1987-1991) and stating the objectives and targets of the program, with strategies and tactics. A detailed analysis of activities to be implemented during the first year in the areas of action (biologicals, cold chain, training, social communication, operational costs, supervision, epidemiological surveillance, research and evaluation) is also included. For each activity there is an expected output and a timeframe for implementation. Furthermore, the responsibility for each activity is identified and the total cost in terms of capital or recurrent expenditure is defined. The cost of the activity is then analyzed by source of funding (national and/or external) and, for the external funding, a breakdown by agency is provided. An estimation of expenditures by each of these areas of action is then provided for the following four years.

The plan of action is originally elaborated by national authorities at the Ministry of Health. Once a draft is available, it is discussed by the Government and the ICC agencies, which then have the opportunity to comment, make suggestions and verify the possibility of financial support and their level of commitment by area of action.

Figure 12

EPI IN THE AMERICAS
Inputs from External Agencies*
1987-1991, US$ (millions)



* Provisional data
Source: PAHO

Once these discussions take place and a consensus is reached on the feasibility of the plan, a Memorandum of Understanding is signed between the Government and all ICC agencies for the implementation and support of the plan. This Memorandum of Understanding outlines the responsibilities of the Government as well as the responsibilities of each ICC agency during the five-year period covered by the plan. Furthermore, there is a provision for quarterly meetings of the ICC agencies with officials of the Ministry of Health in which the plan of action can be monitored and adjusted. At the end of each year, an evaluation is performed and an outline of detailed activities is prepared for the following operating year. Still, not all countries have yet signed the Joint Memorandum and are not taking advantage of the quarterly meetings for program coordination. Among these are Chile, Guyana, Haiti, Jamaica, Panama and Venezuela. It is important to note that this methodology is now being utilized for the coordination and programming of other health programs.

2.3.2 Preliminary Financial Analysis

Data is already available for 20 countries in Latin America and the Caribbean that have completed the programming process. These countries account for over 96% of the population of Latin America and the Caribbean. Over US$63 million were committed by the ICC agencies for the implementation of these national plans of action.

When national resources are added, the total estimated cost of these plans is in the order of over $450 million, 85% being national funds and 15%, external funds.

The proportion of external funds varies from a low of 4% in Brazil to a high of 48% in Bolivia, and nearly 75% of these inputs are related to capital expenditures, particularly the cold chain, transport, training, laboratories and social communication. Nearly 90% of the recurrent costs are being covered from national funds.

With the exception of Rotary International, which finances five-year supplies of oral polio vaccine, and other agencies (which account for less than 2% of the total external inputs), the funds from the other ICC agencies, PAHO, AID and UNICEF, are for capital expenditures (nearly 65% of the total external input).

