

Situation Summary

Between epidemiological week (EW) 1 and EW 22 of 2018, 11 countries reported 1,685 confirmed cases of measles in the Region of the Americas: Antigua and Barbuda (1 case), Argentina (3 cases), Brazil (114 cases), Canada (11 cases), Colombia (26 cases), Ecuador (12 cases), Guatemala (1 case), Mexico (4 cases), Peru (2 cases), the United States (84 cases), and the Bolivarian Republic of Venezuela (1,427 cases). This number exceeds what was reported in 2017, when 4 countries in the Region reported 895 confirmed cases: Argentina (3 cases), Canada (45 cases), the United States of America (120 cases), and Venezuela (727 cases).

Following is a summary of the current outbreaks in the Region of the Americas.

In **Brazil**, there is an ongoing measles outbreak with 995 reported cases (611 in Amazonas state and 384 in Roraima state), 114 of which have been confirmed (30 in Amazonas state and 84 in Roraima state), including 2 deaths. There are 798 suspected cases under investigation. In addition, a case was confirmed in the state of Rio Grande do Sul. The case is a one-year-old female with no vaccination history, resident of Sao Luiz Gonzaga municipality, with travel history to Europe, visiting multiple countries with ongoing measles outbreaks. The genotype identified in this latter case is B3.

In the state of Amazonas, 611 cases were reported, 30 of which were confirmed, 63 were discarded, and 518 remain under investigation. The suspected cases are from 14 municipalities: Anori, Beruri, Careiro da Várzea, Humaitá, Itacoatiara, Itapiranga, Iranduba, Jutai, Manacapuru, Manaus, Novo Airão, Parintins, São Gabriel da Cachoeira, and Tefé. All 30 confirmed cases are from Manaus, all of them are Brazilian citizens, 17 of which are female. With respect to the 518 cases that remain under investigation, 254 are female and the same number are the age group between 6 months and 4 years of age.

In the state of Roraima, 384 cases were reported, 84 of which were confirmed, 20 were discarded, and 280 remain under investigation. The cases are from 11 municipalities: Alto Alegre, Amajari, Boa Vista, Cantá, Caracaraí, Caroebe, Iracema, Pacaraima, Rorainópolis, São João da Baliza, and Uiramutã. The 84 confirmed cases are from: Boa Vista (62 cases), Cantá (1 case), Pacaraima (19 cases), Maracaibe (1 case), and Uiramutã (1 case).

Among the 84 confirmed cases in Roraima, 58 are Venezuelans (69%), 24 Brazilians (29%), one from Guyana (1%), and one from Argentina (1%). The ages of the confirmed cases ranged from under 6-months to 39-years-old. Of the 58 Venezuelan cases, 32 are indigenous; and 35 cases were in the 1-year-old to 9-years-old age group. The 2 measles deaths are Venezuelan children from the municipality of Boa Vista. Four cases were

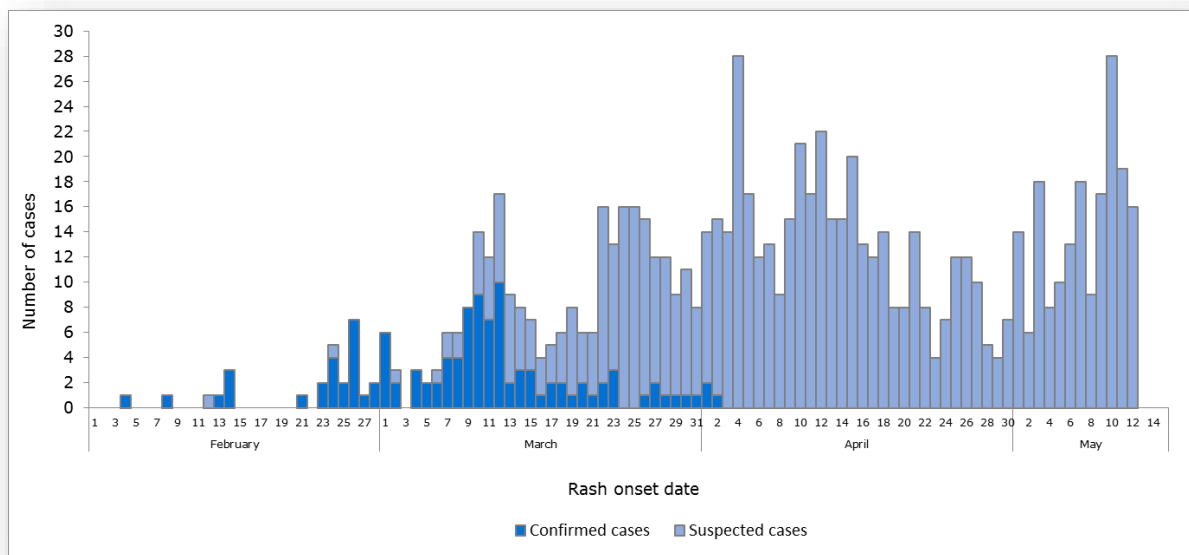
hospitalized. Of the 24 confirmed cases in Brazilians, 1 is indigenous and 12 were in the 6-months-old to 4-years-old age group. The confirmed case from Guyana is indigenous.

