Epidemiological Update
Measles

4 October 2021

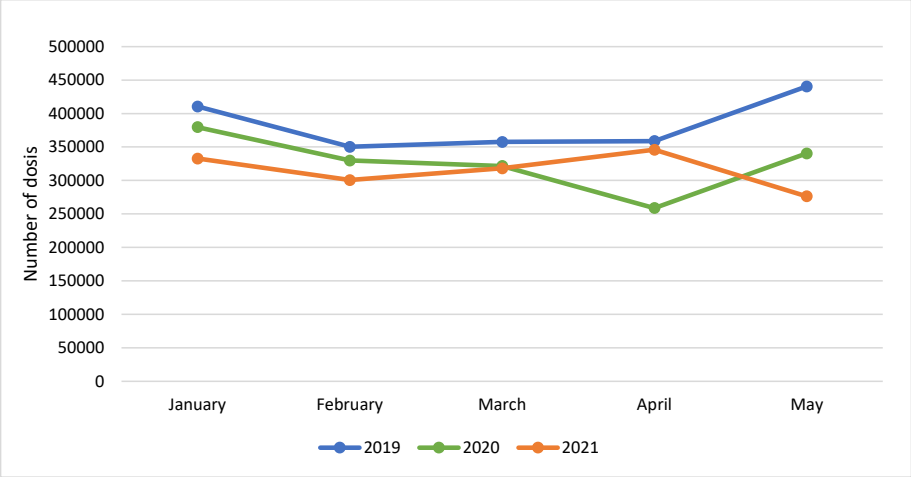
Situation Summary

In 2021, between epidemiological week (EW)1 and EW 38, two countries in the Region of the Americas have reported confirmed cases of measles: *Brazil* with 552 confirmed cases, including 2 deaths in 6 federal units; and *United States of America* with 20 measles cases confirmed in 3 jurisdictions, including 18 cases reported among evacuees recently arriving from Afghanistan during the resettlement process.

In 2020, a total of 9 countries in the Region of the Americas reported cases and deaths due to measles[1].

PAHO/WHO has monitored the impact of the pandemic on vaccination coverage in the Region. In regards, comparing the period from January to May of 2019 with the same period in 2020 and 2021, a decrease in the number MMR1[2] doses was observed during May 2020 (by 22% compared with the same period in 2019) and 2021 (by 18% compared with the same period in 2020) (**Figure 1**). Likewise, in 2020, the weekly notification of suspected measles and rubella cases decrease by 73% compared to 2019. In 2021, between epidemiological week (EW) 1 and EW 38, there is a low notification of suspected cases, with a median of 4 cases reported weekly.

Figure 3. Number of MMR1 doses administered in countries and territories of Latin America and The Caribbean, 2019-2021(between January and May).



Source: PAHO/WHO Measles-Rubella-Congenital Rubella Syndrome Weekly Bulletin (36) - 11 September 2021 Available at: https://bit.ly/3qcmf68

[1] Countries that reported cases and deaths due to measles in 2020: Argentina (61 cases including 1 death), Bolivia (2 cases), Brazil (8,448 cases including 10 deaths), Canada (1 case), Chile (2 cases), Colombia (1 case), Mexico (196 cases), the United States of America (13 cases), and Uruguay (2 cases).

[2] First dose of measles, mumps and rubella vaccine (MMR1)

