

# EPI Newsletter

## Expanded Program on Immunization in the Americas

Volume XXIII, Number 2

IMMUNIZE AND PROTECT YOUR CHILDREN

April 2001

### Haiti begins all out effort to halt measles and OPV-derived polio outbreaks

#### Background

The Ministry of Health in Haiti is now focused on two fronts: controlling a nationwide measles outbreak and preventing the spread of Sabin type 1-derived poliovirus. Two National Immunization Days (NIDs) using fixed posts and multi antigens were conducted in 2001 targeting both of these problems. In spite of these campaigns, new measles and polio cases continue to be reported, although for measles new cases are being reported at a reduced rate (Figure 1). Future campaigns will rely on house-to-house vaccination with close supervision and careful logistical planning. From May until July, the strategy of "rolling campaigns with polio vaccine" - staggered vaccination efforts of groups of several departments until vaccination in the entire country is completed - will be implemented.



Source: Dr. J. Moya

percent of these cases have occurred in the metropolitan area of Port-au-Prince. Since December 2000 there has been a steady decline in the number of confirmed measles

cases, dropping from a high of more than 70 cases per week down to the current level of approximately 2-3 per week. With this decline, national and departmental epidemiologists have been able to investigate every case. Two previous National Immunization Days targeting all children from ages 6 months to 14 years for measles failed to reach even half of the population. This was mainly due to inadequate time for planning and implementation of the campaigns, the decision to use fixed posts, and administrative problems. By the

end of the year 2000, the Ministry of Health estimated that based on administrative data approximately 70% of the 3.2 million children in Haiti <15 years had been vaccinated for measles, with most of the vaccination activities coming from house-to-house campaigns early in the outbreak. A number of small-scale field studies have confirmed this estimate, finding local vaccination coverage ranging from 50-90%. Mop-up activities will focus on areas with low coverage.

#### Measles

The current measles outbreak began in March of 2000. By mid-April 2001 (the end of epidemiologic week 15), 1,130 cases have been confirmed by the nationwide surveillance system, 990 in 2000 and 140 so far in 2001. Sixty-eight

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House-to-house measles vaccination will resume in Port-au-Prince and other urban areas once the priority of polio vaccination coverage throughout the country has been completed. Based on the experience in Haiti and other countries it is now clear that successful house-to-house immunization requires (see shaded box) strong field supervision, revisiting of houses with children that need to be vaccinated, and monitoring of vaccination coverage within each zone.

### Polio

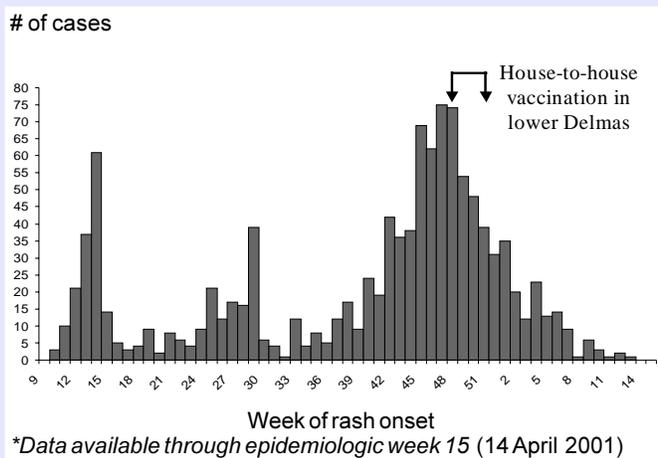
The first polio case in Haiti attributed to Sabin-derived poliovirus -1 occurred in August, 2000 in the village of Danse à l’Ombre in northwestern Haiti (Figure 2.)

