

Situation Summary

In 2018, twelve countries¹ in the Region of the Americas reported confirmed measles cases, whereas in April 2019 to date, there are already 12 countries in the Region that have reported confirmed measles cases: Argentina, the Bahamas, Brazil, Canada, Chile, Colombia, Costa Rica, Mexico, Peru, the United States of America, Uruguay, and the Bolivarian Republic of Venezuela. No fatal cases have been reported in the Region in 2019, while in 2018 there were two countries, Brazil and Venezuela, that reported fatal cases.

The outbreak that started in Venezuela in 2017² spread to Brazil and Colombia in 2018. Additionally, in 2018, 4 additional countries in the Region (Argentina, Chile, Ecuador, and Peru) reported imported cases or import-related cases of the same genotype and lineage as the one circulating in Brazil, Colombia, and Venezuela. A decrease in the number of reported cases was observed from epidemiological week (EW) 27 of 2018 until the end of 2018 (**Figure 1**).

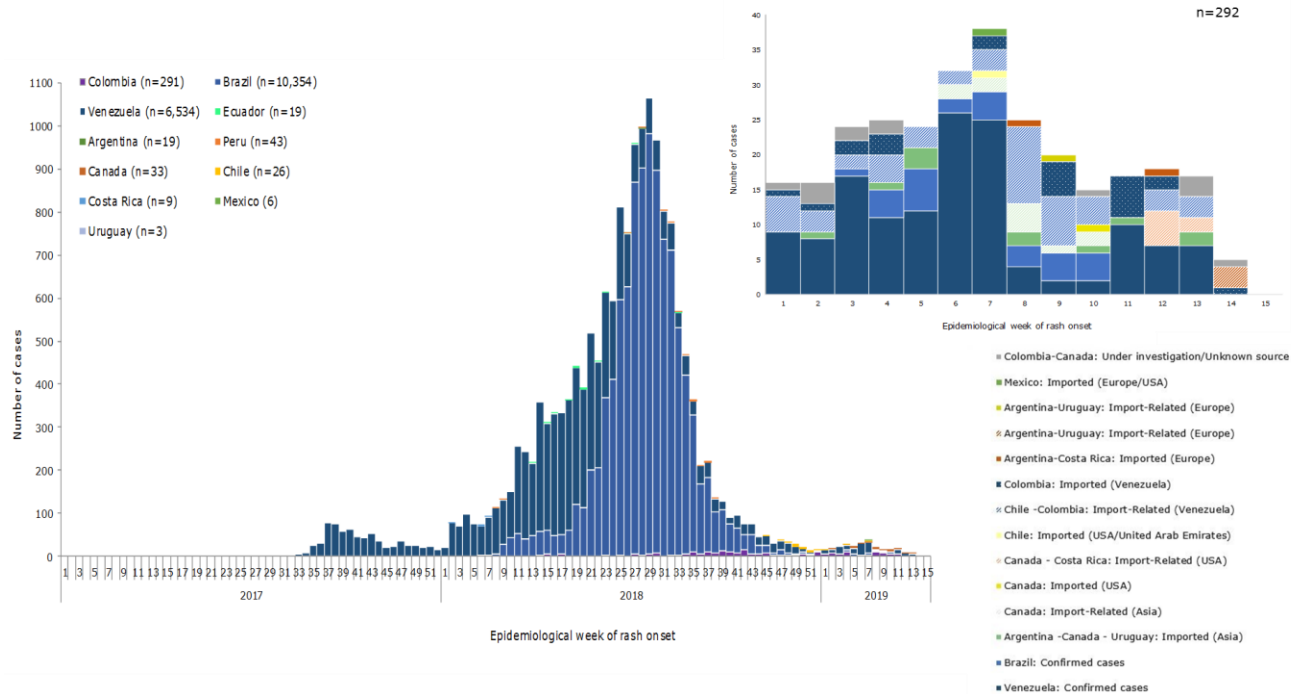
In 2019, Brazil, Colombia, and Venezuela continue to report cases associated with the same genotype and lineage², indicating the continued circulation of this virus, while 9 other countries³ have reported cases imported from outside of the Region with different genotypes identified (**Figure 1**).

¹ Antigua and Barbuda, Argentina, Brazil, Canada, Chile, Colombia, Ecuador, Guatemala, Mexico, Peru, the United States of America (USA), and Venezuela.

² Caused by genotype D8 lineage MVi/HuluLangat.MYS/26.11

³ Argentina, the Bahamas, Canada, Chile, Costa Rica, Mexico, Peru, the United States of America, and Uruguay.

Figure 1. Distribution of confirmed measles cases by epidemiological week of rash onset. Region of the Americas. 2017-2019 (up to EW 13)



Source: Data provided by the International Health Regulations National Focal Points of Argentina, Brazil, Chile, Colombia, Ecuador, Peru, Uruguay, and Venezuela and from information published by Ministries of Health and Health Agencies and reproduced by PAHO/WHO.

The following is a summary of the epidemiological situation for countries that have reported confirmed cases in 2019.

Argentina has reported 4 confirmed measles cases, of which 3 were imported and one was import-related. The first case is a 35-year-old Argentinian male resident of Rosario city, Santa Fe Province, with an unknown measles vaccination history and rash onset on 17 February after returning in Argentina on 5 February from a business trip to Hong Kong, Special Administrative Region (SAR) of the People's Republic of China.

The second case is a 49-year-old Argentinian with rash onset on 27 February after returning from a cruise in Brazil, where an outbreak of measles had been reported. The third case is a 39-year-old European tourist with no history of vaccination and with rash onset on 17 March; during the transmissibility period, the case traveled by ferry to Montevideo, Uruguay, and by plane to Puerto Iguazú. The fourth case is an import-related case in a 36-year-old male with rash onset on 2 April and who had been on the same flight as the third case.