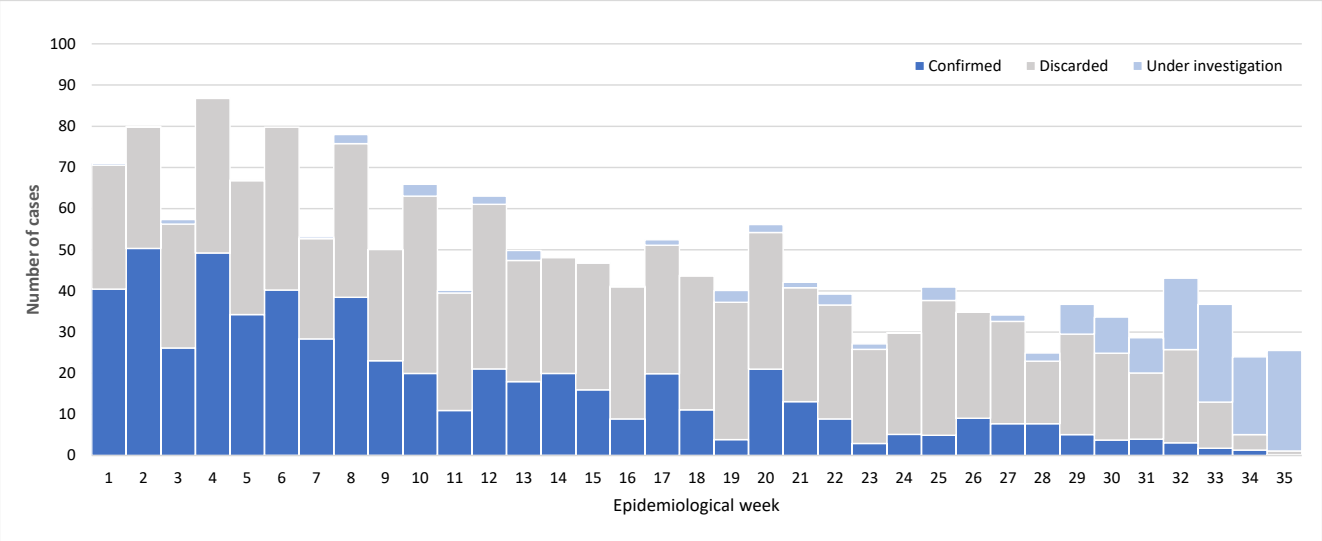
Suggested citation: Pan American Health Organization / World Health Organization. Epidemiological Update: Measles. 4 October 2021, Washington, D.C.: PAHO/WHO; 2021

PAHO/WHO recommends remaining alert to the probable occurrence of new outbreaks of varying magnitude in the Americas Region, due to the following risk factors: 1) gaps among the international indicators for integrated measles/rubella surveillance[3]; 2) the low vaccination coverage of the first and second doses of vaccines against measles, mumps and rubella (MMR1 and MMR2) in many countries and territories of the Region of the Americas in 2020; 3) the ongoing measles outbreaks in Brazil; 4) the wide circulation of the virus worldwide, and 5) the migratory flow of vulnerable populations within the Region of the Americas and from other Regions.

The following is an update of the measles epidemiological situation in Brazil and United States of America, that have reported confirmed measles cases since the last PAHO/WHO Epidemiological Update on Measles published on 1 March 2021[4].

In **Brazil**, between EW 1 and EW 35 of 2021, a total of 1,671 suspected cases were reported, of which 580 (35%) were confirmed, 956 (57%) were discarded, and 135 (8%) remain under investigation. (**Figure 2**). During the same period, two deaths were reported in the Amapá State, both in children under 1-year-old with no vaccination history.

Figure 2. Reported cases of measles by epidemiological week (EW) of rash onset. Brazil. EW 1 to EW 35 of 2021.



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

As of EW 35 of 2021, the federal units reporting the highest cumulative incidence rates of confirmed measles cases in Brazil were: Amapá (70.4 cases per 100,000 population), Pará (4.8 cases per 100,000 population), Ceará (2.8 cases per 100,000 population), and Alagoas (1.1 cases per 100,000 population).

[3] The international indicators for integrated measles/rubella surveillance are described in the PAHO/WHO Weekly bulletins. Measles, Rubella, and Congenital Rubella Syndrome. Available at: https://bit.ly/3qcmf68

[4] PAHO/WHO Epidemiological Update: Measles. 1 March 2021, Washington, D.C.: PAHO/WHO; 2021, Available at: https://bit.ly/3D0Whcp

In 2021, as of EW 35, the highest cumulative incidence rates of confirmed cases of measles by age group in Brazil were reported among under 5-year-olds (22.6 cases per 100,000 population), followed by 5 to 19-year-olds (1.6 cases per 100,000 population), 20 to 49-year-olds (1.04 cases per 100,000 population) and older than 50-year-olds (0.15 case per 100,000 population).

As of EW 35 of 2021, three federal units reported ongoing outbreaks[5] : Amapá, Pará, and Alagoas. The following is a summary of the epidemiological situation in these federal units[4]:

In *Amapá*, between EW 1 and EW 35 of 2021, a total of 659 suspected cases of measles were reported, of which 454 were confirmed (including 2 deaths), 164 were discarded, and 41 remain under investigation. The highest incidence rates by age group are among under 1-year-olds (1,350.03 cases per 100,000 population), followed by 1 to 4-year-olds (223.10 cases per 100,000 population), and 5 to 9-year-olds (43.44 cases per 100,000 population). Among the confirmed cases, 331 (72.9%) were unvaccinated y 55 (12.1%) were vaccinated (information regarding the number of doses per person was unavailable). For 68 cases (14.9%), no information regarding vaccination status was available. The most recent confirmed case in Amapá had rash onset on 24 August 2021 and was reported in Macapá Municipality. Amapa shares border with *French Guiana* and *Suriname*.

