

EPI Newsletter

Expanded Program on Immunization in the Americas

Volume XVI, Number 6 **IMMUNIZE AND PROTECT YOUR CHILDREN**

December 1994

Summary of Caribbean Managers Meeting

The Eleventh Meeting of the Caribbean EPI Managers was held in Nassau, Bahamas, from 14-18 November 1994. Throughout the meeting, various points of achievement were noted. These included the fact that no cases of indigenous measles have been reported in over 3 years in the Caribbean, despite intensified surveillance for measles with nearly 600 units reporting each week in the English speaking Caribbean and Suriname. Also, nearly 12 years have elapsed since a reported case of paralytic poliomyelitis was detected in the Caribbean. Remarkable progress has been achieved in surveillance of fever and rash illnesses and immunization coverage levels remain high throughout the Caribbean and the Americas.

The Meeting was attended by over 80 participants from the 19 countries of the English speaking Caribbean and Suriname; representatives of the French Departments of Guadeloupe and French Guyana, as well as from Curaçao and St. Maarten also attended the meeting. For the first time, and following recommendations of previous meetings, representatives from Puerto Rico attended the event. Several NGOs, including Rotary International and the Christian Children's Fund were also in attendance. Technical personnel from PAHO and its Caribbean Epidemiology Center, UNICEF, and CPHA, were active participants in the Meeting as well.

An extraordinary level of commitment was clearly evidenced by the high quality of presentations and by 100% participation of member countries. Governmental commitment was evidenced by allocation of resources which have accounted for approximately 90% of the cost of the program over the last few years, as well as personal involvement of political leaders in support of the program.

The role of international supporting agencies was noted as an important factor in the progress achieved thus far and their continued support will be fundamental for further gains.

The principal purpose of the Meeting was to review the overall EPI program in the Caribbean and to identify obstacles which might impede achieving program targets. To assist in this identification, country reports and the 1994 National Work Plans were reviewed and analyzed. This exercise resulted in the elaboration of the 1995 National Work Plans.

Another major objective of the Meeting was to evaluate continued efforts towards the elimination of measles by 1995, focusing on various limitations related to surveillance of suspected measles cases and incomplete laboratory specimen collections. The key issue of the continued build up of susceptibles was addressed, with each country determining the number of potential susceptibles in their country, and whether a catch-up vaccination campaign was necessary. Also addressed were issues pertaining to the maintenance of the absence of wild poliovirus transmission in the region.

Surveillance

The continued implementation of and improvements in the surveillance system for detection of suspected measles cases was evidenced by improved weekly reporting and training in operational procedures related to surveillance and case investigation. The meeting stressed the critical role that CAREC should play in helping to strengthen the surveillance of vaccine preventable diseases in the Caribbean, both in terms of organization and maintenance of the reporting networks, and analysis of the data to allow for refining strategies for disease control and elimination.

In this issue:

Summary of Caribbean Managers Meeting	1
Measles in Canada, 1994 (as of September 14)	4
United Kingdom Launches National Measles Campaign	5
Weekly Measles Bulletin is Launched	6

Poliomyelitis Surveillance	6
Reported Cases of Selected Diseases	7
Weekly Measles Surveillance Bulletin	8

It was noted that a great number of measles epidemiological investigation forms are not being sent to CAREC. This has greatly impeded the analysis and evaluation of data for the entire Caribbean. Without such data it is difficult to assess trends and make group policy and strategy decisions. Nevertheless, based upon data available collected and analyzed from laboratory forms, a number of indicators related to the laboratory results were presented. These included the fact that for the period January to October, 1994, a total of 187 out of 220 (94%) of suspected cases had an S1 sample obtained and submitted to CAREC. (4 of the 33 which were without specimens were cases which did not require an S1, such as cases incorrectly reported as suspected.) Of the 187 S1, 114 (60%) had S2 submitted and of the other 73 S1, 27 were without specimens due to cases not requiring an S2, for example, confirmed rubella diagnosis with S1. Also, the interval between rash onset and collection of S1 was under 8 days in over 85% of cases. 50% of all S1 specimens taken were received within a two week period at the reference laboratory. Over 40% took longer than 3 weeks to have specimens received in CAREC. 50% of S2 was collected within 2 weeks after collection of S1.