For the first case, the genotype identified was B3. For the second case, genotype D8 lineage MVi/Delhi.IND/01.14 was identified, similar to the one reported among cases associated with the cruise ship outbreak in Brazil. For the third case, genotype D8 lineage MVs/Gir Somnath.IND/42.16 was identified; this strain has widespread distribution in Asia and Europe. Genotype and lineage results for the fourth case are pending.

The Bahamas reported an imported laboratory-confirmed case of measles in March 2019.

The case is a 4-year-old male with no history of vaccination who arrived in the Bahamas on 10 February from France and had rash onset on 18 February. Genotype D8 was identified, different from what is circulating in other countries in the Region.

In **Brazil**, between EW 1 of 2018 and EW 9 of 2019, there were 10,354 confirmed measles cases reported (10,326 in 2018 and 28 in 2019), including 12 deaths (all in 2018). Additionally, on 20 February 2019, Brazil reported a measles outbreak on a cruise ship where 20 measles cases were confirmed (all crewmembers).

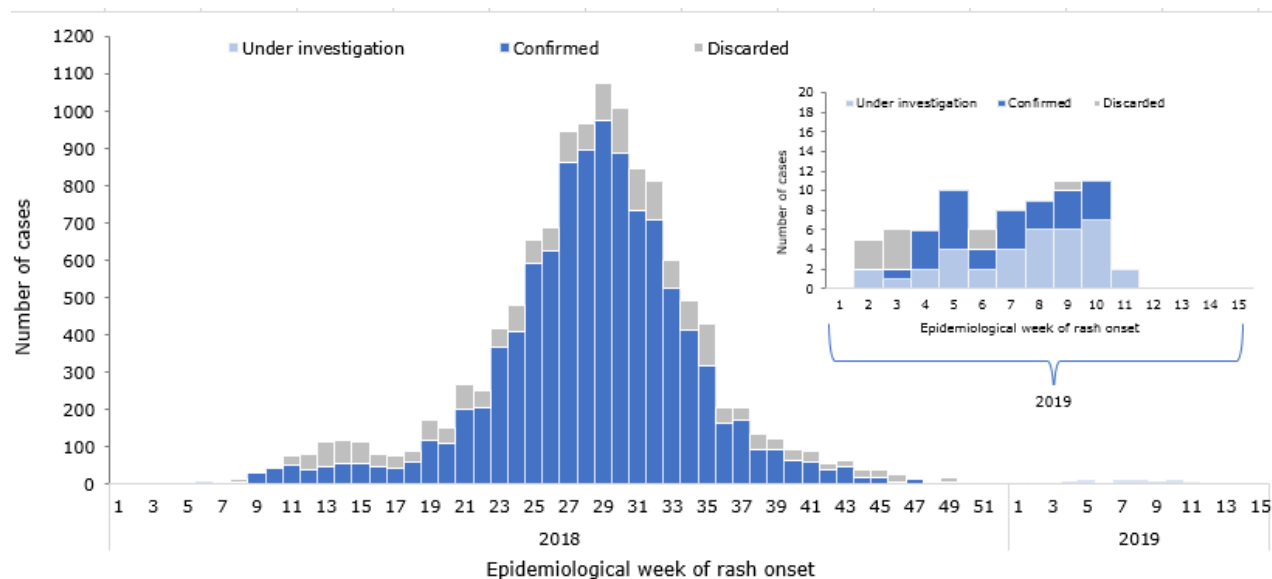
In 2018, there were 11 federal units that reported confirmed cases of measles: Amazonas (9,808 cases, 6 deaths), Bahía (3 cases), the Federal District (1 case), Pará (79 cases, 2 deaths), Pernambuco (4 cases), Rio Grande do Sul (46 cases), Rio de Janeiro (20 cases), Rondônia (2 cases), Roraima (361 cases, 4 deaths), São Paulo (3 cases), and Sergipe (4 cases). In 2019, the federal units that have reported confirmed cases are Amazonas (5 cases) and Pará (23 cases).

For all of the federal units reporting cases, with the exception of one case in Rio Grande do Sul and one case in São Paulo, genotype D8 lineage MVi/HuluLangat.MYS/26.11 was identified, similar to that circulating in Venezuela and other countries in the Region. The genotype identified in the outbreak on the cruise ship was D8, with genomic differences to the D8 virus identified in the outbreaks in Brazil in 2018 in the states of Amazonas, Roraima, and Pará, nor is it similar to the sporadic cases of genotype D8 reported in Brazil in 2018.

The most recent confirmed case in Brazil had rash onset on 23 February 2019 and was reported in Pará State.

The most recent confirmed cases imported from Venezuela had rash onset in EW 7 of 2019 and were reported in Pará State.

Figure 2. Reported measles cases by EW of rash onset. Amazonas, Pará, and Roraima states, Brazil, EW 1 of 2018 to EW 13 of 2019.



Source: Data published by the Amazonas, Pará, and Roraima State Secretariats of Health and reproduced by PAHO/WHO.

