Epidemiological Update Measles in the Americas Region

2 May 2025

Global overview

In 2025, the monthly measles and rubella surveillance data published by the World Health Organization (WHO) indicates 82,068 suspected measles cases were reported as of 10 April 2025, in 156 Member States across the six WHO regions, of which 39,281 (47.9%) were confirmed[1]. In 2024, 706,913 suspected measles cases were reported in 184 WHO Member States, of which 359,466 (50.9%) were confirmed *(1)*.

Summary of the situation in the Americas Region

In 2025, between epidemiological week (EW) 1 and EW 16, in the Americas Region, 2,325 measles cases have been confirmed, including four deaths, in Argentina (n= 22), Belize (n= 7)[2], the Plurinational State of Bolivia (n= 1), Brazil (n= 5), Canada (n= 1,069)[3], Mexico (n= 421 cases, including one death), and the United States of America (n= 800, including three deaths) **(Figure 1)** *(2-8)*. This total represents an 11-fold increase compared to the 205 measles cases reported in the same period of 2024.

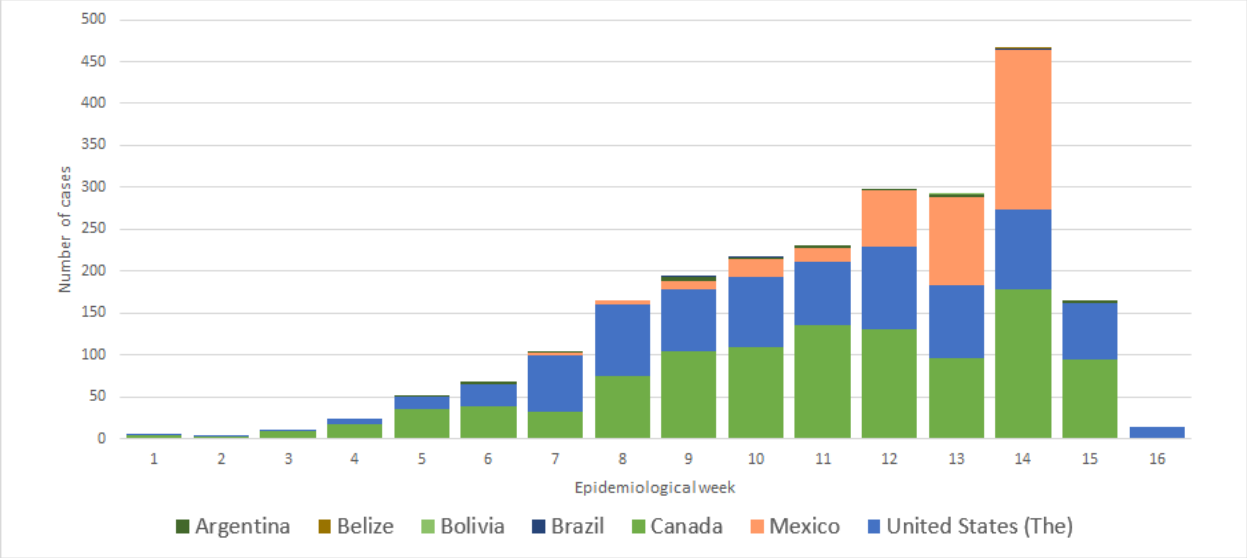
The distribution of confirmed measles cases in the Americas Region by epidemiological week shows an increase in cases as of EW 3 of 2025, with the maximum number of cases recorded in EW 14 related to outbreaks in vaccine hesitant communities settled in several countries of the region. According to the information available from confirmed cases, the age group with the highest proportion of cases corresponds to the 10-19-years-old group (24%), the 1–4-year-old group (22%) and the 20–29-year-old group (19%). Regarding the history of vaccination, 30% of the cases were not vaccinated and in 65% this information was unknown or absent (**Figure 2**) *(9)*.

