Epidemiological Alert Measles in the Americas Region

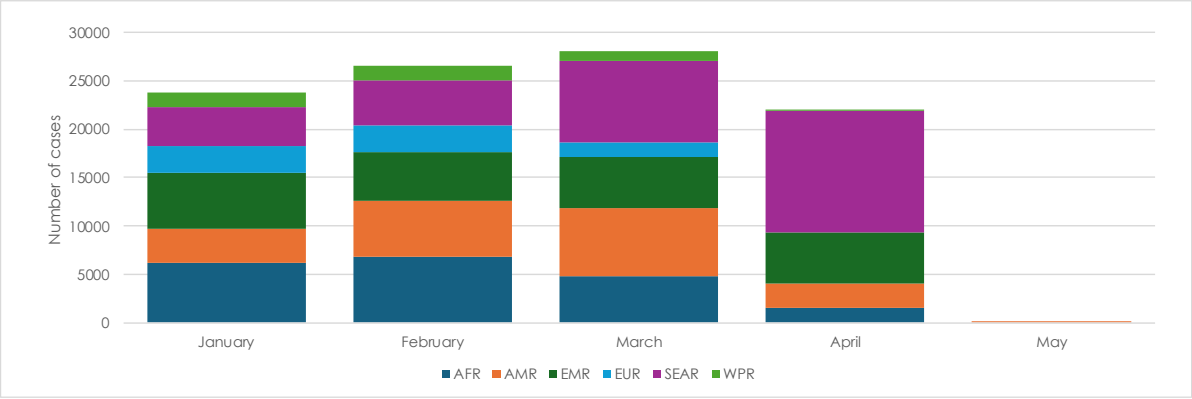
29 May 2026

Given the increase in measles cases in the Americas Region during 2025 and 2026, the occurrence of other public health events in countries within and outside the Region, and in the context of large-scale events with broad international participation, the Pan American Health Organization / World Health Organization (PAHO/WHO) urges Member States to prioritize the strengthening of surveillance and vaccination activities and to ensure a rapid and effective response to suspected measles cases. PAHO/WHO also recommends implementing active community, institutional, and laboratory-based case-finding for early case identification, as well as conducting supplementary vaccination activities aimed at closing immunity gaps.

Global overview

According to monthly measles and rubella surveillance data published by the World Health Organization (WHO), between 1 January and 13 May 2026, 184,489 measles cases were reported in 155 Member States across the six WHO regions, of which 100,239 (54.3%) were confirmed[1]. Twenty-nine percent of the cases were reported in the WHO South-East Asia Region, followed by the WHO Eastern Mediterranean Region with 21% of the cases, and the WHO African and American Regions with 19% of the cases each (**Figure 1**) *(1)*.

Figure 1. Distribution of measles cases by month and WHO Region, 2026.



WHO Regions: AFR: African Region; **AMR**: Americas Region; **EMR**: Eastern Mediterranean Region; **EUR**: European Region; **SEAR**: South-East Asia Region; **WPR:** Western Pacific Region.

Source: Adapted from World Health Organization. Immunization data—Provisional measles and rubella data. Geneva: WHO; 2026 [cited 22 May 2026]. Available from: https://immunizationdata.who.int/global?topic=Provisional-measles-and-rubella-data&location= *(1)*.

[1] Includes cases confirmed by laboratory testing, clinical criteria, or epidemiological criteria.

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Summary of the situation in the Americas Region

In 2026, between epidemiological week (EW) 1 and EW 20, 20,521 measles cases were confirmed in the Americas Region, including 25 deaths. Cases were reported by 16 countries and one territory: Argentina (n= 1 case), Belize (n= 9 cases), Bolivia (Plurinational State of) (n= 70 cases), Bonaire (n= 1 case), Brazil (n= 3 cases), Canada (n= 1,018 cases), Chile (n= 1 case), Colombia (n= 1 case), Costa Rica (n= 5 cases), El Salvador (n= 18 cases), Guatemala (n= 6,209 cases, including 12 deaths), Honduras (n= 1 case), Mexico (n= 10,920 cases, including 13 deaths), Panama (n= 3 cases), Peru (n= 301 cases), the United States of America (n= 1,952 cases), and Uruguay (n= 2 cases) (**Table 1**) *(2–22)*. This total represents a fourfold increase compared with the 5,123 measles cases reported in 2025 for the same period *(23, 24)*. Compared with historical measles data in the Region, the number of confirmed measles cases in 2025 and 2026 is the highest since 2019, which was the year with the highest number of confirmed cases in the past 22 years (n= 23,269) (**Figure 2**) *(23–25)*.

In 2025, 15,152 measles cases were confirmed in the Americas Region, including 29 deaths, of which 73% (n= 22) occurred among indigenous populations *(2)*. Cases were reported by Argentina (n= 36 cases), Belize (n= 44 cases), Bolivia (n= 598 cases), Brazil (n= 38 cases), Canada (n= 5,461 cases[2], including two deaths), Chile (n= 1 case), Costa Rica (n= 1 case), El Salvador (n= 1 case), Guatemala (n= 9 cases), Mexico (n= 6,608 cases, including 24 deaths), Paraguay (n= 49 cases), Peru (n= 5 cases), the United States of America (n= 2,288 cases, including three deaths), and Uruguay (n= 13 cases) (**Table 1**) (**Figure 3**) *(2-22)*.

Table 1. Number of measles cases by country and territory in the Americas Region in 2025 and 2026 (through EW 20 of 2026).

