

EPI Newsletter

Expanded Program on Immunization in the Americas

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IMMUNIZE AND PROTECT YOUR CHILDREN

October 1997

SVI Technical Advisory Group Meets

The Twelfth Technical Advisory Group Meeting on Vaccine-Preventable Diseases (TAG) was held in Guatemala, September 8-12, 1997. Formed in 1985 during the polio eradication campaign, the TAG meets every two years and functions as the leading forum to promote regional initiatives aimed at controlling and eliminating vaccine-preventable diseases. One of its main objectives has been to strengthen the policy dialogue on immunization among governments in the Region and participating agencies. The following are some of the major conclusions and recommendations.

Immunization in a Changing Policy Environment

All countries are moving toward delegating greater responsibility for delivery and management of health care services to local levels. This provides an opportunity to promote community participation and commitment of local health authorities.

However, with decentralization there remains a requirement at the central level to assure that immunization program goals are met in all areas of a country. Because almost all vaccine-preventable diseases can spread widely, successful control or elimination requires coordinated national and international efforts so that no area becomes a reservoir to seed infection into other communities and countries.

Recommendations

- National governments must maintain authority to monitor the implementation of immunization programs at the

state and local level and to take corrective actions should problems be detected.

- Vaccination and surveillance programs should be considered essential public goods and funded with public resources.
- Within the context of a changing environment to improve access to health services, vaccination coverage should be an indicator of the success of local and state delivery of services and a measure of the success of the health care reform and decentralization process.



Children wave their certificates proving that they have completed their vaccination schedule.

Source: WHO/Ministry of Health, Mexico

Measles Eradication

Substantial progress has been made towards achieving the goal of measles eradication in the Americas. Transmission has been interrupted in many countries of the Region. The PAHO vaccination strategy (*catch-up, keep-up and follow-up*), where fully implemented, has proven to be highly effective. However, TAG pointed out that low levels of incidence can lead to a false sense of security. In the absence of measles transmission, susceptibles accumulate in a community, as a result of

failure to vaccinate all children and because primary vaccination does not protect 5 to 10% of those vaccinated. These susceptibles can sustain future measles outbreaks. To maintain a measles-free state will require ongoing efforts to minimize susceptibility using the complete strategy.

The measles eradication effort is not a local or even a national campaign but a hemisphere-wide program which

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can only be as strong as its weakest component. This is true on a global scale as well because many cases in this Region have been linked either epidemiologically or virologically to importations from outside this hemisphere. Thus, better worldwide measles control is important to the continued success of measles eradication in the Americas.

Recommendations

General

- The occurrence of epidemic measles in a major urban area poses, by far, the most serious threat to the overall program because of the possibility of widespread disease dissemination. Accordingly, it is important that program success in all urban areas (population of $\geq 1,000,000$) be monitored on an ongoing basis by national authorities and reported to PAHO.

Vaccination Strategies

- Routine vaccination of infants (*keep-up* vaccination) is a critical component of the PAHO measles eradication strategy.
- To maintain high population immunity among preschool-aged children, *follow-up* measles vaccination campaigns should be conducted whenever the estimated number of susceptible children 1-4 years of age approaches the number of children in one birth cohort.

Surveillance and Laboratory

- Each country should periodically evaluate the quality of its surveillance system. PAHO has developed a protocol for rapid evaluation of surveillance systems which should be disseminated to all countries of the Region. A plan should be made for these evaluations in all countries as soon as possible.
- Laboratory confirmation is an essential part of the regional measles surveillance system. A single serum specimen collected at first contact with the health care system is sufficient for confirming measles.
- Virologic surveillance is important. Clinical specimens for viral isolation should be obtained from every chain of transmission. Urine, the most practical specimen to collect, should be obtained within 7 days of rash onset and forwarded to a laboratory to be properly processed.

Outbreak Response

- Countries should not implement indiscriminate campaigns to vaccinate all adults against measles. Most adults are likely to be immune and achieving significantly higher levels of coverage among adults is extremely difficult. However, where surveillance has identified specific risk groups for measles among adults, such as university students, health care workers, or others, targeted vaccination efforts may be useful.

