EPI Newsletter

Expanded Program on Immunization in the Americas

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Sustainable National Immunization Programs

The Pan American Health Organization (PAHO) and the countries in the Americas have sustained one of the most successful public health partnerships in immunization. The legacy of this partnership is a Region with the lowest morbidity and mortality record of vaccine-preventable diseases in the world. PAHO and the countries have collectively built a comprehensive network for immunization delivery and vaccine-preventable disease surveillance at the regional and country levels, with key support from the international community. This success is primarily attributed to the commitment of national health authorities in establishing national immunization programs, and in providing the necessary support to ensure their effective performance. Improved knowledge of diseases and new vaccine development has further allowed the Region of the Americas to introduce new vaccines of public health importance and to expand vaccination to other age groups.

The proven impact of vaccination programs in the Americas and their potential future contributions toward the reduction of ill health due to vaccine-preventable diseases have placed immunization goals prominently in the global agenda for sustainable development and poverty reduction. Immunization objectives are part of the Millennium Development Goals endorsed by all States of the United Nations, the international financial institutions' Poverty Reduction Strategies, and is one of three indicators being used by the United States government (United States Treasury Department) to assess aid effectiveness.

Immunization Programs in Critical Situations

Advances in immunization in the Americas are being challenged by severe economic crises in the Region, which have affected social programs, including immunization. Fluctuations in the allocation of resources resulting from economic downturns and uneven management of health reform and decentralization processes are jeopardizing the implementation of national immunization programs, potentially opening the way for higher costs in the case of an outbreak of a vaccine-preventable disease. These critical situations are occurring while countries seek to introduce new vaccines of public health importance in routine vaccination schedules.

Economic hardships have had a substantial impact on the delivery of routine vaccination programs even with the basic vaccines of the Expanded Program on Immunization (EPI). A few countries have incurred large debts with the PAHO Revolving Fund for Vaccine Procurement, leaving them without the ability to place new vaccine orders. These countries could face the dangerous

Hemispheric Goal of Rubella and Congenital Rubella Syndrome Elimination by 2010

The rapid reduction in disease burden which has resulted from the implementation of an accelerated rubella control strategy, combined with the extensive experience gained by the Region in vaccinating large and heterogeneous population groups, the availability of a safe, affordable and efficacious vaccine, the evidence on the cost-benefit of immunizing against rubella, and the ample support provided by the public and health authorities from countries, have paved the way for the decision to establish the goal of rubella and CRS elimination in the Americas by the year 2010. During its June session, PAHO's Executive Committee endorsed the goal of rubella and CRS elimination by 2010 and urged countries to draft national plans of action within one year, and for the Director of the Organization to elaborate a regional plan of action and mobilize resources in support of the rubella/CRS elimination goal.

In this issue:

Recommendations

- Given that ministries of finance are key decision-makers regarding country health budgets, efforts should be made to gain their support in identifying sustainable options to protect the investments made in immunizations, including, but not limited to, laws that establish specific budget lines for the purchase of vaccines, syringes, and operational costs. The availability of secure financing mechanisms for immunization programs at the country level needs to be principally driven by equity criteria.
- Health authorities should become familiar with the main sources of financing in their own countries that include domestic public funds, such as tax revenues and social health insurance, as well as private funds, such as resources from households and employers. Careful review of a country's level and composition of external domestic funding, comprised principally by official development assistance (bilateral and multilateral), either in the form of concessionary or regular lending, as well as by external private resources should also be undertaken. Countries also need to define the criteria that will differentiate the allocation of secured funding for immunization for budget support and funding to support immunization programs in unique circumstances or emergency situations.
- The link between improved accountability of immunization service delivery at the district/municipal level and the sustainability of immunization programs is critical. Countries should strengthen managerial capacity, knowledge and commitment to immunization goals at the municipal and local levels. To improve accountability and quality of work, regular educational supervision should be implemented and budgeted in all countries.
- Sustained funding for the implementation of information, education, and communication strategies is necessary to improve the community's knowledge about vaccination benefits and drive the demand for such services, especially for high-risk population groups.
- As a regional/international public good with important cross-border externalities, the dialogue of countries with the international community on immunization financing should include the development of new financial mechanisms supporting initiatives that are international in reach.
- The partnership of countries and the international community have played a decisive role in countries' attainment of immunization goals. Emphasis has so far been given to strengthening the State's ability to guide the delivery of effective immunization services. Partners have aided in the introduction of vaccines and program support, and Member States have had an incremental role in the funding of recurrent costs of immunization programs. This precedent in the relationship between countries and the international community has been standing policy for 25 years. The precedent is being challenged with the economic crises affecting a large portion of countries, and the restructuring of the way health systems are organized and financed at the country level. The continuation of the strong financial commitment by countries will require careful dialogue, coordination, and action with countries, as well as with partners in the international community, public and private alike. Only through the continuation of these collective efforts will the Region be able to protect the investments made in national immunization programs, and allow its population to benefit from a wider number of vaccines of public health importance.

