



# *EPI Newsletter*

## *Expanded Program on Immunization in the Americas*

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IMMUNIZE AND PROTECT YOUR CHILDREN

June 2002

### Ministers of Health of Andean Region pledge support to halt measles virus transmission

The Ministers of Health of the Andean Region and Chile signed an agreement in the city of Sucre, Bolivia on April 23, 2002, pledging their support to prevent the regionalization of the measles outbreak that is currently affecting Venezuela and Colombia. In the *Sucre Agreement* the Ministers of Health of the Andean Region agreed to:

- Provide resources to finance the activities in the Plans of Action of national immunization programs in each country, aimed at interrupting the transmission of measles virus in Venezuela, and preventing the regionalization of measles.
- Carry out programmed national vaccination campaigns on a timely basis, and include measles monitoring and verification of coverage attained at the local level.
- Coordinate the simultaneous implementation of a National Vaccination Week in all Andean countries, beginning in 2003.
- Maintain active epidemiological surveillance of measles at all levels, using active case-finding as a routine strategy in high-risk areas.
- Plan, in coordination with countries' international relations offices, inter-country immunization and surveillance activities, particularly in border areas. The objective is to intensify vaccination, epidemiological surveillance and public information activities within the

framework of Resolutions 367 and 368 (Epidemiological Andean Shield), adopted at the meeting of Ministers of Health of the Andean Region (REMSA), November 2001, in Quito, Ecuador.



- Urge the creation and adoption of Vaccine Laws in countries that do not have them, to guarantee the continuity of resources for the procurement of vaccines and other critical inputs, and to ensure timely financing for routine vaccination programs and emergency situations.
- Ensure compliance with the recommendations of the XII Sub-regional Meeting of Managers of National Immunization Programs in the Andean Region, Brazil, and Chile, held on 22-23 April in Sucre, Bolivia.
- Propose as part of the health system reform processes that the steering role of Ministries of Health be strengthened, to ensure that equitable access to vaccination be considered a State responsibility.

The Ministers of Health also agreed to convene their technical teams to work on a set of specific recommendations issued for each country, which are included in an annex of the *Sucre Agreement*. Furthermore, they resolved to make the topic of vaccine-preventable diseases a permanent item on the agenda of meetings of Ministers of Health of the Andean Region (REMSA).

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# Update: Measles Outbreak in Venezuela

## Background

Since August 2001, a measles epidemic resulting from an importation from Europe is ongoing in Venezuela (refer to *EPI Newsletter*, February 2002 for more information on the Venezuela outbreak). As of June 15 (epidemiological week 24, 2002), a total of 6,297 suspected cases have been reported in the country, with a total of 2,255 confirmed cases (Figure 1). These cases are distributed in 15 of the country's 23 States, plus the Capital District. The State most affected is Zulia, which has the highest population and shares an extended border with Colombia. Zulia reported 1,955 confirmed cases during the first 24 weeks of 2002, which account for 83% of the country's total. Following intensive immunization efforts among children and young adults, that were possible due to the high-level commitment of the country's health authorities, measles incidence in Zulia showed a decrease of more than 90% during weeks 23 and 24, compared to the peak of the outbreak in week 11.

## Update

### *Falcon State*

As of epidemiological week 50 of 2001 (December 15), the State of Falcon, where the outbreak started, had reported a total of 35 confirmed cases. These were distributed in three municipalities and mainly among unvaccinated people. The attack rate was highest among children < 1 year (26.7 per 100,000), followed by 1-4 years (25 per 100,000) and adults 25-29 years (16.7 per 100,000). The majority of infected adults were laborers, students and health workers.

The outbreak was stopped after a statewide immunization campaign with measles and rubella-containing vaccine, targeting children up to 15 years of age. In affected municipalities, the campaign included adults as well.

During epidemiological week 5 of 2002, measles reappeared in Falcon State. Transmission first took place in a hospital of the Paraguana peninsula, a major touristic and economic area. Since then, a total of 165 cases have been confirmed up to week 24 of 2002. The main groups affected were the under-1-year and over-20-year age groups, primarily in the Paraguana peninsula. The 1-14 year age group, vaccinated during the November and December campaigns, was practically unaffected. Following the State's control measures, the outbreak has slowed considerably during the last weeks, with sporadic cases in the peninsula, mainly in the Carirubana municipality.

