



# Measles, Rubella & CRS Rubella Watch

*Rubella Watch* is an electronic publication disseminated bimonthly by the Immunization Project of the Pan American Health Organization (PAHO), Regional Office for the Americas of the World Health Organization (WHO). *Rubella Watch* is a supplement to the *Immunization Newsletter* published by PAHO. The purpose is to provide you with the most up-to-date information on the measles, rubella and congenital rubella syndrome (CRS) elimination initiative currently underway in the Americas.

**The goal: maintain measles, rubella and CRS elimination in the Americas!**

## News from June-July 2010

### Global experts affirm that “measles can and should be eradicated by 2020.”

A global ad-hoc advisory committee concluded that measles can and should be eradicated and that it is feasible to accomplish global eradication by 2020. This conclusion was presented during the global technical consultation to assess the feasibility of measles eradication that was organized by the World Health Organization (WHO) and hosted by the Pan American Health Organization (PAHO) from 28 to 30 July.



The ad-hoc committee based their conclusions on the following: 1) a comprehensive review of available evidence, which established the biological and technical feasibility of measles eradication; 2) the experience of the Americas that demonstrates an effective operational model that is also cost-effective; and 3) the significant progress towards measles elimination achieved by other WHO Regions. The committee also concluded that, where appropriate, measles eradication activities should be used to accelerate rubella control and the prevention of congenital rubella syndrome (CRS).

The main objectives of the meeting were: 1) to review the outcome of work done to assess the feasibility of measles eradication; 2) to provide recommendations on the timing and nature of the next global measles goal (for consideration by the Strategic Advisory Group of Experts [SAGE] on Immunization); and 3) to provide recommendations on research/work needed to facilitate measles eradication. The specific objective of the global ad-hoc advisory group was to summarize the findings from the scope of work presented and provide recommendations regarding the feasibility of measles eradication.

The experience from the Region of the Americas was of particular importance considering that it is the only WHO Region that has eliminated measles, and it has recently celebrated the anniversary of the interruption of endemic rubella virus. During his presentation, Dr. Carlos Castillo-Solórzano, PAHO advisor on measles, summarized the Region's successful efforts to eliminate measles, rubella, and CRS and emphasized the catalytic effect of rubella elimination efforts on strengthening and sustaining measles elimination, especially through the implementation of “speed-up” campaigns (targeting adolescent and adult males and females) and high-quality surveillance in the face of importations. Dr. Ana Morice, Vice-Minister of Health, Costa Rica, also presented during the meeting and clearly demonstrated that measles elimination is achievable even in resource-poor countries. Until measles is

### In this edition:

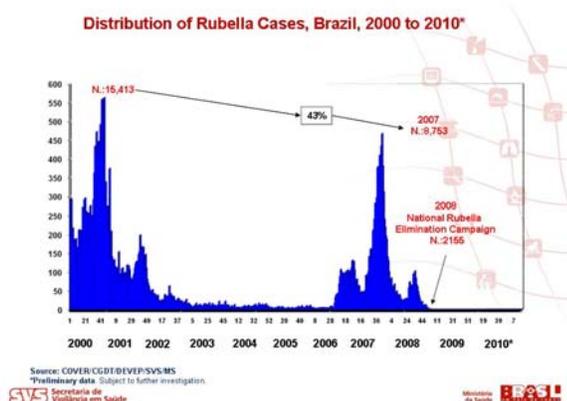
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eradicated, the Region of the Americas faces the risk of importation and secondary cases, the cost of outbreak response, and the continuation of high-quality follow-up campaigns. This translates into significant financial and human resource costs for the countries. The discussion following the presentation was focused on the following points:

- The economic benefits of eliminating measles in the Americas should be made more widely known.
- Private sector participation has been critical to achieving and sustaining elimination. Alliances with scientific societies have also been fundamental in rapidly responding to crisis related to vaccination and to preserving the integrity of immunization programs.
- The vaccination of men and women up to 39 years of age has played a key role in maintaining measles elimination in the Americas; this strategy should be evaluated in detail prior to a decision on global measles eradication.
- Country ownership played a decisive role in the success of measles and rubella elimination efforts in the Americas. Intense advocacy efforts are required to ensure political commitment and the mobilization of resources at all levels.