In March, 2001 two additional cases were confirmed, one in the north (Pilate) and one in the Port-au-Prince area (Delmas 3). For the two most recent cases, in girls ages 9 and 10, vaccination status was unknown, while the other case had a complete vaccination schedule (3 doses). Ge-

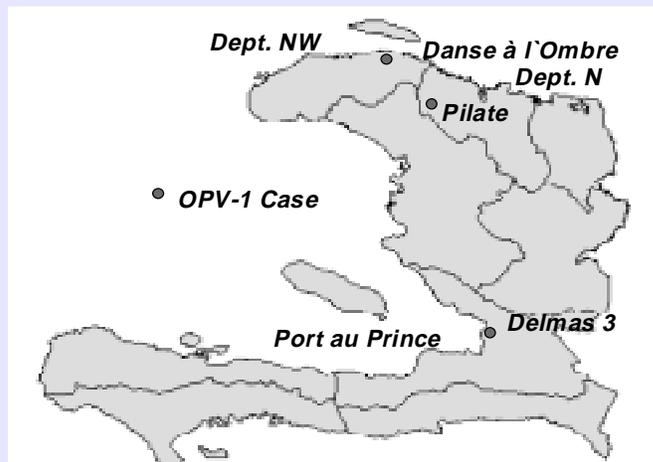
netic sequencing of the virus recovered from the cases indicated that the virus from Pilate is more closely related to the virus in Danse a l’Ombre than to that in Delmas. In addition to these 3 confirmed cases, 6 other suspected cases of acute flaccid paralysis (AFP) have been reported in 2001: 5 are pending laboratory results, and 1 was lost to follow-up. The vaccination campaigns being planned will target approximately 2.2 million children >10 years living in Haiti. Ten national and eight international epidemiologists are being hired to assist in these activities, as well as in the active search for additional cases.

**Editorial Note:** The Ministry of Health of Haiti needs to be commended for its laudable efforts in controlling the ongoing measles and vaccine-derived polio outbreaks in the country. PAHO is confident that the upcoming campaigns, which have been planned in great detail under the leadership of Dr. Henri-Claude Voltaire, Minister of Health, and his team, will be able to successfully halt the spread of these diseases.

**Figure 1**  
Evolution of the measles outbreak confirmed cases by month, 2000-2001\*



**Figure 2**  
Location of vaccine - derived polio cases in Haiti



### House-to-house Vaccination

This tactic calls for teams of 3 members to be assigned to vaccinate in a neighborhood that is clearly delimited on a map. As the team moves into a new neighborhood for vaccination, each house that is completely vaccinated (or lacking children in the target age group for polio) is clearly marked with a ⊕ in chalk. Houses with eligible children who were absent during the vaccination are marked with a ⊖, meaning that they will have to be revisited. The next day (Day 2), one member of the vaccinating team will revisit the previous day’s area, going back to all houses with a ⊖ to vaccinate all children who were missed the previous day, while the rest of the team will go on to the next area. During all days, a supervisor in charge of up to 5 teams will move through the areas to verify that all streets have been visited and marked, as well as confirm that the marks are correct. Also, an overseer will monitor the work of five supervisors, ensure that they cover the areas that were programmed, and monitor house-to-house vaccination status of 20 children <10 years of age in the area. If the vaccination coverage of children is above 90%, then the team can move on to the next neighborhood; if not, further revisiting of houses will be conducted until that vaccine level is reached.

# Institute of Medicine (IOM) Committee Rejects Causal Relationship Between Measles-Mumps-Rubella Vaccine and Autism Spectrum Disorder

At a public briefing on Monday, April 23, the Institute of Medicine's (IOM) Committee on Immunization Safety Review released a report in which they conclude that the evidence favors rejection of a causal relationship between the measles-mumps-rubella (MMR) vaccine and autism spectrum disorder, commonly known as autism. The Committee concluded that:

- the epidemiological evidence shows no association between MMR and autism;
- case studies based on small numbers of children with autism and bowel disease do not provide enough evidence to draw a conclusion about a causal relationship between these symptoms and administration of the vaccine;
- biological models linking MMR and autism are 'fragmentary';
- there is no relevant animal model linking MMR and autism.

Therefore, the Committee recommended maintaining the current policies relating to licensure and administration of the MMR vaccine in the United States. The Committee Chair, Marie C. McCormick, M.D., Sc.D., professor of maternal and child health at the Harvard School of Public Health, stated at the briefing that while no vaccine is 100% safe, the MMR vaccine is 'as safe as a vaccine can get.'

The Committee reviewed published and unpublished material, and also heard testimony from a variety of witnesses, including Dr. Andrew Wakefield, the author of a well-publicized study published in *The Lancet* in 1998. This study seemed to indicate that the onset of autism and gastrointestinal problems were associated with the receipt of

the MMR vaccine. Dr. McCormick noted that the Wakefield study was published as an observation for further investigation and never claimed to prove the relationship. She further noted that the Committee reviewed numerous studies that examined Wakefield's hypothesis and were unable to find evidence to support it.