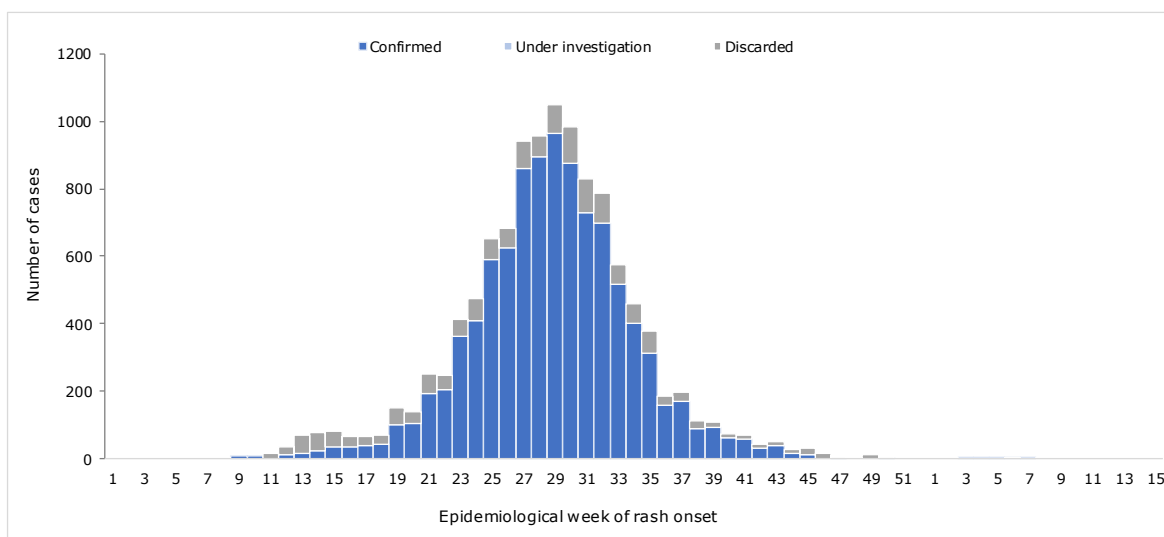
The following is a brief summary of the epidemiological situation in the states of Amazonas, Pará, and Roraima.

In the state of Amazonas, between 6 February 2018 and 19 March 2019, there were 11,423 suspected cases reported, including 6 deaths. Of the total suspected cases, 9,808 were confirmed (9,803 with dates of rash onset in 2018 and 5 in 2019), 1,609 were discarded, and 6 remain under investigation. The 6 deaths are among 4 infants under 1-year-old, an adult in the age group of 40 to 49-year-olds, and another adult over the age of 50 years.

Of the confirmed cases, 55.6% (5,452) are male. The most recent confirmed case in this state had rash onset on 31 January 2019 (EW 5) and the most recent case under investigation had rash onset in EW 8 of 2019 (see **Figure 3**).

Of the 62 municipalities in the state of Amazonas, 46 have reported confirmed cases. The municipality of Manaus accounts for 78.7% (8,986) of the suspected cases and 82.1% (8,056) of the confirmed cases reported in the state. The cumulative incidence rate of confirmed cases in the state is 273.1 cases per 100,000 population, and the municipalities with the highest incidence rates are: Manacapuru (994.2 cases per 100,000 population), followed by Juruá (458.6 cases per 100,000 population), and Manaus (378.2 cases per 100,000 population).

Figure 3. Reported measles cases by EW of rash onset. Amazonas State, Brazil, EW 1 of 2018 to EW 13 of 2019.



Source: Data published by the Amazonas State Secretariat of Health and reproduced by PAHO/WHO.

The highest incidence rate for confirmed cases by age group is among children under 1-year-old (2,191.8 cases per 100,000 population), followed by 15 to 19-year-olds (552.1 cases per 100,000 population), 20 to 29-year-olds (358.6 cases per 100,000 population), 1 to 4-year-olds (354.4 cases per 100,000 population), 30 to 39-year-olds (189.0 cases per 100,000 population), and 40 to 49-year-olds (117.4 cases per 100,000 population).

In the state of Pará, between 4 February 2018 and 19 March 2019, there were 322 suspected cases reported. Of these, 104 were confirmed (79 with dates of rash onset in 2018

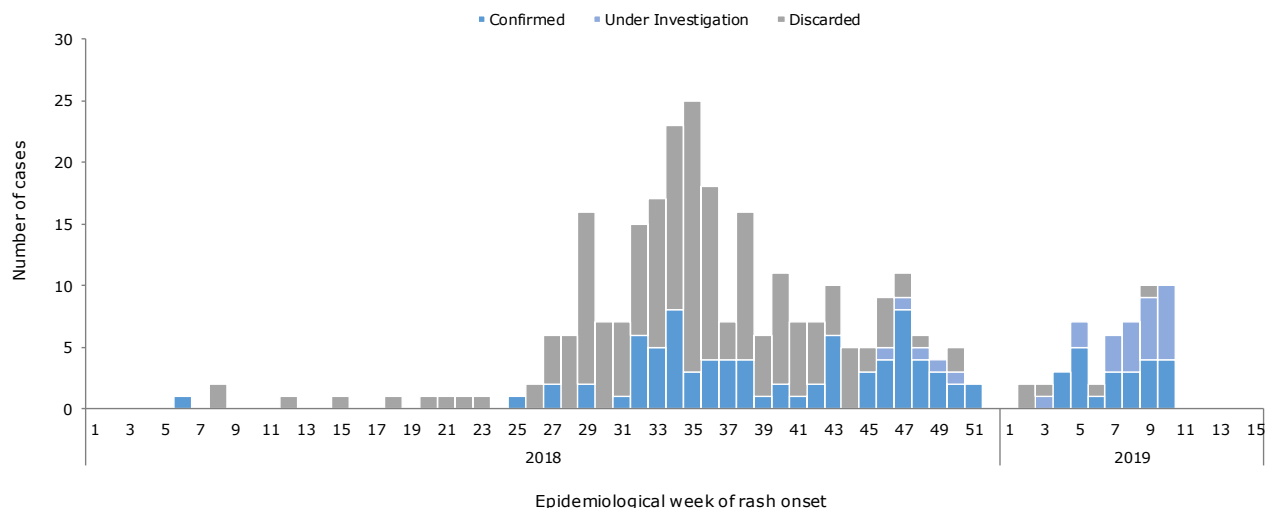
and 23 in 2019), 118 were discarded, and 30 remain under investigation. Two deaths were reported among the confirmed cases, both among indigenous Venezuelan infants under 1-year-old.

