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PLAN OF ACTION FOR MAINTAINING MEASLES, RUBELLA, AND CONGENITAL RUBELLA SYNDROME ELIMINATION IN THE REGION OF THE AMERICAS: FINAL REPORT

Background

1. This document is the final report to the Governing Bodies of the Pan American Health Organization (PAHO) on the progress achieved through the implementation of Resolution CSP28.R14 (2012), Plan of Action for Maintaining Measles, Rubella, and Congenital Rubella Syndrome Elimination in the Region of the Americas (1). This Plan of Action was approved with a view to the Member States establishing emergency interventions to strengthen immunization programs and surveillance of measles, rubella, and congenital rubella syndrome and, thereby, to ensure sustainable elimination of these diseases.

Update on Progress Achieved

2. Implementation of the strategies proposed in the Plan of Action has led to historic public health achievements in the Region of the Americas. Following are the most significant developments since the progress report (document CD53/INF/6, Rev.1) presented to the Directing Council in 2014.

3. The ministries of health of the countries of the Region, together with the national commissions formed to document and confirm the elimination of measles and rubella, worked arduously between 2011 and 2014 to present evidence to the International Expert Committee (IEC) to confirm the sustainable elimination of both diseases.

4. In turn, the IEC has done invaluable and tireless work during these years to prepare the regional report, after having studied the country reports containing evidence of the interruption of endemic transmission of the measles and rubella viruses. Indeed, the joint effort made by all stakeholders has led to the completion of a thorough analysis and acceptance of the reports from the Member States and to a declaration of the elimination of endemic measles and rubella viruses in the Region.

Declaration of the Elimination of Rubella and Congenital Rubella Syndrome in the Americas

5. On 22-23 April 2015, the IEC for measles and rubella elimination in the Americas reviewed the epidemiological information for the period 2011-2014 presented by the Member States and determined that the Region had interrupted the endemic transmission of rubella. The last confirmed case of endemic rubella was reported on 3 February 2009 in Argentina, while the last confirmed case of congenital rubella syndrome was in a baby born on 26 August 2009 in Brazil. Genotype 2B was identified in the last endemic rubella outbreaks in Argentina and Brazil (2).

6. Between 2010 and 2015, 65 imported cases of rubella were reported in eight countries: Argentina (4), Brazil (1), Canada (17), Chile (1), Colombia (2), French Guiana (1), Mexico (2), and United States (37). Eight imported cases of congenital rubella syndrome were reported: two in Canada (one in 2011 and one in 2015) and six in the United States (three in 2012 and one in 2013, 2014, and 2015, respectively).

Advances in Verification of Measles Elimination***a) Measles Outbreaks in the Region of the Americas, 2003-2015***

7. The Region of the Americas met the goal of eliminating the circulation of the endemic measles virus in 2002. The secular trend of measles in the post-elimination period between 2003 and 2010 was relatively stable, with an annual average of 153 cases, either imported or linked to imported cases. However, between 2011 and 2015, major outbreaks in Brazil, Canada, Ecuador, and the United States resulted in 8-12 times more reported cases than in the preceding period.

8. Nevertheless, the highest regional rate in 2014 (1.7 cases per million inhabitants) is lower than the five cases per million inhabitants established by the World Health Assembly in 2010 as a milestone for progress toward the goal of worldwide elimination. In accordance with the assessment report on the 2015 Global Vaccine Action Plan (GVAP), only the Region of the Americas had achieved measles elimination by 2015, while the five remaining regions are on their way to achieving elimination by 2020.

9. The importation of cases from other regions of the world, the weaknesses identified in epidemiological surveillance systems, and the increasing number of susceptible individuals in the population are the main threats to maintaining elimination in our Region.

10. Between 2011 and 2015, Canada and the United States faced multiple measles outbreaks caused by different imported genotypes, due to the large number of people travelling to and from other regions of the world. However, both countries responded quickly and decisively to these outbreaks, successfully interrupting the reestablishment of endemic transmission in those countries. An explosive outbreak of measles originating in an amusement park in California (United States) in December 2014—and successfully

interrupted in May 2015—showed that transmission can be interrupted even in critical epidemiological settings.

b) Measles Outbreak in Brazil

11. This outbreak originated from an imported case and lasted 27 months, from 19 March 2013 (Pernambuco) to 6 July 2015 (Ceará); 1,052 measles cases were confirmed throughout the country. The most affected states were Ceará and Pernambuco. The D8 genotype, which has circulated widely in Europe, was identified in this outbreak (3).

12. The outbreak in Pernambuco lasted from 19 March 2013 to 14 March 2014; the age group most affected was children under 1 year (48% of cases).

13. The outbreak in Ceará occurred between 26 December 2013 and 6 July 2015. Adolescents and young adults (15-39 years) were the most affected age group (39%), followed by children under 1 year (28%). For this reason, Ceará lowered the age of vaccination to 6 months (zero dose), and administered the first dose at 12 months and the second dose at 15 months, in accordance with its national schedule.