Current research on autism has established that there is a strong genetic component to the disease; however, the Committee report notes that 'other factors, including infectious, neurologic, metabolic, immunologic, and environmental insults, may play significant roles.' Therefore, although the Committee felt that a relationship between MMR vaccine and autism would be extremely rare, if it occurred at all, they recommend that research to examine this possible relationship continue.

The IOM's Committee on Immunization Safety Review was convened in Fall 2000 to provide an independent review and assessment of increasingly prominent vaccine safety concerns. It will examine nine vaccine-safety hypotheses over the next three years. The 15 Committee members have expertise in pediatrics, internal medicine, immunology, neurology, infectious diseases, epidemiology, biostatistics, public health, risk perception, decision analysis, nursing, genetics, ethics, and health communications. To prevent any perception of conflict of interest, anyone with financial ties to vaccine manufacturers or their parent companies, and anyone who had served on vaccine advisory committees, provided expert testimony, or published papers on issues of vaccine safety are excluded from participating on the Committee.

*Source:* Institute of Medicine, April 24, 2000.

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## Partnerships: World Bank- PAHO Immunization Day

The first Immunization Day was held at the World Bank on March 20, 2001, with the participation of staff from the World Bank's Latin America and the Caribbean Health Sector (LCSHH) and staff from the Division of Vaccines and Immunization (HVP) of the Pan American Health Organization (PAHO). The meeting sought to provide up-to-date information to World Bank Task Managers about immunization programs, and to exchange ideas about how PAHO and the World Bank could continue working together in the productive partnership on immunization initiated in 1998.

The meeting was opened by Charles Griffin, Sector Manager for the Latin America and Caribbean Region's Health Sector, who highlighted the benefits of including

immunization in the World Bank's health interventions because of their clear and measurable objectives, and Dr. Ciro de Quadros, Director of PAHO's Division of Vaccines and Immunization, who stressed the importance of the PAHO-World Bank immunization partnership in the framework of the *Shared Agenda* (please refer to shaded box).

PAHO staff highlighted the priorities in immunization in the Americas for the coming three years, which include the consolidation of the interruption of indigenous measles transmission; maintenance of polio eradication, reached in 1991; achievement and maintenance of at least 95% vaccination coverage in all districts for each antigen; and strengthening of the surveillance infrastructure for vaccine-preventable diseases.

An analysis of the impact of decentralization and health sector reform on immunization programs was presented, illustrated by the results of 16 evaluations of national immunization programs performed in the last four years by countries and an international team assembled by PAHO. An invitation was extended to World Bank Task Managers to take part in these country evaluations in the future. In the area of vaccine introduction, discussion focused on PAHO's efforts in generating information for the sustainable introduction of new vaccines, and the Organization's efforts in supporting countries to use quality vaccines in immunization programs. An overview of the key elements of the PAHO Revolving Fund for Vaccine Procurement and its role over the past 20 years in providing a continuous and reliable source of funds for the purchase of vaccines at affordable prices was also discussed.

World Bank staff reviewed the Bolivia experience showing the critical input of each organization. The Bank's role was to raise the understanding with the Ministry of Finance of the importance of channeling increased funding to Bolivia's national immunization program. The Bank also increased the understanding of the Ministry of Health of the demands for accountability by the Ministry of Finance. The latter led to the elaboration of performance contracts with specific

targets for improved immunization outcomes between the Ministry of Health and each region.

A more recent experience in Paraguay was also presented. Here, the PAHO-World Bank partnership seeks to reach vaccination coverage levels above 80% with all antigens, improve vaccination activities in high-risk districts, develop a sustained social communication plan for immunization, strengthen cold chain, as well as surveillance activities and that country's laboratory procedures.

PAHO has provided permanent technical guidance to the National Immunization Program in both countries, for the implementation of an evaluation of the national immunization program; collaboration with the Government and donors to produce a comprehensive plan that included the incorporation of new vaccines; streamlining of vaccine procurement through the PAHO Revolving Fund; revision of the cold chain; and participation in the World Bank's technical supervisions.