Management Indicators

The following indicators are essential for monitoring the performance of the program:

Notification:

- $\geq 80\%$ of reporting sites report on a weekly basis the presence or absence of suspected measles cases.

- $\geq 80\%$ of reporting sites report at least one suspected measles case per year.

Investigation:

- $\geq 80\%$ of suspected measles cases are investigated within 48 hours of report.
- $\geq 80\%$ of suspected measles cases have a blood specimen collected if there is not an epidemiological link to a laboratory confirmed measles case.
- $\geq 80\%$ of measles chains of transmission have an identified source of infection.

Laboratory:

- $\geq 80\%$ of specimens with results within 7 days of receipt in laboratory.

Poliomyelitis

The hemisphere continues to be free of wild polio virus and surveillance indicators for the Region, as a whole, show that most countries are continuing to conduct adequate surveillance for acute flaccid paralysis (AFP) cases. However, the TAG noted a substantial deterioration in surveillance in some of the countries of the Region, raising concerns that future importations of wild virus could be missed.

- All countries must assure that adequate resources are devoted to polio surveillance. AFP surveillance must continue with ascertainment of at least one case annually of AFP per 100,000 < 15 years of age.
- For laboratory diagnosis, only one stool, collected within 15 days of onset of paralysis, is needed. Such specimens should be collected from at least 80% of AFP cases.
- An inventory of all laboratories in the hemisphere which have wild polio virus stocks should be completed as a first step toward the eventual destruction of all wild polio viruses as part of the global certification process.
- OPV remains the vaccine of choice in the Americas because it induces gut immunity, thus preventing spread of wild viruses if introduced; it is easy to administer; and it is relatively inexpensive.

Neonatal Tetanus

Acceleration of NNT elimination activities in the Region of the Americas began in 1988 and great progress has been made. The annual number of cases in the Region decreased from 1,470 in 1988 to 312 in 1996, and the number of districts with multiple cases of NNT has also decreased.

Recommendations

- Td should replace TT any time TT is indicated for vaccination of women of childbearing age, other adults, and older children to also improve protection against diphtheria.
- Surveillance and NNT case investigations should be improved in risk areas of endemic countries, particularly in areas from which information on coverage and cases is lacking.

Rubella and Congenital Rubella

Available data indicate that rubella is prevalent throughout the Americas. Cases of congenital rubella syndrome

(CRS) and fetal infection have been documented in Barbados, Belize, Brazil, Cuba, Jamaica, Mexico, Panama, and Trinidad. It has been estimated that there are more than 20,000 infants born with CRS each year in the Americas in the absence of major epidemics.

Recommendations

- All countries should incorporate rubella vaccine (as MR or MMR) into childhood vaccination programs, both as part of routine childhood immunization at 12-15 months and as part of the *follow-up* campaigns reaching children 1-4 years of age every 4 years.
- Countries implementing childhood rubella programs should make efforts to reduce the accumulation of susceptible adult female groups, such as post-partum vaccination, immunization in family planning clinics, and other settings where females can be vaccinated. Women should be vaccinated with MR or MMR vaccine to take advantage of the opportunity to increase immunity to measles.
- Surveillance of CRS (and rubella) should be initiated throughout the Americas and should begin before, or at the same time as, implementation of a rubella vaccination program.
- Countries wishing to prevent and control CRS promptly should carry out a one time mass campaign to vaccinate all females 5-39 years of age with rubella or MR vaccine.
- Countries wishing to prevent and control both rubella and CRS promptly should carry out a one time mass campaign to vaccinate both males and females 5-39 years of age with rubella or MR vaccine.

Hepatitis B

It has been estimated that between 140,000 to 400,000 new cases of acute hepatitis B occur annually in the Americas. Two thirds of them are believed to occur in South America, primarily in areas within the Amazon Basin.