### *Zulia State*

The first case reported in Zulia, situated to the West of Falcon State and sharing a border with Colombia, took place on October 25, 2001, in Maracaibo. The case is a nursing

aide from a private health facility that receives many patients from Falcon State. She contaminated 6 other persons in two parishes. On November 16, three suspected measles cases were reported in the San Francisco municipality that borders the Maracaibo municipality and together form the city of Maracaibo, which has the highest population density in the country. One of the initial cases was a 27-year-old male who works as a guard in a health center in San Felipe and visits Falcon State twice a week, specifically the Buchivacoa municipality. The other two cases were a 4-year-old girl, with whom he had had contacts several times, and a 1-year-old boy who lives in the same building as the guard. The outbreak spread to the rest of the State where a total of 72 cases were reported in 2001.

As of week 24 of 2002, the total number of confirmed cases in Zulia State was 2,027 (86.5% of the country's total cases) with all 21 municipalities of the State reporting cases. The most affected age group was that of children under 5 years of age, particularly children under 1 year who presented an attack rate of 685 per 100,000. The young adult groups, mainly those between 20 and 34 years, also showed a high incidence rate, 20-24 years: 68.5 per 100,000; 25-29 years: 52.4 per 100,000; and 30-34 years: 39.5 per 100,000.

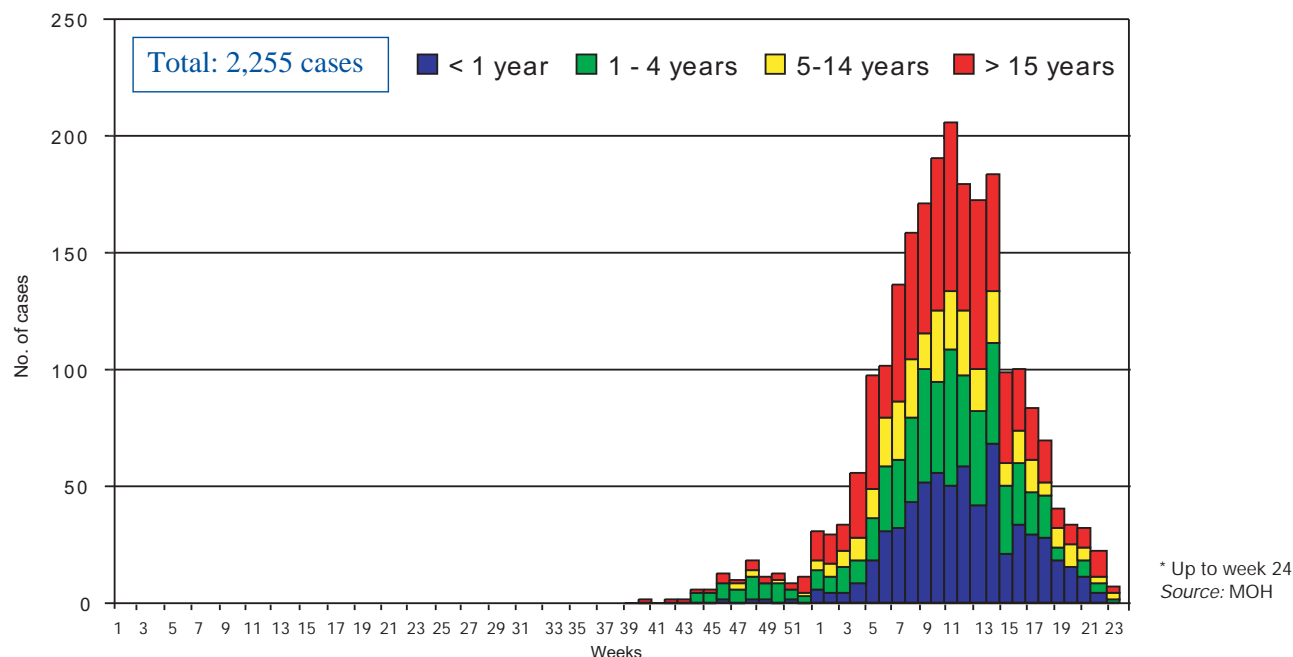
At present, reported administrative coverage is above 100% in nearly all of Zulia's municipalities. However, several monitoring activities carried out in different areas show that coverage for children <5 years of age fluctuates between 85% and 95%. The positive impact of such actions are evidenced by the over 90% decrease in the weekly number of cases between epidemiological week 11, the epidemic's peak with 183 cases, and week 19 with 10 cases.