Additional countries mentioned that would benefit from a PAHO-World Bank partnership are Haiti, the Dominican Republic, Venezuela, Ecuador and Colombia. In Ecuador a technical and economical feasibility study should be undertaken to assess that country's national production of vaccines.

### DOMINICAN REPUBLIC

**Status**

- Immunization remains a priority in the country's national health policy.
- Majority of provinces have well-defined high-risk areas.
- EPI norms are available in most health establishments.
- Availability of designated staff to collect and process information on doses applied by antigen, overall number of doses and age at the provincial and municipal level.
- Assigned staff for epidemiological surveillance of vaccine-preventable diseases at the management level.
- Most hospitals have an electrical plant for the conservation of vaccines.
- Disposable syringes and needles are used at all health services.
- In case of an immunization emergency situation, there is a high-priority special resource towards immunization at all levels.
- In general, human and physical resources are available at all levels.
- Despite the lack of a formal social communication plan for immunization, it has been determined that beneficiaries are aware of the importance of vaccination and vaccine seeks to prevent.

**Issues**

- Health posts with reduced and irregular service hours, and lack of follow-up on vaccinated children and to identify the unvaccinated.
- Annual Plan of Action is not utilized as a management tool and for data analysis.
- Few provinces utilize program data for the definition of risk areas. Risk maps are also not included in the analysis.
- The "fixed posts" strategy is not sufficient to maintain useful vaccination function ineffectively.
- Lack of an ongoing plan of supervision, training and feedback at the provincial level.
- Lack of updated information on vaccination coverage. Information with incomplete schedule is not generated.
- Data on coverage and morbidity and surveillance indicators are not available.
- Generally, untimely implementation of surveillance activities. Managers are unaware of immunization norms.
- Lack of training of health staff that operate biologicals in fixed posts of immunization norms.
- Biosafety methods are not applied in the use of syringes and needles.
- Lack of capacity at the central and provincial levels to develop and mobilize resources, resulting in insufficient funds to ensure optimum up of the program.
- Distribution of biologicals is not based on needs or priorities.
- Operational evaluations are not carried out periodically in any of the provinces.

Dominican Republic /2

- Lack of financial resources for social communication, with little or no community representation in planning of activities.
- Strengthening of epidemiological surveillance is urgently required. Low performance of AFP and measles surveillance indicators jeopardizes timely identification of new cases and/or outbreak. Cases of diphtheria and whooping cough continue to occur. Vaccination coverage with DPT3 and OPV3 needs improvement. House-to-house vaccination in hard-to-reach areas is recommended in the short-term. However, a well-defined and financed National Plan of Action of house-to-house vaccination is recommended.
- The immunization program needs to strengthen all its technical and managerial components.

**IMMUNIZATION DAY**  
A WORLD BANK - PAHO PARTNERSHIP  
WASHINGTON, DC  
MARCH 20, 2001

**Division of Vaccines and Immunization**  
PAN AMERICAN HEALTH ORGANIZATION  
Pan American Sanitary Bureau, Regional Office of the  
WORLD HEALTH ORGANIZATION

8.5 million  
230,249 (2001)

7.9% (1996)

21 %  
83 % males  
83 % females  
25 per 1,000 (1999)  
44 per 1,000 (1999)  
80 per 100,000

immunization in the Americas. Basic Indicators, 2000

**Immunization**

Immunization program: 1977

Polio case: 1985

Strategy for polio eradication: One or two annual National Immunization Days

**Surveillance Indicators for Acute Flaccid Paralysis**  
1999 and 2000

| % Invest < 48 Hrs. | % of approp. Samples | % Weekly Notification |
|--------------------|----------------------|-----------------------|
| 90                 | 30                   | 0                     |
| 94                 | 48                   | 0                     |

Week 10, 2001

**Outbreak in the Dominican Republic:** An outbreak of poliomyelitis (poliovirus) was detected in the Dominican Republic in October, 2001. The first case was reported in the province of Monseñor Nouel county of Bonao had onset of

Country Immunization Profiles were prepared for the World Bank-PAHO Immunization Day. These profiles will be updated twice a year and posted on the Vaccines and Immunization web page on PAHO's internet site.