The most recent confirmed case had rash onset on 23 February 2019 (EW 8) and the most recent case under investigation had rash onset in EW 10 of 2019 (**Figure 4**).

Of the confirmed cases, 50% (52) are male. The municipality of Santarém reported 36% (116) of the suspected cases and 40.4% (42) of the confirmed cases. The incidence rate in the state is 1.3 cases per 100,000 population.

The highest incidence rate for confirmed cases by age group is among children under 1-year-old (15 cases per 100,000 population), followed by 1 to 4-year-olds (3.1 cases per 100,000 population), 5 to 9-year-olds (1.4 cases per 100,000 population), 10 to 14-year-olds (1.3 cases per 100,000 population), and 15 to 19-year-olds (1.2 cases per 100,000 population).

Figura 4. Reported measles cases by EW of rash onset. Pará State, Brazil. EW 1 of 2018 to EW 13 of 2019.



Source: Data published by the Pará State Secretariat of Health and reproduced by PAHO/WHO.

In the state of Roraima, between 4 February 2018 and 19 March 2019, there were 601 suspected cases reported, including 4 deaths. Of the total suspected cases, 361 were confirmed (all with rash onset in 2018), 224 were discarded, and 16 remain under investigation. The most recent confirmed case in the state had rash onset on 3 December 2018 (EW 49) and the most recent case under investigation had rash onset in EW 13 of 2019.

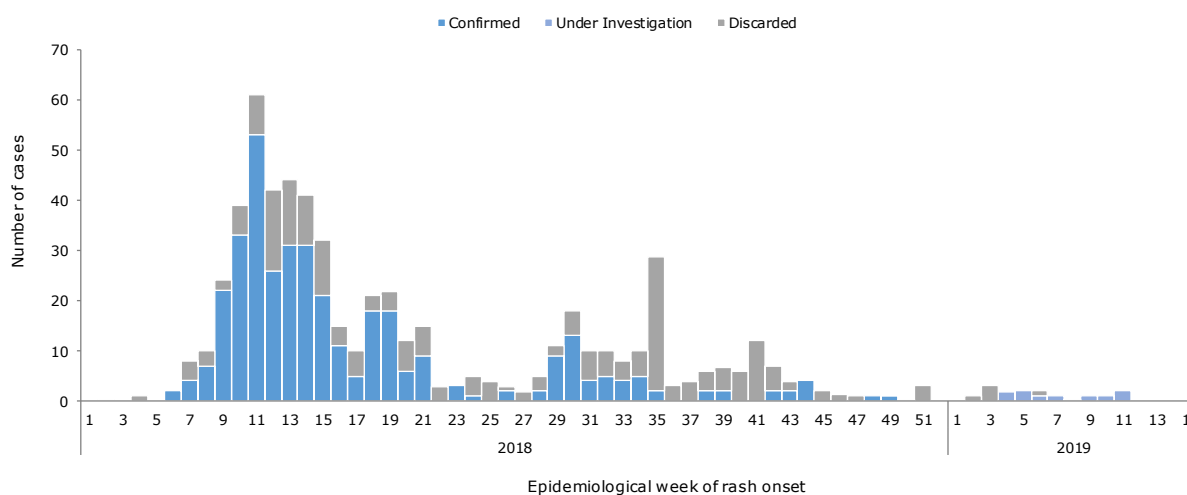
Of the confirmed cases, 54.0% (195) are male, 60.7% (219) are Venezuelan, 38.5% (139) are Brazilian, and 1% (3 cases) correspond to persons from other countries. Of the confirmed cases, 40.4% are indigenous (128 from Venezuela and 18 from Brazil).

Of the 15 municipalities in the state of Roraima, 13 have reported confirmed cases. The municipalities of Amajari, Boa Vista, and Pacaraima account for 89.8% (542) of the suspected cases and 89% (323) of the confirmed cases reported in Roraima. The incidence rate in Roraima is 62.6 cases per 100,000 population, and the municipalities with the highest

incidence rates are: Pacaraima (314.5 cases per 100,000 population), Amajari (72.6 cases per 100,000 population), Cantá (61.6 cases per 100,000 population), Rorainópolis (50.8 cases per 100,000 population), and Boa Vista (48.5 cases per 100,000 population).

The highest incidence rate for confirmed cases by age group is among children under 1-year-old (841.8 cases per 100,000 population), followed by 1 to 4-year-olds (255.8 cases per 100,000 population), 5 to 9-year-olds (106.9 cases per 100,000 population), 10 to 14-year-olds (66.6 cases per 100,000 population), and 15 to 19-year-olds (51.0 cases per 100,000 population).

Figure 5. Reported measles cases by EW of rash onset. Roraima State, Brazil. EW 1 of 2018 to EW 13 of 2019.



Source: Data published by the Roraima State Secretariat of Health and reproduced by PAHO/WHO.