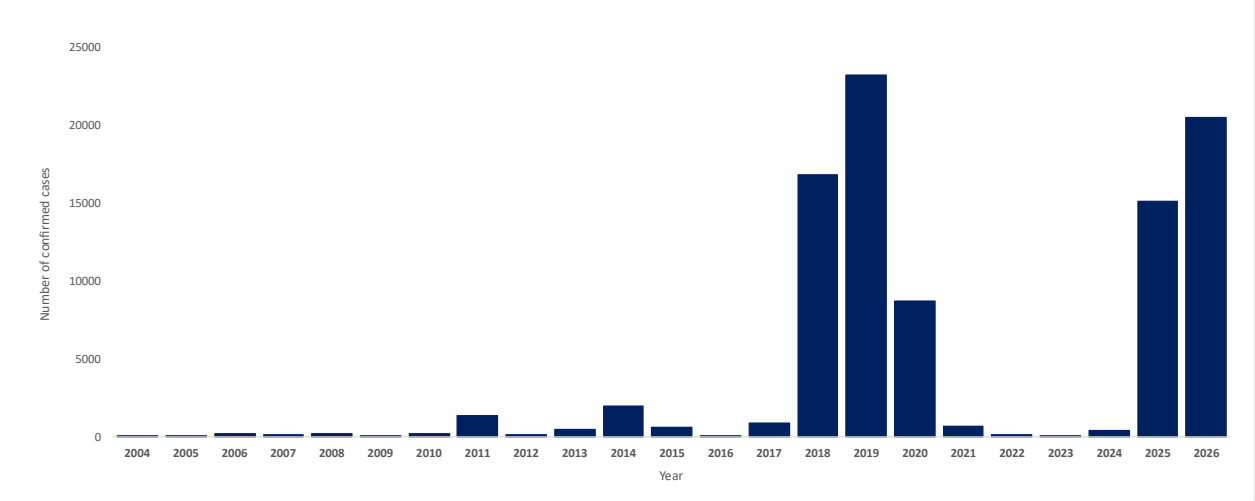
Country	Number of cases in 2025	Number of cases in 2026 as of EW 20	Last date of rash onset (EW)
Argentina	36	1	EW 6 of 2026
Belize	44	9	EW 17 of 2026
Bolivia (Plurinational State of)	598	70	EW 20 of 2026
Bonaire	0	1	EW 5 of 2026
Brazil	38	3	EW 13 of 2026
Canada	5,461	1,018	EW 18 of 2026
Chile	1	1	EW 4 of 2026
Colombia	0	7	EW 15 of 2026
Costa Rica	1	5	EW 14 of 2026
El Salvador	1	18	EW 19 of 2026

[2] In Canada, measles cases include confirmed and probable cases. **Definition** of **a probable case**: Clinical illness (in the absence of adequate laboratory tests, as well as an epidemiological link to a laboratory-confirmed case) and one of the following conditions: -In a person who has an epidemiological link to a geographic area or community where measles activity is known to exist. -In a person with an epidemiological link to a clinically confirmed case (not confirmed by laboratory testing) *(10)*. The definition of a probable case aligns with PAHO's definition of clinically compatible.

Country	Number of cases in 2025	Number of cases in 2026 as of EW 20	Last date of rash onset (EW)
Guatemala	9	6,209	EW 19 of 2026
Honduras	0	1	EW 20 of 2026
Mexico	6,608	10,920	EW 19 of 2026
Panama	0	3	EW 19 of 2026
Paraguay	49	0	EW 39 of 2025
Peru	5	301	EW 20 of 2026
United States of America	2,288	1,952	EW 20 of 2026
Uruguay	13	2	EW 3 of 2026
Total	**15,152**	**20,521**	

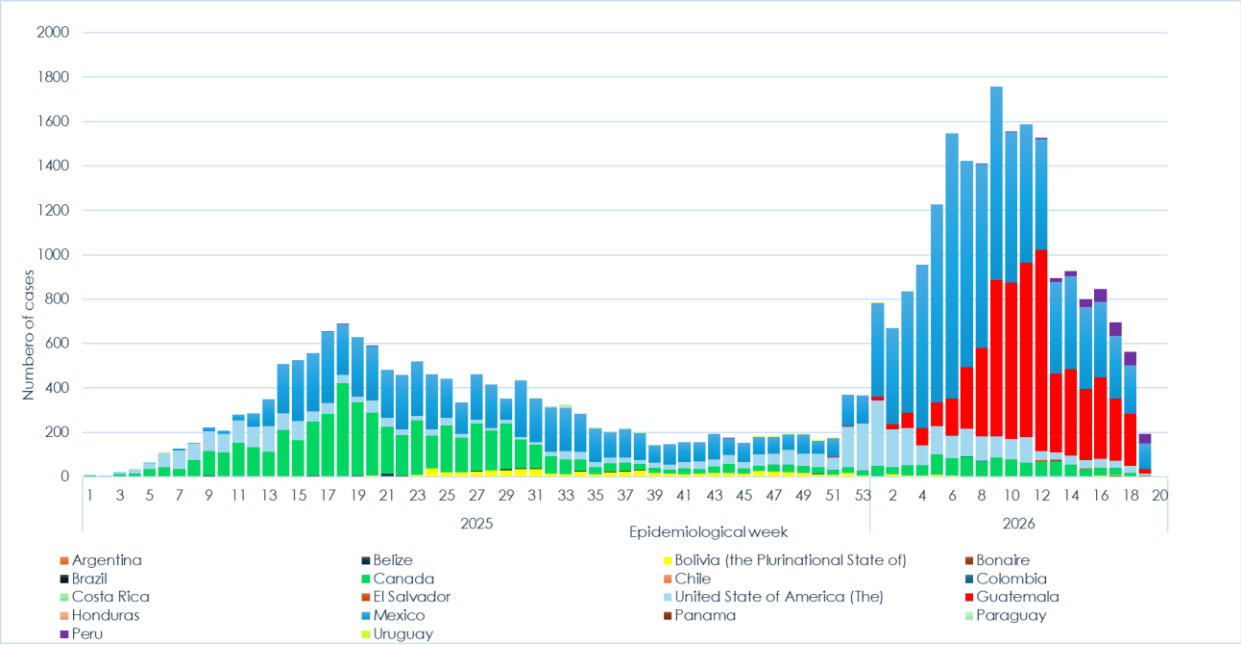
Source: Adapted from data provided by the respective countries *(2–22)*.