situation of having no vaccines for regular operations. Others, forced to interrupt immunization activities due to insufficient vaccines, have found it difficult and more costly to track people for vaccination schedule completion once vaccines were back in stock. Missed opportunities for vaccination are occurring daily among the poor that lack affiliation with social security systems when they visit health services in search for free vaccination services. Immunization programs are suffering from lack of staff at all levels of the health system. Those who are in the system have lost key access to decision-makers.

New vaccines have increased the cost per immunized child for the six basic EPI vaccines from US$ 1 for the biologicals plus US$ 14 for administering the vaccine to approximately US$12 for the biologicals only. Additional costs associated with the incorporation of new vaccines include surveillance and cold chain, as well as the expertise to handle these new technologies. The sustainability of new or underused vaccine introduction is a matter of serious concern and has pressured several countries in the Americas to reconsider scheduled plans to add new vaccines due to a lack of sustained resources. Others have introduced new vaccines with support from the international community, only to pull them back once donor monies have ceased to flow. Furthermore, today there are still countries in the Region that find themselves totally unable to incorporate additional vaccines that have been on the market for over 15-20 years.

Parallel to the impact of economic crises on immunization programs in the Americas has been the impact of changes in the steering and delivery of national health programs due to health reform and decentralization. These systemic changes have proven to be a challenge for the effective and uniform implementation of national immunization programs. Particular areas where weaknesses are evident include local management of immunization delivery and surveillance areas, as well as aspects related to financial flows to the local level, and human resource management. Furthermore, local capabilities are not

in place to secure an ongoing flow of quality and standardized information on vaccine-preventable diseases throughout the health system.

Protecting country investments in immunization

Important breakthroughs in the fight against infectious diseases that can be prevented through vaccination have occurred in the Americas in the past 25 years. The proven impact of vaccination programs has placed immunization at the center stage of the global agenda for sustainable economic growth and poverty reduction. In order to safeguard the public health achievements and proven impact of national immunization programs, as well as enable their continued growth, countries and the international community need to identify and assess sustainable options to protect the investments made in immunization and ensure a steady flow of affordable vaccines to countries.

Source: Official document, *Sustaining Immunization Programs - Elimination of Rubella and Congenital Rubella Syndrome,* to be presented to the 44th Directing Council of the Pan American Health Organization, 22-26 September, 2003.