Over the last few weeks, Venezuela has been exporting measles virus to neighboring Colombia due to the extensive border shared by both countries and the vast population movements that generally take place. As of week 24 of 2002, Colombia had reported a total of 60 confirmed measles cases. Although many of these cases are directly related to the Venezuela outbreak, some cases already reflect secondary transmission in Colombia.

### *Others States*

During 2001, only Falcon and Zulia had reported cases. However, starting week 5 of 2002 and with higher intensity since week 11 (following the Holy Week celebrations that involve major movements of people between States due to tourism, parties, and family reunions), cases have begun to appear in States bordering Zulia State - Lara, Merida, Tachira, Trujillo) and later in seven other States. A total of 101 cases (4% of the country's total) have been confirmed in 2002 in those 11 States, distributed as follows: Lara (26 cases), Merida (18 cases), Tachira (9 cases), Capital District (8

**Figure 1.**  
**Distribution of confirmed measles cases by age group and by week, Venezuela, 2001 - 2002\***



cases), Apure (7 cases), Anzoategui (7 cases), Aragua (5 cases), Vargas (4 cases), Monagas (3 cases), Miranda (2 cases), Trujillo (8 cases) and Cojedes (4 cases).

### **Contributing factors to the effective control of the outbreak in the Zulia and Falcon States**

#### *1. Financial and Political Support*

- a. Significant mobilization of human resources with additional support received from the Ministry of Health for the measles *follow-up* campaign of November 2001. In 2002, the political support of the Ministry of Health to control the measles epidemic at the national level has been further strengthened, and priority is being given to the hardest-hit States.
- b. In Zulia State, efforts to involve the State Government in the process have been successful. This has resulted in significant financial support through the Regional Directorate for Health. Particularly over the last weeks, regional authorities have increased their commitment and are actively sponsoring local promotion and social communication activities - key components when controlling an outbreak. For the final push in the States of Zulia and Falcon, additional nurses have been hired specifically for immunization and monitoring activities. Furthermore, the majority of vehicles and staff available at the Regional Directorates have been made available for immunization activities.
- c. Community participation in the different municipalities, and the use of local health promoters as vaccinators have been critical in Zulia. Similarly in Falcon, community

leaders are also participating actively and additional nursing staff have been hired.

- d. Sustained technical support provided mainly to these two States by PAHO since the beginning of the outbreak. In addition to funds earmarked for the vaccination teams, 11 seasoned epidemiologists from other countries in the Region have collaborated with the regional teams in planning and monitoring coverage during the last six months.

#### *2. Prioritization of activities based on available epidemiological data*

- a. Good measles surveillance has permitted to assign priority to the most affected areas and age groups.
- b. Strengthening of monitoring in border areas with Colombia and neighboring States, through the establishment of inter-municipal immunization posts and at international border crossings during working hours.

#### *3. Vaccination coverage monitoring*

Optimum use of rapid house-to-house vaccination coverage monitoring as an excellent supervision and on-the-spot evaluation tool. This facilitated the identification of zones or areas that required re-visiting by vaccinators and areas that had been adequately immunized.

#### *4. Health authorities and staff's commitment*

It is noteworthy to mention the effort and commitment shown by the team of epidemiologists of all the affected States, as well as the commitment of Venezuela's health authorities.

# Measles Outbreak in Colombia

Following several years without measles, indigenous measles transmission was established in Colombia, due to an importation from Maracaibo, Venezuela - a 7-year-old girl from Barranquilla, in the Atlantico Department, who was vaccinated at 9 months of age and had rash onset on January 2002. The case is considered the primary case and the source of various chains of transmission that occurred in the Magdalena Department. As of epidemiological week 26, there have been 1,334 suspected cases reported (measles/rubella), of which 68 have been confirmed (Figure 1). As of now, 60 of the 68 confirmed measles cases show a link to an importation from Venezuela. These cases originated from 20 municipalities (Colombia has a total of 1,114 municipalities), and are located in nine of the country's 33 Departments: La Guajira, Norte de Santander, Magdalena (Santa Marta), Atlantico (Barranquilla), Bolivar (Cartagena), Sucre, Santander, Cundinamarca and Bogota. Of the 20 municipalities affected, 14 are considered active since they have reported cases in the last 12 weeks. No cases have been reported with rash onset in the last two weeks. Attack rates by age group are higher in the under-five age group, followed in order of importance by the 5-9 year old and the 25-29 year old groups (Figure 2).