Figure 2. Confirmed measles cases by year in the Americas Region, 2004–2026.



Source: Adapted from the Pan American Health Organization / World Health Organization. Number of Vaccine-Preventable Disease (VPD) cases in the Americas and Weekly Measles/Rubella Bulletin *(23–25)*.

Figure 3. Confirmed* measles cases by epidemiological week of rash onset and country/territory in the Americas Region, 2025–2026 (as of EW 20 of 2026).

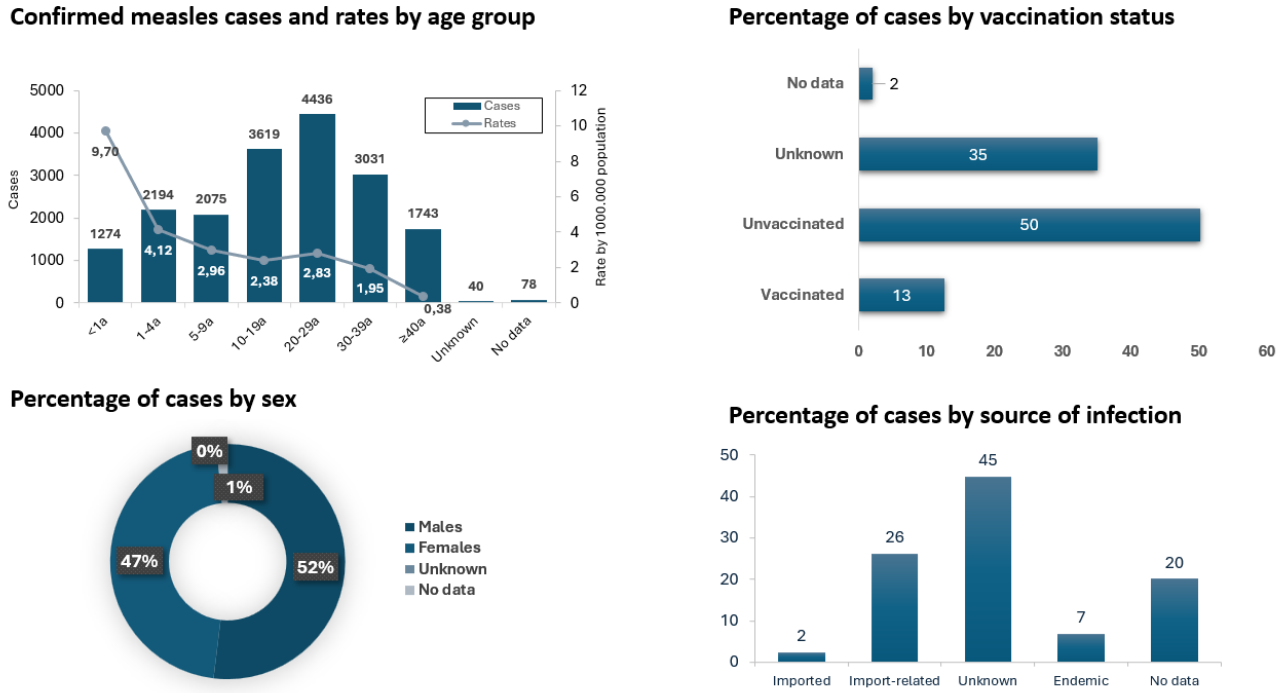


***Note:** Includes confirmed and probable cases for Canada.
Source: Adapted from data provided by the respective countries *(2–22)*.

According to information available in the Immunization Data Repository and country surveillance reports submitted to PAHO, among confirmed cases in 2026 with available data (n= 18,490), the 20–29 age group accounts for the highest proportion of cases (24%), followed by the 10–19 age group (20%) and the 30–39 age group (16%). However, the incidence rate shows an inverse relationship with age, being highest among children under one year of age (9.7 cases per 100,000 population), followed by the 1–4 age group (4.1 cases per 100,000 population), and the 5–9 age group (3.0 cases per 100,000 population). Rates remain above one case per 100,000 population up to the 30–39 age group (**Figure 4**) *(26)*. Regarding vaccination history, 45% of cases were unvaccinated, and for 45%, the information was unknown or unavailable. According to classification by source of infection, 6% of cases were endemic, 23% were import-related cases, 36% had an unknown source of infection, and 2% were classified as imported cases (**Figure 4**) *(26)*.

Of the cases confirmed in 2026, 560 genetic sequences from the N-450 region of the measles virus have been reported to MeaNS (Measles Nucleotide Surveillance database); 97.2% (n= 554) corresponded to genotype D8 and 2.8% (n= 16) to genotype B3. Among the genotype D8 detections, 90.4% (n= 501) were identified as Distinct Sequence ID (DSId) 9171 *(27)*.

Figure 4. Percentage distribution of confirmed measles cases by age group, sex, vaccination status, and source of infection in the Americas Region as of EW 20 of 2026.



