



EPI Newsletter

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Record Five Years Measles-Free!

The Thirteenth Meeting of the Caribbean EPI Managers held in Miami Beach, Florida from 4-6 November, brought together over 65 health officials from 19 countries of the English-speaking Caribbean and Suriname, representatives from the French Departments of Guadeloupe and Martinique and from The Netherlands Antilles. Present were also health officials from Haiti, Canada's Laboratory Center for Disease Control, England's Department of Health, the United States' Centers for Disease Control and Prevention, Los Angeles and Dade Counties' Departments of Health, the Caribbean Epidemiology Center (CAREC), UNICEF, as well as technical staff from SVI/PAHO.

The English-speaking Caribbean continues to hold the longest record in the Western Hemisphere of five years without measles. Discussions focused on the build-up of susceptibles and actions needed to prevent the re-introduction of the disease. Considerable time was also devoted to assessing the current situation of rubella virus circulation and congenital rubella syndrome (CRS) in the Caribbean. There was a consensus among participants on the need to raise awareness, particularly among women and the countries' government officials, on the seriousness of this disease. Emphasis was placed on determining the critical elements for an effective strategy to control/eliminate rubella and CRS. As part of this effort, each country performed its own cost-benefit analysis of the immediate elimination of rubella/CRS by a mass campaign with rubella-containing vaccine. This analysis should serve as a baseline for further refinement at the country level.

Measles Eradication

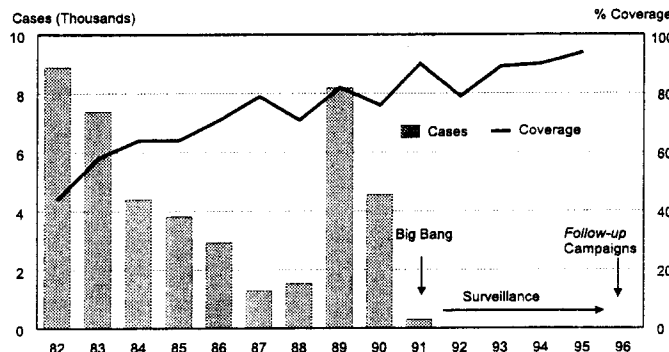
During the 1992-1996 period, there has been no laboratory confirmed indigenous measles transmission, despite intensive surveillance and the investigation of 1,453 suspected measles cases. The level of measles vaccination coverage ranged from 75-86%. The last two confirmed cases were reported from Barbados in August of 1991. Over 270 cases have been discarded as rubella, 58 as dengue, and 1,125 have been discarded with other diagnoses. CAREC's

Laboratory investigated 334 suspected measles cases in 1995, reported from 16 CAREC member countries. Jamaica had the highest number of suspected measles cases in 1995 due to a rubella epidemic. Dominica and Turks & Caicos also had relatively high numbers of cases due to a dengue epidemic.

Virtually all countries in the sub-region have already implemented PAHO's three-step strategy for measles eradication. *Follow-up* campaigns have been carried out in 14 of

the 19 countries. Five countries have not implemented the *follow-up* campaign as yet. Suriname is waiting for vaccines and plans to conduct a *follow-up* campaign in 1997. Trinidad & Tobago has decided to conduct a *mop-up* campaign for low-coverage and hard-to-reach areas, and the need for a *follow-up* campaign is being evaluated. Bermuda, Bahamas and Cayman Islands are not planning a *follow-up* campaign at this time. Countries continued to work toward reaching the measles eradication target of 95% measles vaccination coverage.

Measles cases, 1982-1996
English-speaking Caribbean



Source: Country Reports to CAREC
BIG BANG - 1991 Mass Vaccination Campaign, 9 mo.-14 yrs.
Follow-up Campaign: 1-5 yrs.

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The English-speaking Caribbean is committed to sustaining the region's measles-free status!

- The measles *catch-up* campaign has been implemented by 18 of the 19 countries.
- Routine vaccination programs have maintained coverage levels over 80%.
- *Follow-up* campaigns have been implemented or are being implemented in 14 of the 19 countries.
- Efforts continue at the same pace, even after five years since the *Big Bang* mass vaccination campaign.
- Governments are covering over 80% of recurrent immunization costs.
- Commitment is deeply entrenched among people at various levels—politicians, chief medical officers, program managers, public health staff, laboratory staff, among others.