PAHO has requested that the recommendation for the measles eradication goal be included in the agenda of the Sixty-fourth World Health Assembly in 2011.

### Meeting of the International Technical Team to Review Data on the Last Rubella and CRS Cases in Brazil



An international technical team comprised of epidemiologists, measles and rubella laboratory specialists, and immunization advisors from the PAHO/WHO, the United States Center for Disease Control and Prevention, and Oswaldo Cruz Foundation (FIOCRUZ) met in Brasilia, Brazil, on 27-28 May 2010 to review the data on the last rubella and CRS cases.

Brazil is one of the last countries of the Americas to report endemic rubella and CRS cases. Following a resurgence of rubella cases in the Americas in 2007 due to importations into countries that initially vaccinated only females during mass vaccination campaigns, Brazil confirmed 8,753 rubella cases in 2007 and 2,155 cases in 2008.

An unfortunate consequence of these rubella outbreaks was the confirmation of 14 CRS cases and 3 congenital rubella infection (CRI) cases in the country in 2009. The date of birth of the last confirmed CRS case in Brazil was 26 August 2009. Since CRS cases can excrete virus for up to 12 months, it was essential that the country intensify surveillance and monitor virus excretion from confirmed CRS cases to ensure no additional spread of endemic rubella virus.

The main objectives of the technical meeting were the following: 1) to review data of the investigations of the CRS and CRI cases with a focus on documenting the interruption of rubella virus transmission; 2) to review available surveillance and vaccine coverage data; 3) to analyze country results related to samples with negative results for dengue; and 4) to determine whether the data provided support the argument that endemic rubella virus has been interrupted in Brazil.

It was apparent during the meeting that there exists high political and technical commitment to document the interruption of measles, rubella, and CRS in Brazil and that most of the data are available to successfully document the interruption of rubella virus transmission. In addition, the high quality rubella campaign implemented in 2008 targeting adolescent and adult men and women aged 20-39 years resulted in a rapid and significant decrease in the number of rubella and CRS cases.

While Brazil has made great progress toward preparations for documenting the interruption of rubella virus transmission, the international technical team recommended attention to the following areas:

- Data analysis and presentation should focus on the relevant information supporting the documentation of interruption of rubella virus transmission.

- Data analysis and presentation should be built around a critical evaluation of the data to support elimination as outlined in the 6 components described in the regional plan of action to document and verify measles, rubella, and CRS elimination (i.e., epidemiology of measles, rubella, and CRS; quality of surveillance; molecular epidemiology and laboratory activities; analysis of vaccinated population cohorts; sustainability of national immunization program; and correlation and integration of the evidence).
- The essential relationship of the linkage between epidemiology and laboratory should be strengthened at all levels.
- Confirmed rubella/CRS cases must continue to be reported using the communication channel for International Health Regulations.
- In regards to epidemiology, more detailed analysis and information are needed on clinically confirmed/clinically discarded cases, laboratory discarded cases, the last confirmed cases, and suspected and confirmed CRS/CRS cases, as well as a detailed description of the surveillance systems and the involvement of the private sector in surveillance activities.
- In regards to the quality of surveillance, organized data should be presented to document the quality of the measles/rubella and CRS surveillance systems, including retrospective case search and monitoring of surveillance indicators included in the regional plan of action stratified by state.
- In regards to molecular epidemiology, although data may be limited there should be significant efforts to see if conclusions can be reached from the existing data concerning elimination.
- In regards to the analysis of vaccinated population cohorts, the analysis should be presented by parish (or equivalent level) for unvaccinated persons, and coverage gaps should be identified along with strategies for resolving these gaps.
- In regards to the sustainability of the national immunization program, a plan on how to achieve and maintain high vaccine coverage (>95%) for first and second measles-mumps-rubella vaccine doses at the local levels should be described, including plans for follow-up campaigns. In addition, a plan on how to maintain adequate surveillance to detect imported and sporadic cases, outbreaks, and CRS cases should be presented.