Source: Adapted from Pan American Health Organization. Immunization Data Repository and country surveillance reports submitted to PAHO. Comprehensive Immunization. Washington, D.C.: PAHO; 2026 [cited 27 May 2026]. Unpublished *(26)*.

Epidemiological Situation of Measles by Country in the Americas Region

The following is a summary of the epidemiological situation of measles in the countries and one territory of the Region, in alphabetical order, that have reported confirmed cases in the Americas in 2026.

In **Argentina**, in 2026, during EW 6, an imported case of measles was reported; the case is a 29-year-old adult resident of the City of Buenos Aires, with a history of travel to the Philippines and a history of contact with a measles case on an international flight. On 9 February symptoms and rash onset, on 10 February the case sought medical care and samples were collected for diagnosis *(2)*. The National Reference Laboratory detected the measles virus in the urine sample using rt-PCR; molecular studies identified genotype D8 *(2)*. The case had a documented history of measles-mumps-rubella (MMR) vaccination in childhood. No secondary cases related to this imported case were detected. During 2025, national MMR vaccination coverage reached 82.1% for the first dose and 46.4% for the second dose *(2)*.

In **Belize**, in 2026 as of EW 20, a total of nine measles cases have been confirmed. The confirmed cases were identified in the districts of Toledo (n= 8 cases) and Cayo (n= 1 case) and were confirmed by RT-PCR laboratory testing; the samples were processed at the

reference laboratory of the Caribbean Public Health Agency (CARPHA). Of the total confirmed cases, six were imported, two were import-related cases, and one had a source of exposure under investigation. The imported cases reported a history of travel to or stay in Guatemala prior to the onset of symptoms *(3)*. The cases range in age of 8 months to 54 years. Regarding measles vaccination history, all cases were unvaccinated or had an unknown vaccination history at the time of diagnosis *(3)*.

In **Bolivia**, between EW 1 and EW 20 of 2026, 70 measles cases were confirmed in the departments of Beni (n= 8 cases), Cochabamba (n= 7 cases), Chuquisaca (n= 2 cases), La Paz (n= 1 case), Santa Cruz (n= 49 cases), and Tarija (n= 3 cases). The cases range in age of zero months to 65 years; 29% (n= 20 cases) are children under 1 year of age, 20% (n= 14 cases) are children between 1 and 4 years of age, 19% (n= 14 cases) to children aged 5 to 9 years, 10% (n= 7 cases) to those aged 10 to 14 years; 6% (n= 4 cases) to those aged 15 to 19 years, and 14% (n= 11 cases) to adults aged 20 years or older. The incidence rate by age group shows that the most affected group is children under 1 year of age (58 cases per 100,000 population), followed by the 1 to 4-year-old group (19 cases per 100,000 population). Regarding vaccination status, 82% of all confirmed cases had no documented history of measles vaccination. Genotyping of samples from 20 confirmed cases identified genotypes B3 and D8. Throughout the outbreak (2025–2026), 33 cases required hospitalization. In 2025, national MMR vaccination coverage reached 84% for the first dose and 75% for the second dose *(4)*.

In **Bonaire**, during EW 5 of 2026, an imported measles case was reported. The case was reported in Kralendijk in a sailor on a cargo ship who arrived in Bonaire on 1 February 2026, and had transited through Aruba between 28 and 29 January 2026, after departing from a country in Southeast Asia. The case had onset of rash on 30 January 2026, and was confirmed by RT-PCR on 2 February 2026, by the Fundashon Mariadal Laboratory in Kralendijk, Bonaire. No secondary cases were reported *(5)*. During 2024, the most recent year for which data are available, measles vaccination coverage in Bonaire reached 86.5% among 2-year-olds for the first dose and 42.5% among 10-year-olds for the second dose *(5, 6)*.

In **Brazil**, between EW 1 and EW 20 of 2026, three measles cases have been confirmed: two imported cases in the state of São Paulo and one of unknown source in the state of Rio de Janeiro. The cases involve a 6-month-old female residing in São Paulo with a history of travel to Bolivia; a 22-year-old female residing in Rio de Janeiro with no history of international travel; and a 42-year-old male from Guatemala who traveled to São Paulo, where he was diagnosed with measles *(7, 8)*. In 2025, nationwide MMR vaccination coverage reached 92.8% for the first dose and 77.2% for the second dose *(7, 8)*.

In **Canada**, between EW 1 and EW 18 of 2026, 1,018 measles cases were reported (941 confirmed and 77 probable), across seven provinces: Alberta (n= 302 cases), British Columbia (n= 30 cases), Manitoba (n= 630 cases), Nova Scotia (n= 10 cases), Ontario (n= 24 cases), Quebec (n= 17 cases), and Saskatchewan (n= 5 cases). In 2026, the number of weekly cases peaked at 90 cases in EW 5 of 2026, showing a gradual decline since then. Of the 1,018 cases reported in 2026, 97% (n= 987 cases) were exposed in Canada, 2% (n= 23 cases) were imported cases, and less than 1% (n= 8 cases) had an unknown or under-investigation source of exposure. Forty-one percent of the cases were in persons aged 5 to 17 years, followed by 37% in persons aged 18 years or older, and 14% in children aged 1 to 4 years. Regarding vaccination history, 87% were unvaccinated, 5% had received one dose of a measles-containing vaccine, 5% had received two or more doses of a measles-containing vaccine,

and 4% had an unknown vaccination status. Six percent of cases were hospitalized (n= 65 cases), and four confirmed cases of congenital measles have been reported. Among confirmed cases with available genotyping data, genotype D8 was identified in 457 cases and genotype B3 in 10 cases *(9, 10)*.