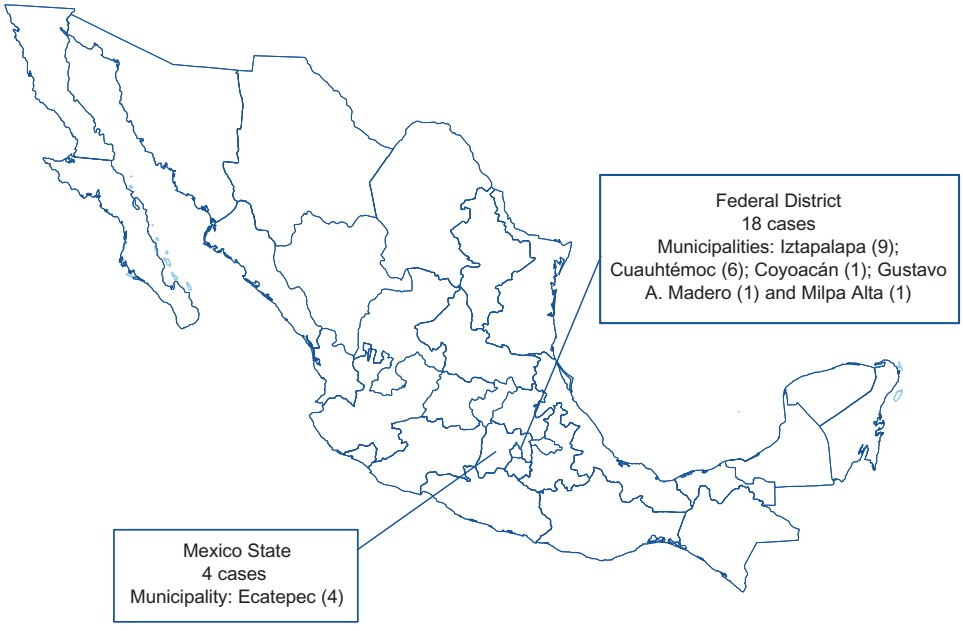
Importation of the H1 Measles Virus in Mexico City, April 2003

New measles cases were reported to the Epidemiological Surveillance System on Febrile Rash Illnesses (FRIs) in the Federal District (DF) and the States of Mexico and Hidalgo between April and July 2003.

The first known case of this outbreak occurred in Mexico City, the most populated urban area of the Americas, and had onset date of 13 April 2003; the last case had onset date of 4 July. Nineteen cases were laboratory confirmed, 15 of them in the DF and 4 in Mexico State. The total number of known cases is 22, with 3 cases (all in the Fedral District) being epidemiological contacts of confirmed cases (Figure 1). The source of infection could not be identified in 12 (55%) of the 22 cases. Based on the number of reported cases, it is assumed that the real number could have been 32 (22 known cases and at least 10 unknown). Serological diagnosis was performed using the ELISA test for detection of measles IgM at the national epidemiological reference laboratories of Mexico, InDRE (Instituto de Diagnóstico y Referencias Epidemiológicas), and at the Centers for Disease Control and Prevention (CDC), in the US. Furthermore, pharyngeal and urine samples were collected for culture and polymerase chain reaction (PCR) analysis at both institutions.

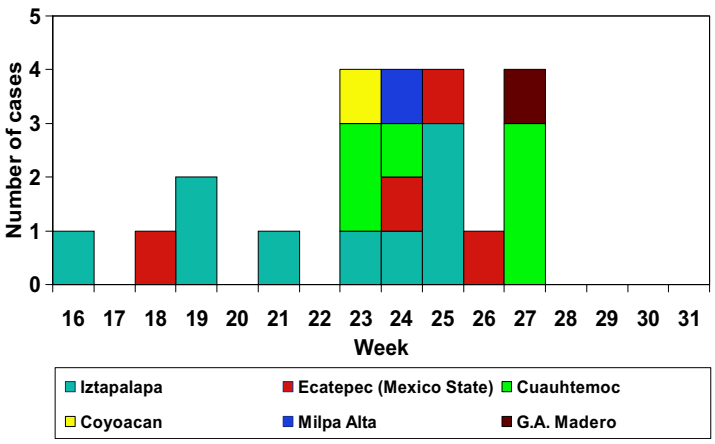
Of the 22 known cases, 18 live in 5 jurisdictions of the Federal District and 4 in the jurisdiction of Ecatepec, Mexico State (Figure 2). Six cases (27%) occurred in children under 1 year of age; 5 (23%) in preschool children aged 1-4 years; 2 (9%) in the 5-14 year old age group; 2 (9%) in the 15-24 year old age group; and the remaining 7 (32%) in adults between 25-44 years old (Figure 3). Twelve (55%) of the cases are between 6 months and 9 years old and 7 are (32%) between 20 and 30 years old. The highest attack rate (0.9 per 100,000) was among children under age 1. Of the 7 cases in children between 1-9 years old (who, in accordance with the national immunization schedule, should have received one or two vaccine doses), only one (14%) had been vaccinated. If one child aged 1 year and 3 months is excluded from this analysis (window of opportunity), the percentage would be 17%.