In 2024, between EW 1 and EW 52, in the Americas Region, 17,887 suspected measles cases were reported, of which 465 cases had been confirmed in Argentina (n= 14), Bermuda (n= 2), Bolivia (n= 3), Brazil (n= 5), Canada (n= 146), Mexico (n= 7), Peru (n= 2), and Turks and Caicos (n= 2), the United States (n= 284). According to the information available from the confirmed cases of 2024, the age groups with the highest proportion of cases correspond to the 10-19-year-old group (27%), the 1-4-year-old group (25%) and the 20-29-year-old group (23%). Regarding the history of vaccination, 63% of the cases were not vaccinated and in 18% this information was unknown or absent *(9)*.

[1] Confirmed cases include those confirmed by laboratory, clinical, or epidemiological criteria.
[2] The number of measles cases for Belize includes cases confirmed clinically and by epidemiological link.
[3] The Canada measles cases include confirmed and probable cases.

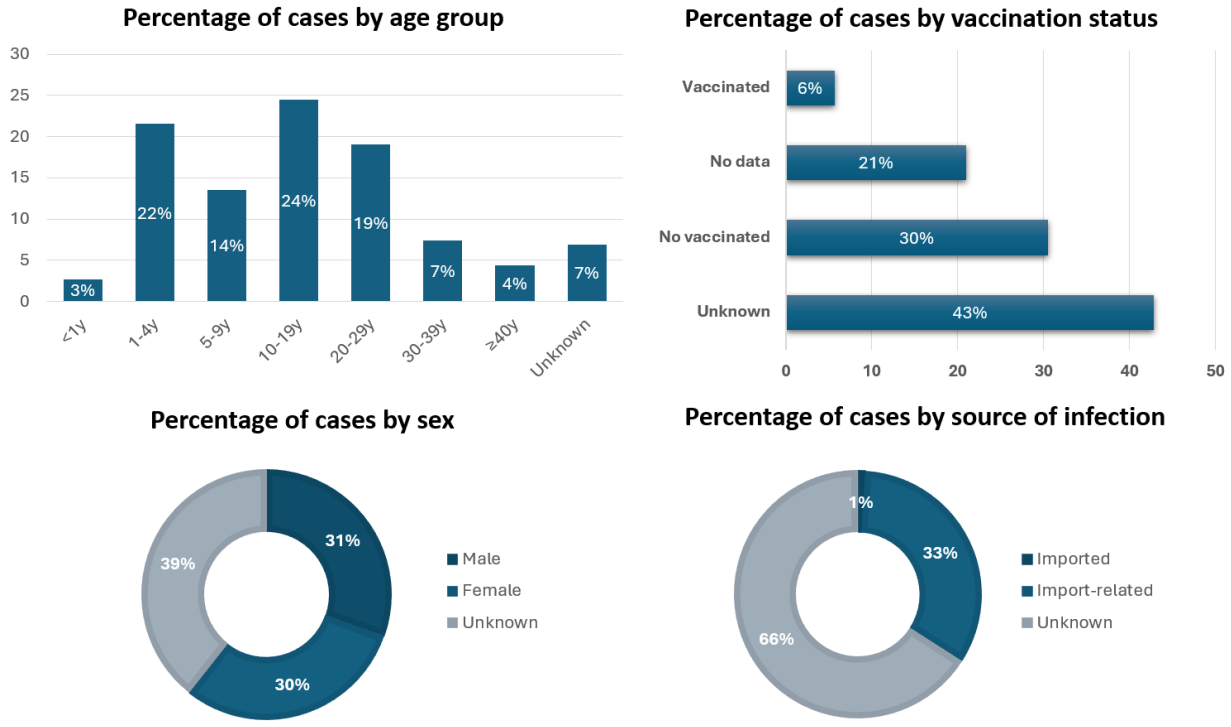
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Figure 1. Confirmed* measles cases by epidemiological week of onset of rash or notification and country in the Americas Region, 2025 (up to EW 16).



***Note:** Includes confirmed and probable cases for Canada.
Source: Adapted from data provided by the respective countries *(2-8)*.

Figure 2. Percentage distribution of confirmed measles cases by age group, sex, vaccination status, and source of infection in the Americas Region, 2025.