Since 2024, a total of 5,873 confirmed cases and 484 probable cases have been linked to a multi-jurisdictional outbreak in Canada, which remains active. Most cases associated with the outbreak were unvaccinated or had an unknown vaccination history (93%) and resided in interconnected communities with low vaccination coverage *(9, 10)*.

In **Chile**, during EW 5 of 2026, a confirmed imported measles case was reported in the Atacama Region. The case is an 11-month-old male infant who entered the country on 21 January 2026, from Mexico *(11)*. The case had no records of routine age-based vaccination or travel vaccination. On 28 January 2026 rash onset and on 5 February the Institute of Public Health of Chile confirmed measles by serology and RT-PCR. No secondary cases related to this case have been reported. During 2025, national MMR vaccination coverage reached 94.8% for the first dose and 78.2% for the second dose *(11)*.

In **Colombia,** between EW 1 and EW 19 of 2026, seven measles cases have been confirmed in the country. Of the total cases, five are imported cases and two have a source of infection under investigation. The confirmed cases were reported in Bogotá D.C. (n= 4 cases), in the departments of Antioquia (n= 1 case) and Santander (n= 1 case), and in the district of Cartagena (n= 1 case) *(12)*. Four of the cases had a history of travel to Mexico and one to the United States of America. The cases range in age between 18 and 35 years *(12)*. Regarding the vaccination history of the cases, four had an unknown vaccination history, and three had a history of measles vaccination. Regarding genotyping, based on the analysis of samples from four of the cases, the identified genotype corresponds to D8 *(12)*. During 2025, national MMR vaccination coverage reached 91% for the first dose and 86% for the second dose *(12)*.

In **Costa Rica**, between EW 1 and EW 20 of 2026, five measles cases have been confirmed in the country. Of the total cases, three are imported cases and two are import related cases. The confirmed cases were reported in the provinces of San José (n= 3 cases), Limón (n= 1 case), and Guanacaste (n= 1 case) *(13)*. One of the cases had a history of travel to Guatemala, two had a history of travel to Mexico, and two had a history of attending a mass event with participants from countries with active measles outbreaks. The cases range in age of 4 to 41 years. Regarding the vaccination history of the cases, two had an unknown vaccination history, one had no vaccination history, and two had a history of receiving two doses of the measles vaccine *(13)*. Regarding genotyping, based on the analysis of samples from the five cases, the identified genotype corresponds to D8 *(13)*. During 2025, national MMR vaccination coverage reached 97.67% for the first dose and 91.69% for the second dose *(13)*.

In **El Salvador**, between EW 1 and EW 20 of 2026, 18 measles cases have been confirmed in the country. All cases were imported. Thirteen of the cases had a history of travel to Guatemala, and one had a history of travel to Mexico. Most cases were among individuals aged between 20 and 40 years. Regarding vaccination history, 44% were unvaccinated, 17% had received two or more doses of a vaccine containing measles, and 39% had an unknown vaccination status. During 2025, national MMR vaccination coverage reached over 95% for the first dose and over 95% for the second dose *(14)*.

In **Guatemala**, between EW 1 and EW 19 of 2026, 6,209 confirmed measles cases were reported, including 12 deaths. Cases were reported in all 22 departments of the country. The majority of confirmed cases were reported in the departments of Guatemala (n= 2,936 cases, including four deaths), Quiche (n= 412 cases, including four deaths), Sololá (n= 355 cases, including two deaths), Totonicapán (n= 299 cases, including two deaths), Chimaltenango (n= 297 cases), and Huehuetenango (n= 288 cases) *(15)*.

With regard to the age distribution of confirmed cases in 2026, the largest group is the 20–29 age group, accounting for 35% (n= 2,157 cases), followed by the 0–4 age group at 24% (n= 1,476 cases, with a predominance of children under 1 year of age, among whom 838 cases have been recorded and the 10–19 age group at 11% (n= 1,040 cases). The incidence rate by age group shows that the most affected group is 0 to 4 years old, where children under 1 year old account for 224 cases per 100,000 population, followed by the 20–29 age group with 35 cases per 100,000 population *(15)*. Regarding vaccination history among the 6,209 confirmed cases, 68.4% (n= 4,246) were unvaccinated, 24.4% (n= 1,515) had an unknown vaccination history (verbal report or unknown), and 4.37% (n= 271 cases) had a documented dose of MMR. 7.52% of cases required hospitalization (n= 466 cases), and 12 related deaths have been confirmed *(15)*. According to genotyping performed at the National Health Laboratory on samples from confirmed cases (n= 39), only the D8 genotype has been identified. Regarding the 12 deaths recorded due to measles complications, 75% of the deaths were among children under one year of age. By 2025, the country achieved a national MMR vaccination coverage of 91% for the first dose and 79% for the second dose *(15)*.

In **Honduras**, during EW 20 of 2026, an imported measles case was confirmed, reported in the department of Ocotepeque. The case is a 40-year-old male who entered the country from Guatemala on 19 May 2026 and rash onset 17 May 2026. On 21 May 2026, the case was confirmed by RT-PCR and serological tests for measles; the case has no history of vaccination, and as of the date of this publication, no associated secondary cases have been reported. During 2025, national MMR vaccination coverage reached 86.7% for the first dose and 84.4% for the second dose *(16)*.