Since launching the Measles Elimination Surveillance System (MESS) on September 28, 1991, through December 31, 1995, there had been 223 weeks of reporting. During that time, most countries exceeded the target of 80% completeness for weekly reports.

Responding to the feedback received from the recent measles surveillance evaluations in the Americas, the English-speaking Caribbean has analyzed the quality of the case reporting forms. While performing generally well, areas to be strengthened included: more detailed information regarding the presence or absence of conjunctivitis, coryza or cough, vaccination history, dates of the last vaccination and the patient's address.

In the absence of measles cases, key indicators of population susceptibility are vaccination coverage and the accumulation of susceptibles, who either were not vaccinated or who have experienced primary vaccine failure.

Importations are the only way measles can re-emerge in the region. Given the high volume of tourists every year, there is concern that if *follow-up* campaigns are not conducted, particularly in Trinidad & Tobago, there is a high risk of an outbreak, which could threaten the other countries as well. A *follow-up* campaign was strongly recommended for that country.

Polio Eradication

During 1996, seven countries reported 18 cases of acute flaccid paralysis (AFP) - Jamaica, Trinidad & Tobago, Guyana, Suriname, Barbados, Bahamas and Antigua. Bahamas and Antigua met all the AFP surveillance indicators, Guyana met three indicators, Trinidad & Tobago and Barbados met two indicators, and Jamaica met one indicator. Twelve countries did not report any AFP cases. Eighteen out of 19 countries met the indicator of > 80% weekly reporting units.

Reported breakdowns of the surveillance system for AFP in the region have prompted countries to take remedial steps. These have included refresher courses in record-keeping and networking, as well as updating AFP surveillance manuals and guidelines.

Health officials at the meeting were reminded of the need to mobilize health workers to actively search and investigate every case of AFP. Re-sensitization of clinicians and public health staff about the importance of prompt investigation, reporting and active surveillance will be key until global polio eradication is achieved. Similar to measles surveillance, efforts to incorporate new reporting sources, such as non-governmental organizations, private physicians and community groups will further strengthen surveillance.

Immunization coverage

Immunization coverage was maintained at previous high levels. However, it was reported that in some countries coverage had either dropped or remained stationary under the 90% mark. When coverage is less than 95%, there is a considerable number of unvaccinated children. Measures should be taken to trace these children and ensure that they receive the needed vaccines.

Introduction of New Vaccines

The introduction of new vaccines into national immunization programs should follow the careful investigation of the epidemiological relevance of the vaccine. Also, whenever possible, evidence should be presented that introduction of the vaccine into immunization programs would be a cost-effective use of resources. Once that case has been made and resources identified, an introduction/implementation plan needs to be developed. Topics to be considered include: vaccine studies, disease surveillance, supply arrangements, immunization scheduling, coverage measurements, communications strategies, professional training, materials, and surveillance for impact assessment. The implementation of new vaccines is a complex, multi-faceted task that requires the coordination of policy makers, program managers, public health experts, advertising and marketing experts, researchers, manufacturers, regulators, parents and health professionals. The extensive experience in the Caribbean with the implementation of immunization campaigns will be valuable in the successful introduction of new vaccines into routine programs.

Rubella Control and Elimination Strategies

Rubella virus causes most of its damage to the human fetus by infecting women during the first trimester of pregnancy. Adverse outcomes from congenital rubella virus infection include miscarriage, stillbirth, congenital rubella syndrome (neonatal and post neonatal) and therapeutic abortions. Data obtained from the region indicate widespread circulation of rubella and congenital rubella syndrome (CRS):

- Rubella virus is circulating on an ongoing basis in the larger countries. Jamaica, Guyana, Belize, and Suriname have had laboratory-documented rubella circulation in at least 4 of the last 5 years. Trinidad (2 years) and Barbados (3 years) have also had laboratory-documented rubella within the last 5 years.
- The magnitude of rubella circulation in the larger countries seems to be significant. In Jamaica, Trinidad & Tobago, Guyana and Belize, the percentage of suspected

measles cases which tested positive for rubella range from 38% to 60%.