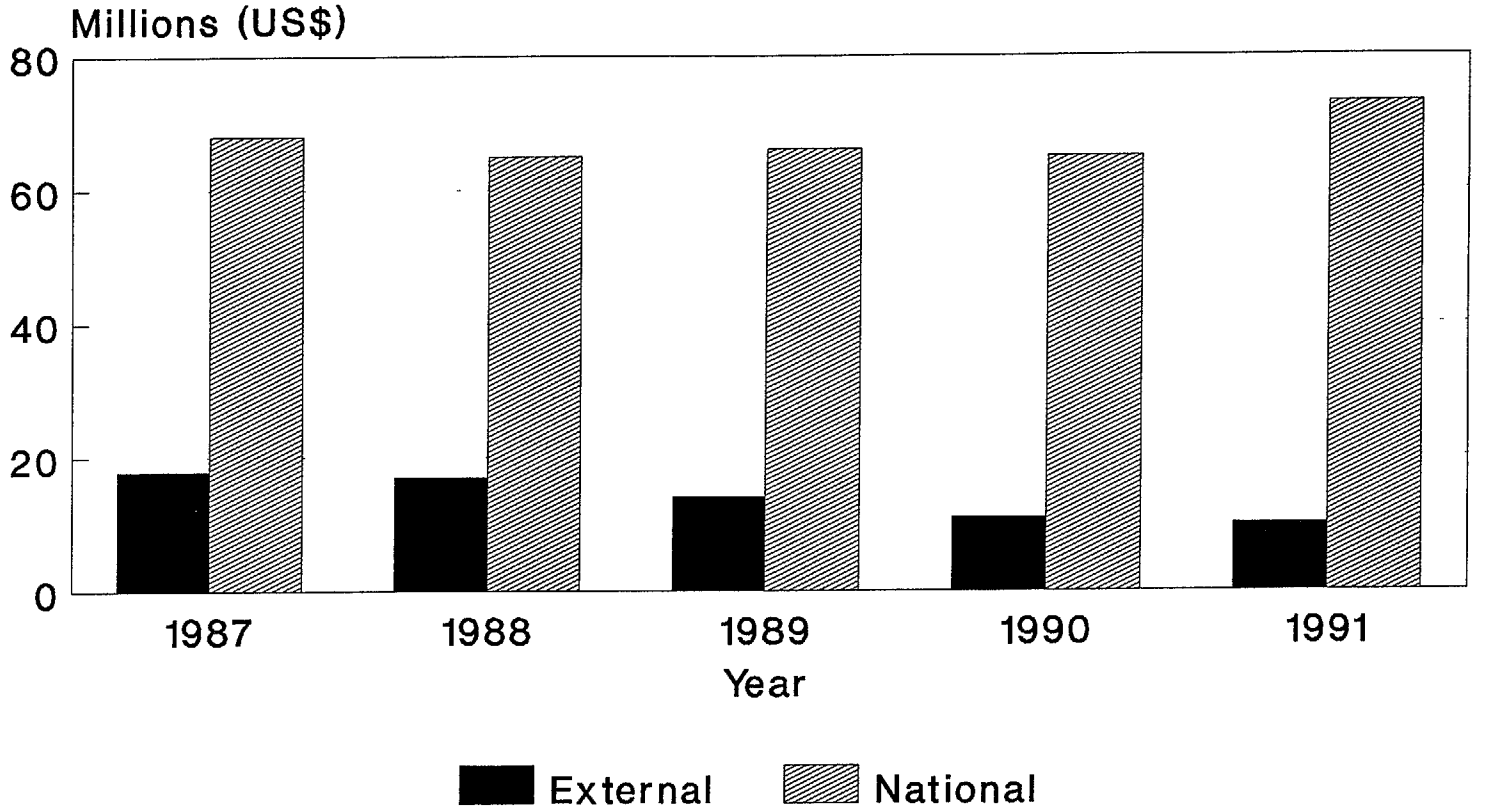
It is also interesting to note that as external funding declines in the fourth year and levels off in the fifth, the national expenditures tend to increase slightly (Figure 13).

These data suggest that it will be necessary to continue external funding beyond 1991, at levels similar to those which existed before the current accelerated immunization effort started. It is also important to note that there is a slight increase in national expenditures as the five-year period ends, suggesting the commitment of the Governments to the program and indicating that programs will be sustained.

As mentioned, this analysis is preliminary and as this programming and evaluation process continues, data will need to be refined. But it

Figure 13

EPI IN THE AMERICAS
EXTERNAL AND NATIONAL RESOURCES (US$)
1987 - 1991



Provisional Data (19 countries)
Source: PAHO

is important to note the level of commitment that the Governments and external agencies have so far displayed, and that this constitutes a reassurance that the goals of EPI and the eradication of polio from this Hemisphere could be reached by 1990.

2.4 Policy and Strategies

Following the overall policy of providing immunization to all children by 1990 and interrupting transmission of wild poliovirus from the Americas by 1990, the following strategic approaches are recommended for program implementation:

a) Issues related to the impact of EPI on disease reduction are to be stressed, with the level of success in reducing polio morbidity to zero becoming the most sensitive indicator of immediate program success. Therefore, a major feature of the Plan of Action is the utilization of the presence of poliomyelitis in a given country as the immediate indicator of poor performance of the EPI and determination of tactics for acceleration of efforts.

b) Following this criteria, the countries in the Region were classified into two major groups:

Group I: Polio-infected countries (those countries reporting indigenous cases of polio within the previous three years).