In **Mexico**, between EW 1 and EW 19 of 2026, 10,920 measles cases have been confirmed, including 13 deaths. Cases were reported in 31 Federative entities across the country; the majority of confirmed cases were reported in the states of Jalisco (n= 6,162 cases, including three deaths), Mexico City (n= 943 cases, including two deaths), Chiapas (n= 809 cases), Sonora (n= 342 cases), Durango (n= 323 cases, including one death), Mexico (n= 323 cases), and Sinaloa (n= 283 cases, including one death). Regarding the distribution by age group, confirmed cases are most frequently among the 30–34 age group (12.23%, n= 1,336 cases), followed by the 5–9 age group (11.62%, n= 1,269 cases) and the 25–29 age group (11.59%, n= 1,266 cases). Regarding the incidence rate, the under-one-year-old age group reported the highest rate at 44.67 cases per 100,000 population, followed by the 1–4-year-old and 30–34-year-old groups, with rates of 14.81 and 12.48, respectively. Regarding the vaccination history of confirmed cases, 91.47% (n= 9,989) had no vaccination history, 6.13% (n= 669) had received one dose of MMR, and 2.40% (n= 262 cases) had two or more doses of MMR documented in the national vaccination record. Of the total confirmed cases, 1,247 required hospitalization, of which 547 were from the state of Jalisco. According to genotyping performed on samples from confirmed cases (n= 42), genotype D8 has been identified *(17)*.

In 2026 and as of EW 19, 13 deaths from measles complications have been confirmed, all in individuals with no history of vaccination, some of whom had comorbidities. The deaths are

distributed among Jalisco (n= 3), Zacatecas (n= 3), Mexico City (n= 2), Michoacán (n= 1), Guerrero (n= 1), Durango (n= 1), Sinaloa (n= 1), and Tlaxcala (n= 1) *(17)*.

In **Panama**, between EW 1 and EW 20 of 2026, three measles cases: two imported cases and one import related case have been confirmed. All confirmed cases were reported in the province of Panama (n= 3 cases). The imported cases, aged 18 and 21, came from Nicaragua and Costa Rica respectively. The third case, a 40-year-old, had prolonged occupational exposure to one of the confirmed cases. The two imported cases had no history of measles vaccination; however, the case resulting from an imported infection had three documented pre-exposure doses and one post-exposure dose (administered eight days after exposure). Genotype B3 has been identified in all three cases. During 2025, national MMR vaccination coverage reached 86.7% for the first dose and 58.4% for the second dose *(18)*.

In **Peru**, between EW 1 and EW 20 of 2026, 301 measles cases have been confirmed in two departments. The cases are concentrated in the department of Puno (n= 299 cases); other cases were detected in the department of Lima (n= 2 cases, one imported case and one case of unknown source) *(20)*. Regarding the distribution of cases by age group, 37% correspond to the 10–19 age group (n= 112 cases), followed by the 20–29 age group with 30% (n= 91 cases) and the 5–9 age group with 15% (n= 44 cases). Regarding the incidence rate, the 10–19 age group reported the highest rate at 2.03 cases per 100,000 population, followed by the 20–29 age group and the 0–4 age group, with rates of 1.73 and 1.38, respectively *(20)*.

Regarding the vaccination history of confirmed cases, 66% (n= 199 cases) had no history of vaccination, 4% (n= 12 cases) had received one dose of MMR, and 25% (n= 76 cases) had received two or more doses of MMR. Of the total confirmed cases, 37 required hospitalization. Based on genotyping performed on 11 samples from confirmed cases, genotypes D8 and B3 were identified. In Peru, in 2025, MMR vaccination coverage reached 90.5% nationwide for the first dose and 82.1% for the second dose *(20)*.

In the **United States of America**, between EW 1 and EW 20 of 2026, 1,952 confirmed measles cases were reported. Of these, 1,943 measles cases were reported by 40 jurisdictions: Alaska (n= 1 case), Arizona (n= 83 cases), California (n= 47 cases), Colorado (n= 22 cases), District of Columbia (n= 1 case), Florida (n= 138 cases), Georgia (n= 5 cases), Idaho (n= 2 cases), Illinois (n= 4 cases), Kansas (n= 1 case), Kentucky (n= 4 cases), Louisiana (n= 1 case), Maine (n= 5 cases), Maryland (n= 3 cases), Massachusetts (n= 2 cases), Michigan (n= 13 cases), Minnesota (n= 17 cases), Missouri (n= 1 case), Montana (n= 5 cases), Nebraska (n= 1 case), New Jersey (n= 1 case), New Mexico (n= 16 cases), New York City (n= 5 cases), New York State (n= 5 cases), North Carolina (n= 22 cases), North Dakota (n= 38 cases), Ohio (n= 11 cases), Oklahoma (n= 1 case), Oregon (n=23 cases), Pennsylvania (n=32 cases), Rhode Island (n=1 case), South Carolina (n= 669 cases), South Dakota (n= 8 cases), Texas (n= 182 cases), Utah (n= 482 cases), Vermont (n= 1 case), Virginia (n= 43 cases), Washington (n= 44 cases), Wisconsin (n= 2 cases), and Wyoming (n= 1 case). A total of nine measles cases were reported among international visitors to the United States *(21)*.

Of the total number of cases, 93% (n= 1,815) were associated with outbreaks (defined as three or more cases), with 29 outbreaks identified in 2026 *(21)*. Twenty-one percent (n= 413) of the cases were among children under 5 years of age, 51% (n= 990) in people aged between 5 and 19 years, 28% (n= 543) in people over 20 years of age, and less than 1% (n= 6) in people of unknown age. The incidence rate by age group shows that the most affected

group was children aged 1 to under 5 years (2.27 per 100,000 population), followed by the group of children under 1 year of age (1.99 cases per 100,000 population) *(21)*.