## Control Measures

- *Strengthening of Epidemiological Surveillance:* Issuing of a national and international alert about the measles outbreak, which led to the doubling of the weekly notification rate of suspected cases compared to previous years.
- *Development and Implementation of a Measles Containment Plan:* The plan is being implemented in the Atlantic Coast and the capital city of Bogota since the end of 2001, and seeks to contain the circulation of measles virus in

those areas due to the constant importations by travelers from the State of Zulia, Venezuela. The containment plan includes the following activities: (i) **Indiscriminate door-to-door mass vaccination** in all high-risk municipalities located in the Atlantic Coast, targeting all children between 6 months and 5 years of age; (ii) **Rapid monitoring of coverage** to verify and confirm that useful coverage has been obtained and to prevent pockets of susceptible individuals; (iii) **Active search in health facilities and in the community** in all the affected municipalities; (iv) **Regular training** of all health workers on out-

break containment strategies and management of each suspected case.

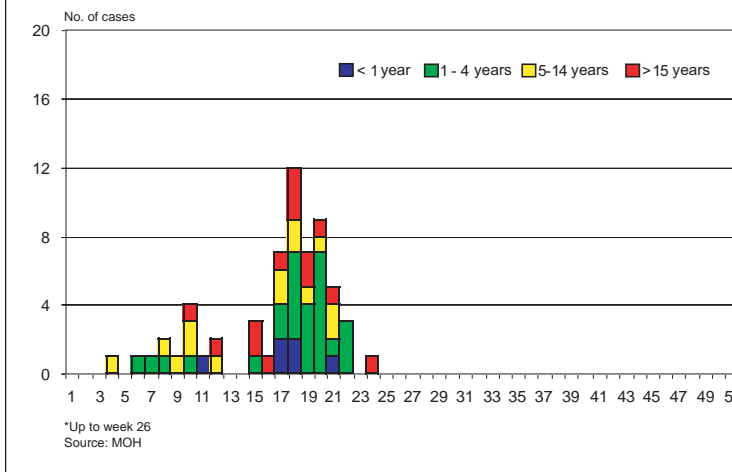
- *Planning of a National Immunization Measles Follow-Up Campaign (NID):* Indiscriminate measles vaccination of all children between the ages of 6 months and 4 years in the country since April, 2002 and scheduled to end in July.

- *Development and Implementation of a Social Communication Plan:* Widely publicized social communication plan to be implemented from 22 June to December, 2002. This effort seeks to stimulate the demand for immunization during the NID, and enhance the ongoing flow of information addressing adequate identification of symptoms and signs of a suspected measles case, to ensure its timely detection and reporting.

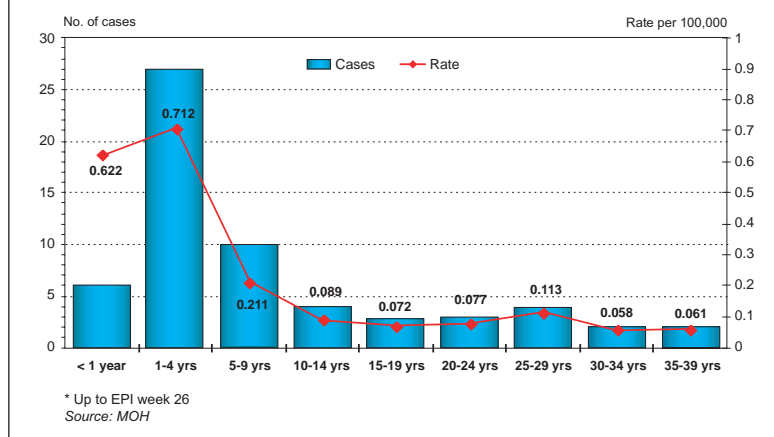
Critical has been the implementation of rapid

control measures in the country. This is of particular importance given the high level of migratory movements between Venezuela and Colombia, and the fact that the most affected State in Venezuela (Zulia) borders with Colombia.