It is important to note that in some countries the private medical practitioners (PMD) are not yet fully incorporated in the system, additional efforts should be made to achieve this objective. In a region that is apparently free from indigenous transmission and with a very heavy influx of outside tourists, it is likely that cases of fever and rash illnesses would first be seen by a private medical practitioner, therefore the importance of their participation in the system. Some countries are having very good progress incorporating the PMD, the key to their success has been good coordination, training and permanent contact and feed back.

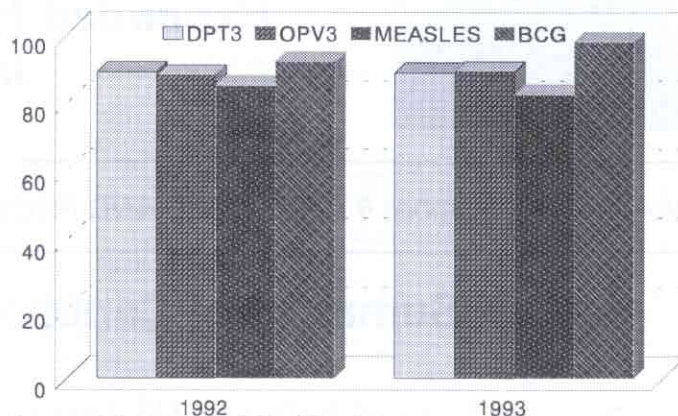
Another aspect that merits action is evaluation of the surveillance system with respect to the ZERO reporting. It is crucial that ZERO actually reflect the absence of suspected measles cases and not the routine submission of a negative report.

Coverage and Susceptibles

Overall, immunization coverage has been maintained at the previous high levels already achieved. (See Figure 1) However, it was reported by some countries that coverage had either dropped or remained stationary under the 90% mark. When coverage is less than 95%, this indicates that there are considerable numbers of unvaccinated children.

Despite improved coverage a yearly increase of approximately 30,000 susceptibles are likely to be added to this total (from each new birth cohort, those not vaccinated and those that represent vaccine failures). Such a number of susceptibles are more than sufficient to support a considerably large epidemic should a measles introduction occur. This estimate does not include an unknown number of susceptibles in the greater than 4 years of age sector of the population.

Figure 1: Vaccination Coverage EPI Vaccines, 1992 - 1993 English-Speaking Caribbean and Suriname



Source: Ministries of Health - 1994

With the above background information, each country estimated the number of likely susceptibles in the <5 population. It was determined that if there was an average of 20% susceptibles in the birth cohort over the last 4 years, then the build up of susceptibles over a 4 year period is critical enough to warrant a catch-up campaign targeted to the under 5 age group. Countries which do not exceed this limit still need to identify smaller pockets of susceptibles, such as areas with urban poor and remote or inaccessible locales, where vaccination activities should be aggressively implemented to deal with these groups. (See Table 1)

**Table 1
Projection of Children Under 5 Years of Age Who Would Be Susceptible to Measles by June 1995 (4 birth cohorts born since May 1991)**

Country	Annual Births	Percent Not Vaccinated	Projected Susceptible <5 Years Age*
Anguilla	159	0	96
Turks & Caicos	286	10	258
Montserrat	186	0	112
British V. I.	320	1	202
Cayman Islands	550	2	363
St. Kitts/Nevis	1000	1	630
Antigua/Barb.	1284	0	770
Bermuda	954	15	1002
Dominica	1652	7	1339
St. Vincent/Gr.	2640	9	2297
Grenada	2372	13.5	2384
St. Lucia	3690	15	3875
Belize	7781	20	9337
Bahamas	6500	9	5655
Barbados	4097	9	3564
Suriname	9000	26	12420
Guyana	21344	20	25613
Trinidad/Tob.	23000	20	27600
Jamaica	60000	20	72000
TOTAL SUSCEPTIBLES			169517

* Projection based on a) 10% vaccine failure for 3 birth cohorts, b) percent unvaccinated for 3 birth cohorts, and c) 30% of one birth cohort (the 30% figure represents the estimated number of infants under 12 months of age which may be susceptible at any given time). The estimated total number of susceptibles is calculated as ((3 X annual births) X 0.1) + (0.3 X annual births) + ((3 X annual births) X % Unvaccinated).

An analysis of the Caribbean measles situation was made. As immunizations are given in most countries at 1 year of age, there are approximately 150,000 infants (all less than 1 year of age) at any given time unimmunized in the Caribbean. If it is assumed that approximately 30% of these infants are unprotected either by lack or loss of maternal antibody at sometime during their first year of life, this would provide up to 45,000 susceptibles at any given time in the under 1 age group. As the mass campaign provided vaccine to all persons 1 to 15 years of age in May 1991, it is likely that at that time the number of susceptibles in that age group were dramatically reduced. However, there are factors which prevent 100% of the target population from being immune; 1) vaccine is not 100% effective, 2) as coverage has been less than 100% since the campaign, there is a likely build up of additional susceptibles with each successive birth cohort, and 3) potential cold chain problems.