Regarding the vaccination history of the cases, 92% were unvaccinated or had an unknown vaccination history, 4% had received a single dose of the measles-mumps-rubella (MMR) vaccine, and 4% had received two doses. Among the confirmed vaccinated cases, 9% were children under 5 years of age, 36% were individuals aged 5 to 19 years, and 55% were adults over 20 years of age. Six percent (n= 124) of the cases required hospitalization; 34% (n= 42 cases) of the hospitalizations were among children under 5 years of age *(21)*.

During 2026, of the 687 rRT-PCR-positive samples from confirmed measles cases that have undergone genotyping to date, 97% (n= 667) were genotype D8 and 3% (n= 20) were genotype B3. Among the D8 genotype detections, the majority, 92% (n= 614), were identified as the distinctive sequence (DSId) 9171 *(21)*.

Vaccination coverage with the MMR vaccine among children has declined in recent years, falling from 95.2% during the 2019–2020 school year to 92.5% during the 2024–2025 school year *(21)*.

In **Uruguay**, between EW 1 and Ewe 20 of 2026, two imported measles cases were confirmed, both in the country's capital, Montevideo. The cases were 48 and 51 years old. Regarding vaccination history, one of the cases was unvaccinated and the other had received two doses of MMR. The cases did not require hospitalization. During 2025, national MMR vaccination coverage reached 97.92% for the first dose and 87.99% for the second dose *(22)*.

Guidance for Member States

The high incidence of cases among young children, the significant proportion of cases among young adults—a highly mobile population—the high percentage of unvaccinated individuals, and the persistence of outbreaks in communities reluctant to vaccinate reflect the urgent need to achieve and sustain ≥95% coverage with two doses of the MMR vaccine uniformly nationwide; to strengthen responsive and timely epidemiological surveillance; and to consolidate rapid and effective response capacity to prevent the reintroduction and endemic transmission of the virus in the countries of the Region, restore elimination status in those where endemic transmission has been reestablished, and prevent the morbidity, mortality, and negative social and economic effects associated with this vaccine-preventable disease.

Taking into account the aforementioned risk factors and the current regional context, the following recommendations are provided regarding vaccination, surveillance and rapid response, mass gatherings, and international travel *(28, 29)*:

a. Countries with areas of community transmission:

a.1. Vaccination

- Implement indiscriminate mass vaccination activities (an additional dose of MMR or MR vaccine) for high-risk groups, based on susceptibility analysis and surveillance data, including infants aged 6 to 11 months (zero dose).

- Complete the two-dose vaccination schedules, allowing a 4-week interval between doses. The intervention area will depend on the magnitude of the outbreak, as well as the movement patterns of cases and population mobility. The objective is to quickly get ahead of the virus's circulation, interrupt transmission in affected areas and populations, and prevent its spread to other areas.
- Implement microplanning activities for mass outbreak response campaigns, in accordance with PAHO/WHO recommendations.
- Extend vaccination service hours to evenings and weekends, in accordance with the schedule of the target vaccination population.
- Monitor the administrative coverage of mass vaccination activities daily and implement rapid vaccination monitoring (RVM) to identify areas or groups that have not yet been vaccinated.
- Promptly redirect vaccination teams to areas with the highest number of cases, the lowest coverage, or where monitoring has identified gaps.
- Maintain vaccination containment strategies in areas without community transmission. To ensure that containment actions are effective, vaccination must begin within the first 72 hours of a case being identified and be carried out comprehensively in the field, ensuring that no unvaccinated person or person with a history of incomplete vaccination is left without receiving the corresponding dose(s). Monitoring and supervision of the implementation of these activities is key.
- Use the available measles vaccine for vaccination activities in the priority age groups for each strategy to be implemented. This includes considering the use of the MMR vaccine containing the Leningrad-Zagreb mumps vaccine virus component without age restrictions.
- For areas without community transmission, see item b.

a.2 Surveillance

- In areas with community transmission, use the classifications of confirmed cases based on clinical criteria (presence of fever, rash, cough, runny nose, and conjunctivitis) and epidemiological link. The implementation of response actions should begin upon the identification of suspected cases without waiting for the final classification of cases.
- Evaluate the use of a flowchart to prioritize the processing of samples collected for the diagnostic confirmation of measles, in accordance with PAHO/WHO recommendations *(30)*. In this situation, it is important to continue collecting and processing a number of samples prioritized according to case characteristics, as well as to designate one or two days a week on which samples would be collected from all suspected cases.
- Generate incidence maps at the municipal level, by age group and vaccination status.
- Strengthen the sensitivity of the national surveillance system in areas without community transmission or reported cases to reduce underreporting of cases and initiate appropriate response actions. Active case finding, in accordance with PAHO recommendations, is a very useful tool for this purpose.
- For areas without community transmission, see item b.