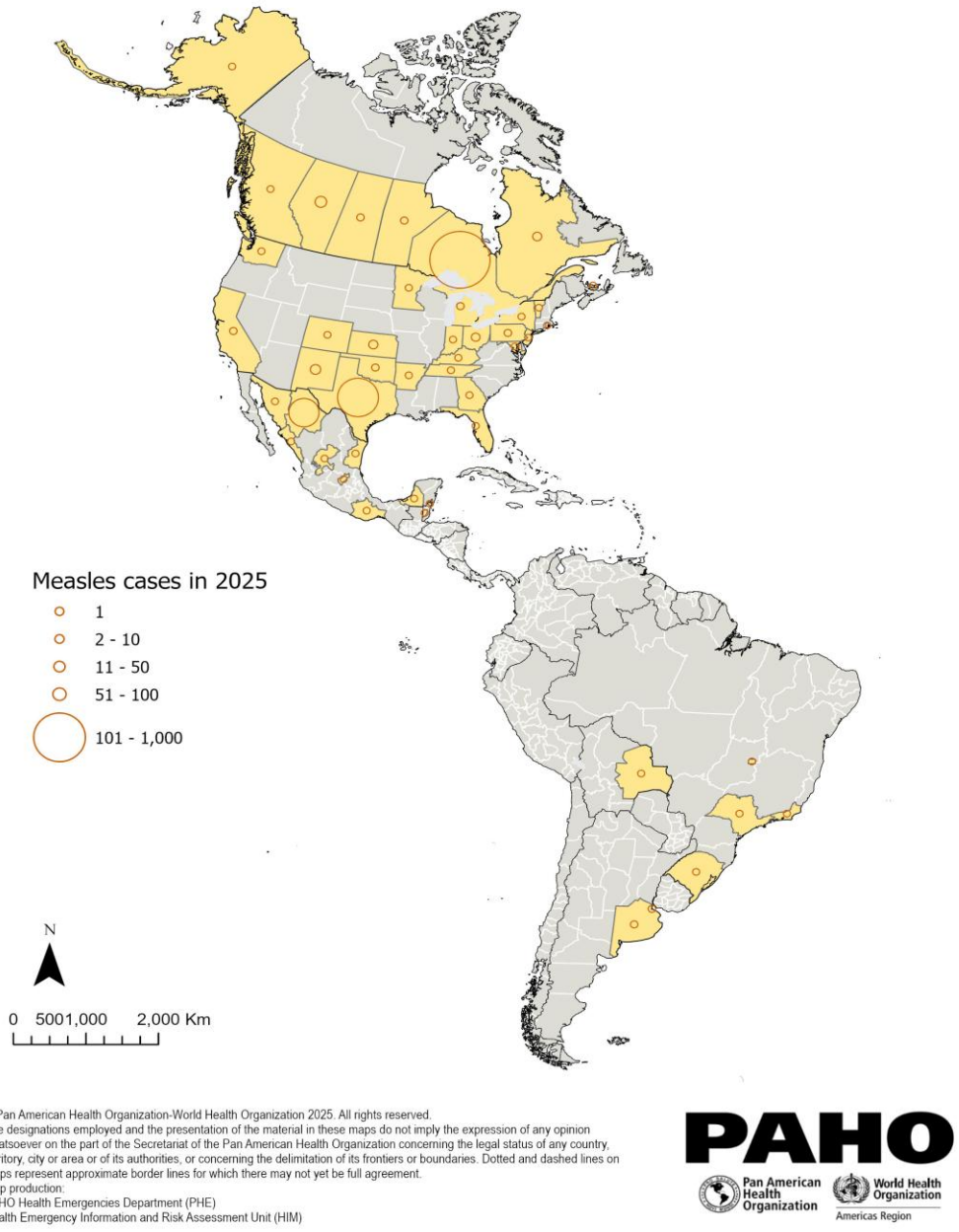


Source: Adapted from the Pan American Health Organization. Integrated Surveillance Information System (ISIS) for polio, measles, rubella and congenital rubella syndrome and country reports to IMC/PAHO. Washington, D.C.: PAHO; 2025 [cited 28 April 2025]. Unpublished.

Measles epidemiological situation in 2025 by country in the Americas Region

The following is an update on the epidemiological situation of measles in countries that have reported confirmed cases in the Americas in 2025. Since the 28 February 2025 Pan American Health Organization / World Health Organization (PAHO/WHO) epidemiological alert on measles in the Americas, the following countries reported confirmed cases: Argentina, Belize, Bolivia, Brazil, Canada, Mexico, and the United States **(Figure 3)** *(2-8)*.