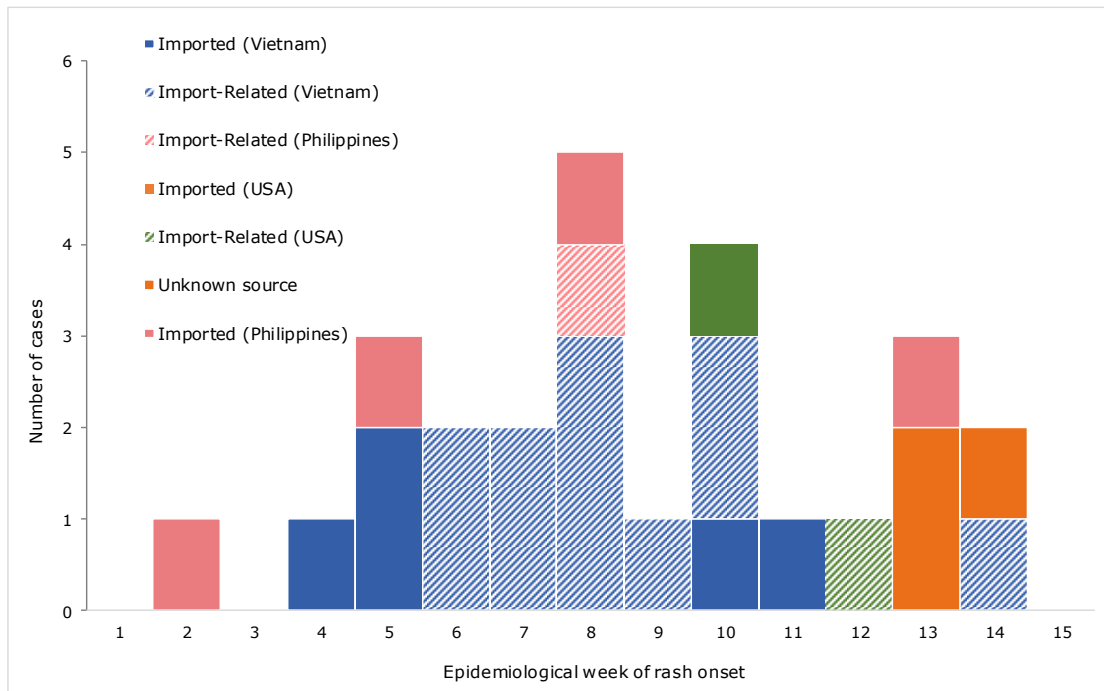
In **Canada**, between EW 1 and EW 13 of 2019, there were 33 confirmed measles cases reported in the provinces of Québec, British Columbia, Ontario, and Alberta, and the Northwest Territories. For 28 of the 33 confirmed cases, the genotype was identified, corresponding to B3 (11 cases) and D8 (17 cases).

The highest proportion of cases have been reported by British Columbia Province, with 26 confirmed measles cases reported between 1 January and 12 April 2019. Cases were import-related or imported from the Philippines, the United States, or Vietnam. For some cases, the origin of infection could not be established. In British Columbia Province, 59% (15) of cases are male; and 35% (9) had no history of vaccination⁴. A total of 42% (11) were reported among 10 to 19-year-olds, 31% (8) among 20 to 29-year-olds, 12% (3) among persons aged 40 years or older, and 8% (2) among 30 to 39-year-olds.

In 2018, there were 9 confirmed cases reported in this province.

⁴ Among the remaining cases, 8% (2 cases) reported receiving one vaccine dose, 19% (5) reported receiving 2 doses, 8% (2) had proof of vaccination for one dose, and 31% (8) had proof of vaccination for 2 doses.

Figure 6. Confirmed measles cases by EW of rash onset, British Columbia, Canada. EW 1 to EW 14 of 2019.



Source: Data published by the British Columbia Centre for Disease Control and reproduced by PAHO/WHO⁵

In **Chile**, 26 confirmed cases of measles have been reported (23 in 2018 and 3 in 2019, as of EW 8), of which 8 were imported and 18 were import-related. Fourteen cases required hospitalization, and no deaths have been reported. Of the total confirmed cases, 54% (14) are male and 57% (15) are children under 1-year-old. Cases have been reported in the Metropolitan (24) and Biobío (2) regions.

Among 18 cases, genotype D8 lineage MVi/HuluLangat.MYS/26.11 was identified, which is circulating in other countries in the Region.

The most recent confirmed imported case had onset of rash on 11 February 2019 in a 46-year-old male with a probable site of infection in Miami, Florida, United States, or Dubai, United Arab Emirates. Genotype D8 lineage MVs/GirSomnath.IND/42.16 was identified.

⁵ Available at: <http://www.bccdc.ca/resource-gallery/Documents/Measles%20BC%20epi%20summary%20to%20April%2012%20FINAL.pdf>

Figure 7. Confirmed measles cases reported by EW of rash onset. Chile, EW 45 of 2018 to EW 8 of 2019.



Source: Data received from the Chile International Health Regulations National Focal Point and reproduced by PAHO/WHO.

In **Colombia**, between EW 10 of 2018 and EW 14 of 2019, there were 8,684 suspected measles cases reported (7,089 in 2018 and 1,595 in 2019), of which 291 were confirmed (209 with dates of rash onset in 2018 and 82 in 2019). No deaths were reported. Genotyping performed on samples for 87 cases indicated genotype D8 lineage MVi/HuluLangat.MYS/26.11, similar to that circulating in other countries in the Region.