**Figure 1. Distribution of confirmed measles cases by age group and by week of rash onset, Colombia 2002\***



**Figure 2. Distribution of confirmed measles cases by age group and rate per 100,000 Colombia, 2002\***





# Haiti and the Dominican Republic join efforts to control polio and measles on the Island of Hispaniola

## Background

Between 2000 and 2001, Haiti and the Dominican Republic, the two countries sharing the island of Hispaniola, were affected simultaneously by a large outbreak of measles and by an outbreak of poliomyelitis caused by a vaccine-derived poliovirus. A total of 13 cases of vaccine-derived polio were confirmed in the Dominican Republic and 8 in Haiti. The outbreak of polio resulted from the prolonged circulation of vaccine-derived poliovirus in areas with very low coverage with oral polio vaccine (OPV), as well as poor sanitation conditions.

For measles, Haiti had completed a nation-wide *catch up* measles vaccination campaign in 1994, reaching an estimated official vaccination coverage of over 95% of children ages 9 months to 14 years. Following this campaign Haiti remained free of measles for six years. However, vaccination coverage through routine immunization with measles vaccine in 1 year olds averaged 47% (range 32-85%) between 1995 and 1999. This led to an accumulation of over 1 million susceptible children below age 5. A *follow-up* measles vaccination campaign was conducted in 1999, but reached an estimated coverage of between 70-80% of the target population of all children between the ages of 6 months and 4 years, approximately 1.3 million children. The main reasons for these results included lack of political will, failure to implement close supervision of vaccinators, and logistical failures in delivering vaccine on time and in good condition.

In response to the situation, the Ministries of Public Health of both countries pledged their commitment to carrying out a series of unprecedented control measures. With the strong support of several international agencies including the Government of Canada, USAID, CDC, Rotary International, the World Bank, and the technical cooperation of PAHO, the epidemics were brought to a halt. For Haiti, the date of onset for the last confirmed case of measles was

26 September 2001, while for vaccine-derived polio the date was 12 July 2001. In the Dominican Republic, the onset date for the last confirmed case of measles was 4 June 2001, and that for vaccine-derived polio was 25 January 2001.

Each country is now completing its vaccination efforts initiated in 2000 and continued through 2001 and 2002. The overall objective of these campaigns has been to provide at least one dose of measles vaccine and three doses of OPV to each child.

## Haiti

Beginning in March 2000, Haiti began a series of measles vaccination campaigns within most of the country's 11 health districts using a mix of door-to-door and fixed-post strategies.

These were followed by two national immunization days (NIDs) in early 2001 based solely on fixed-post vaccination strategy that included both measles and oral polio vaccines. Two further NIDs using door-to-door strategy were conducted against both diseases in the summer and fall of 2001. A third NID began 30 May 2002 and will be completed in August 2002. This campaign, to be implemented in close coordination with the health authorities of the Dominican Republic, seeks to vaccinate all children below age 10 against polio, and all children between the



*The joint polio and measles campaigns were inaugurated May 31 by the First Lady of the Dominican Republic, Mrs. Rosa Gomez de Mejia (right), and the First Lady of Haiti, Mrs. Mildred Trouillot Aristide (left), the Minister of Health, Dr. Jean Claude Voltaire of Haiti and Dr. Jose Rodriguez Soldevila of the Dominican Republic, as well as government authorities, NGOs and international agencies.*

ages of 6 and 23 months against measles. Following the vaccination of children below age 10 in all schools in the country for a two-week period in May, groups of two or three health departments will be vaccinated in sequence.

## Dominican Republic

In response to the polio outbreak, the Dominican Republic conducted National Immunization Days in December 2000, as well as in February and May of 2001. All NIDs reached a vaccination coverage of approximately 100% with OPV, which was confirmed through field monitoring of vaccination coverage. During the last NID, vaccination against measles was

also carried out. Monitoring of coverage performed in all municipalities of the country identified a vaccination coverage of approximately 95%. Previous campaigns against measles failed to reach the recommended coverage, and the circulation of measles had not been interrupted.