Figure 3: Geographic distribution of confirmed measles cases by subnational level (in yellow) in the Americas Region, 2025 (up to EW 16)



Source: Adapted from data provided by the respective countries *(2-8)*.

In **Argentina**, between EW 1 and EW 16 of 2025, a total of 22 measles cases have been confirmed, 10 in the Autonomous City of Buenos Aires (CABA) and 12 in the Province of Buenos Aires. Three cases are imported, 15 are related to imported cases, and four are under investigation to establish the possible link with the chains of transmission of imported cases *(2, 10)*.

The first case of 2025 was reported on 31 January, in a six-year-old female, with a history of international travel. The second case reported on 3 February 2025, is the 20-month-old female sibling of the index case. Neither of the two minors had a history of measles vaccination. The tests confirmed the presence of the virus in both, by viral genome detection by rRT-PCR *(2, 10)*. Since the identification of these cases, 20 additional cases were confirmed as of 28 April, in people between 5 months and 40 years of age. One case from the province of Buenos Aires had a history of travel to Thailand, through genotyping the epidemiological relationship with the rest of the cases was discarded. Two cases required hospitalization due to pneumonia, the other cases were managed on an outpatient basis, and all evolved favorably. Fourteen of the cases were confirmed at the National Reference Laboratory of the National Institute of Infectious Diseases National Administration of Laboratories and Health Institutes (INEI-ANLIS per its acronym in Spanish) "Carlos G. Malbrán" with identification of the B3 genotype, while the case with a history of travel to Thailand was confirmed with identification of the D8 genotype *(2, 10)*.

In **Belize**, between EW 1 and EW 16 of 2025, a total of 7 measles cases have been confirmed. On 12 April 2025, the Ministry of Health and Welfare (MOHW) reported two confirmed measles cases – the first in the country since 1991. The cases correspond to two 17-year-old males residing in the districts of Corozal and Cayo, with no history of vaccination and who traveled to Chihuahua – Mexico between 5 January and 31 March 2025 to attend a meeting. The onset of symptoms of the cases was on 2 and 3 April 2025. In both cases, blood samples and nasopharyngeal swabs were collected, and on 12 April 2025, they were confirmed as positive for measles, thirteen close contacts who attended the meeting in Chihuahua were identified *(3)*. Additionally, on 27 April 2025, the MOHW reported five confirmed clinically and epidemiologically linked in the group of close contacts of the cases reported on 12 April. An additional 22 school contacts were identified. The above cases along with new cases of fever and rash have been tested and all to date have returned negative to measles *(3)*.

In **Bolivia**, in EW 16 of 2025, one imported measles case was confirmed in the department of Santa Cruz. The case, a 14-month-old male, did not have a vaccination history and entered Bolivia on 25 March from Brazil. The case presented the onset of symptoms and onset of rash on 24 March 2025. The case was hospitalized in a private clinic in the city of Santa Cruz and to date had presented favorable clinical evolution. Blood samples and nasopharyngeal swab were obtained from the case on 20 April, which was positive for measles IgM antibodies and by rT-PCR polymerase chain reaction at the National Institute of Laboratories INLASA *(4)*.

In **Brazil**, between EW 1 and EW 16 of 2025, five measles cases were confirmed in the Federal District (n= 1), Rio de Janeiro (n= 2), São Paulo (n= 1), and Rio Grande do Sul (n= 1). The cases in Rio de Janeiro are two children under 8 months of age, unvaccinated. The onset of the rash was on 28 February and 2 March 2025. The B3 genotype was identified, 99.8% of genomic identity with the MVs/Quetta.PAK/44.20 strain, MVs/Sao Joao de Meriti.BRA/9.25 lineage (case 1) and MVs/Sao Joao de Meriti.BRA/10.25 (case 2). The cases in the Federal District and Rio Grande do Sul are imported cases. Both cases were adult females with a history of international travel. The case reported in the Federal District, 35 years old, with no history of vaccination with onset of rash on 1 March 2025, the *D8 MVs/Brasilia.BRA/9.25* genotype was

identified. The case traveled to the United States, Singapore, the Philippines, and Australia prior to symptom onset. The case reported in Rio Grande do Sul, 50 years old, with a history of travel to the United States, had onset of rash on 6 April 2025, tested positive for measles by rT-PCR and genotyping is pending. Additionally, a case in a 31-year-old male was reported in São Paulo with no history of international travel and vaccinated (3 doses) against measles; the case began with an exanthema on 5 April 2025 and the source of infection is under investigation *(5)*.