14. In 2015, a firm political commitment to stop the epidemic was demonstrated at all levels (federal, state, and municipal), and consideration was given to recommendations that the IEC had emphatically made on different occasions. At the end of February 2015, steps were taken to interrupt the outbreak in Ceará and, as a result, throughout Brazil. These measures included an indiscriminate vaccination campaign aimed at people from 5 to 29 years of age in the municipalities of Fortaleza and Caucaia, and an intensive communication and social mobilization strategy to raise the level of public awareness of the opportunity to voluntarily request vaccination.

15. A slow but sustained transmission (“drop by drop” transmission) was observed over two years, reflecting a different epidemiological pattern in the post-elimination period, in high-density population settings with high levels of vaccination coverage (95% or more).

16. In light of this situation, in its meeting on 22-23 April 2015, the IEC declared that endemic measles transmission had reemerged, exclusively in Brazil. The IEC emphasized that in order to declare measles elimination in the Region of the Americas, Brazil would have to present evidence confirming the end of the measles outbreak, followed by at least one year without confirmed endemic cases in the presence of a high-quality epidemiological surveillance system.

17. The Technical Advisory Group (TAG) on vaccine-preventable diseases, at its meeting of July 2015, supported the IEC recommendations issued in April 2015 (4).

18. Brazil considered endemic measles transmission to have been interrupted as of 6 July 2015—12 weeks after the last case—and presented the IEC with evidence of the

end of the outbreak in December 2015 (5). In July 2016, Brazil is expected to present the IEC with definitive proof of the absence of endemic transmission of the virus and to be able to declare the elimination of the endemic measles virus in Brazil and possibly throughout the Region.

19. In April and May 2016, all the ministries of health of the Member States will update their national committees (for the verification of the elimination of measles, rubella, and congenital rubella syndrome) regarding the epidemiological situation of measles, and will provide evidence that they have maintained the interruption of endemic transmission of this disease in their territories. These reports will be studied and, in due course, approved by the IEC members, who will confirm measles elimination in the Region of America.

Critical Challenges for the Sustainability of Measles and Rubella Elimination

20. In order to achieve the sustainable elimination of measles and rubella, efforts should continue to:

- a) Ensure that all countries achieve at least 95% coverage in at least 80% of municipalities for both the first and second doses of the measles, mumps, and rubella (MMR) vaccine. Regional MMR coverage in the last three years has been in the 92-93% range, but is very uneven between countries and municipalities. This means that every year a group of susceptible individuals transfers the risk to other age groups such as adolescents and young adults who are not immunized.
- b) Increase coverage in follow-up vaccination campaigns. Only six countries implemented follow-up campaigns in 2014 and 2015; two of them achieved >95% coverage (the Dominican Republic and Venezuela), while the other four reported <90% coverage (Argentina, Brazil, Chile, and Paraguay).
- c) Maintain high-quality epidemiological surveillance that facilitates the timely detection and study of suspected cases. To accomplish this, it is necessary to maintain a laboratory network that permits differential diagnosis with other diseases currently present in our Region (dengue, chikungunya and, especially, Zika virus infection).
- d) Ensure that countries and strategic partners maintain their political commitment to the sustainable elimination of these diseases, given the other public health priorities that exist at the global, regional, and country levels (for example, infectious diseases such as Zika virus).

Action Needed to Support the Sustainable Elimination of Measles, Rubella, and Congenital Rubella Syndrome

21. An ongoing, sustained commitment is required of the Member States and PASB in support of the following measures and recommendations:

- a) Prepare and implement a standardized regional framework, formulating guidelines to monitor progress toward the permanent sustainability of the medium- and long-term elimination of measles, rubella, and congenital rubella syndrome.
- b) Promote the implementation of the strategies contained in the regional Plan of Action on Immunization (6) in order to achieve uniform vaccination coverage (95% or higher) with the first and second dose of MMR vaccine in at least 80% of the municipalities of each country by strengthening the regular immunization program.
- c) Prepare and apply tools to standardize and guarantee the quality of micro-planning, implementation, and evaluation of vaccination campaigns in order to achieve the greatest possible population immunity in the coming years by guaranteeing at least 95% coverage in all vaccination campaigns.
- d) Promote the preparation of a rapid and timely response to imported cases of measles, rubella, and congenital rubella syndrome in order to prevent the reemergence of endemic transmission in the countries, and maintain the quality of surveillance of large-scale events that put the Region at risk of imported cases from other regions of the world.
- e) Support the proposal of certain Member States to adopt a resolution in the World Health Assembly in 2017 for the global eradication of measles and rubella.

Action by the Executive Committee

22. The Executive Committee is invited to take note of this report and support the recommendations made.

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