Meeting of the Measles Rubella Elimination Regional Monitoring and Re-verification Commission (MRE-RMC) with the Colombian Health Authorities
Bogotá, Cartagena y Barranquilla - March 18-22, 2019

Introduction

As of March 2018, Colombia faced multiple measles virus importations: between epidemiological week 10 of 2018 and EW 9 of 2019, 258 cases of measles were confirmed and a total of 8,110 cases were investigated. No deaths were recorded (figure 1). Genotype D8 was identified in 50 samples, similar to the one circulating in other countries of the Americas. The first and last confirmed measles cases were among Venezuelan citizen; onset of rash was 8 March, 2018 and 10 March, 2019 respectively. The first case among a Colombian citizen reported onset of rash on 27 July, 2018, in Cartagena.

A total of 14 departments were affected by the measles virus importations as well as the districts of Barranquilla, Bogotá, Cartagena and Santa Marta. Close to 68% of the total confirmed cases were
reported by Cartagena, Barranquilla and Norte de Santander. The highest incidence rate in Colombian population is among infants <1 year (6 cases per 100,000 children under 1 year), followed by children aged 1 to 4 years (1.74 per 100,000 inhabitants).

In this regard, the Measles Rubella Elimination Regional Monitoring and Re-verification Commission visited Colombia to meet with the health authorities at the national, departmental and district levels.

The objectives of the visit to the country were the following:

1. Review the situation of the measles outbreak in Colombia;
2. Determine the road map to interrupt the transmission of measles virus;
3. Advocate with the government and health authorities of the districts of Barranquilla and Cartagena and the department of Bolivar, to document and verify the interruption of the measles outbreak.

**Visited places**

The Regional Commission met with national authorities to review the epidemiological situation of the outbreak and the implementation of control measures in Colombia. The first meeting was chaired by the Minister of Health, Dr. Juan Pablo Uribe; and was attended by the following authorities:

1. Minister of Health, Dr. Juan Pablo Uribe;
2. Deputy Minister of Health, Iván Dario Gonzalez;
3. Director of the National Institute of Health (NIH), Dr. Marta Ospina;
4. Director of Promotion and Prevention, Dr. Aida Milena Gutiérrez;
5. Director of Epidemiology and Demography, Dr. Sandra Girón;
6. President of the National Commission for the Sustainability of the Elimination of MR, Dr. Marta Alvarez;
7. Chief of the Immunization Program, Dr. Diego Garcia;
8. Director of Epidemiology of the NIH, Dr. Franklyn Cerrato;
9. FPL/PAHO Advisor, Dr. Ivy Talavera;
10. PAHO Consultant in Colombia, Dr. Regina Durón;
11. Focal point of IM OPS / Col, Viviana Calderon.
12. Other members of the Immunization Team of the MSPS and the INS.

In the visit to Cartagena, department of Bolívar, the members of the Commission focused in the analysis of the chains of transmission between the district and the department of Bolivar, as well as in the implementation of triage procedures to reduce the nosocomial transmission. In this line, the
Commission visited the Children’s Hospital “Casa del Niño” to observe and understand the triage strategy and its impact on outbreak control. The authorities present were the following:

- Dr. Carolina Ariza, Governor in Charge of Bolívar
- Dr. Eduardo Franco Osorio, Director of Public Health of Bolívar
- Dr. Antonio Sagbini, Director of Health of the district of Cartagena
- Dr. Luis Alberto Percy, Director of the Children's Hospital Casa del Niño

The analysis of the chains of transmission demonstrated measles virus transmission between districts and departments (Bolívar-Atlántico) in Colombia.

During the visit to Barranquilla, department of Atlántico, the Commission focused in the analysis of chains of transmission, tracing contract and follow-up and primary health model, which was detrimental in outbreak response. The authorities present were the following:

- Mr. Eduardo Verano de la Rosa, Governor of the Atlantic
- Dr. Arilis Ruiz Medina, Sub Secretary of Public Health, Atlántico
- Lic. Elvira Pretel, Coordinator of the Expanded Immunization Program, Atlántico
- Dr. Alma Solano, Secretary of Health of the District of Barranquilla
- Dr. Eloina Goenaga, Chief of Public Health, Barranquilla

Similar to the finding in Cartagena, the analysis of chains of transmission demonstrated cross-department virus spreading.

Conclusions and Recommendations

I. General
II. Surveillance
III. Measles outbreak
IV. Immunization
V. Development of national capacities
I. General conclusions

1. Colombia’s response to the emergency due to the measles outbreak has been extraordinary and the Commission urges the country's high health authorities to lead efforts for the global elimination of measles and rubella.

2. The volume of samples processed in the Laboratory, the large number of suspected cases investigated, and the small number of confirmed cases are evidence of this effort.

3. The establishment of triage and isolation in hospitals will help to strengthen the national capacity of health services to face future health emergencies.

I. General recommendations

1. Continue with the support of the highest political level to sustain the elimination of measles and rubella in Colombia.

2. PAHO should actively seek opportunities for Colombia to lead initiatives related to the global elimination of measles and rubella.

II. Surveillance

Conclusions:

1. Epidemiological surveillance indicators have been reached at the national and local levels.

2. Cases with unknown source of infection should receive special attention, making every effort to ensure that they are not part of a known transmission chains.

3. The presentation of outbreak data can be improved by integrating the epidemiological data into epidemiological curves with immunization, triage and hospital isolation interventions.

Recommendations:

1. Ensure the collection of samples for viral detection every two months during outbreaks following the recommendations of PAHO.

4. Strengthen the analysis of cases with unknown source of infection, considering that the rapid response teams can implement a thorough investigation to provide timely, complete and accurate data, to identify the source of infection.

5. Increase the analysis of contact tracing to adequate identify the number of contacts investigated for each suspect and/or confirmed case.

6. Ensure that all pending laboratory results are delivered to classify cases in a timely manner.
III. Outbreaks

Conclusions

1. The outbreaks of Bogota, Barranquilla and Cartagena were successfully interrupted.
2. The outbreaks of Norte de Santander and La Guajira are still active.

Recommendation
The Ministry of Health must repeat the epidemiological analysis of the measles outbreak based on the international terminology used by PAHO, WHO and the Technical Advisory Group for Vaccine-Preventable Diseases, to confirm the initial conclusions of the Commission.

IV. Immunization

Conclusions:

1. The efforts that have been made in immunizations are outstanding; however, the Commission expresses concern about the cumulative number of susceptible individuals, given that imported cases will continue to occur in the future.
2. The Ministry of Health has appropriately implemented the "zero dose" vaccination of 6 - 11 months.
3. Other factors that contribute with the accumulation of susceptible individuals are: a) national coverage with a second dose of 88% that is less than coverage of 95%; b) presence of low coverages with second dose in the municipalities and/or districts regardless measles outbreak reporting.
4. The age of vaccination of the second dose is at 5 years and does not allow to provide early protection to children.

Recommendations
The Commission recommends the Ministry of Health:

1. Conduct a Follow-up Vaccination Campaign with rubella measles vaccine, targeting children less than 5 years old. The campaign will ensure enough population immunity to contain virus spread due to future importations.
2. In any response to future measles outbreaks, vaccination should be directed to children under five years of age and other age groups affected by the outbreak.
VI. Development of National Capacities

Conclusions:
1. To congratulate the Ministry of Health for its approach to the emergency of the measles outbreak that generated capacity to face any threat to public health.
2. The Commission is impressed by Colombian’s response to the challenge of migration as a social problem and not only as a health sector, contributing to reducing inequities in health services.
3. The use of the strategy titled “caminantes” galvanized the commitment and active participation of the community.