## Shared Agenda

On June 2000, the heads of the Pan American Health Organization, the World Bank and the Inter-American Development Bank signed an agreement to develop a *Shared Agenda for Health in the Americas*. This initiative allows the three organizations to ensure a more systematic coordination and complementarity among their multiple health efforts at different levels of action – regional, sub-regional, national and local – while pursuing their ongoing independent activities. The ultimate objective of this partnership is to jointly improve the health status of the population in Latin America and the Caribbean.

The *Shared Agenda for Health in the Americas* emphasizes the key role played by health in the economic and social development of a country. This coordination, which emphasizes shared values and common strategies, will complement the ongoing activities carried out independently by each organization. In this way, the three organizations seek to increase the value-added from each one of them and to give their coordinated activities continuity, consistency, and stability to achieve Health for All in the Americas.

Under the framework of the Shared Agenda, the three organizations have established four working groups covering the areas of disease surveillance, the environment, pharmaceuticals and national health accounts.

*Source:* Office of External Relations, PAHO

# Progress Report: Bolivia PAHO-World Bank Project

## Background

Recognizing the importance of reversing the erosion in immunization coverage, the Government of Bolivia, the World Bank and the Pan American Health Organization agreed to focus on strengthening the National Immunization Program, as part of a 10-year Health Sector Reform World Bank project in Bolivia (refer to *EPI Newsletter*, April 1999). During project preparation, the immunization program was evaluated and a medium-term immunization plan was developed to address key problems along three broad lines of action: (1) institutional strengthening of the Expanded Program on Immunization to improve adoption and implementation of immunization policies; (2) strengthening of health services to improve vaccination coverage and introduction of new vaccines; and (3) strengthening of the information and surveillance systems.

The following report outlines the activities during Phase I carried out under each line of action, achievements of the last two years, and areas that still require strengthening.

PHASE I (1999-2001); revamping of the National Immunization Program and Incorporation of New Vaccines

**Institutional strengthening of the Expanded Program on Immunization (EPI) to improve adoption and implementation of immunization policies.** Under Phase I of the Project, progress was made in establishing a long-term commitment to domestic, public sector financing of the immunization program, and to strengthening essential management functions.

On the financing front, the Ministry of Finance introduced a line item into the national budget, so that the allocation of funding for vaccine purchase is made more transparent. Importantly, the Ministry of Finance also established a tax on Bolivia's Social Security Agency (Caja Nacional de Salud), with the proceeds earmarked for the purchase of vaccines.

With respect to management strengthening, improvements occurred at the central and departmental levels, as well as in the coordination between those two levels. The profile of the EPI work was elevated by the Program being constituted as a unit that reports to the Directorate General of Health within the Ministry of Health; on a periodic basis it reports directly to the Minister of Health. The central EPI team was strengthened with the addition of three professionals and five support staff, as well as short-term technical assistance.

New administrative and procurement processes have been established. Vaccine purchases are under the responsibility of the Directorate of Administration and the Vice-Minister. An automatic inventory control system for vaccines and syringes has been developed and is being implemented.

With immunization targets included within performance agreements, lines of communication between the center and departments have been strengthened and specific responsibilities have been established to reinforce accountability. Departments share responsibility in the efforts to achieve high immunization coverage and to reduce the number of municipalities reporting low vaccination coverage. Quarterly evaluation meetings between national and departmental levels are held, and quarterly supervisory visits at all levels are being conducted. In addition, a Technical Advisory Committee has been formed at national and departmental levels, in which Bolivia's scientific societies participate.

To aid in effective planning, a national KAP study has been carried out detailing the differences of the eco-regions, ethnographic groups and urban-rural population. The results of the KAP study are being used for the development of the permanent information, education and communication (IEC) strategy.

**Strengthening of health services to improve coverage and introduce new vaccines.** Under Phase I, field capacity for routine administration of immunization and

emergency response was increased. In addition, effective new vaccines were also added to Bolivia's immunization schedule.

Across the country, EPI teams and the departmental level were strengthened with the addition of one nurse and the assignment of rapid response brigades, known by their Spanish acronym, BEAR. One hundred and twenty bilingual vaccinators were hired, trained and equipped to support vaccination and surveillance activities in every department. In addition, departmental teams have been trained to identify and respond to municipalities with low coverage, and five PAHO-financed epidemiologists have been detailed to the country's critical departments.