Group II: Polio-free countries (those countries reporting no indigenous cases of polio within the previous three years). This group was divided into two subcategories:

- Group II.A: Higher-risk countries (those which have vaccination coverages of less than 80% of children under one year of age in any of the previous three years, in any geopolitical unit).

- Group II.B: Lower-risk countries (those which have maintained vaccination coverages greater than 80% of children under one year of age in each of the previous three years, in all geopolitical units).

The Plan of Action's recommendations to achieve the goals of the EPI program, including the eradication of poliomyelitis, will vary depending upon each country's existing vaccination coverage, health infrastructure development, and level of poliomyelitis activity.

c) National vaccination days, to be held routinely at least twice a year, are recommended for countries classified in Group I.

Their success will require intensive planning of the logistics of both supply and demand and strong social mobilization, as stated in the "Joint WHO/UNICEF Statement on Planning Principles for Accelerated Immunization Activities," published in 1985. As of 1987, several Group I countries, such as Brazil, Bolivia, Colombia, Ecuador, Guatemala, Haiti, Mexico, Paraguay, Peru and Venezuela either were not implementing NVDs or were not utilizing all the EPI antigens in NVDs, thereby missing this opportunity for increasing overall EPI coverage.

d) The utilization of national vaccination days or similar tactics, which is the key for polio eradication and program acceleration, should be a complement to and not a replacement for the services offered by the basic health services, as also stated in PAHO's "Position Paper on Immunization Delivery in the Americas," published in September 1983.

In this connection, attention should be paid to extension and reinforcement of the infrastructure which could then guarantee the continuation of the services once these special efforts are discontinued. The decision for their discontinuation should be made only when the basic infrastructure is able to maintain the same level of coverage and impact in disease reduction, including the maintenance of polio-free status.

e) Furthermore, the Plan of Action and the reports of the five meetings held so far by the Technical Advisory Group have recommended and stressed that the national vaccination days should include the administration of DPT, measles and tetanus toxoid vaccines (for women of childbearing age), in order that this opportunity to increase coverage with all EPI antigens is not missed.

f) Trivalent oral poliomyelitis vaccine (TOPV) will be the primary means of achieving eradication of indigenous transmission of wild poliovirus in the Americas. The appropriate role of inactivated poliomyelitis vaccine (IPV) in the polio eradication effort in the Americas will be reviewed by the Technical Advisory Group on a continuing basis.

g) As national disease surveillance systems develop and cases or outbreaks of poliomyelitis are detected in periods in between national vaccinations days, immediate containment measures have to be instituted in the form of vaccination with TOPV. These containment measures can be geographically limited or very extensive, covering even an entire province, state or country, depending upon the epidemiological characteristics of the outbreak. To facilitate speed and logistics, a single antigen should be used during the implementation of containment vaccination for outbreak control.

h) Countries classified in Group II should make every effort to assure continuation of high levels of coverage and also intensify surveillance activities to assure maintenance of their polio-free status, and should aim at further control of measles and neonatal tetanus.

2.5 Interagency Coordination

Since the last review of EPI by the PAHO Directing Council in September 1986, the Interagency Coordinating Committee (ICC) has met twice, in January and September 1987. Two important statements were issued at these meetings. The first related to the joint reviews of the national plans of action and joint signature of agreements with the Governments for their implementation, and the second related to the implementation of a joint plan for social communication in support of EPI in the Region.

A third joint statement by ICC covers the issue related to the EPI policy and strategic approaches for the Region of the Americas. This statement emphasizes the issue of the impact of the program on disease reduction, the improvement of surveillance systems, the use of national vaccination days for increasing immunization coverage, and the utilization of the polio eradication initiative as the opening wedge for the development of the EPI.