The most recent National Immunization Day was carried out between 31 May and 2 June, 2002, targeting all children under 3 years of age. The goal was to reach approximately 700,000 children for polio and 590,000 for measles.

**Heightened coordination between Haiti and the Dominican Republic**

Early coordination efforts between the two countries consisted primarily of sharing information and internation-

al consultants. However, by late 2001 these had evolved into a series of international meetings at both the national and regional levels. The simultaneous campaigns demanded a high-level of coordination and exchange of information between the two nations. The plan included a formal meeting of senior health officials from the two Ministries of Public Health at the main border area. Furthermore, all children in the target age groups passing through any one of four official border crossings were vaccinated at one of the special vaccine posts situated on both sides of the border. Haiti and the Dominican Republic health staff will continue to exchange surveillance information on a weekly basis to confirm that both diseases remain absent from the two countries.

**Diphtheria Outbreak in Paraguay**

**Background**

Diphtheria has shown a decreasing trend in Paraguay for the past 22 years with the exception of a reported increase from 1985 to 1987, i.e., including 1986. In 1985, Paraguay reported the highest rate ever per 100,000 persons, i.e., 0.75. From 1996 to 2000 no cases were reported. However, in 2001, an isolated case, reported from the Department of Alto Parana, was later confirmed as diphtheria. No additional cases were reported from that area even after a thorough investigation.

**Outbreak**

During epidemiological week 7 of 2002 (week ending February 2) a diphtheria case was reported (in a 4 year-old child) from the district of Capiata in the Central region. During epidemiological week 13 (March 30), a second case from the same region was reported in the district of J. Augusto Saldivar. Subsequently, two additional cases reported in week 15 (April 13) were later laboratory-confirmed. Since week 15, new confirmed cases have been notified weekly, with a peak in notification during epidemiological week 22 (June 1) when 10 cases were reported.

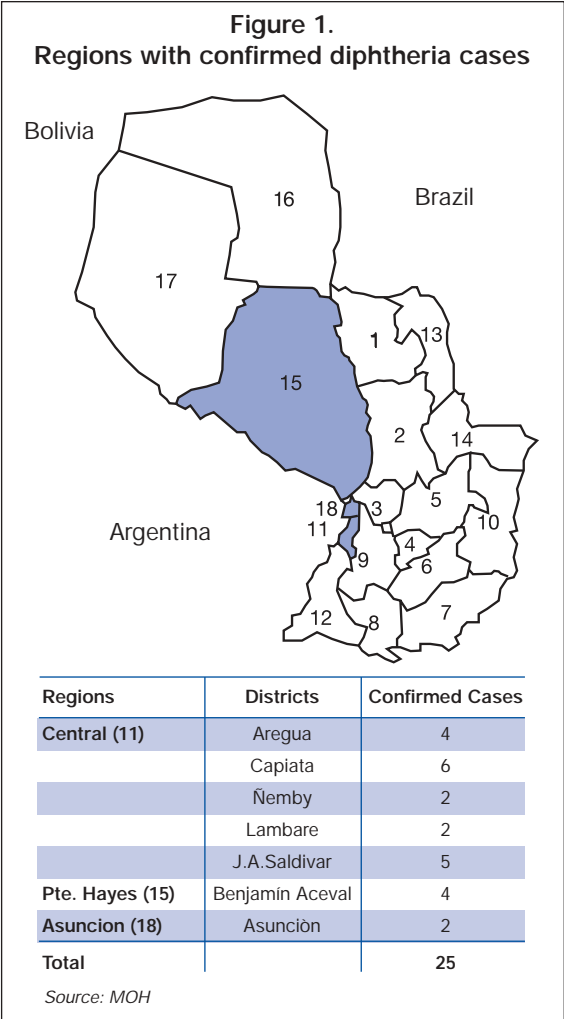
As of epidemiological week 25, a total of 44 cases had been reported, of which 25 have been confirmed, i.e., 15 by laboratory, 7 were confirmed clinically

and 3 have been confirmed by epidemiologic link (Figure 1).