The national immunization schedule has been expanded to include vaccination against *Haemophilus influenzae* type B (Hib) and hepatitis B, and vaccination against yellow fever has been included in endemic zones. Measles vaccine has been replaced by a combined vaccine against measles, mumps and rubella (MMR). Furthermore, the combined vaccine of Hib, DPT and hepatitis-B has been introduced as a pentavalent vaccine in July 2000.

Other important improvements include the implementation of basic bio-safety practices, with the acquisition of safe boxes for the disposal of syringes and needles, and the development of a bio-safety manual. The cold chain has been renovated, including the updating of a national warehouse and the construction of five departmental warehouses. Where needed, local equipment has been renovated and storage capacity has been increased as required by the new vaccines.

**Strengthening the information and surveillance systems.** The critical immunization program functions of surveillance, data collection and analysis were strengthened. For example, national committees responsible for the analysis of information are being strengthened at all levels. Rapid monitoring of immunization coverage has been implemented. Active search for vaccine-preventable diseases now occurs in 1,236 health establishments (50,000 diagnoses reviewed), and 73,587 community leaders and people in the community have been interviewed.

A registration book for vaccinations outside health services was printed and distributed. Training in daily registration of doses applied and monthly consolidation of information was given to the health personnel at all levels. Weekly monitoring of surveillance indicators, monthly monitoring of coverage by municipalities and implementation of corrective measurements have all been accomplished. Sentinel hospital have been identified for the surveillance system of Hib type b and hepatitis B. Finally, collaboration with the Directorate of Epidemiology was established, to improve the notification and implementation of the surveillance system alert system.

### **Financing under the Phase I**

Implementation of the medium-term immunization plan was co-financed by the Government of Bolivia, international specialized agencies, and the World Bank. Spending on immunization increased from a total of US\$2.4 million in

1999 to an estimated US\$11.15 million in 2001. At the same time, the Government of Bolivia allocations for vaccines and other program inputs more than doubled, increasing from US\$1.15 million in 1999 to an estimated US\$3.5 million in 2001.

### **Results**

The first phase has yielded demonstrable results. Immunization coverage (as measured by DPT3) increased from 75% in 1996-98 to 89% in 2000. Coverage with pentavalent3 has reached 75% in 2001. Importantly, the number of municipalities with low DPT3 coverage has been reduced from 212 to 72. Furthermore, after missing its financing target for 1999, in 2000 the Government of Bolivia was able to mobilize its target level of US\$3 million for procurement of vaccines in 2000.

### **Lessons Learned**

The partnership between the Government of Bolivia, the World Bank and PAHO has had a tremendous impact in improving the policy environment and financial sustainability of Bolivia's national immunization program. The Ministry of Finance now recognizes the need to invest in vaccines to make the Program sustainable, and the Government of Bolivia has also assumed its responsibility of investing in vaccines in an incremental way.

The Project has clearly shown that the level of infrastructure of a country's health system and the system's capacity to deliver services play a critical role in the development and implementation of sustainable immunization programs. Another aspect that makes this Project of particular relevance to other countries in the Americas and elsewhere is the use of immunization impact indicators that measure not only the immunization components, but also overall aspects of health care reform and the processes of decentralization.

The tools and methodology used to develop this Project are being utilized for the strengthening of national immunization programs at the global level. The Global Alliance for Vaccines and Immunization (GAVI) has incorporated several tools and methodologies developed by PAHO and used in the Bolivia experience into its guidelines for funding requests for the Children's Vaccine Fund. These include the methodology for evaluating a national immunization program; five-year and annual plans of action; Inter-agency Coordinating Committees; rapid monitoring of vaccination coverage obtained; plans for close supervision at the local level; and establishment of rapid response brigades.

The Government of Bolivia and members of the Inter-agency Coordinating Committee have recently signed a Memorandum of Understanding endorsing the Second Generation Expanded Program on Immunization (EPI-II). During Phase II (2002-5) of the Bolivia PAHO-World Bank Project, it is proposed that EPI-II continue on the three lines of action, focusing on critical elements for future success.

*Source:* Annex, Project Appraisal Document, Phase II - Bolivia Health Sector Reform Project, World Bank.