Figure 1. Confirmed measles cases in Mexico, 2003



Sixteen of the cases belong to five possible chains of transmission, with between 2 and 6 known cases each. The chain of transmission has not been identified in the 6 other cases. Three of the cases occurred in health workers between 27-36 years old, who infected a minimum of 6 people. These 9 cases (41% of the total of 22 known cases) were avoidable, since health workers are supposed to be vaccinated. A 27-year-old infected nurse of the Federal District consulted several physicians who did not consider measles as a diagnosis. Fifteen (68%) of the 22 known cases occurred in families whose members work in factories and mobile markets, are laborers or are involved in prostitution. At least seven (32%) of the cases occurred in people of rural origin.

Figure 2. Measles cases by week of onset and age group Mexico 2003



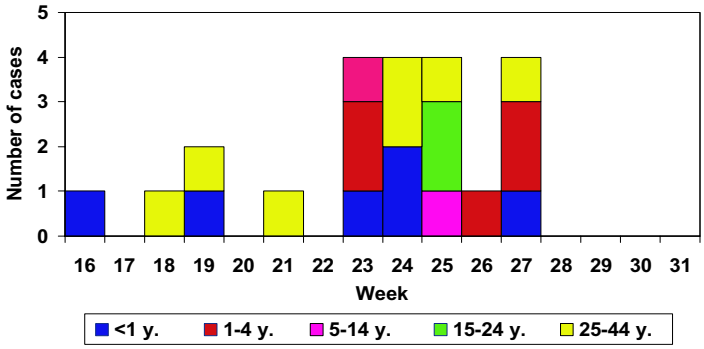
Virus Identification and Origin

The molecular biology analysis carried out by the CDC in Atlanta on samples from two cases showed that they belonged to the H1 strain and were very similar to the H1 strain currently circulating in Japan. The source of importation, however, has not been identified. Preliminary data from a PCR analysis indicate the virus bears a three-nucleotide difference with the H1 virus isolated from an importation from Japan to Chile this year. The H1 genotype virus has recently been identified in Korea and China. This suggests that the source of importation originated from this Asian region.

Vaccination Coverage

According to data from PROVAC (automated information program for vaccination coverage), national immunization coverage rates as of December 2002 were 85% among children under 14 months old, 95% among 1 year-old children, 98% among two year-olds, and at least 99% among children less than 5 years. This coverage has been maintained during the last four years. Rapid coverage monitoring conducted in several States according to WHO methodology over several years usually showed similar or higher rates. The last *follow-up* campaign, carried out in 2002, only targeted children between 1-4 years living in municipalities with coverage below 95% and municipalities not reporting FRIs. Two *catch-up* campaigns were carried out, one in 1993 and the other in 2000, with coverage rates close to 95%. MMR immunization coverage in the Federal District as of May 2003 was 85% among 1-year old children and 93% among children between 1-4 years old, an uninterrupted improvement since 1999. Rapid coverage monitoring carried out in the Federal District in 2002 showed coverage figures higher than the official numbers.

Figure 3. Confirmed measles cases according to week of onset and age group, Mexico 2003



Activities carried out

Activities in affected areas of the Federal District and Mexico and Hidalgo States have been implemented in a coordinated fashion among federal, state and local levels with participation of all health institutions. These activities have specifically included:

1. Clinical and epidemiological case studies;
2. Active case search, search around homes of confirmed cases, at job sites, day-care centers, mobile markets, and schools;
3. Vaccination of susceptible population and children 6-11 months old;
4. Retrospective case-finding in health units;
5. Rapid coverage monitoring.

Additional vaccination activities in at-risk areas and among at-risk groups are being carried out by the health services of the Federal District and the States of Mexico, Puebla, and Hidalgo.

Conclusions

In view of the above, we can conclude that the first cases of the outbreak were due to an importation of the wild measles virus, H1 genotype, probably imported from Japan or Korea. Once the outbreak was detected, case investigation was performed in a detailed and specific manner, allowing for the identification of several risk groups. Laboratory work was efficient and timely.