In **Canada**, between EW 1 and EW 15 of 2025, 1,069 measles cases (916 confirmed and 153 probable cases) were reported in seven provinces: Alberta (n= 83), British Columbia (n= 6), Manitoba (n= 10), Ontario (n= 924), Prince Edward Island (n= 2), Quebec (n= 36), and Saskatchewan (n= 8). These include cases associated with a small number of outbreaks and imported cases. Measles cases reported to date in 2025 far exceed the 177 confirmed and probable cases detected in 2024 and constitute the highest annual case count since elimination was achieved in 1998 *(6, 11)*.

Of the 1,069 cases, 983 were exposed in Canada, 16 are imported, and 70 have an unknown or pending source of exposure. Forty-six percent of cases were between 5 and 17 years old, followed by 29% of cases who were over 18 years old. In terms of vaccination history, 79% were unvaccinated, 15% had no known history of vaccination, 2% had received one dose of measles, mumps, and rubella (MMR) vaccine, and 3% had received two doses of MMR. The vaccination history by age group is as follows: the percentage of cases who had received one or more doses of MMR vaccine is less than 1% in children aged 1 to 4 years, 2% in cases aged 5 to 17 years, and 18% in adults aged 18 years and older. Seven percent of the cases were hospitalized (n= 80). Among the confirmed cases with available genotyping information, D8 genotypes were identified in 200 of the cases and the B3 genotype in 26 of the cases *(6, 11)*.

The majority of cases (83%) reported in 2025 are related to a multi-jurisdictional outbreak affecting unvaccinated people in communities with low levels of vaccination who sometimes interact with each other. The outbreak began at the end of 2024. Between 27 October and 12 April 2025, 971 cases have been associated with this reported outbreak in six provinces (Alberta, Manitoba, New Brunswick, Ontario, Prince Edward, and Quebec). The outbreak began with an imported case who attended a massive event in New Brunswick in October 2024, which included multiple attendees from the provinces. Most cases associated with this outbreak are either unvaccinated (84%) or vaccination status unknown (12%) *(6, 11)*.

Between EW 1 and EW 15 of 2025, six outbreaks have been reported, different from the previously described multi-jurisdictional outbreak, which remained active up to 12 April 2025. These outbreaks consist of two or more epidemiologically or virologically related cases and are directly related to imported cases *(6, 11)*.

In **Mexico**, between EW 1 and EW 15 of 2025, 421 measles cases were confirmed, including one death: two imported, 35 related to importation and 384 with a source of infection under investigation. The cases were reported in Campeche (n= 4), Chihuahua (n= 403, including one death), Oaxaca (n= 4), Querétaro (n= 1), Sinaloa (n= 1), Tamaulipas (n= 2), and Zacatecas (n= 1). The first case reported in 2025, a five-year-old female, with no history of vaccination, from the United States and resident in Oaxaca, with a history of international travel between October 2024 and January 2025, arrived in Mexico on 29 January and had onset of exanthema on 10 February. The case was confirmed by the Institute of Epidemiological Diagnosis and Reference (InDRE per its acronym in Spanish) with positive

measles and measles IgM rRT-PCR results. The genotype and lineage identified was B3, Lineage: MVs/An_Giang.VNM/27.24. Three additional cases related to this case were confirmed in Oaxaca *(7, 12)*.

In the State of Chihuahua, the first confirmed case there was reported on 20 February, corresponding to a 9-year-old male with no history of vaccination, who presented the onset of rash on 11 February and completed his period of transmissibility within his community. The case was confirmed by the InDRE with positive measles and measles IgM rRT-PCR results. The genotype and lineage identified was D8, Lineage: MVs/Ontario.CAN/47.24. Subsequently, as part of the contact tracing and active search actions, an additional 416 cases have been identified *(7, 12)*.