## Final Measles Surveillance Data, 2000

| Region                     | Country                  | Final 2000 Data                |               |                 |                         |              | Total Confirmed Cases 1999 |
|----------------------------|--------------------------|--------------------------------|---------------|-----------------|-------------------------|--------------|----------------------------|
|                            |                          | Total Suspected Cases Notified | Discarded     | Confirmed Cases |                         |              |                            |
|                            |                          |                                |               | Clinical        | Laboratory And EPI Link | Total        |                            |
| Andean Region              | Bolivia                  | 1,516                          | 1,391         | 60              | 62                      | 122          | 1,441                      |
|                            | Colombia                 | 2,048                          | 2,047         | 1               | 0                       | 1            | 43                         |
|                            | Ecuador                  | 1,296                          | 1,295         | 0               | 0                       | 0            | 0                          |
|                            | Peru                     | 6,362                          | 5,680         | 0               | 1                       | 1            | 12                         |
|                            | Venezuela                | 1,584                          | 1,562         | 6               | 16                      | 22           | 0                          |
| Brazil                     | Brazil **                | 54,589                         | 54,357        | 6               | 30                      | 36           | 908                        |
| Central America            | Belize                   | 37                             | 37            | 0               | 0                       | 0            | 0                          |
|                            | Costa Rica               | 219                            | 219           | 0               | 0                       | 0            | 23                         |
|                            | El Salvador              | 624                            | 624           | 0               | 0                       | 0            | 0                          |
|                            | Guatemala                | 905                            | 905           | 0               | 0                       | 0            | 0                          |
|                            | Honduras                 | 626                            | 626           | 0               | 0                       | 0            | 0                          |
|                            | Nicaragua                | 523                            | 523           | 0               | 0                       | 0            | 0                          |
|                            | Panama                   | 126                            | 126           | 0               | 0                       | 0            | 0                          |
| English-speaking Caribbean | Anguilla                 | 3                              | 3             | 0               | 0                       | 0            | 0                          |
|                            | Antigua & Barbuda        | 6                              | 6             | 0               | 0                       | 0            | 0                          |
|                            | Bahamas                  | 5                              | 5             | 0               | 0                       | 0            | 0                          |
|                            | Barbados                 | 40                             | 40            | 0               | 0                       | 0            | 0                          |
|                            | Cayman Islands           | 10                             | 10            | 0               | 0                       | 0            | 0                          |
|                            | Dominica                 | 1                              | 1             | 0               | 0                       | 0            | 0                          |
|                            | Grenada                  | 22                             | 22            | 0               | 0                       | 0            | 0                          |
|                            | Guyana                   | 27                             | 27            | 0               | 0                       | 0            | 0                          |
|                            | Jamaica                  | 100                            | 100           | 0               | 0                       | 0            | 0                          |
|                            | Montserrat               | 0                              | 0             | 0               | 0                       | 0            | 0                          |
|                            | Netherlands Antilles     | 0                              | 0             | 0               | 0                       | 0            | 0                          |
|                            | St. Kitts & Nevis        | 3                              | 3             | 0               | 0                       | 0            | 0                          |
|                            | St. Lucia                | 2                              | 2             | 0               | 0                       | 0            | 0                          |
|                            | St. Vincent & Grenadines | 1                              | 1             | 0               | 0                       | 0            | 0                          |
|                            | Suriname                 | 26                             | 26            | 0               | 0                       | 0            | 0                          |
|                            | Trinidad & Tobago        | 116                            | 116           | 0               | 0                       | 0            | 0                          |
|                            | Turks & Caicos           | 3                              | 3             | 0               | 0                       | 0            | 0                          |
| British Virgin Islands     | 1                        | 1                              | 0             | 0               | 0                       | 0            |                            |
| U.S. Virgin Islands        | 0                        | 0                              | 0             | 0               | 0                       | 0            |                            |
| Latin Caribbean            | Cuba                     | 1,861                          | 1,311         | 0               | 0                       | 0            | 0                          |
|                            | Dominican Republic       | 3,651                          | 3,397         | 16              | 238                     | 254          | 274                        |
|                            | French Guyana            | ...                            | ...           | ...             | ...                     | ...          | 0                          |
|                            | Guadeloupe               | ...                            | ...           | ...             | ...                     | ...          | 0                          |
|                            | Haiti                    | 1,184                          | 190           | 13              | 979                     | 992          | 0                          |
|                            | Martinique               | 0                              | 0             | 0               | 0                       | 0            | 0                          |
|                            | Puerto Rico              | 0                              | 0             | 0               | 0                       | 0            | 0                          |
| Mexico                     | Mexico                   | 1,940                          | 619           | 0               | 28                      | 28           | 0                          |
| North America              | Bermuda                  | 0                              | 0             | 0               | 0                       | 0            | 0                          |
|                            | Canada                   | 206                            | 0             | 0               | 206                     | 206          | 29                         |
|                            | United States            | 85                             | 0             | 0               | 85                      | 85           | 100                        |
| Southern Cone              | Argentina                | 935                            | 929           | 0               | 6                       | 6            | 313                        |
|                            | Chile                    | 107                            | 106           | 0               | 0                       | 0            | 31                         |
|                            | Paraguay                 | 807                            | 807           | 0               | 0                       | 0            | 0                          |
|                            | Uruguay                  | ...                            | ...           | ...             | ...                     | ...          | 34                         |
| <b>Total</b>               |                          | <b>81,594</b>                  | <b>77,117</b> | <b>102</b>      | <b>1,651</b>            | <b>1,753</b> | <b>3,208</b>               |