Although available information suggest the outbreak stems from a single importation, probably from Japan or Korea, the lack of identification of the source of contagion in at least 12 cases and the lack of viral isolates from those cases without known source of infection prevent us from being conclusive. The continued virus circulation in 8 neighboring jurisdictions in the center of the country for three months, the high percentage of cases (82%) among non-vaccinated individuals who do not belong to the target group of the universal vaccination program (under 12 months or over 6 years), and the number of cases without an identified infection source are reasons to fear that, had control measures not

been implemented throughout the country in a timely fashion, virus circulation could have spread to other jurisdictions and other States.

Given the large number of international travelers arriving into the country, the fact that Mexico is a popular tourist destination, and the wide measles circulation in some countries of other regions (Japan, Korea, China, etc.), the frequent emergence of imported measles cases is unavoidable. Although immunization coverage rates at the national level are among the best in the Americas, the conditions in some municipalities not reporting FRIs could allow the reintroduction of endemic transmission, whether due to this importation or another.

Editorial Note: This outbreak highlights several important issues for maintaining the achievements of the measles elimination initiative in the Americas. As long as measles virus circulates in other parts of the world, the countries of the Americas will always be at risk for importations and subsequent outbreaks. Fortunately, the data from Mexico suggest that the importation of measles virus did not lead to widespread transmission. To reduce the risk of widespread transmission after importation, as happened in Venezuela in 2002, we must maintain high levels of measles vaccination coverage in all municipalities and high-quality surveillance. Monitoring measles vaccination coverage in all municipalities and targeting those with <95% coverage for special vaccination activities remain essential strategies in all countries. That, coupled with the implementation and maintenance of high-quality surveillance, will be the first line of defense to prevent widespread transmission when importations occur.

Acute Flaccid Paralysis Surveillance System Evaluation in Ecuador

Background

Ecuador has 13.1 million inhabitants living in 109,483 thousand square miles; overall poverty conditions, access to health services and internal and external migrations have remained steady during the last two years. The last case of poliomyelitis in Ecuador occurred in 1990. Coverage with 3 doses of oral poliovirus vaccine (OPV3) has varied in recent years, with coverage of 77% in 1997, 83% in 1998, 70% in 1999, and 81% in 2000. From 1996–2000, the acute flaccid paralysis (AFP) detection rate has been maintained at ≥ 1 case of AFP per 100,000 children under age 15 years every year, ranging from 1.03 in 2000 to 1.28 in 1997, except in 1998, when the rate was 0.94. However, there is variation in both OPV3 coverage levels and AFP detection rates throughout the country.

In 2001, Ecuador carried out an evaluation of its AFP surveillance system. The purpose of the evaluation was to categorize provinces into four risk groups, carry out active case search in the selected provinces, and strengthen the AFP surveillance system in all provinces of the country.

The evaluation was performed according to the guidelines of the protocol designed by PAHO to identify countries at risk of undetected poliovirus circulation. The methodology was developed following the 2000 outbreak of circulating vaccine-derived polio in the Dominican Republic and Haiti. This outbreak demonstrated to the Region of the Americas that it was necessary to increase polio vaccination coverage, or maintain it at a high level, to maintain high population immunity. Additionally, the outbreak highlighted the need to strengthen epidemiological surveillance by keeping a sensitive surveillance system, supported by a laboratory network, which would allow for the timely detection of wild or vaccine-derived poliovirus circulation.

Table 1. Classification of Risk of Poliovirus Circulation by Province, Ecuador 1996-2000