Meeting participants from the Brazilian Ministry of Health recognized that much work remains to complete the documentation process in the country. However, they are committed to being the first Latin American country to submit its country report documenting the interruption of measles, rubella, and CRS to the national commission for formal submission to the International Expert Committee.

#### **146th Session of the Executive Committee: Presentation on Progress of Rubella and CRS Elimination**

The progress report on the elimination of rubella and CRS was presented during the 146th Session of the PAHO Executive Committee<sup>1</sup> on 24 June 2010. The progress report summarizes the advances of the Region in eliminating these vaccine-preventable diseases and highlights the resurgence of rubella cases in countries that vaccinated only women in preliminary campaigns, final country efforts to implement “speed-up” campaigns, trends in molecular epidemiology, and the last endemic rubella and CRS cases reported in the Region. The document describes activities for the post-elimination phase, such as intensifying surveillance and improving country preparedness to rapidly detect and respond to importations to limit secondary spread. The steps involved in the documentation and verification process of measles, rubella, and CRS elimination in the Americas are also included in the progress report.



Several countries commented on the success they have had in implementing rubella elimination strategies and highlighted current challenges, which included importations following large international events (i.e., 2010 FIFA World Cup), the anti-vaccination movement in many countries, and strengthening surveillance. Dr. Cuauhtémoc Ruiz Matus, Senior Advisor, Comprehensive Family Immunization Project (FCH/IM), recognized the hard work of colleagues in the countries, including the ministries of health and community level health workers, as well as colleagues at the regional office. Dr. Ruiz also brought attention to the need for countries

<sup>1</sup> The Executive Committee is composed of nine Member States, elected by the Pan American Sanitary Conference or the PAHO Directing Council, which meets twice a year and acts as a working party of the Conference or Council.

to remain vigilant and not let their guard down considering these vast achievements. He also noted that high vaccination coverage must be maintained at the municipality level to prevent the reintroduction of endemic measles and rubella into the Region.

In her comments to the Executive Committee, Dr. Mirta Roses, PAHO Director, addressed the source of importations to the Region, mainly from Europe, where many anti-vaccination groups are based and where individual choice takes precedence over the health of the population. She left the audience with a very poignant message: "We as a Region cannot sustain these achievements alone. There are enormous economic and social costs associated with these issues and we need to bring attention to this at the highest political level (such as the G20 Summit)."

### **Working Group for the Documentation of Elimination in the English-speaking Caribbean**



The English-speaking Caribbean countries have made extraordinary progress in fulfilling the commitments outlined in Resolutions CD44.R1 (2003) and CD47.R10 (2006) to eliminate rubella and CRS by 2010. In accordance with Resolution CSP27.R2 (2007), the Caribbean is once again proving to be a pioneer in the elimination initiative by beginning the process to document the interruption of endemic measles and rubella transmission in the countries.

The first meeting of the Working Group for the Documentation and Verification of Measles, Rubella and CRS Elimination was held in Barbados from 27 to 29 July. The working group consisted of representatives from Barbados, Belize, Bermuda, PAHO-Brazil,

Guyana, Jamaica, PAHO-Suriname, and the Caribbean Epidemiology Center (CAREC). Participants were EPI Managers, medical officers of health, as well as technical advisors from PAHO offices.

The objectives of the meeting included a review of the regional plan of action for the documentation and verification of measles, rubella, and CRS elimination; the development of practical tools, such as checklists, questionnaires, and a model country report, to facilitate the process in the countries; and the preparation of the terms of reference for the subregional commission in the English-speaking Caribbean.