Based on these 3 factors one might estimate that 20% of the 1-15 age group is susceptible. For the 3 years since the campaign there have been approximately 450,000 births, and if approximately 20% are not protected, this would add up to 90,000 susceptibles. If we add this number to the 45,000 susceptibles under 1 year of age, there may be as many as 135,000 susceptibles at any given time in the Caribbean.

Poliomyelitis

The International Commission for the Certification of Poliomyelitis Eradication (ICPE) concluded that the transmission of the wild Polio virus has been interrupted in the English speaking Caribbean and Suriname. In order to maintain this polio free status various recommendations were made. These included maintaining immunization levels of at least 80% at all levels, including at the district level, maintaining weekly negative reporting, continuing investigation of AFP in children under 15, and taking adequate stool samples in every case.

Rubella

Confirmed Rubella cases were reported in a number of countries including Jamaica, Belize and Suriname. There is general concern to reduce the number of cases of congenital rubella syndrome (CRS) in the Caribbean. In order to achieve this, it is necessary to define the epidemiology of rubella and congenital rubella syndrome and develop an appropriate rubella vaccination strategy. Several recommendations were made regarding this issue, including the need to improve surveillance of congenital rubella syndrome through active hospital surveillance, targeting pediatricians and obstetricians who perform termination of pregnancy and services that care for children with long term sequelae of CRS such as deafness, mental retardation and heart disease. Rubella sero-surveys should be performed in selected countries among women aged 15 to 30 years to identify susceptible cohorts and rubella testing of blood

samples taken from suspected measles surveillance must be continued. Also an appropriate rubella vaccination strategy should be developed for each Caribbean country based on the pattern of susceptible age cohorts and history of rubella vaccine use.

Tuberculosis

The average incidence rate for tuberculosis among CAREC Member Countries (CMCs) in 1992 was 10 per 100,000, with rates ranging from zero in three small countries to a high of 38.5 in one. Among the 987 deaths due to tuberculosis reported during the period 1979 to 1992 from the nineteen CMCs, 75% occurred among persons aged 45 years and above and only 2% occurred among children aged 5 years and under. Males accounted for 69% of tuberculosis deaths and 91% of tuberculosis deaths resulted from respiratory disease.

Two major concerns are co-infection with the HIV and the emergence of drug resistant strains of tuberculosis. The incidence rate of HIV infection is growing in the region and it is estimated that a person infected with the HIV has a 50% risk of developing active tuberculosis. The emergence of drug-resistant strains of tuberculosis in North America is of particular concern to CMCs, two of which have reported identification of tuberculosis strains resistant to at least one of the most commonly used antibiotics.

A survey of the CMCs in 1993 revealed that tuberculosis control programs in the region are generally inadequate. Surveillance activities are both limited and fragmented and diagnostic capabilities vary widely. Frequently, standards for tuberculosis treatment have not been implemented, the availability of drugs is limited, and monitoring of treatment is not routine. Thirteen of the nineteen CMCs utilize BCG vaccine in the EPI program, but two of these countries administer it at age 5 years instead of at birth as recommend by WHO.

The WHO strategy for national tuberculosis programs emphasizes six strategies. These include political commitment, staff training and supervision, cost effective diagnosis, effective chemotherapy, surveillance which focuses on case-finding and rapid follow-up and research of new approaches in service delivery, program management, treatment and prevention.

Social Mobilization

Continued Social Mobilization and NGO involvement and enhanced participation are essential to the goals of the EPI, improving coverage and the maintenance of the eradication of polio and the elimination of measles. With regard to measles, social mobilization is critical to increase the population's consciousness about the need to have children of any age taken to a health authority when rash and

fever occur. To achieve this end, innovative approaches, similar to those developed in Jamaica, must be taken on a continuous basis. These include the use of media and community groups in addition to a special school program which develops materials intended to heighten the awareness of school children about the importance of immunizations.

World Health Day will be celebrated in April 1995 and will focus on progress towards global polio eradication. This is an excellent opportunity for re-vitalizing a variety of aspects related to the EPI program, including coordination between the countries and donor agencies in relation to dissemination of social communication materials for this event.