Category	Province	OPV3 Coverage					AFP rate ≥1/100,000 (Yes/No)
		1996	1997	1998	1999	2000	
1	Azuay	90.3	89	91	90.7	90.4	N
	Carchi	90.2	100	87	86.5	84.2	Y
	Galápagos	100	100	100	100	100	Y
	Guayas	100	100	82	82.4	100	Y
	Sucumbios	96.1	80	89	89	82.5	N
2	Pichincha	90.5	90	76	75.3	82.3	Y
	Tungurahu	87.9	94	69	68.8	82.1	Y
	Río	87.5	88	64	64.2	73.2	Y
	Pastaza	75.6	75	74	74.3	80.3	Y
	Chimborazo	77.1	70	67	66.6	65.2	Y
	Imbabura	76.6	72	64	64.4	70.4	Y
3	El Oro	100	100	76	75.7	93.9	N
	Morona S	80.3	100		73.3	86.5	N
	Zamora CH	69.2	78	81	80. 9	76.6	N
	Cañar	78.9	100	60	59.3	74.9	N
	Manabí *	71.4	84	51	51.1	70.4	N
4	Cotopaxi *	61.1	68	50	49.8	55	N
	Esmeraldas*	63.4	61	48	48.1	69	N
	Loja*	68.5	78	59	59.5	65	N
	Napo*	55.1	56	50	50.1	70.3	N
	Bolivar*	68.3	66	55	55.2	78	N
* High risk provinces (Active search)				OPV3 > 80%			

Methodology

To classify the provinces at risk of poliovirus circulation, AFP surveillance data from 1996-2000 were analyzed. Two parameters were used to classify the 21 provinces in Ecuador into four risk groups: (1) OPV3 coverage levels, and (2) achievement of the expected APF rate of 1 case per 100,000 children under age 15 years.

As a result of the analysis, the provinces were divided into 4 categories (Table 1):

1. Provinces with OPV3 coverage ≥ 80% for each year from 1996-2000, regardless of whether the expected APF rate of ≥ 1 case per 100,000 children under age 15 years was met.
2. Provinces with an AFP rate ≥ 1 case per 100,000 children under age 15 years, regardless of OPV3 coverage level.
3. Provinces with an AFP rate < 1 case per 100,000 children under age 15 years, regardless of OPV3 coverage level.
4. Provinces with an AFP rate < 1 case per 100,000 children under age 15 years and OPV3 coverage < 80%.

Category 4, with OPV3 coverage <80% and AFP rate <1 case per 100,000, was considered the High Risk Category. The five provinces in category 4 were chosen for additional activities. The province of Manabí, which was in Category 3, was included as a high risk province because of its large population and the fact that OPV3 coverage was <80% for four of the five years under study. In these high risk provinces, active case search was carried out in all 6 provincial hospitals and in at least one cantonal hospital. Registries of hospital discharges from 1998 through May 2001 were reviewed. Diagnoses from the last five years supporting hospital discharges that could present as AFP and potentially mask poliomyelitis, such as Guillain-Barré Syndrome, transverse myelitis, peripheral neuropathy, traumatic myelitis, and others, were also reviewed. Among the 326,752 reviewed diagnoses, 14 AFP cases were found, of which 6 (43%) had not been reported to the national AFP surveillance system.

Activities

Activities implemented to improve AFP surveillance nationwide with a particular focus on the six high-risk provinces were specific and covered a number of areas. The evaluation motivated the Expanded Program on Immunization (EPI) of Ecuador to plan and implement the following actions with PAHO's support:

- Training epidemiologists in epidemiological surveillance, with an emphasis on AFP identification and investigation and analysis of AFP surveillance indicators, stressing the importance of having a responsive surveillance system with sufficient sensitivity for active case-search and monitoring.
- Training in active case-search as a tool that validates the surveillance system while testing its sensitivity.
- Meetings with epidemiologists, as a motivation booster, for presentation of results.
- OPV immunization given in the 6 high-risk provinces.
- Integrated EPI and epidemiological surveillance supervision allowing for in-service training, troubleshooting and analyzing, and on-site implementation of corrective measures.
- Regular (approximately 4 times per year) AFP active case-search in national reference hospitals as well as provincial hospitals.
- Rapid coverage monitoring for all EPI vaccines, implemented since 2002, as a basis for defining immunization intensification strategies and achieving high vaccination coverage.
- Periodic review of data reports for immunization coverage and surveillance and monitoring of provinces still reporting low immunization coverage and notification rates.
- Identification and annual classification of municipalities with OPV3 coverage below 50%.
- Trend analysis of OPV3 coverage at the province and district levels, and AFP rates at the province level
- Indiscriminate immunization in 2001 among children under age 5 years in the six high-risk provinces.
- Indiscriminate polio immunization in June 2003 among children under age 5 years in provinces or health areas with OPV3 coverage below 50% during at least one year during the 2000-2002 period.