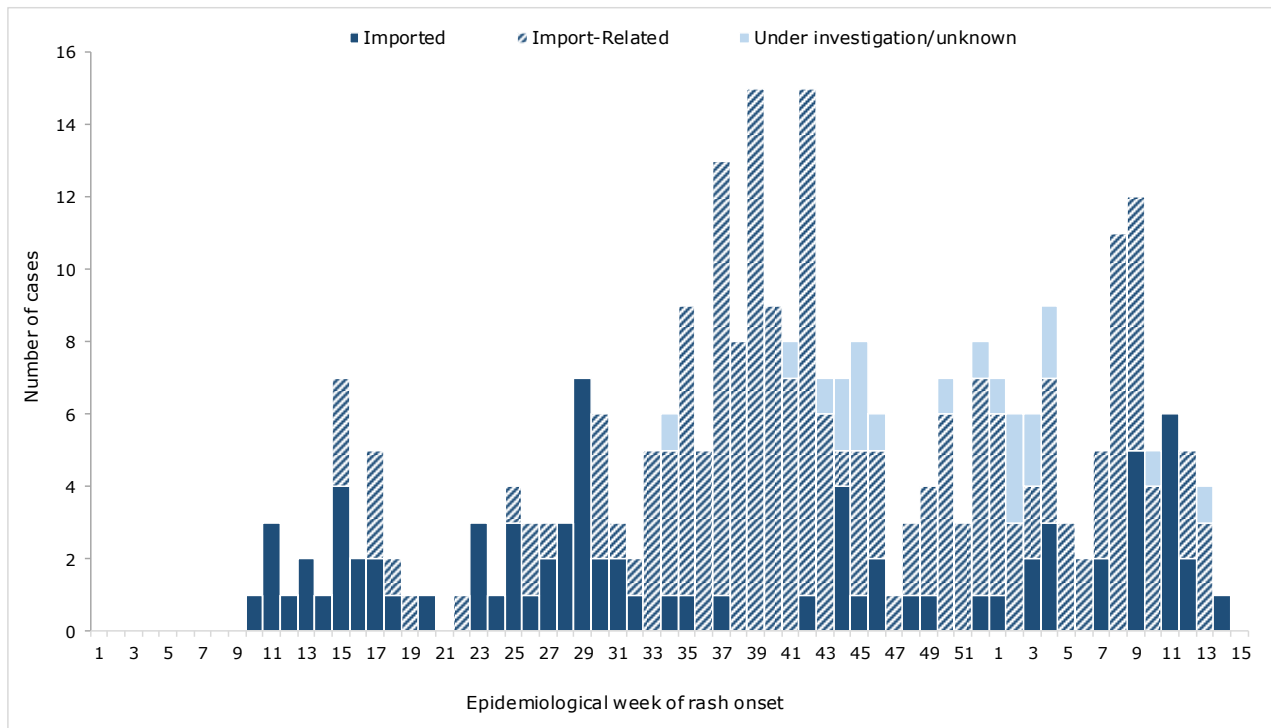
In 2019, confirmed cases have been reported in the departments of Atlántico, Cesar, Cundinamarca, La Guajira, and Norte de Santander and in the districts of Barranquilla and Bogotá. During the previous four weeks (EW 11 to EW 14), 15 cases were confirmed in the departments of La Guajira and Norte de Santander and in Barranquilla District; of these, 9 were imported from Venezuela.

The most recent confirmed imported case had rash onset on 31 March 2019, and the most recent suspected case under investigation had rash onset on 11 April 2019.

The cumulative incidence rate in the country is 0.22 cases per 100,000 population, and the highest incidence rates have been reported from the following territorial entities: Cartagena (5.5 cases per 100,000 population), Barranquilla (3.2 cases per 100,000 population), and Bolívar (1.1 cases per 100,000 population).

The highest incidence rate by age group among import-related cases or cases of secondary transmission among Colombians is among children under 1-year-old (5.9 cases per 100,000 children), followed by 1 to 4-year-olds (0.6 cases per 100,000 population).

Figure 8. Confirmed measles cases by EW of rash onset. Colombia, EW 10 of 2018 to EW 14 of 2019.



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

Costa Rica reported 9 confirmed measles cases between EW 1 and EW 13 of 2019, of which 3 were imported and 6 were import-related. The 3 imported cases include a 5-year-old French male with no history of vaccination and his parents, who arrived in Costa Rica on 18 February from Paris, France. The child had rash onset on 20 February; while the parents did not present with rash, they were confirmed as positive for measles through laboratory testing. The other 6 cases are among children aged 1, 3, 5, 7, 9, and 10 years with onset of rash on 18 March (2 cases), 19 March (2 cases), and 27 March (2 cases); all 6 of these cases had no history of vaccination and are from the same family. There is no epidemiological link between the 3 confirmed imported cases in February and the other 6 cases identified afterwards.

The genotype identified for the 3 imported cases was D8 lineage MVs/Gir Somnath.IND/42.16.

Mexico reported a laboratory-confirmed imported case of measles. The case is a 54-year-old female resident of Nuevo León State with a travel history to France (Paris) and the United States (Houston and San Antonio, Texas). The case had no history of vaccination and had rash onset on 10 February 2019. Genotype B3 was identified.

Peru has reported one confirmed measles case in 2019. The case is a 40-year-old Peruvian female from Spain who arrived in Peru on 21 March. Rash onset was 1 April, and the case was hospitalized for pneumonia. No secondary cases related to this case have been detected.

In 2018, there were 42 confirmed cases of measles, imported or import-related, reported in Peru. No deaths were reported. Among the cases, 26% (11) were children under 1-year-old. The confirmed cases in 2018 were reported from: Amazonas, Callao, Cusco, Ica, La Libertad, Lima, Piura, and Puno.

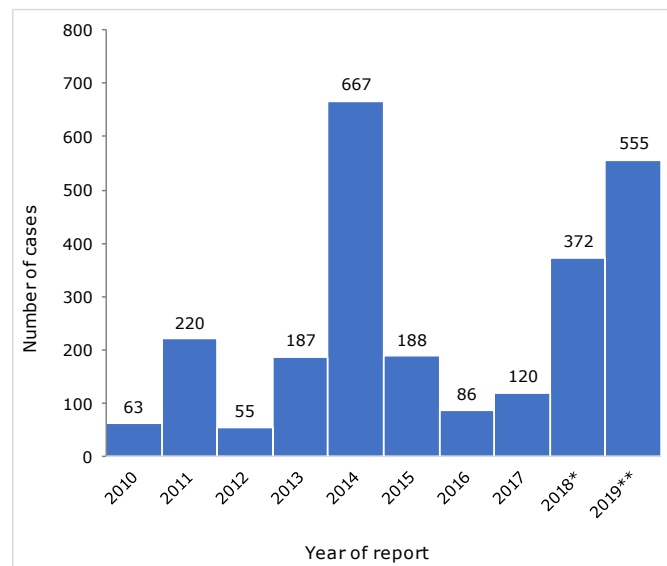
In the **United States**, between 1 January and 11 April 2019, there have been 555 confirmed measles cases⁶ reported in 20 states: Arizona, California, Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Missouri, Nevada, New Hampshire, New Jersey, New York, Oregon, Texas, and Washington.