Of the confirmed cases, 52% are female and 48% male. Thirty-four percent of cases were between 25 and 44 years old, followed by 14% of cases that were between 5 and 9 years old. Regarding the history of vaccination in confirmed cases, 92% were unvaccinated, 4% had received one dose of MMR and 4% had received two doses of MMR. One death due to complications of measles was confirmed in a person with comorbidities and no history of measles vaccination *(7, 12)*.

In the **United States**, between EW 1 and EW 16 of 2025, 800 measles cases and including three deaths have been reported in 25 jurisdictions: Alaska, Arkansas, California, Colorado, Florida, Georgia, Hawaii, Indiana, Kansas, Kentucky, Maryland, Michigan, Minnesota, New Jersey, New Mexico (including one confirmed death), New York State, New York City, Ohio, Oklahoma, Pennsylvania, Rhode Island, Tennessee, Texas (including two confirmed deaths), Vermont, and Washington. Of the total cases, 93% (n= 751) are associated with outbreaks (defined as three or more cases), with ten outbreaks identified this year. Cases linked to the outbreak have been reported in 12 states (Georgia, Indiana, Kansas, Kentucky, Michigan, New Jersey, New Mexico, Ohio, Oklahoma, Pennsylvania, Tennessee, and Texas). Outbreaks in the states of Texas, New Mexico, and Oklahoma account for 82% of the reported cases *(8, 13)*.

Thirty-one percent (n= 249) of the cases correspond to children under 5 years of age, 38% (n= 304) to persons between 5 and 19 years of age, 29% (n= 231) to adults over 20 years of age, and 2% (n= 16) to people of unknown age. In terms of vaccination, 96% of cases were unvaccinated or had an unknown vaccination history and 1% had a single dose of MMR and 2% had two doses of MMR. Among the confirmed vaccinated cases, 14% are under 5 years of age, 25% people between 5 and 19 years of age, 57% adults over 20 years of age and 4% their age is unknown. Eleven percent (n= 85 of 800) of the cases required hospitalization, mainly in children under 5 years of age with 19% (n= 47 of 249). MMR vaccination coverage in children has declined in recent years from 95.2% in 2019-2020 to 92.7% in 2023-2024 *(8, 13)*.

Guidance to Member States

In the context of the increase in measles cases in the Americas Region thus far in 2025, the Pan American Health Organization/World Health Organization (PAHO/WHO) recommends that Member States intensify efforts to sustain the elimination of measles, rubella, and congenital rubella syndrome.

Considering the risk factors mentioned above, and the current regional context, the following are recommendations related to vaccination, surveillance, and rapid response *(14, 15):*

Vaccination

a. Countries with active outbreaks:

- In countries with community transmission, with long chains of transmission, wide geographical dispersion and difficulty in identifying the source of infection, implement indiscriminate mass vaccination activities (an additional dose of MMR or MR vaccine) to affected groups.

- In countries with outbreaks with small chains of transmission, limited number of cases in clearly identified geographical areas and sources of known transmission:

  i. Implement the ring vaccination in the first 72 hours in a five blocks radious (121 blocks) and following the route of movement of confirmed cases, during their period of transmissibility.

  ii. Implement documented mop-up vaccination if the intervention is after the first 72 hours or if the blockade was ineffective. The mop-up should be implemented over a wider area than that of the vaccination blockade.

  iii. Conduct rapid vaccination monitoring in the intervened areas in order to determine areas that require additional vaccination interventions.

b. All countries:

- **Maintain a reserve of** measles and rubella (MR) and/or MMR vaccine, and syringes/supplies for prevention and control actions in the event of imported cases.

- **Implement vaccination intensification activities** based on the results of the measles and rubella risk analysis, with the aim of closing coverage gaps, prioritizing municipalities at greatest risk.

- **Strengthen micro-planning of routine immunization services** to achieve vaccination coverage of at least 95% with two doses of the vaccine. PAHO has developed guidelines that can be very useful for this work.