Interagency coordination will play an increasingly important role in developing sustainable immunization programs during the rest of this decade and beyond 1990.

3. Technical Advisory Group Reports

The Technical Advisory Group (TAG) met five times since the initiation of the activities towards polio eradication. Reports of these meetings were widely circulated. Due to the importance and relevance of its last meeting, held in Lima, Peru, 26-29 January 1988, the following section will deal with the recommendations of that meeting, which the Executive Committee is requested to endorse.

4. Recommendations of the Fifth Technical Advisory Group Meeting

Substantial progress has been made since the countries of the Americas resolved in 1985 to eradicate polio from the Hemisphere by 1990. Many countries have improved the quality of their information systems. Reported overall coverage for polio vaccine reached over 80% in 1986 and 1987. Despite increasing surveillance activities, the total of reported cases of paralytic polio actually decreased in 1987. While the reported number of cases increased in 1987 over 1986 in some countries, the increase was not unexpected given the intensification of surveillance.

Momentum, interest, and commitment on the part of many countries would appear consistent with meeting the goal of polio eradication by 1990. However, such commitment is not present in all countries and some critical program elements have not been adequately implemented.

Less than three years remain to the target date for polio eradication. Each country should assess the current status of its program without delay to determine what changes in program elements should be made to accelerate progress towards this goal. The strategy for eradication remains unchanged: a) achieving and maintaining high vaccination coverage; b) intensive surveillance and active case investigation; and c) aggressive containment.

As for achieving and maintaining high vaccination coverage, the TAG believes that the Plan of Action for the Eradication of the Indigenous Transmission of Wild Polio Virus from the Americas by 1990 is still appropriate.

Many of the conclusions and recommendations above and those that follow have been made in previous TAG reports but bear repeating because they remain fundamental components of the polio eradication effort and because many have not been fully implemented.

4.1 Vaccination Strategy and Coverage

a) National vaccination days with trivalent OPV should be adopted by those countries classified as infected with polio. This is the most effective strategy for prompt interruption of wild poliovirus transmission.

b) NVDs should include the administration of DPT, measles, and tetanus toxoid (for women of childbearing age) to gain maximum health benefit from resources expended. Every effort should be made to ensure NVDs help to strengthen the entire EPI and lead to development of permanent, ongoing immunization services.

c) The continuing occurrence of cases in peri-urban areas of many countries deserves special attention. These areas undoubtedly represent reservoirs of infection from which disease spreads to rural areas. Special intensive vaccination campaigns that target these areas are warranted.

d) Advantage should be taken of every opportunity for vaccinating children and women of childbearing age. Immunization should be offered to every eligible child during every visit for health care.

4.2 Surveillance and Investigation

Surveillance remains the key element in disease control and eradication and must continue to have top priority. The improvements in quality and quantity of surveillance information are noteworthy; however, very few countries yet have fully adequate systems.

a) Surveillance systems must be designed to obtain information on a weekly basis from all health units (including hospitals and

rehabilitation units) where polio cases are likely to be seen. Each unit should be required to report weekly regardless of whether or not cases have been seen. A roster of reports by site should be kept to monitor compliance. The reporting network, which should include both public and private health care facilities, should be fully operational in all countries by the end of 1988.

b) The case definitions/classifications developed by the TAG should be used in all countries for both surveillance and reporting. Uniform criteria for confirming cases should be used, following the guidelines developed previously. Specifically, the TAG continues to recommend that the following be classified as confirmed cases of polio for epidemiologic purposes:

   i) All cases of acute flaccid paralysis with laboratory confirmation of polio;

   ii) All cases of acute flaccid paralysis with residual paralysis at 60 days and without another specific diagnosis. Cases in persons under 15 years of age, diagnosed by clinicians as Guillian-Barre Syndrome (GBS) with residual flaccid paralysis at 60 days, should be classified as confirmed polio;

   iii) All cases of acute flaccid paralysis who are lost to follow-up or who die within 60 days of onset.

c) Containment activities should be undertaken after preliminary classification and should not wait for final assessment.

d) Final classification of cases must be made no later than 10 weeks after onset.

e) The difficulties in differentiating polio from GBS indicate the need for prospective studies of the clinical and epidemiologic characteristics of both, with the objective of developing a more specific case definition for polio while maintaining sensitivity. Prospective evaluation is critical so appropriate clinical histories can be taken, laboratory specimens collected, and diagnostic tests such as nerve conduction studies and electromyograms (EMGs) obtained on all cases.