Currently, 6 measles outbreaks⁷ are ongoing in the following jurisdictions: Rockland County, New York; New York City, New York; the State of Washington; New Jersey; Butte County, California; and the State of Michigan. These outbreaks are associated to travelers with a travel history to Israel, Ukraine, and the Philippines.

The majority of measles cases were unvaccinated.

In 2018, 17 outbreaks were reported in the United States; the outbreaks in New York State, New York City, and New Jersey reported the highest number of cases. Cases occurred mainly among unvaccinated persons in Orthodox Jewish communities. These outbreaks were associated with travelers from Israel, where a large outbreak is occurring. In 2018, 82 cases were imported from other countries, which is the highest number of imported cases since measles was eliminated in the United States in 2000.

Figure 9. Measles cases by year of report. United States, 2010-2019 (until 11 April).



*Cases as of 29 December 2018. Case count is preliminary and subject to change.

**Cases as of 11 April 2019. Case count is preliminary and subject to change.

Data are updated every Monday.

Source: Data published by the United States Centers for Disease Control and Prevention and reproduced by PAHO/WHO

⁶ Cases as of 11 April 2019. Case count is preliminary and subject to change.

⁷ Defined as 3 or more cases.

Information is updated periodically on the U.S. Centers for Disease Control and Prevention (CDC) website, available at: <https://bit.ly/2iMFK71>.

Uruguay has reported 3 confirmed measles cases. The first case is a 44-year-old female with rash onset on 2 April and with no history of vaccination. This case was a contact of the confirmed case in a European tourist in Argentina⁸. The second case is a 42-year-old female with rash onset on 27 March and with no history of measles vaccination; the case had a travel history to Thailand. The third case is a 51-year-old male with rash onset on 6 April and a vaccination history which included receiving one dose of the measles vaccine. The investigation indicated that this case is a possible contact of the European tourist confirmed in Argentina.

Identification of the genotype and lineage for the 3 cases is ongoing.

In **Venezuela**, the outbreak that began in 2017 remains ongoing. Between EW 26 of 2017 and EW 13 of 2019, a total of 9,585 suspected cases (1,307 in 2017, 7,790 in 2018, and 488 in 2019), including 6,534 confirmed measles cases (727 in 2017, 5,667 in 2018, and 140 in 2019), have been reported. Cases in 2018 were confirmed by laboratory (2,201), clinical diagnosis (2,659), and epidemiological link (807). Cases in 2019 were also confirmed by laboratory (85), clinical diagnosis (32), and epidemiological link (23). There have been 76 deaths reported: 2 in 2017 (in Bolívar) and 74 in 2018 (37 in Delta Amacuro, 27 in Amazonas, 6 in Miranda, 3 in the Capital District, and 1 in Bolívar). The most recent laboratory-confirmed case had rash onset on 30 March 2019, from Simón Bolívar Municipality, Anzoátegui State.⁹

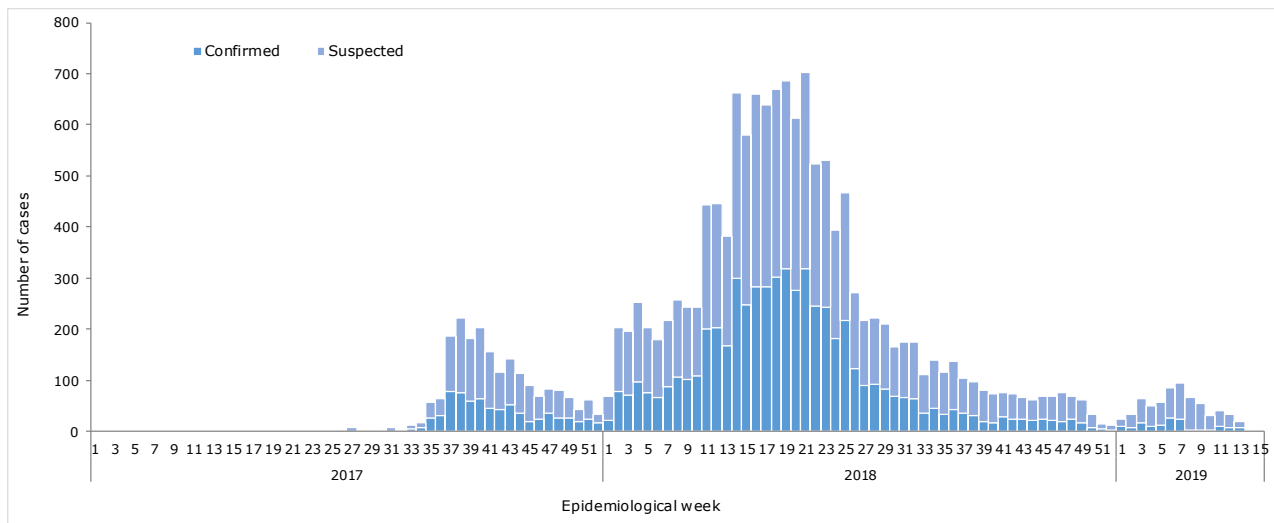
The cumulative incidence rate in the country during 2017-2019 is 20.4 cases per 100,000 population. The highest incidence rates have been reported in: Delta Amacuro (214 cases per 100,000 population), the Capital District (126 cases per 100,000 population), Amazonas (77 cases per 100,000 population), Bolívar (55 cases per 100,000 population), Vargas (46 cases per 100,000 population), and Miranda (38 cases per 100,000 population).

