

Southern Cone: Progress Towards Measles Eradication

Managers of national immunizations programs and laboratory staff responsible for measles diagnosis in the Southern Cone, Brazil and Bolivia met in January to review the current measles situation and discuss the next steps to meet the deadline of measles eradication by the year 2000. The meeting was sponsored by PAHO and included the participation of Argentina, Chile, Paraguay, Uruguay, Bolivia and Brazil.

Coverage: Provisional data for the countries of the Southern Cone, as well as for Brazil and Bolivia show that those carrying out a measles campaign for children under 5 years of age reported coverage rates between 94% and 100%. Routine vaccination coverage against measles, however, has been under 95%.

Surveillance: During 1999 there were a provisional total of 3,000 confirmed measles cases in the Americas.

These cases occurred in 11 countries, of which only four (Bolivia, Brazil, Argentina and the Dominican Republic) have reported indigenous virus transmission. Bolivia reported 1,442 cases (48% of the total in the Region), Brazil 756 (25%), Argentina 247 (8%), and Dominican Republic 206 (7%). All these countries are currently implementing aggressive plans of action that include: implementation of timely *follow-up* measles campaigns, active search of measles cases, and strengthening of surveillance. As a result, the number of cases decreased in the last quarter of the year (see Figure 1). The five countries that kept high measles vaccination coverage (Canada, Chile, the United States, Peru, and Uruguay) were affected by measles importations, which caused limited outbreaks and no endemic circulation afterwards.

The outbreak in Brazil started in 1996 in Santa Catarina and São Paulo (the latter state did not participate in the last scheduled national measles *follow-up* campaign). The highest incidence of cases was seen in 1997 (53,644 cases), 68 times more than in 1996. In 1998, the total number of confirmed cases went down to 2,930. Of the 756 provisional confirmed cases in 1999, 305 (40%) occurred in the Northeastern region. The state of Pernambuco was the most affected, with 24% of the total cases in the country.

Unlike the 1997 situation in São Paulo, the age group most affected in 1999 was children under 5 years. With the incorporation of 27 additional epidemiologists, hired as part of a special Task Force, and the implementation of an emergency plan, there was a surge in the notification of

suspected measles cases to a total of 33,781 cases. Although each state had at least one laboratory for serological diagnosis, only 355 of the 756 confirmed cases were confirmed by laboratory or had an epidemiological link to a suspected case. Overall, measles vaccination coverage in 1999 reached 93%. However, in 59% of the municipalities coverage was under 95%. In order to interrupt measles virus transmission, Brazil has scheduled a *follow-up* campaign for June 17, 2000 and has also intensified surveillance. The campaign will target children under 5, up to age 15 years of age in some states.

In Argentina, the outbreak began at the end of 1997 in Missions. That year, 121 cases were reported in three provinces. The outbreak spread to the entire country in 1998, with a total of 10,229 confirmed cases. In 1998, a national vaccination campaign was conducted targeting children 1 to 6 years of age, but it did not include all the provinces. During

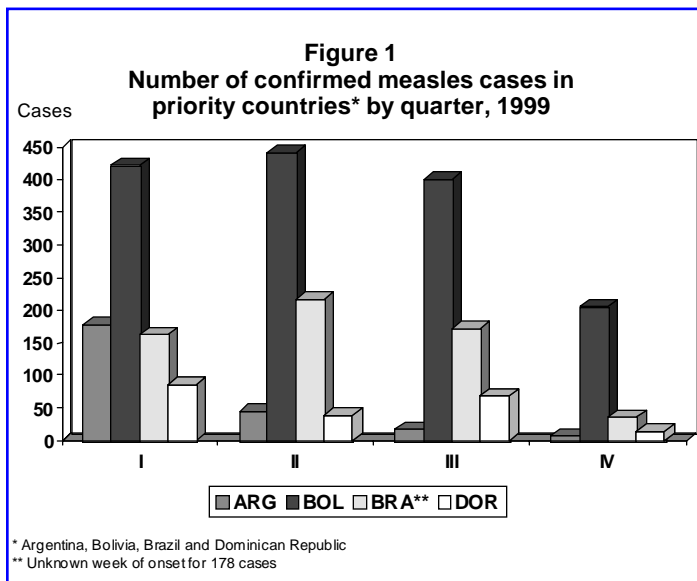
1999, 247 confirmed measles cases were reported from 12 (50%) of the 24 provinces. The last case was reported during epidemiological week 46 in Mendoza. The population most affected were unvaccinated children under 5 years of age.

In Bolivia, it is important to note that in 1995 vaccination coverage was 80%, but increased in 1996 and 1997 to 98%. Nevertheless, due to lack of vaccines, this coverage declined again in 1998 to 85%. The measles outbreak commenced in May 1998 in Tarija, which borders with Argentina, and

from there gradually spread to the rest of the country, with a total of 1,004 confirmed measles cases in 1998 and 1,442 cases in 1999. Fifty two percent of the total number of confirmed cases in 1999 corresponded to unvaccinated children under 5 years of age.

In order to control the epidemic in Bolivia, the government implemented a plan of action with the collaboration of PAHO, the World Bank, USAID, UNICEF, and the IDB and an important financial contribution from the government. The plan included the implementation of a national *follow-up* campaign between November and December 1999. Coverage obtained in the campaign was 98%, with 71% of municipalities reporting coverage of 95% or higher. A dramatic reduction was achieved in the number of cases confirmed since the end of the campaign to date. Currently, the country is carrying out mop-up vaccination and active search of cases in municipalities at risk.