Of the remaining 19 suspected cases, 11 have been discarded and 8 are under investigation. Of the 25 confirmed cases, 4 deaths have occurred in children ranging in ages from 10 months to 12 years. The outbreak has affected five districts in the Central region (Aregua, Capiata, Nemby, San Lorenzo, and J.A. Saldivar) and one district in the Pte. Hayes region (Benjamin Aceval) and 2 periurban areas from Asuncion (Figure 2).

Between 1995 and 2001, national coverage for DPT3 ranged between 79% and 89%. Reported vaccination coverage in 2001 for DPT3 in the affected areas ranged between 86% and 99%. Evaluation of the vaccination history of the 25 confirmed cases shows that only 32% had a history of vaccination. However, only half of these vaccinated confirmed cases had a vaccination card to confirm their status. A total of 68% of the confirmed-cases were not vaccinated. Of those immunized with proof of vaccination, five children had completed their vaccination schedule and recuperated without

sequelae, two were discarded by laboratory and one was pending laboratory results.



# Reported Cases of Selected Diseases

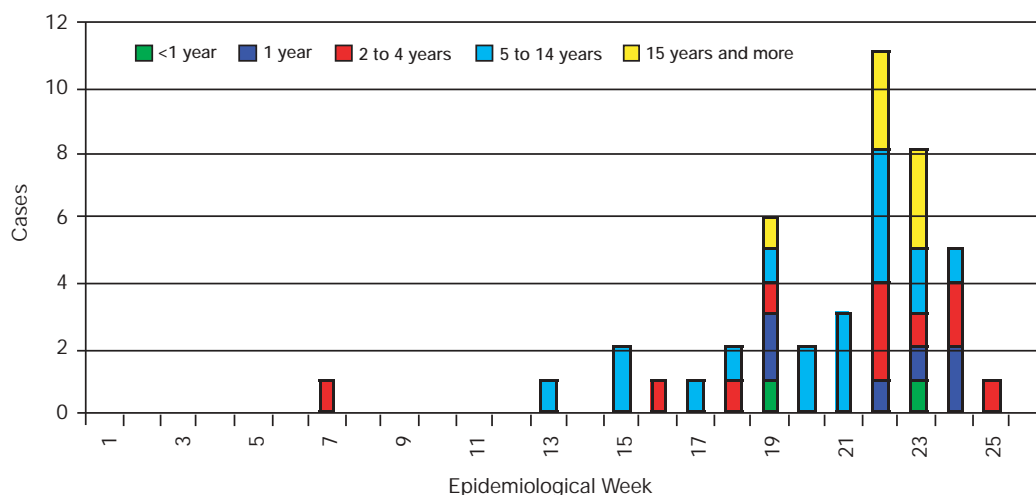
Number of reported cases of measles, poliomyelitis, tetanus, diphtheria and whooping cough, from 1 January 2001, to date of last report, and the same epidemiological period in 2000, by country