In *Pará*, between EW 1 and EW 35 of 2021, a total of 277 suspected cases of measles were reported, of which 107 were confirmed, 146 were discarded, and 24 remain under investigation. The highest incidence rates by age group are among under 1-year-olds (41.63 cases per 100,000 population), followed by 1 to 4-year-olds (10.57 cases per 100,000 population), and 20 to 29-year-olds (9.73 cases per 100,000 population). Among the confirmed cases, 87 (81.3%) were unvaccinated, and 12 (11.2%) were vaccinated. For 8 cases (7.4%), no information regarding vaccination status was available. The most recent confirmed case in Pará had rash onset on 14 August 2021 and was reported in Marituba Municipality. Pará shares border with *Guyana* and *Suriname*.

In *Alagoas*, between EW 1 and EW 35 of 2021, a total of 27 suspected cases of measles were reported, of which 11 were confirmed and 16 were discarded. All confirmed cases correspond to the 1 to 4-year-olds age group (18.62 cases per 100,000 population). Among the confirmed cases, 2 (18.2%) were unvaccinated, and 9 (81.8%) were vaccinated. The most recent confirmed case in Alagoas had rash onset on 30 June 2021 and was reported in Capela Municipality.

In the **United States**, between 1 January and 29 September 2021, a total of 20 measles cases have been confirmed in 3 jurisdictions, including 18 cases reported among evacuees recently arriving from Afghanistan during the resettlement process.

This information is regularly updated in the Centers for Disease Control and Prevention (CDC) website, available at: https://bit.ly/2iMFK71.

Information regarding measles cases reported among persons recently arriving from Afghanistan was published by the US CDC in the Guidance for Clinicians Caring for Individuals Recently Evacuated from Afghanistan on 20 September 2021. Available at: https://bit.ly/3DeDZ7R

[5] Federal units that have reported confirmed cases in the last 90 days.

Advice to national authorities

On 27 September 2016, the Region of the Americas was the first WHO Region to be declared measles-free, following a 22-year effort. The elimination of measles and rubella in the Region of the Americas has been a very important milestone, for which the PAHO/WHO urges Member States to follow the recommendations of the 2021 XXVI Meeting of the Technical Advisory Group (TAG) on Preventable Diseases Vaccination (final report available at: https://bit.ly/2Y8uU1), which are framed in the context of the COVID-19 pandemic.

In the context of the response to the COVID-19 pandemic and considering the imminent crisis in the Region of the Americas regarding routine vaccination, the PAHO / WHO urges Member States to:

- Maintain and strengthen immunization programs and other essential health programs.
- Implement urgent corrective actions to ensure 95% coverage with the two doses of MMR vaccine in children under 2 years of age; in addition to carrying out periodic monitoring and mass campaigns directed at vulnerable populations and cohorts of older age groups.
- Strengthen the national and subnational capacity for outbreak response and risk assessment in order to implement interventions at the local level that contribute to closing detected gaps.
- Prioritize the policy of "Reinvigorating immunization as a Public Good for universal health," which was approved at the 168th session of the PAHO/WHO Executive Council (final report available at: https://bit.ly/2Wob3ud), which will reverse the decline in vaccination coverage (MMR1 and MMR2) and the surveillance indicators recorded during the last decade, which were affected even more by the COVID-19 pandemic.

Among the guidelines and recommendations for countries with measles outbreaks, the following are highlighted:

Vaccination

- In health care facilities where vaccination activities are carried out, it is essential that health care workers are alert to signs and symptoms of respiratory diseases and offer patients with flu-like symptoms a surgical mask and refer them for medical evaluation, in accordance with local protocols for initial triage of suspected COVID-19 patients.
- Maintain infection prevention and control measures and social distancing practices during vaccination services.
- Although there are currently no known medical contraindications to vaccination of a person who has had contact with a case of COVID-19, it is recommended to defer vaccination until quarantine has been completed (14 days after the last exposure).
- Vaccinate populations at-risk and without proof of vaccination or immunity against measles and rubella residing in areas where the measles virus is circulating.
- Maintain stock of the measles-rubella (MR) and/or MMR vaccine and syringes/supplies for prevention and control actions of imported cases.