As of March 16, 2000, the total number of confirmed measles cases in Bolivia is 35 (31 by laboratory and 4 by



epidemiological link) five are pending and 71 have been discarded. The last confirmed case had onset on February 23. Eighty six percent (30 cases) correspond to persons over 5 years of age and 62% (22 cases) to those over 15 years of age. Starting from epidemiological week six (February 12), the Department of Beni was the only one reporting confirmed cases due to an outbreak in a military barrack. The departments of Santa Cruz and Beni account for 86% of the cases in Bolivia this year. Other states reporting cases are Pando (3), Potosi (1), and La Paz (1). A total of eight of the 314 municipalities in the country have been affected. In each of the eight municipalities, control activities are being carefully implemented, in order to ensure that transmission is stopped.

Highlights of Other Vaccine Preventable Diseases

Rubella

The majority of countries of the Southern Cone are using measles, mumps, rubella (MMR) vaccine as part of their regular vaccination program. Paraguay plans to introduce the vaccine this year. Brazil is integrating its surveillance system for rubella with that of measles. The remaining countries utilize the measles surveillance system to detect rubella virus circulation. Chile carried out a successful national rubella campaign, which targeted women between 10 and 29 years to prevent the occurrence of congenital rubella syndrome (SRC). The campaign achieved vaccination coverage of 98%. (See issue of *EPI Newsletter*, December 1999)

Yellow fever

In 1999 the epidemiological situation of yellow fever (YF) in the Americas presents characteristics similar to those of the previous years. Until December 1999, 204 confirmed cases of the selvatic form and 97 deaths had been reported, the majority occurring in Brazil, Peru, and Bolivia. As of March 17, there were a total of 38 confirmed cases and 15 deaths. Thirty five of the 38 cases were from Brazil, especially from the State of Goias (31 cases). The sociodemographic profile of confirmed cases maintains the classical pattern of the selvatic form: males over 15 years who work in the jungle. The episode in Brazil, where at least 5 ecotourists were infected in an epizootic area and became ill in different cities infested by the urban vector of the disease, shows the high-risk existing today of the re-urbanization of yellow fever.

Epidemiological surveillance is improving and health professionals in high-risk areas have been informed of the risk of the YF. Bolivia, Brazil and Peru have established routine epidemiological investigation for YF whenever a suspected case is identified. Almost all cases reported in 1999 are laboratory confirmed. In the Americas, only Trinidad and Tobago and French Guiana have introduced universal vaccination of children. Brazil initiated the implementation of this strategy in 17 of its 27 states. Peru, Bolivia and Venezuela are also aiming for universal vaccination of children this year. Brazil, Peru, Venezuela, Bolivia, Ecuador and Colombia launched vaccination campaigns for other age groups in areas considered to be at greater risk.

Hepatitis B

Hepatitis B is an acute and chronic disease, with global distribution. It is estimated that there are over 2 billion of past or present infections, and approximately 350 million chronic carriers of the surface antigen. Over a million people die every year because of active chronic hepatitis, cirrhosis, and/or hepatocarcinoma. Only in the Americas, new annual cases have been calculated to be in the range of 140,000 and 400,000.

In the Americas highest endemicity is found among indigenous groups, such as the Jíbaros of the Amazon Basin and the Eskimos of Alaska. Epidemiology of hepatitis B indicates that in areas of low and intermediate prevalence, transmission occurs especially in adults of the following risk groups: health workers and others such as emergency technicians exposed to blood, male homosexuals, drug addicts (due to used syringes), heterosexuals with multiple partners, persons with sexually transmitted diseases, persons undergoing dialysis and hemophiliacs.

Haemophilus influenzae type b

Efforts are underway to introduce and/or consolidate the introduction of conjugated vaccines against Hib, which are safe and of known effectiveness, in the routine schedule for children under 1 year. In the Southern Cone, Uruguay, Chile, Argentina, and Brazil have already introduced Hib vaccine; Bolivia and Paraguay will join this year.

Progress: Government of Bolivia/ PAHO/World Bank Collaboration

The Pan American Health Organization is working with the World Bank in Bolivia, Peru and the Dominican Republic, and more recently in Paraguay and Haiti in the immunization component of the Bank's health projects. In Bolivia, the PAHO/World Bank collaboration is part of a 10-year project seeking to improve coverage and the quality of service networks, empower communities to improve their health status and strengthen local capabilities to respond to health needs. The implementation of the overall World Bank project is being monitored by the use of eight indicators, three of which are related to immunization.

Progress has been achieved in establishing a specific budget line in the national budget to cover vaccines and syringe costs of national immunization programs and in the introduction of the pentavalent and measles mumps rubella vaccines, as well as yellow fever in endemic areas. Bolivia allocated US\$ 2 million towards its immunization program in 1999, up from US\$ 53,000 in 1998. Another innovative development of this project is the inclusion of diphtheria, pertussis and tuberculosis (DPT3) vaccine coverage, as an indicator to measure performance and resource allocation within *Performance Agreements*, which are contracts signed between the states and central authorities as part of the processes of decentralization of health services.