- During the 1996 Barbados outbreak, 52% of the 229 reported rubella cases were among women between the ages of 15-44 years.
- Although only half of the countries had laboratory-documented rubella circulation in the past four years (1992-1996), all countries with a pool of susceptible adults or children are at risk of an outbreak. Several smaller island countries had indications of rubella virus circulation (patients with positive laboratory tests) in the last four years — Cayman Islands, St. Kitts and Nevis, Dominica, and St. Lucia.
- As awareness of CRS increases, cases are increasingly being detected. So far, congenital rubella syndrome cases have been detected in Jamaica (6), Barbados (2), and Trinidad & Tobago (1). In one CAREC country, 15 pregnant women have had laboratory-confirmed rubella infection.

Rubella/CRS Surveillance

CAREC has proposed a set of case definitions for CRS, a CRS case reporting form, and guidelines for CRS surveillance. These have been distributed to member countries for comments and feedback. The guidelines include the creation of a registry of pregnant women with laboratory-confirmed rubella, who's infants need to be followed through the neonatal and postnatal period, to detect possible defects due to rubella virus. CRS should be made a notifiable disease. In countries where therapeutic abortions are available, monitoring of therapeutic abortions related to rubella virus infection may be a sensitive indicator of congenital rubella infection. Countries were also encouraged to strengthen the current surveillance system put in place for measles elimination, in order to improve rubella surveillance.

Rubella/CRS Prevention

Infant immunization is not expected to have a major impact on CRS cases for 20 years. Most countries in the Caribbean have a pool of susceptibles, which will sustain rubella outbreaks if rubella virus is re-introduced. To attain rapid control or elimination of rubella and CRS cases, these large pools of susceptibles must be eliminated.

Twelve countries used the measles, mumps and rubella vaccine (MMR) among 1-14 year old children during the 1991 *catch-up* mass vaccination campaign, which means that most of the persons under 20 years old are now immune. Ten countries used MMR in the 1996 *follow-up* campaign. All of the English-speaking countries are now using MMR vaccine in infant immunization schedules.

Rubella/CRS Cost-Benefit Analysis

Preliminary data generated by a costing exercise performed by each country's delegation at the Miami ... meeting indicate that mass campaigns with rubella-containing vaccine to eliminate rubella virus and CRS

would be highly cost-effective in most of the Caribbean countries. It was estimated that even with the strategies now in place in some of the countries, a total of 1,500 cases of CRS would occur over the next 15 years, during which time those countries already using rubella-containing vaccine will see limited impact from their existing strategies. Expenditures with rehabilitation and care of these cases, without counting the human suffering, is estimated at over US\$ 60,000,000 for the same period of time.

The implementation of a strategy to interrupt rubella transmission, hence eliminate the possibility of CRS occurrence over this period, would entail vaccination of all the population (male and female) between 1-30 years of age (with variations among countries to take into account their present strategy, including whether MMR was used among 1-14 year old children in the 1991 *catch-up* campaign) and would cost approximately US\$ 4,500,000. The cost-effectiveness of the mass campaigns is estimated to average US\$ 2,900 per case of CRS prevented. These estimations assume the use of MMR vaccine for children 1-14 years old and rubella vaccine for the population 15-30 years of age.

Recommendations:

- In 1997, all countries should discuss with senior health officials at the Ministries of Health and political leaders the elimination of pools of susceptible persons by means of mass campaigns or other effective strategies.
- For countries with the political commitment due to recent outbreaks of rubella and CRS cases, mass campaigns to eliminate rubella virus and CRS cases are encouraged.
- In 1997, CRS case surveillance along with a registry of pregnant women with laboratory-confirmed rubella should be introduced. Where feasible, considerations should be given to monitoring therapeutic abortions related to rubella infection.

For a copy of the complete Report, please contact SVI.



Major sequelae of CRS include: mental retardation, deafness, blindness, heart defects and death.

Source: CAREC