4.3 Laboratory Support

The laboratories play a critical role in the polio eradication effort. Rapid processing of specimens and feedback of results to epidemiologists and other health authorities are essential to surveillance and containment activities.

a) High quality and reliability is required of all laboratories in the network. The laboratories should be evaluated periodically by having them perform serologic studies in a blinded fashion on coded specimens prepared to have specified titers. Similar tests for viral isolation should also be performed.

b) If national laboratories are going to continue poliovirus work once the diagnostic laboratory network is operational, they must send duplicates of all polio specimens to the network laboratories.

c) Periodic meetings between epidemiologists and laboratory personnel should be set-up to assure all steps in the laboratory diagnosis, from specimen collection to reporting of results, and to integrate the diagnostic expertise of both epidemiologists and laboratory technicians in determining the presence or absence of polio.

d) The top priority for laboratories in the network is to determine whether the illness being evaluated is either confirmed as polio or not confirmed. Further studies to determine the precise etiology if the case is not confirmed as polio are of low priority.

4.4 Polio Vaccine Formulation

Preliminary studies in Brazil suggest that seroconversion to type 3 polio virus in trivalent OPV is low and that the low rate might be explained by the low quantity of the type 3 component, 300,000 $TCID_{50}$, in some vaccines. Low seroconversion was overcome in part by raising the concentration of type 3 to 600,000 $TCID_{50}$. The TAG recommends that, as soon as feasible, all purchases of trivalent OPV for the program contain approximately 600,000 $TCID_{50}$ of the type 3 component, which may help improve seroconversion rates in other countries to type 3.

5. Conclusions

Almost three years have elapsed since the announcement of the initiative in May 1985 to eradicate polio from the Americas by 1990. Less than three years are left before the targeted date.

Over the last three years, the PAHO Executive Committee and Directing Council have reviewed the progress of the program and the two groups that advise the Organization on this issue--ICC and TAG--have met, respectively, four and five times.

Progress achieved so far has been considerable, both at regional and country levels. Many countries have improved the quality of their information systems; reported overall coverage for polio vaccine reached 80% in 1986 and 1987; despite increased surveillance activities, the

total confirmed cases of paralytic polio have been under 1,000 in the last two years, and actually decreased in 1987 in comparison with 1986. While the number of cases increased in 1987 over 1986 in some countries, the increase was not unexpected given the intensification of surveillance.

The effort to eradicate polio has had a positive effect on the overall development of the EPI, and coverage for other EPI vaccines has increased in parallel with that for polio vaccine. The methodologies for program planning, coordination and evaluation utilized by EPI have been useful for other health programs and have been favorable to the overall process of decentralization and organization of the local health services.

However, the task is a difficult one and much remains to be done if the goals are to be reached. The major impediments to program success relate to political commitment, allocation of resources and adherence to program policies and strategies as set forth by the Regional Plan of Action and the recommendations of the various meetings of the ICC, TAG and the PAHO Directing Council.

The recommendations of the most recent TAG Meeting (January 1988) were presented in Section 4. Those recommendations emphasize that the program strategy remains unchanged and that to achieve program goals it is necessary, among other actions, to: a) maintain high levels of vaccination coverage; b) implement intensive surveillance and active case investigation; and c) institute agressive outbreak control.

To accomplish the above, national vaccination days must be implemented as a complement to the routine vaccination services, and surveillance systems will have to be further organized and strengthened.

The goals of EPI and polio eradication are achievable in the Region of the Americas, but additional efforts by Member Countries will be necessary if the target is to be met by 1990.