Plan of Action

All countries have presented and discussed their 1995 National Work Plans, outlining all the technical components and activities, including the cost per activity and area of action. The total cost for the EPI in the English speaking Caribbean and Suriname for 1995 is in the order of US\$9.0 million, 83% of which will come from national budgets. Other sources of funding include PAHO, CPHA, UNICEF, and Rotary International. The funds from external agencies are being requested for some of the following areas: biological and logistics, cold chain, training, social mobilization, operating costs, supervision, surveillance, research and evaluation.

Measles in Canada, 1994 (as of September 14)

From January 1 to September 14, 1994, a provisional total of 358 measles cases have been reported in Canada. This is 108% higher than the 172 cases reported for the same period in 1993. Over 65% (258 cases) of these cases were reported from Ontario, followed by Quebec with 25% (98 cases). No cases have been reported from Prince Edward Island, New Brunswick, the Yukon, and the Northwest Territories.

The province of Quebec recently reported two outbreaks, one of which involved a group of people who oppose immunization for religious reasons (a full report will appear in the next issue). Although several Ontario health regions have reported sporadic cases (peaking in the last week of May). A brief report follows in this issue on the latter outbreak.

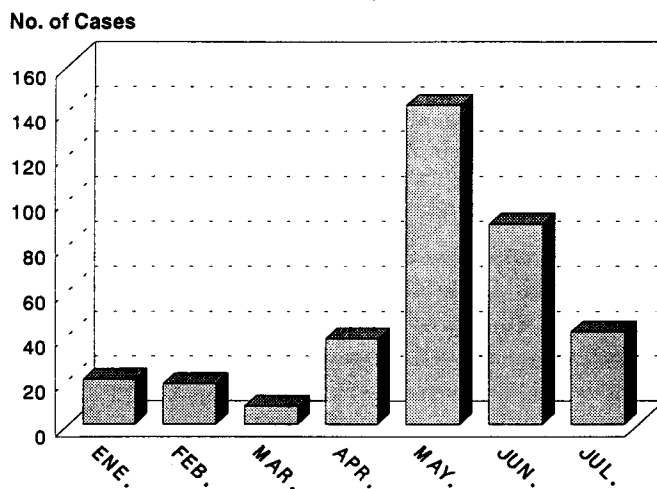
Figure 1 shows the distribution of cases by month of onset for the period January 1 to July 31, 1994. The highest number of cases (145) was recorded in May, followed by June (89 cases).

Ages of the cases ranged from 5 months to 57 years (median: 13). The highest proportion (38%) of the cases was among those aged 15 to 19 years with the greatest incidence occurring among those 16 years of age, followed by those 5 to 9 years old (22%). Infants < 1 year of age accounted for 14 cases (4%) (Figure 2). No deaths have been reported.

Immunization Status

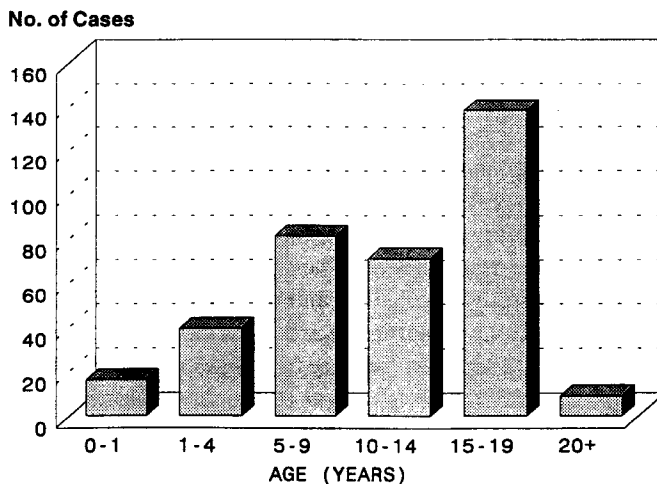
Of the 358 cases, 339 were eligible for measles vaccination, i.e., they were born after 1957 and were older than 12 months of age. Two hundred and ninety-two (86%) of this vaccine-eligible group had a documented history of immunization - a pattern expected due to the high immunization coverage of a vaccine with < 100% vaccine efficacy. Immunization history was not known for 32 of the cases (8.9%).

Figure 1:
Reported cases of measles by month, Canada, January 1 to July 31, 1994*



*Provisional data

Figure 2:
Reported cases of measles by age group, Canada January 1 to July 31, 1994*



*Provisional data