Of the 280 cases in Roraima state that remain under investigation, 141 are Brazilian (20 indigenous), 138 Venezuelan (79 indigenous), and 1 from Guyana (indigenous).

The rash onset of confirmed cases in both states occurred between 4 February and 2 April 2018. According to the laboratory testing conducted by the Oswaldo Cruz Foundation (Fiocruz/RJ), the genotype identified in all the laboratory confirmed cases is D8. The lineage is identical to the one identified in Venezuela in 2017.

Figure 1 illustrates the progression of the outbreak, showing an increasing trend during March and in May. As results of the 798 cases that remain under investigation become available the observed trend could change.

Figure 1. Reported measles cases by rash onset date. Amazonas and Roraima states. Brazil. EW 1 to EW 19 of 2018.



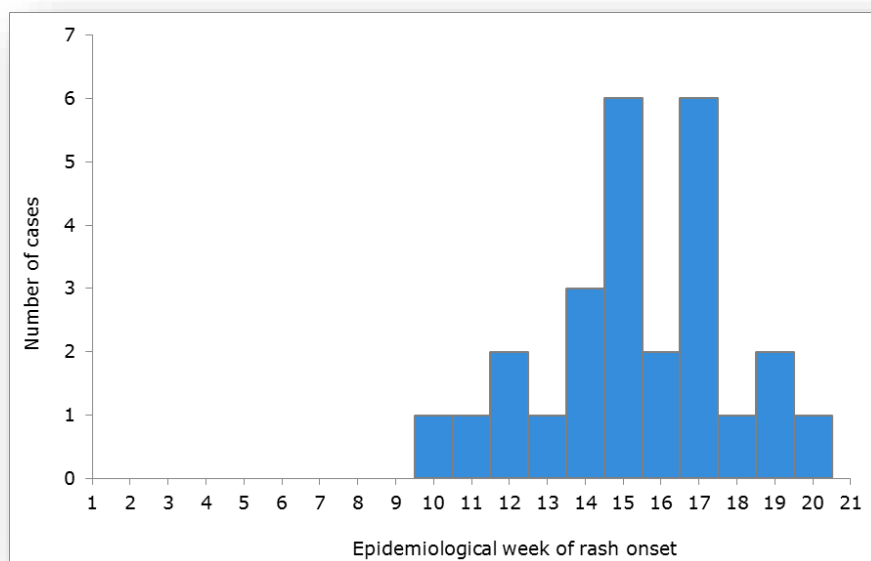
Source: Data provided by the Ministry of Health of Brazil and reproduced by PAHO/WHO.

In **Colombia**, between EW 11 and EW 21 of 2018, there were 26 confirmed measles cases reported (**Figure 2**). Ages ranged between 10-months to 26-years-old. Six of the total cases were female. Rash onset between 8 March and 19 May of 2018. Of the 26 cases, 17 were imported from Venezuela, 7 cases are of secondary transmission, in people from Venezuela who reside in Colombia for more than 4 months, and 2 cases were related to importation. No deaths have been reported.

The cases were reported in the departments of: Antioquia, Bolívar, Cauca, Cesar, Norte de Santander, Risaralda, Sucre, and the Districts of Cartagena and Santa Marta.

Laboratory testing of all cases was conducted by the National Health Institute and cases were confirmed by the detection of anti-measles IgM antibodies in serum and by reverse transcription polymerase chain reaction (RT-PCR) in pharyngeal swabs and in urine samples. The genotyping from 9 cases indicated genotype D8, lineage MVi/Hulu Langat.MYS/26.11, identical to the one identified in Venezuela in 2017.

Figure 2. Reported measles cases by EW of rash onset. Colombia, EW 10 to EW 20 of 2018.



Source: Data provided by the Colombia International Health Regulations (IHR) National Focal Point (NFP) and reproduced by PAHO/WHO.