Recommendations

- Routine vaccination of all children living in the Amazon Basin is recommended as well as in other areas, if any, with high endemicity (HbsAg prevalence equal or greater than 7%).
- Routine vaccination is also recommended for those at high risk of infection, such as health care workers and hospital staff.

Yellow Fever

Between 1990 and 1996, 1,287 cases of yellow fever were reported in the Americas. As during the decade of the 1980s, 80% of these cases came from the Amazon Basin areas of Bolivia and Peru. However, important risk areas for yellow fever are also present in Brazil, Colombia, and Venezuela.

Recommendations

- Incorporate vaccination against yellow fever into national immunization programs in high-risk areas and ensure that adequate quantities of vaccines and other supplies necessary to immunize against this disease are available at local health services.

Haemophilus Influenzae type b (Hib)

Safe and effective vaccines against *Haemophilus influenzae* type b (Hib) have had an enormous impact in industrialized countries on Hib disease incidence, particularly meningitis and epiglottitis. Similar effects have also been observed in some countries in the Region (e.g. Uruguay and Chile) that have introduced Hib vaccine in their national immunization programs. It is possible that a larger impact on pneumonia will be observed in developing countries, as *Haemophilus influenzae* type b is an important pathogen in childhood pneumonias.

Recommendations

- The TAG recommends the introduction of Hib vaccine in national immunization programs provided that adequate additional funds can be identified. However, implementation of Hib should not divert resources needed to sustain and enhance existing immunization efforts.

Vaccines of Quality

Quality of vaccine is assured through both quality control of the final product, as well as Good Manufacturing Practices (GMP) during the entire manufacturing process. Both manufacturers and governments using vaccines are responsible for quality. Manufacturers must adhere to GMP that assure high quality of every lot (consistency of production). Governments must have adequate capacity to monitor manufacturers and their products.

Recommendations

- Local vaccine manufacturers should participate in the PAHO Certification Program for Vaccine Producers.
- Local manufacturers should perform feasibility and viability studies of vaccine production to demonstrate their capability to supply vaccines of quality to immunization programs in a timely and continuous manner.
- Governments in the Region must institute National Control Authorities (NCA) appropriate to their vaccine production and purchasing policies.
- Immunization program managers should use only vaccines of known quality in their immunization programs.

Research and Development: the Regional Vaccine Initiative.

Although governments recognize that vaccine and immunization are key to the control, elimination and eradication of vaccine-preventable diseases, this recognition has not been translated into concrete actions to promote and support research and development for vaccine production. Research and development teams in the Region are few and not coordinated among themselves or with vaccine producers. The introduction of new vaccines into national immunization programs in the Region may be facilitated if some existing public laboratories participate in the process.

Results obtained by the Pneumococcal Surveillance Network demonstrate the importance of inter-country collaboration and coordination to standardize laboratory and epidemiological methodologies for monitoring a specific

pathogen, to determine regional burden of disease, and to define particular characteristics of the burden such as serotype distribution or antimicrobial resistance. This system can be established and developed as the basis for a more comprehensive surveillance network for vaccine-preventable diseases.

Recommendations

- Formal programs for vaccine research and development must be established with appropriate financial resources, together with strong coordination at the country and regional level in order to potentiate existing research, development and production capabilities.
- This initiative should give priority to the development of polysaccharide and polysaccharide conjugated vaccines as this methodology will provide vaccines against several important childhood pathogens such as *Haemophilus influenzae*, *Neisseria meningitidis*, *Streptococcus pneumoniae*, *Salmonella typhi*, and *Shigella* sp., responsible for significant mortality and morbidity in the Region.

- The Network should collect information on cases and correlate those data with laboratory information to answer questions such as whether the increasing trend of antibiotic resistance has been associated with increased disease severity, complications, and cost. These data will be important in guiding clinical management and future policies for pneumococcal vaccination.