- **Offer vaccination to travelers** through medical brigades or fixed vaccination posts, ensuring their access at strategic points.

- **Increase efforts to achieve vaccination coverage in vaccine hesitant populations**, including awareness-raising activities aimed at local authorities, community and religious leaders, as well as other social actors and key government sectors, such as the education sector. In addition, carry out complementary vaccination activities in host communities or areas surrounding vaccine hesitant populations to close immunity gaps and strengthen community protection.

Vigilance

a. Countries with active outbreaks:

- Activate trained rapid response teams, incorporating all relevant sectors.

- Implement a situation room for data analysis and decision-making. This should include detailed analysis of cases, including their movement routes and analysis of vaccination activities implemented.

- Activate administrative measures that facilitate the targeting of resources to implement rapid response measures.

- In areas with community transmission, it is recommended to use a more specific case definition and document the definition change.

- Likewise, in case of not being able to confirm suspected cases by laboratory, use the classifications of confirmed case by clinical criteria (presence of fever, rash, cough, coryza, and conjunctivitis) and epidemiological link, so as not to delay the implementation of response actions.

b. All countries:

- **Strengthen epidemiological surveillance** in areas considered high-risk, border areas, and areas with epidemiological silence, through the implementation of active searches both in health services and in the community.

- **Adopt and adapt PAHO's recent guidance** on active case finding when implementing this surveillance strategy, following the recommendations of the Regional Commission for Measles, Rubella, and Congenital Rubella Syndrome issued at its 2024 meeting, available from: https://www.paho.org/en/documents/guidance-active-case-finding-acute-flaccid-paralysis-measles-and-rubella *(16)*.

- **Obtain serum, nasopharyngeal swab, and urine *samples*** *(17)* from all suspected measles or rubella cases, to enhance the corresponding analysis for both laboratory confirmation through real-time RT-PCR serological and molecular testing and genomic sequencing to document the genotype associated with the infection.

- **Classify suspected cases** with positive IgM results considering clinical, epidemiological, and laboratory criteria, with the participation of the surveillance, laboratory, and immunization delegates, as well as the national commission for the sustainability of the elimination of measles and rubella.

Rapid Response

- **Review and, if necessary, adjust operational preparedness and rapid response plans**, strengthening the capacity of health systems mainly in the risk areas mentioned in the ***Vaccination*** section.

- **Initiate a timely response to imported measles or rubella cases**, including the activation of trained rapid response teams and the implementation of national rapid response protocols *(18, 19)*.

- **Establish adequate in-hospital management for cases** to avoid nosocomial transmission, particularly during outbreaks. This involves maintaining an adequate flow of patient referral in isolation rooms (at any level of care), avoiding contact with other patients in common rooms such as waiting rooms and hospitalization rooms.

- **Train health personnel**, with emphasis on rapid response teams, in response to outbreaks. PAHO has self-study online courses available for this purpose: 1) Rapid Response to Measles and Rubella Outbreaks in the Americas. https://campus.paho.org/es/curso/brotes-sarampion-rubeola *(18)*; 2) Measles outbreak in the post-elimination era: A case study. https://campus.paho.org/en/course/measles-case-study *(19)*.

Mass gatherings and international travelers

The latest recommendations on mass gatherings and international travelers in the Americas Region are available from the 28 February 2025 PAHO/WHO Epidemiological Alert on measles, available from: https://www.paho.org/en/documents/epidemiological-alert-measles-americas-region-28-february-2025 *(20)*.

Guidance dissemination

PAHO/WHO recommends national authorities consider disseminating the guidance in this document through the following channels:

- Public awareness campaigns to promote and improve the health of travellers before and after their trip and enable responsible behavior in relation to measles vaccination, as well as awareness of the signs and symptoms of measles. For this activity, considering medical care services or clinics for travelers, airports, ports, train and bus stations, airlines operating in the country, among others, is recommended.

- Travel agencies, tourism-related entities, and diplomatic corps should also be aware of and disseminate the necessary recommendations that a traveler should take into account prior to traveling.

- Communication with doctors and other health workers of the contents of existing national surveillance guidelines, as well as timely dissemination of any new protocols that the country develops in relation to travelers.

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