Country/Territory	Date of last report	Measles				Polio		Tetanus				Diphtheria		Whooping Cough	
		Confirmed 2001				2001	2000	Non Neonatal		Neonatal		2001	2000	2001	2000
		Laboratory	Clinically	Total	Confirmed 2000*			2001	2000	2001	2000				
Bolivia	31-Dec	0	0	0	122	0	0	3	8	3	2	3	1	55	10
Colombia	31-Dec	0	1	1	1	0	0	25	27	15	10	0	11	577	446
Ecuador	31-Dec	2	0	2	0	0	0	...	28	8	6	1	1	308	482
Peru	31-Dec	0	0	0	1	0	0	33	57	8	10	0	0	24	68
Venezuela	31-Dec	104	9	113	22	0	0	38	50	3	2	0	0	474	555
Brazil	31-Dec	1	0	1***	36	0	0	129	301	17	27	...	46	...	764
Costa Rica	31-Dec	0	0	0	0	0	0	1	1	0	0	0	0	51	23
El Salvador	31-Dec	2	0	2***	0	0	0	7	13	1	3	0	0	6	3
Guatemala	31-Dec	0	0	0	0	0	0	7	11	5	7	0	...	229	...
Honduras	31-Dec	0	0	0	0	0	0	17	9	1	0	0	0	37	169
Nicaragua	31-Dec	0	0	0	0	0	0	10	9	1	0	0	0	0	11
Panama	31-Dec	0	0	0	0	0	0	2	4	1	0	0	0	7	66
Anguilla	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Antigua & Barbuda	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bahamas	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barbados	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belize	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bermuda	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
British Virgin Islands	31-Dec	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Cayman Islands	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dominica	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
French Guiana	31-Dec	0	0	0	0	0	0	...	...	...	...	...	...	...	...
Grenada	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Guadeloupe	31-Dec	0	0	0	0	0	0	1	3	0	0	0	0	na	na
Guyana	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	100	0
Jamaica	31-Dec	0	0	0	0	0	0	9	5	1	0	0	0	7	23
Martinique	31-Dec	0	0	0	0	0	0	...	...	...	...	...	...	...	...
Montserrat	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Netherlands Antilles	31-Dec	0	0	0	0	0	0	...	...	...	...	...	...	...	...
St Vincent/Grenadines	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St. Kitts/Nevis	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St. Lucia	31-Dec	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Suriname	31-Dec	0	0	0	0	0	0	0	2	0	0	0	0	5	0
Trinidad & Tobago	31-Dec	0	0	0	0	0	0	1	2	0	0	0	0	0	0
Turks & Caicos	31-Dec	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cuba	31-Dec	0	0	0	0	0	0	2	1	0	0	0	0	0	0
Dominican Republic	31-Dec	111	2	113	254	3**	11**	37	25	0	4	47	52	19	40
Haiti	31-Dec	147	12	159	990	7**	3**	...	...	65	58	5	...	30	...
Mexico	31-Dec	3	0	3***	30	0	0	101	103	6	9	0	0	218	...
Canada	31-Dec	34	0	34***	206	0	0	3	1	0	0	1	0	1,056	1839
Puerto Rico	31-Dec	0	0	0	0	0	0	...	...	...	...	...	...	...	...
United States	31-Dec	109	0	109***	85	0	0	12	12	...	...	1	0	2,129	2789
Argentina	31-Dec	0	0	0	6	0	0	3	0	0	0	0	0	73	60
Chile	31-Dec	0	0	0	0	0	0	11	10	0	0	0	0	1,611	3554
Paraguay	31-Dec	0	0	0	0	0	0	15	13	8	7	1	0	65	24
Uruguay	31-Dec	0	0	0	...	0	0	1	0	0	0	0	0	6	0
TOTAL		513	24	537	1,753	10**	14**	469	696	143	145	59	111	7,087	10,926

... Data not available    \_\_ Clinically confirmed cases are not reported

\* Laboratory and clinically confirmed cases    \*\* Type 1 vaccine derived poliovirus    \*\*\* Due to importation    na - not applicable

Figure 2. Reported diphtheria cases by age groups and epidemiological weeks. Paraguay, 2002



Source: MOH

The highest attack rates were observed in children 5 to 14 years of age (4.14 per 100,000), followed by children 2 to 4 years of age (3.28 per 100,000), and children 1 year of age (2.56 per 100,000). No difference by sex was observed. Cases occurred among children living in extreme poverty, some of the cases were migrants from rural areas who are living in poor and peri-urban areas.

### Control measures

Vaccination has been intensified in the entire country, particularly in the affected areas and in high-risk areas defined as those with low vaccination coverage levels. Children under 14 years of age have been targeted. In districts with cases, vaccination activities have been expanded to include adults at high-risk. Various strategies are being employed, including house-to-house vaccination, and vaccination in health services and educational institutions.

Priority has been given to vaccination in poor peri-urban areas, as well as in newly settled areas with migrants.

The Ministry of Health has issued an epidemiological alert for the entire country and has pledged the participation of various organizations from the community and sectors of governments. Health staff have been trained on the clinical, epidemiological, laboratory and management aspects of diphtheria. The country's General Epidemiological Unit distributed a preliminary version of a revised EPI Manual and information leaflets, and organized inter-institutional meetings. Social communication campaigns have been conducted using mass media in the country's Central Department.

An investigation of the outbreak continues to be carried out in the affected districts. Prophylaxis is being given to all close contacts of cases. Activities also include monitoring vaccination coverage and active search for suspected cases through intensified national and regional supervisions.

The *EPI Newsletter* is published every two months, in Spanish and English by the Division of Vaccines and Immunization (HVP) 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.

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



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Regional Office of the  
World Health Organization

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