Technical Advisory Group Members

- Peter Figueroa (Jamaica)
- Donald A. Henderson, Chairman (United States)
- Akira Homma (Brazil)
- John La Montagne (United States)
- Joseph Z. Losos (Canada)
- Fernando Muñoz Porras (Chile)
- Walter Orenstein, Rapporteur (United States)
- Roberto Tapia Conyer (Mexico)

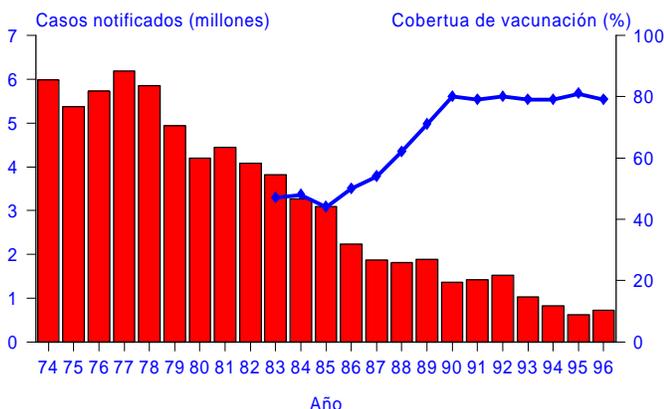
For a complete version of the TAG conclusions and recommendations, please contact SVI in Washington, D.C.

Third Global Roundtable on Measles Control and Elimination

The Third Meeting on Advances in Measles Control and Elimination was held in August 27-29, in Atlanta, Georgia. This consultative meeting is co-sponsored by PAHO, the Centers for Disease Control and the World Health Organization.

The progress made in the global fight against measles and interruption of transmission has been demonstrated in several countries, reinforcing the view that measles eradication is technically feasible using existing vaccines and intervention strategies. This has generated a positive trend in measles control and elimination (Figure 1).

Figure 1
Global annual reported vaccine coverage and measles cases 1974-1996



Source: WHO/EPI Information System

The countries of the Americas are well underway in their efforts to eliminate the disease by the year 2000 and the Pacific Island nations are expected to make a similar commitment in the near future. The European Advisory Group has recommended an elimination target date of 2007 and it is anticipated that the Regional Committee will consider this goal at its 1998 meeting. The Regional Committee of the Eastern Mediterranean will consider an elimination target of 2010. China and several southern African countries have embarked on accelerated measles control/elimination approaches.

A decision to eradicate measles worldwide will have a tremendous impact on infant morbidity and mortality. Despite the availability of an effective vaccine, measles continues to cause 42 million cases, and nearly 1 million deaths per year worldwide. Global coverage with measles vaccine is estimated at 79%. Most measles deaths occur among children under five years of age living in developing countries, particularly in Africa. This is because many children remain unprotected, particularly in poor urban areas where the case fatality is highest. The disease thrives in cities, in poor urban areas where crowding, poor sanitation and low measles vaccination coverage ensure ongoing circulation of the virus. Participants at the Atlanta meeting agreed it would be important to support urban immunization strategies to control measles in low income countries with high population density, with special emphasis on populations that have not yet been reached.

The successful completion of the global polio initiative will facilitate further progress towards measles elimination. There was consensus that polio eradication and measles elimination activities can be mutually reinforcing and represent a natural joining of efforts. However, participants highlighted that while the global efforts to eradicate polio are progressing well, much remains to be done, particularly in the Indian sub-continent and Africa. Therefore, while it is important to start planning for regional elimination of measles and ultimate eradication before the polio goal is completed, new measles activities should not jeopardize progress toward polio eradication. It will be important to initiate programs to interrupt transmission early in some of the most difficult countries in Africa, to determine the most effective strategies in these settings and demonstrate what can be done.

Sustaining interruption of measles transmission is difficult and expensive. As increasing areas of the world achieve elimination, participants agreed that the goal of global measles eradication be set and achieved in a short period of time. This will require close and effective partnerships between official agencies, private and voluntary sectors, and external donors as it was done in the Americas during the polio eradication years. A major hurdle to further improve control in areas that have obtained the greatest case reductions, such as the Americas and the United Kingdom, is the ongoing circulation of measles virus in other parts of the world. While the reported incidence rate in the Americas was only 0.7 cases per 100,000 population in 1995, the reported rates in other regions were much higher. The rate in Africa was 83 times greater than the rate in the Americas, and the rate in Europe and the Western Pacific region were 13 to 10 times greater respectively.