... No information provided

Source: MESS/HVP except for Argentina, Brazil, Canada, Cuba, Guadeloupe, Haiti and USA

Updated: May 1, 2001

# UN Agencies Launch New Plan to Halve Mortality of Measles - a Major Childhood Killer

In a concerted move against one of the world's deadliest childhood diseases, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) today announced a new initiative designed to halve global measles deaths by 2005.

"Measles is still a major childhood killer, with over 30 million cases and nearly 900,000 annual deaths in recent years. These figures are even more shocking given the fact that effective immunization, which includes vaccine and safe injection equipment, costs just US\$ 0.26 and has been available for more than 30 years," said Dr. Bjørn Melgaard, Director of Vaccines and Biologicals, WHO.

Measles accounts for the majority of the estimated 1.6 million annual deaths due to childhood vaccine-preventable diseases. Failure to deliver at least one dose of measles vaccine to all infants remains the primary reason for the high incidence and mortality rates of measles.

The Global Measles Strategic Plan calls on countries to assess progress on measles control, identify reasons for low routine coverage, develop a three to five-year plan for measles mortality reduction and fully implement the recommended strategies.

The plan has been developed by UNICEF and WHO in cooperation with the United States Centers for Disease Control and Prevention (CDC), numerous experts worldwide and several other partners. It has the advantage of being a flexible framework that can be adapted to the specific needs and immediate goals of individual countries.

Under the new initiative, WHO and UNICEF will assist affected countries to:

1. Provide a first dose of measles vaccine to all infants.
2. Guarantee a "second opportunity" for vaccination to increase the probability that as many children as possible are immunized and to assure that those immunized are responding to the vaccination.

3. Establish an effective system to monitor coverage and conduct measles surveillance.

4. Improve management of complicated measles cases, including vitamin A supplementation.

Near blanket coverage is crucial for containing the disease. "Because measles is so contagious and because a small number of those who are vaccinated do not develop immunity, vaccination coverage levels need to be above 90% to stop measles deaths. Unfortunately, this goal has not yet been achieved in all countries," said Dr. Suomi Sakai, UNICEF's Chief of Immunization Activities "But we know we can get there," she added.

Measles, a viral disease, is spread by infected droplets during sneezing and coughing, through direct contact with nasal or throat secretions of infected persons or by touching contaminated objects. It is predominantly a disease of childhood, causing fever and rash and is sometimes complicated by ear infections, pneumonia, or encephalitis (inflammation of the brain) which can result in convulsions, deafness, mental retardation or death.

In addition to the compelling humanitarian and health reasons, the economic arguments for investing in measles control are convincing. Of all health interventions, measles immunization carries the highest health return for the money spent, saving more lives per unit than most other health interventions.

Source: WHO-UNICEF, 29 March, 2001.

## Errata

In the February issue of the *EPI Newsletter* (page 3), we mistakenly referred to Dr. Michael Katz, Vice President for Research for the March of Dimes, Birth Defects Foundation, as Dr. Samuel Katz. We apologize to both.

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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