During the meeting, participants were divided into three working groups. One of the initial activities was to discuss issues that may arise as the regional plan of action is implemented in the countries of the English-speaking Caribbean. Issues identified included an ambitious timeline for conducting the documentation process, challenges in collecting and processing laboratory specimens, the sensitivity of the surveillance system, difficulties in documenting high vaccination coverage, and lack of coordination with the private sector. Working groups were also tasked with reviewing various components of the plan of action to provide a comprehensive list of activities and methodologies to ensure the required data is provided for each component. Key tools that were generated through these discussions included questionnaires that will be disseminated to gather additional information regarding the absence of vaccine-preventable diseases and the sensitivity of the surveillance system.

The main recommendations from the meeting included the following:

- The support of the Association of Caribbean Family Physicians and that of the Caribbean Paediatric Association will be requested for completion of the survey, utilizing the drafted questionnaires to be used in the verification and documentation of measles, rubella and CRS elimination.
- The working documents developed during the meeting will be sent to countries to guide the initiation of the documentation/verification process in the countries.
- Countries will be asked to form teams at national levels and develop plans for the in-country documentation and verification activities, as well as the preparation of the country report.

The outcomes and recommendations of the meeting will be presented at the Caribbean EPI Managers' Meeting that will take place in

the Cayman Islands from 16-19 November.

### **Overview of the XX Meeting of Central America, Mexico and the Latin Caribbean on Vaccine-preventable Diseases**

The XX Meeting of Central America, Mexico and the Latin Caribbean on Vaccine-preventable Diseases took place in San Salvador, El Salvador, from 6 to 8 July. The meeting had several objectives: 1) to analyze the reasons for low coverage in municipalities of participating countries and discuss measures to correct coverage gaps; 2) to identify activities to document and verify the interruption of measles, rubella, and CRS; 3) to analyze the risk of the reintroduction of wild poliovirus; 4) to review the lessons learned from vaccination against H1N1; 5) to provide country updates regarding the introduction of new vaccines; and 6) to strengthen the management of national immunization programs. A new methodology was used during the meeting: countries were randomly selected to present on any of the various agenda topics, followed by discussion facilitated by those countries that were not selected to present.

The subregional meeting presented an opportunity to assess how countries are advancing in the documentation and verification process. Space was provided in the meeting agenda for one country to address a specific component of the regional plan of action. However, considering the random selection process, each participating country prepared a presentation for each component in the case that they would be selected. This methodology facilitated a comprehensive discussion of the critical evidence required by each country to document the interruption of endemic virus transmission.

Similar to what was observed during meetings of international technical teams to review country data, such as the meeting in Brazil (see above) and a previous technical revision meeting in Costa Rica in 2008, presenting data in a manner that effectively constructs an argument to support elimination in the country is challenging.

For this reason, specific recommendations were provided to countries on the type of detailed information and the most effective way to present it to ensure adequate evidence is provided. Some recommendations included, but were not limited to, the following:

- Provide more detailed information on cases, particularly on the process for final case classification.
- Identify the strengths and weaknesses of information systems.
- Describe the participation of the private sector in surveillance efforts.
- Present information from active case searches.
- Provide results from the monitoring of indicators included in the regional plan of action, stratified by the second level (i.e., state, department, or province).
- Prioritize the collection of samples for viral detection, with special attention given to “hot cases,” or those cases from border areas, industrial areas, tourist destinations, and cases with history of international travel or high probability of exposure to a case.
- Present an analysis of vaccinated population cohorts and identify coverage gaps.
- Describe the plan of the national immunization program to achieve and maintain high MMR coverage..

The lessons learned from the meeting related to the revised meeting methodology and the presentations of countries on the documentation and verification process have been documented and discussed. The lessons learned will inform the preparation and implementation of the upcoming subregional meeting of the South American countries that will take place in Asunción, Paraguay, from 26 to 28 October.

## **Upcoming Events**

### **First Meeting of the International Expert Committee to Verify Measles, Rubella, and CRS Elimination in the Americas**

9-10 December – Washington, D.C.

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