For sustainable impact, there was consensus that it would be important to continue strengthening the primary health care system and EPI in developing countries to achieve and maintain acceptable levels of measles control. Measles elimination is already underway in many areas but global eradication will most likely pose a number of additional challenges. Elimination activities must be integrated within primary health care to ensure the maintenance of progress and to pave the way for future elimination/eradication initiatives.

Next Steps

Programmatic and financial obstacles must be overcome if eradication is to be achieved and strategies will need to be adjusted based on accumulating experience. Competing priorities may create difficulties in raising political commitment to measles control/elimination/eradication. Many of the poorest countries will require significant external support. The amount of additional backing needed should be estimated soon to enable appropriate planning.

Key to rally political support for global measles eradication will be the availability of estimates of the overall cost of a global campaign. It will also be important to consider the marginal and opportunity costs of undertaking elimination or eradication. So far, different approaches have been taken to assess the economic costs, benefits and effectiveness of

measles control/elimination/and eradication efforts. They all show that measles control is highly-cost effective and that improvements in control are also highly cost-effective and may be cost-saving in some countries. Greater agreement on appropriate approaches to economic analysis would be useful, particularly with respect to eradication.

Measles eradication can convey two lasting benefits. The *first*, absence of measles disease (and the need for measles immunization), is obvious and indisputable. The *second*, permanent contribution to the development of health services, is a potential benefit which requires specific attention to maximize the benefits that can accrue to the overall health system from eradication efforts. Specific benchmarks should be developed to monitor interaction of eradication efforts and primary health care development.

Once countries progress from control to elimination goals, surveillance strategies need to be further developed and implemented to allow assessment at the most peripheral level. Based on the experience in the Americas, participants representing developed and developing countries stressed the need to implement the recommended vaccination strategies for measles eradication in full throughout a country or region. PAHO's vaccination strategy for measles eradication, which has been adopted in most countries in the Region, consists of a one-time mass vaccination campaign of all children 1-14 years of age, high coverage through routine vaccination of 1 year olds, and periodic *follow-up* vaccination to reduce the accumulation of susceptible infants and children 1-4 years of age.

Ecuador Approves Vaccine Law

Ecuador has joined Venezuela in winning congressional approval of a Vaccine Law in September, 1997. Venezuela approved an Immunization Law in March of 1996, which includes a specific item addressing the availability of vaccines for the country's immunizations programs. This breakthrough in both countries is an indication of national commitment for immunization programs by all branches of government. PAHO is actively collaborating with legislators in the Region to ensure that similar laws are enacted elsewhere.

In Ecuador, the Vaccine Law was an initiative of Congressman Miguel Lopez (Pachakutik). Following the launching of the EPI in the Americas in 1977, Ecuador was the first country to initiate a national EPI. At the time Dr. Asdrubal de la Torre held the post of Minister of Health. Twenty years later, Dr. de la Torre has played a key role in making Ecuador adopt a law that will ensure the sustainability of routine immunization programs.

Starting from 1998, a specific budget line of no less than US\$ 2.5 million will be incorporated into the national budget to cover recurrent costs of vaccines and other inputs needed for the country's EPI. The law stipulates that this amount cannot be used for other purposes, nor shall there be any reductions.