Results

Table 2 shows the categorization of provinces in 2002.

Table 2. Categorization of Provinces by AFP rate and OPV3 coverage, Ecuador 2001–2002

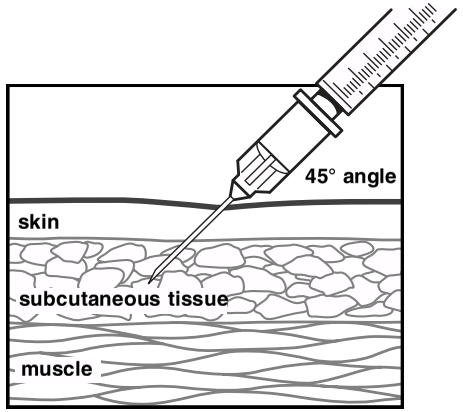
Category	Province	OPV3 Coverage		AFP rate ≥1/100,000 in 2001 and 2002
		2001	2002	(Yes/No)
1	Pichincha	88.8	91.1	Y
	Guayas	114.6	116.6	N
	Sucumbíos	98.4	99	N
	Los Ríos	92.2	89.6	N
	Carchi	93	91.4	N
	Pastaza	85.8	99.8	N
	Galápagos	156.2	143.2	N
	El Oro	98.5	97.8	N
	Zamora	93.7	90.5	N
	Morona S.	93.3	88.1	N
	Azuay	90.9	89.3	N
	Bolívar*	89.8	86.3	N
	Tungurahua	88.1	85.6	N
2	Cotopaxi*	68.4	67.7	Y
	Chimborazo	64.9	61.4	Y
3	Esmeraldas*	85	79.4	N
	Manabí	84	79	N
	Orellana	78.8	87.7	N
4	Cañar	94.6	58.4	N
	Napo*	69.6	80.2	N
	Imbabura	75.9	77.4	N
	Loja*	79.9	69.6	N
*Originally in high-risk category		AFP rate ≥ 1/100,000		

How to Administer Subcutaneous (SC) Injections

Administer these vaccines via subcutaneous (SC) route: MMR, varicella, meningococcal. Administer IPV and PPV23 either SC or IM.

Patient age	Site	Needle size	Needle insertion
Infants (birth to 12 mos. of age)	Fatty area of the thigh	5/8" to 3/4" needle, 23–25 gauge	Pinch up on SC tissue to prevent injection into muscle. Insert needle at 45° angle to the skin. There are no data to document the necessity of aspiration.* Multiple injections given in the same extremity should be separated by a minimum of 1".
Young children (12 to 36 mos. of age)	Fatty area of the thigh or outer aspect of upper arm (see both illustrations below)	5/8" to 3/4" needle, 23–25 gauge	
Older children (>36 mos. of age) and adults	Outer aspect of upper arm	5/8" to 3/4" needle, 23–25 gauge	

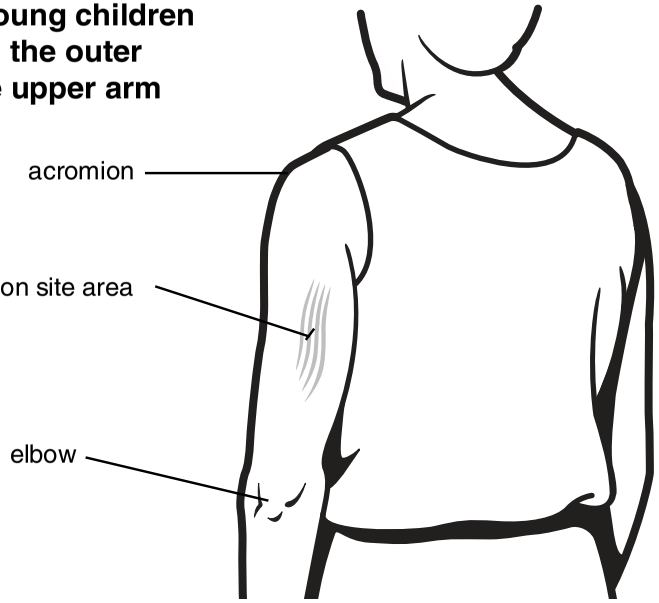
*American Academy of Pediatrics. *2000 Red Book: Report of the Committee on Infectious Diseases*: p.18.