Confirmed cases with dates of onset of rash between EW 1 and EW 13 of 2019 were reported from Zulia (76), Anzoátegui (43), Carabobo (9), the Capital District (4), Monagas (2), Cojedes (2), Amazonas (1), Aragua (1), Bolívar (1), and Miranda (1).

⁸ See page 2 for the report, Argentina.

⁹ Note: The data in this analysis reflects the current case numbers; however, there may be some delays in the reporting and completeness of the information. The data is also subject to change as the information for each case is updated and validated.

Figure 10. Reported measles cases by EW of rash onset. Venezuela. 2017-2019 (until EW 13).



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

Health authorities in Venezuela have implemented a series of vaccination strategies aimed at interrupting the circulation of the virus. In addition to vaccination campaigns, other implemented actions include: intensified acute febrile syndrome surveillance and block vaccinations with the measles-rubella (MR) vaccine as well as selective vaccination of contacts of suspected and confirmed cases in persons up to 39-years-old.

Measles in indigenous communities

In **Brazil**, a total of 185 suspected cases have been reported among indigenous populations, of which 145 were confirmed in Roraima State and 2 (both fatal) in Pará State. The majority of confirmed cases in Roraima State are from the Auaris Indigenous Health District, which borders Venezuela.

In **Venezuela**, between EW 1 and EW 52 of 2018, there were 513 confirmed measles cases among indigenous populations in Amazonas¹⁰ (149 cases, of which 132 were in the Sanema, 16 in Yanomami¹¹, and 1 in Baniva ethnic groups); Bolívar (1 case in the Pemón ethnic group), the Capital District (1 case in the Wayú ethnic group), Delta Amacuro (331 cases, all in the Warao ethnic group); Monagas (22 cases, of which 20 were in Warao, 1 in Shaima, and 1 in Eñepa ethnic groups); and Zulia (9 cases in the Wayú ethnic group). Additionally, 62 deaths were reported, of which 35 were in Delta Amacuro (all in the Warao ethnic group) and 27 were in Amazonas (26 in Sanema and 1 in Yanomami ethnic groups).

¹⁰ The difference with respect to that reported in previous Epidemiological Updates is due to the retrospective adjustments made by the national authorities based on the review, consolidation, and investigation of cases in indigenous populations.

¹¹ According to previous data provided by national authorities, between EW 11 and EW 27 of 2018, there were 126 confirmed cases, including 53 deaths, in the Yanomami Municipality of Alto Orinoco, Amazonas State in Venezuela.

Advice to national authorities

Given the continued imported cases of measles from other regions and the ongoing outbreaks in the Americas, the Pan American Health Organization/World Health Organization (PAHO/WHO) reinforces the recommendations made since February 2015 to all Member States to:

- Vaccinate to **maintain homogeneous coverage of 95%** with the first and second doses of the 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 personnel, persons working in tourism and transportation (hotels, airports, taxi drivers, and others), and international travelers.
- **Maintain a stock** of MR and/or MMR **vaccines and syringes** for control of imported cases in each country of the Region.
- **Identify** migratory flows (arrival of foreigners) and internal flows (displaced populations) in each country, including indigenous populations, in order to facilitate access to vaccination services according to the national scheme.
- Implement a plan to immunize migrant populations in high traffic border areas, prioritizing those considered at-risk, including both migrants and local residents, in these municipalities.
- **Increase vaccination coverage** and strengthen epidemiological surveillance in border areas in order to increase population immunity and rapidly detect/respond to suspected measles cases.
- **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 collection and that laboratory results are available in a timely manner.
- Provide a **rapid response** to imported measles cases to avoid the re-establishment of endemic transmission, through the activation of rapid response teams trained for this purpose and by implementing national rapid response protocols when there are imported cases. 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).
- During outbreaks, **establish adequate hospital case management** to avoid nosocomial transmission, with appropriate referral of patients to isolation rooms (for any level of care) and avoiding contact with other patients in waiting rooms and/or other hospital rooms.

Additionally, PAHO/WHO recommends that Member States advise all travelers aged 6 months¹² and older who cannot show proof of vaccination or immunity **receive the measles**

¹² The MMR or MR dose administered to children between 6 and 11 months old does not replace the first dose of the recommended schedule at 12 months of age.

and rubella vaccine, preferably the triple viral vaccine (MMR), **at least two weeks prior to 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 Measles¹³.

¹³ 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>

Sources of Information

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2. **The Bahamas** International Health Regulations (IHR) National Focal Point (NFP) Report to PAHO/WHO received by email.
3. **Brazil** International Health Regulations (IHR) National Focal Point (NFP) Report to PAHO/WHO received by email.
4. **Canada.** Public Health Agency of Canada. Measles & Rubella Weekly Monitoring Report – Week 13, 2019 (24 to 30 March 2019). Available at: <https://www.canada.ca/en/public-health/services/diseases/measles/surveillance-measles/measles-rubella-weekly-monitoring-reports.html>
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7. **Colombia** International Health Regulations (IHR) National Focal Point (NFP) Report to PAHO/WHO received by email.
8. **Costa Rica** International Health Regulations (IHR) National Focal Point (NFP) Report to PAHO/WHO received by email.
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13. **Venezuela** International Health Regulations (IHR) National Focal Point (NFP) Report to PAHO/WHO received by email.

Related links:

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