Measles Update

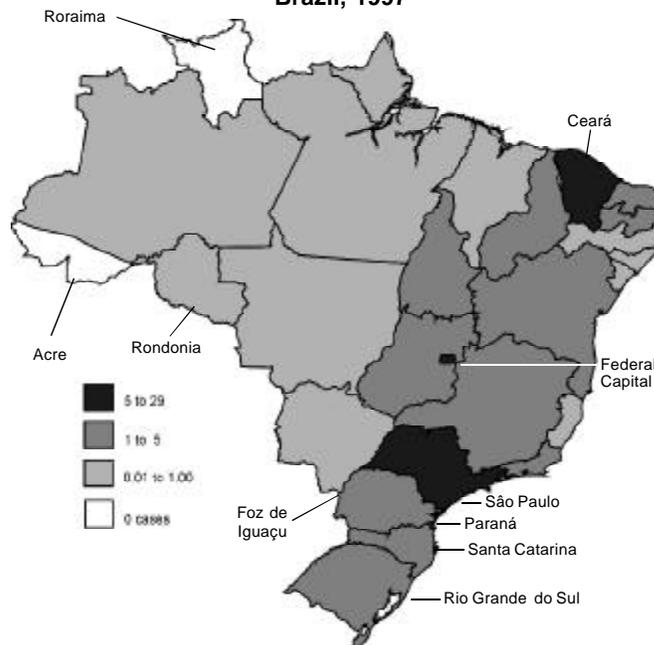
As of week 40 (October 4, 1997), a total of 48,118 suspected measles cases have been reported to the Brazilian Ministry of Health. Of these, 39,929 were reported in the State of Sao Paulo, which with a population of approximately 34 million is the most densely populated state of the country. So far 12,343 cases have been confirmed, most of them by laboratory testing, with a positive finding of IgM in blood samples.

Only two states (Acre and Roraima) have not reported confirmed cases of measles. The incidence rate by 100,000 inhabitants is the highest in São Paulo (28.2), second and third are Brasília, the Federal Capital, and the state of Ceará (see map). Several municipalities with borders with Paraguay, Uruguay, Argentina and Bolivia have confirmed circulation of measles virus and include P.Velho in the state of Rondonia (2 cases), three municipalities in the state of Paraná (70 cases), four municipalities in the state of Santa Catarina (20 cases) and one municipality in the state of Rio Grande do Sul (1 case). The most notable international transmission can be observed between the border cities of Foz de Iguacu in Brazil and Ciudad del Este, Paraguay, with more than 90 cases. This area attracts many tourists because of the Iguacu waterfalls and there is also high commercial activity here between the two countries.

In the current outbreak, infants and persons between 20 and 29 years of age have been the most vulnerable. Their respective attack rates were 45.3 and 19.1 per 100,000 persons. The attack rate among the group of 1 to 4 years of age was 5.5 per 100,000 persons. The highest number of patients (5,451) are between the ages of 20 and 29 years of age. The above mentioned age group consists of those who were born too early for routine vaccination, but too late to have been exposed to circulating measles virus. The groups between 1 and 20 years old who have benefited from vaccination present the lowest attack rates in this outbreak.

In the state of Sao Paulo a campaign aimed at children under the age of 5 was organized in August, reaching 100 % of children in that age group, regardless of previous vaccination status. A preliminary analysis has shown that the number of confirmed cases from Sao Paulo has dropped from approximately 700 cases per day in August before the campaign, to approximately 50 cases per day in September. At the national level, a campaign was held on October 25, during which most children under 5 years of age were vaccinated against poliomyelitis and measles.

**Incidence rate of confirmed measles cases by state
Brazil, 1997**



Source: GT-Sarampo/CNDI/CENEPI/FNS/MS
Incidence rate per 100,000 population
Data as of week 40, 1997.

Safe Destruction of Vaccine Vials

Recently, there have been several inquiries from health services in the Region regarding the safe disposal of vaccine vials. In an effort to standardize procedures, SVI recommends the following:

Vaccine vials should be discarded when:

- they are past their expiration date and the quantity of vaccines involved does not justify re-testing, or
- they have been exposed to excessive heat and the quantity involved does not justify re-testing, or
- they have been re-tested and have shown to have lost their potency, or
- open vaccine vials have not been used within the

recommended time (see *EPI Newsletter*, August 1992, page 4), even if stored at the proper temperature.