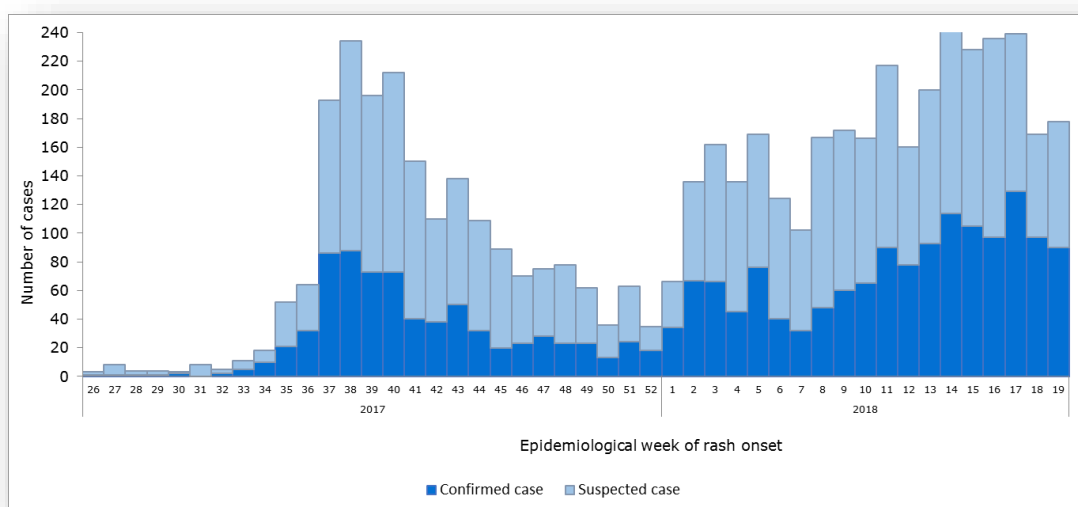
In **Ecuador**, between EW 13 and EW 22 of 2018 there were 12 confirmed measles cases reported, 7 of which were imported and 5 related to importation. The cases were reported in Quito (9 cases), Cuenca (1 case), Carchi (1 case), and Riobamba (1 case); with onset of rash between 28 March and 29 May of 2018. Six of the cases correspond to the same chain of transmission in the southern sector of the city of Quito. Nine of the cases are male, the ages range between 4-months-old and 44-years-old, and 10 of the cases are Venezuelan.

The laboratory confirmation of the cases was carried out in the National Reference Laboratory (INSPI, Quito) by serological tests by the detection of anti-measles IgM antibodies and molecular tests by the polymerase chain reaction (PCR). Genotyping is in progress.

In **Venezuela**, the outbreak is ongoing with measles cases reported in 17 states and the Capital District. Since the confirmation of the first measles case in EW 26 of 2017 up to EW 19 of 2018, there were 2,154 confirmed measles cases; 727 in 2017 and 1,427 between EW 1 and EW 19 of 2018 (**Figure 3**).

Most of the suspected cases come from the state of Bolivar, followed by the Capital District. At the national level, 35 deaths were reported, 33 of which correspond to the state of Delta Amacuro, where cases have been reported since EW 33 of 2017. The confirmed cases in Delta Amacuro were notified by the municipalities of Antonio Diaz, Pedernales, and Tucupita, with the highest incidence rates reported in the parishes of Luis Beltrán Prieto Figueroa (3,320 per 100,000 inhabitants), Pedernales (1,466 per 100,000 inhabitants), and Juan Millán (527 per 100,000 inhabitants).

Figure 3. Reported measles cases by EW of rash onset. Venezuela. 2017-2018 (up to EW 19)



Source: Venezuela Ministry of Popular Power for Health data and reproduced by PAHO/WHO

Advice to national authorities

In light of continuous reports of imported measles cases from other regions and ongoing outbreaks in the Americas, the Pan American Health Organization / World Health Organization (PAHO / WHO) urges all Member States to:

- **Vaccinate** to maintain homogeneous coverage of 95% with the first and second doses of measles, mumps, rubella (MMR) vaccine in all municipalities.
- **Vaccinate** at-risk populations (without proof of vaccination or immunity against measles and rubella), such as healthcare workers, people working in tourism and transportation (hotels and catering, airports, taxi drivers, and others) and international travelers.
- **Maintain** a reserve of measles-rubella (MR) vaccines and syringes for control of imported cases in each country of the Region.
- **Strengthen epidemiological surveillance** of measles to achieve timely detection of all suspected cases of measles in public and private healthcare facilities and ensure that samples are received by laboratories within 5 days of being taken.
- Provide a **rapid response** to imported measles cases through the activation of rapid response teams to avoid the re-establishment of endemic transmission. Once a rapid response team has been activated, continued coordination between the national and local levels must be ensured, with permanent and fluid communication channels between all levels (national, sub-national, and local).
- **Identify** migratory flows from abroad (arrival of foreign persons) and internal flows (movements of population groups) in each country, to facilitate access to vaccination services, according to the national scheme.

Additionally, in view of the upcoming international sporting events, PAHO/WHO recommends that Member States advise all travelers over 6-months-of-age who cannot show proof of vaccination or immunity, that they **receive the measles and rubella vaccine**, preferably the triple viral vaccine (measles, mumps and rubella - MMR), **at least two weeks before traveling to areas where measles transmission has been documented**. The recommendations of PAHO/WHO in relation to advice for travelers are available in the 27 October 2017 PAHO/ WHO Epidemiological Update on Measles.¹

Related links:

- PAHO/WHO. Vaccine-Preventable Diseases: <http://bit.ly/2G8pQwi>

¹ Pan American Health Organization / World Health Organization. Epidemiological Update: Measles. 27 October 2017, Washington, D.C.: PAHO/WHO; 2017. Available at: <https://bit.ly/2l3gCSi>