Epidemiological surveillance

- During an outbreak and when it is not possible to confirm the suspected cases by laboratory, classifications of a confirmed case may be based on clinical criteria (fever, maculopapular rash with at least one of the following signs and symptoms: cough, coryza and conjunctivitis) and epidemiological link, in order to not delay the response actions. This is particularly important in scenarios with arbovirus circulation such as dengue, Zika, and Chikungunya.
- Routine surveillance for other vaccine preventable diseases (VPD) should continue as long as possible. When laboratory testing is not possible, samples should be stored appropriately for confirmation when laboratory capacity permits testing. Countries should ensure sufficient sample storage capacity at the provincial and central levels, and this should be monitored regularly.
- Strengthen epidemiological surveillance in border areas to rapidly detect and respond to highly suspected cases of measles.

Rapid response

- 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), 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 months[6] and older who cannot show proof of vaccination or immunity to **receive the measles and rubella vaccine**, preferably the triple viral vaccine (MMR), **at least two weeks prior to traveling to areas where measles transmission has been documented.** PAHO/WHO recommendations regarding advice for travelers are available in the 27 October 2017 PAHO/WHO Epidemiological Update on Measles[7].

Sources of information

1. **Brazil** International Health Regulations (IHR) National Focal Point (NFP) report received by PAHO/WHO via email.
2. **United States** International Health Regulations (IHR) National Focal Point (NFP) report received by PAHO/WHO via email.
3. **United States** Centers for Disease Control and Prevention. Measles Cases and Outbreaks. Available at: https://www.cdc.gov/measles/cases-outbreaks.html

[6] The dose of the MMR or MR vaccine given to children aged 6 to 11 months does not replace the first dose of the recommended schedule at 12 months of age.

[7] Information available in the Epidemiological Update on Measles of 27 October 2017, Washington, D.C. PAHO/WHO. 2017. Available at: https://bit.ly/2l3gCSi

4. Guidance for Clinicians Caring for Individuals Recently Evacuated from Afghanistan published by the **United States** CDC on 20 September 2021. Available at: https://bit.ly/3DeDZ7R

5. XXVI Meeting of the Technical Advisory Group (TAG) on Preventable Diseases Vaccination on 2021. Virtual. Final report available at: https://bit.ly/2Y8uU1

6. PAHO/WHO. Measles, Rubella, and Congenital Rubella Syndrome Surveillance in the Americas, Weekly Bulletin. Vol. 26, No. 18. Available at: https://bit.ly/2B8O1MU

7. PAHO/WHO. Sixth ad hoc Meeting of PAHO's Technical Advisory Group (TAG) on Vaccine-preventable Diseases. United States of America (virtual meeting). 16 November 2020. Available at: https://bit.ly/3sBjzR4

8. PAHO/WHO. Fifth ad hoc Meeting of the Technical Advisory Group (TAG) on Vaccine-preventable Diseases. 4 August 2020, USA (virtual meeting). Available at: https://bit.ly/3uEhbux

9. PAHO/WHO. The Immunization Program in the Context of the COVID-19 Pandemic. 26 March 2020. Available at: https://bit.ly/2VALMsi (in English), https://bit.ly/2XKtkAe (in Spanish) and https://bit.ly/2xCi1iM (in Portuguese)

10. WHO. Guiding principles for immunization activities during the COVID-19 pandemic. Interim guidance. 26 March 2020. Available at: https://bit.ly/34sfun8

11. WHO. COVID-19: Operational guidance for maintaining essential health services during an outbreak. Interim guidance. 25 March 2020. Available at: https://bit.ly/2xaOa0P

12. WHO: Framework for decision-making: implementation of mass vaccination campaigns in the context of COVID-19, 22 May 2020. Available at: https://bit.ly/35u5w79

13. PAHO/WHO. Immunization throughout the Life Course at the Primary Care Level in the Context of the COVID-19 Pandemic. 17 June 2020. Available at: https://bit.ly/3ltMy60

14. PAHO/WHO. Summary of the Status of National Immunization Programs during the COVID-19 Pandemic, July 2020. Available at: https://bit.ly/3eW2Kug

Related link:

- PAHO/WHO – Vaccine-Preventable Diseases. Available at: https://bit.ly/2Ksx97m