In order to avoid the improper use of vaccines that fit the above description outside the health services and to prevent accidental injuries that can be caused by glass vials, SVI recommends the following two disposal methods:

- Incineration
- Burying

Incineration is the preferred method for the destruction of unused vaccine vials for health services that have access to this technology. If not available, the health service should bury the vaccine vials in a deep hole.

Reported Cases of Selected Diseases

Number of reported cases of measles, poliomyelitis, tetanus, diphtheria, and whooping cough, from 1 January 1997 to date of last report, and the same epidemiological period in 1996, by country.

| Country/Territory | Date of last report | Measles | | | | Polio | | Tetanus | | | | Diphtheria | | Whooping Cough | |
|------------------------|---------------------|----------------|------------|--------------|-----------------|----------|----------|-------------------|---------------|---------------|------------|------------|-----------|----------------|--------------|
| | | Confirmed 1997 | | | Confirmed* 1996 | 1997 | 1996 | Non Neonatal 1997 | Neonatal 1996 | Neonatal 1997 | 1996 | 1997 | 1996 | 1997 | 1996 |
| | | Laboratory | Clinically | Total | | | | | | | | | | | |
| Anguilla | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... |
| Antigua & Barbuda | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | 0 | ... | 0 | ... | 0 | ... |
| Argentina | 5 Jul | 0 | 1 | 1 | 38 | 0 | 0 | 18 | 33 | 3 | 4 | 0 | 1 | 321 | 433 |
| Bahamas | 20 Sep | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barbados | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | 0 | 0 | 0 | .. | 0 | ... |
| Belize | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Bermuda | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | ... | ... | 0 | ... | 0 | ... |
| Bolivia | 20 Sep | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 4 | 7 | 6 | 1 | 1 | 77 | 11 |
| Brazil | 20 Sep | 8,820 | 231 | 9,051 | 130 | 0 | 0 | 58 | 13 | 13 | 5 | 32 | 0 | 101 | 79 |
| British Virgin Islands | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | 0 | ... | 0 | ... | 0 | ... |
| Canada | 20 Sep | 577 | — | 577 | 295 | 0 | 0 | ... | 1 | ... | ... | ... | ... | ... | 1,112 |
| Cayman Islands | 22 Mar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | 0 | ... | 0 | ... | 0 | ... |
| Chile | 20 Sep | 38 | 0 | 38 | 1 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 117 | 245 |
| Colombia | 20 Sep | 5 | 5 | 10 | 20 | 0 | 0 | 18 | 85 | 17 | 22 | 2 | 40 | 15 | 12 |
| Costa Rica | 20 Sep | 1 | 1 | 2 | 5 | 0 | 0 | 2 | ... | 0 | ... | ... | ... | 10 | ... |
| Cuba | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dominica | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | 0 | 0 | 0 | ... | 0 | ... |
| Dominican Republic | 20 Sep | 1 | 0 | 1 | 0 | 0 | 0 | 17 | 21 | 0 | 0 | 4 | 6 | 1 | 2 |
| Ecuador | 20 Sep | 0 | 0 | 0 | 19 | 0 | 0 | 42 | 89 | 19 | 32 | 17 | 15 | 148 | 67 |
| El Salvador | 20 Sep | 0 | 0 | 0 | 1 | 0 | 0 | 3 | ... | 2 | ... | 0 | ... | 2 | ... |
| French Guiana | 22 Mar | 0 | 0 | 0 | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... |
| Grenada | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Guadeloupe | 22 Mar | 72 | 0 | 72 | 1 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... |
| Guatemala | 20 Sep | 2 | 0 | 2 | 0 | 0 | 0 | 5 | 2 | 6 | 10 | 0 | 0 | 92 | 24 |
| Guyana | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Haiti | 22 Mar | 0 | 0 | 0 | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... |
| Honduras | 20 Sep | 0 | 4 | 4 | 1 | 0 | 0 | 5 | 9 | 1 | 4 | 0 | 0 | 121 | 134 |
| Jamaica | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 2 | ... | 0 | ... | 1 | ... | 4 | ... |
| Martinique | 22 Mar | 0 | 0 | 0 | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... |
| Mexico | 23 Aug | 0 | 16 | 16 | 19 | 0 | 0 | 95 | 14 | 16 | 10 | 0 | ... | 24 | 0 |
| Montserrat | 22 Mar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | ... | ... | 0 | ... | 0 | ... |
| Netherlands Antilles | 22 Mar | 0 | 0 | 0 | ... | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... |
| Nicaragua | 20 Sep | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 10 | 0 | 1 | 0 | 0 | 41 | 6 |
| Panama | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 84 | 0 |
| Paraguay | 20 Sep | 30 | 1 | 31 | 4 | 0 | 0 | 24 | 23 | 11 | 8 | 0 | 0 | 24 | 13 |
| Peru | 20 Sep | 0 | 1 | 1 | 63 | 0 | 0 | 42 | 44 | 26 | 36 | 1 | 4 | 608 | 203 |
| Puerto Rico | 20 Sep | 0 | — | 0 | 6 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... |
| St Vincent/Grenadines | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | 0 | ... | 0 | ... | 0 | ... |
| St. Kitts/Nevis | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | 0 | ... | 0 | .. | 0 | ... |
| St. Lucia | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ... | 0 | ... | 0 | ... | 0 | ... |
| Suriname | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 1 | 0 | 0 | 0 | 2 |
| Trinidad & Tobago | 20 Sep | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 15 | 0 | 0 | 1 | 0 | 7 | 56 |
| Turks & Caicos | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 1 | ... | 0 | ... | 0 | ... | 0 | ... |
| United States | 20 Sep | 107 | — | 107 | 440 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | 481 |
| Uruguay | 20 Sep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 10 | 15 |
| Venezuela | 20 Sep | 1 | 0 | 1 | 12 | 0 | 0 | 18 | ... | 6 | 5 | 0 | 0 | 393 | 135 |
| TOTAL | | 9,656 | 260 | 9,916 | 1,059 | 0 | 0 | 370 | 377 | 129 | 144 | 59 | 67 | 2,200 | 3,030 |