SC site for infants and young children in the anterolateral thigh

Insert needle at a 45° angle into fatty area of anterolateral thigh. Make sure you pinch up on SC tissue to prevent injection into the muscle.

SC site for young children and adults in the outer aspect of the upper arm



Insert needle at a 45° angle into outer aspect of upper arm. Make sure you pinch up on the SC tissue to prevent injection into the muscle.

Adapted by the Immunization Action Coalition courtesy of the Minnesota Department of Health
Source: Immunization Action Coalition. Needle Tips, 2002; Vol.12(1):11.

Achievements of the interventions carried out are summarized as follows:

- The majority of high risk provinces listed in Table 1 changed category from 2001-2002. The provinces of Esmeraldas and Manabí, because of higher coverage and AFP rates, left Category 4 (high risk) and moved to Category 3; the province of Bolivar registered improvement in the coverage rate but not the notification rate; Cotopaxi's notification rate went up but OPV3 coverage remained <80%; and the only provinces that stayed in the high risk category were Napo and Loja.
- However, the provinces of Cañar and Imbabura moved to the high risk category in 2002.
- Of the 21 provinces evaluated in 2001, 19 had OPV3 coverage < 95% in children under 1 year. That number went down to 16 in 2002, a 16% decrease (Table 3).
- Only 2 provinces had 95% OPV3 coverage in 2001. Following activities over 2 years, that number went up to 5 in 2002, a 150% increase.
- The number of provinces with an AFP rate < 1 per 100,000 children under age 15 went from 11 to 8, a 27% decrease.
- The number of provinces with an AFP rate greater than 1 per 100,000 children under 15 went from 10 to 13, a 30% increase.
- The national OPV3 coverage rate in children under 1 year increased from 80 to 90%.

Table 3. Changes in AFP surveillance and OPV3 coverage in Ecuador, 2001-2002

Indicators	2001 Evaluation	2002 Evaluation	% change
# of provinces with OPV3 coverage < 95%	19	16	-16%
# of provinces with OPV3 coverage ≥ 95%	2	5	150%
# of provinces with AFP rate < 1 / 100,000 < 15 years	11	8	-27%
# of provinces with AFP rate ≥ 1 / 100,000 < 15 years	10	13	30%
National OPV3 Coverage	80%	90%	11%

Four provinces remained in the high risk category after the evaluation in 2002. The activities discussed earlier are currently being undertaken to improve OPV3 coverage and AFP surveillance in the entire country, focusing on these high risk provinces of Cañar, Napo, Imbabura, and Loja. During the first week of June 2003, Ecuador participated in the Vaccination Week in the Americas activities and immunization campaigns were carried out in all districts with OPV3 coverage <50% in any of the years from 2000-2002. During these campaigns OPV was given to all children under age 5 years, regardless of previous vaccination history, along with other EPI vaccines. In the fall of 2003, Ecuador plans to carry out the second and third phases of this program to immunize children fully.

The most valuable lesson learned from this evaluation and subsequent implementation of activities was the opportunity to showcase, at the local level, a tool that allows measurement of the situation of a province in comparison to the rest of the country in the areas of OPV3 coverage and epidemiological surveillance. Categorization of the provinces using standard criteria clearly demonstrated which provinces were at highest risk and allowed decision-makers to obtain clear justification to carry out activities in these high-risk provinces. Repeating the categorization after one year provided a straightforward means of demonstrating achievements over the course of a year. Repeated use of this tool allows countries to continue to focus their efforts in the areas that are at highest risk of undetected poliovirus circulation while at the same time taking steps to improve AFP surveillance in all areas of the country.

The EPI Newsletter is published every two months, in Spanish, English and French by the Immunization Unit of the Pan American Health Organization (PAHO), Regional Office for the Americas of the World Health Organization (WHO). Its purpose is to facilitate the exchange of ideas and information concerning immunization programs in the Region, in order to promote greater knowledge of the problems faced and their possible solutions.

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