... Data not available.

— Clinically confirmed cases are not reported.

* Laboratory and clinically confirmed cases.

First Ladies United Against Measles

The First Ladies of the Americas and designated representatives held their *Seventh Conference of Wives of Heads of States and Government of the Americas* in Panama on October 8-9, 1997, under the motto "Let us Build the Future of the Americas with Human Rights and a Culture of Peace", to evaluate achievements attained and renew their commitment to address the Region's pressing social problems.

"We reiterate our willingness to be mobilizers, facilitators or convenors for social policies and programs serving our countries, focusing on vulnerable groups, in accordance with our respective national interests and inspired by dialogue, negotiation and mutual respect," the First Ladies stated in their final communiqué, the Panama Declaration.

The First Ladies of the Americas have already been working on behalf of measles eradication since 1995, when they presented a Plan of Action during their Fifth Meeting in Bolivia, that complements the activities undertaken by each country. In the Panama Declaration, the First Ladies re-stated their support to the Regional measles eradication goal by the year 2000.

"We value the work done in countries of the Region which support the elimination of measles and other preventable diseases in the Americas. We also reiterate our commitment to continue our

assistance toward this effort until measles is eradicated," the final text says.

The First Ladies recognized the valuable participation and contribution of international organizations and financial institutions stating that they have "supported our endeavors and are making possible the execution of projects and programs that serve the most needy and vulnerable sectors of our societies."

The support of the First Ladies will be critical to provide greater dissemination of the measles eradication initiative at the national and international level.

Major obstacles for the achievement of this goal are:

- Insufficient dissemination and promotion of the Plan of Action for Measles Eradication at the national/municipal level.
- Insufficient resources to achieve the measles eradication goal.
- Routine vaccination coverage < 90%.
- Inadequate logistical support for investigating all suspected measles cases.
- Limited participation of the private sector and non-governmental organizations in reporting suspected measles cases.



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