a.3 Rapid response

- Activate and train rapid response teams, incorporating all relevant areas. Establish clear leadership at the highest level to facilitate the coordination and implementation of response activities.
- Establish a situation room for data analysis and decision-making. This should include detailed case analysis, including travel history, and an assessment of implemented vaccination activities.
- Activate administrative measures to facilitate the allocation of resources and coordinated work with relevant sectors (education, tourism, transportation, labor, among others) to implement rapid response measures to measles outbreaks.
- For clinical management, administer vitamin A immediately following a measles diagnosis and repeat the following day for children aged 6 to 59 months, regardless of any previous doses of vitamin A received. The recommended dose is 50,000 IU for infants under 6 months of age, 100,000 IU for infants aged 6 to 11 months, and 200,000 IU for children aged 12 months or older. If the case presents clinical ophthalmic signs of vitamin A deficiency, such as Bitot's spots, a third dose should be administered 4–6 weeks later *(31)*.
- Early symptomatic and supportive care is also recommended in severe cases. Continuous patient assessment and timely treatment of diarrhea, dehydration, severe pneumonia, respiratory distress syndrome, sepsis, and shock are essential *(32)*.
- Establish appropriate in-hospital management protocols for cases to prevent nosocomial transmission. This involves implementing infection prevention and control measures starting with the triage of cases with febrile-exanthematous illness, ensuring rapid detection and identification of patients in well-ventilated areas.
- Once a case is suspected, the patient should be placed in an isolated area (closed door and window to the outside) and fitted with a surgical mask.
- Healthcare personnel must be fully vaccinated, must wear personal protective equipment to enter this area (N95/FFP2 or FFP3 respirators, eye protection, gown, and gloves), and must strictly adhere to hand hygiene, standard precautions, and additional aerosol precautions.
- Once the patient is discharged or transferred to another isolation area, cleaning, disinfection, and waste management must be performed in accordance with the institution's established protocols.
- Maintaining an appropriate referral flow of patients, to isolation rooms (at any level of care), avoiding contact with other patients in common areas such as waiting rooms and inpatient wards, is recommended *(33–36)*.

b. <u>Countries with areas having limited transmission chains that can be characterized as:</u>

b.1 Vaccination

- The objective is to stay ahead of virus transmission, which requires rapidly closing vaccination gaps in likely sites of infection, the area of residence, and zones where the outbreak could spread.

- Implement vaccination containment upon identification of a suspected case (without waiting for laboratory confirmation), within the first 72 hours in a 25-block radius around the case's residence (an area of 5 by 5 blocks with the case's residence block at the center) and along the cases' travel routes, during their period of transmissibility. The two-dose vaccination schedule must be completed for all individuals without proof of a complete vaccination schedule at the time of the visit, allowing for a minimum interval of 4 weeks between doses. Conduct active community case finding collaboratively.
- Implement a documented screening if the intervention occurs more than 72 hours after the initial outbreak or if the containment effort was ineffective. The sweep should be implemented in an area larger than that of the vaccination blockade. Where feasible, consider an area of 121 blocks (11 blocks on each side of the block where the case resides at the center). This should be adapted depending on whether the area is urban, peri-urban, or rural. Conduct active community-based case finding during this activity.
- Conduct rapid vaccination monitoring (RVM) in the targeted areas to identify zones requiring additional vaccination interventions. Collect reasons for non-vaccination during the RVM. Continue conducting active community-based case finding during this activity.
- The age groups to be included in vaccination activities will depend on the epidemiological analysis of the distribution of cases by age, as well as on the analysis of the accumulation of susceptible individuals by birth cohort. Include the administration of the zero dose in children aged 6 to 11 months.

b.2 Surveillance

- Investigate each suspected case within the first 24 to 48 hours of notification, including the collection of serum, respiratory, and urine samples.
- Identify and list all contacts during the period of transmissibility; assess vaccination history and complete the vaccination schedule for those who have not received the full two-dose course of MR or MMR vaccine, and follow up for 21 days.
- Develop timelines for all suspected cases, in accordance with PAHO/WHO recommendations, to determine the locations and/or probable source of infection (considering the disease's incubation period), the locations visited during the infectious period where secondary cases are likely to occur, and to determine the duration of contact tracing and active case finding.
- Evaluate the use of applications such as Go.Data for the development and monitoring of transmission chains.
- Immediately notify the International Health Regulations (IHR) National Focal Point (NFP) of imported or travel-related cases; coordinate with the jurisdictions of origin and destination through WHO's regional IHR mechanisms (see item d, mass gatherings and international travelers).

b.3 Rapid Response

- Activate and train rapid response teams, incorporating all relevant areas. Establish clear leadership at the highest level to facilitate the coordination and implementation of response activities.

- Maintain a situation room at all levels with key information for decision-making, including real-time updates on the list and number of cases, vaccination, and laboratory data.
- Activate administrative measures to facilitate the allocation of resources and coordinated work with relevant sectors (education, tourism, transportation, labor, among others) to implement rapid response measures to measles outbreaks.
- Administer vitamin A immediately following a measles diagnosis and repeat the following day for children aged 6 to 59 months, regardless of any previous doses of vitamin A received. The recommended dose is 50,000 IU for infants under 6 months, 100,000 IU for infants aged 6 to 11, and 200,000 IU for children aged 12 months or older. If the case presents clinical ophthalmic signs of vitamin A deficiency, such as Bitot's spots, a third dose should be administered 4–6 weeks later *(31)*.
- Implement infection prevention and control measures, in accordance with the recommendations in item a.3.

c. Countries with no confirmed cases:

c.1 Vaccination

- **Maintain a stockpile of** Measles Rubella (MR) and/or MMR **vaccine**, as well as syringes and supplies, for rapid vaccination response to imported cases.
- **Implement vaccination intensification activities** based on the results of the measles and rubella risk analysis, with the aim of closing vaccination gaps, prioritizing municipalities at highest risk.
- **Strengthen microplanning of routine vaccination services** to achieve vaccination coverage of at least 95% with two doses of the MMR vaccine in a uniform manner (in at least 80% of municipalities nationwide). PAHO has developed guidelines to support this work *(37)*.
- **Offer vaccination to travelers** who do not have a complete measles-rubella vaccination schedule, through medical brigades or fixed vaccination posts, ensuring access at strategic locations. Administer the zero-dose vaccine to children aged 6 to 11 months who are traveling to areas with active transmission of the disease. Ideally, travelers should be vaccinated at least 14 days before travel; however, vaccination can be administered at any time before, during, or after travel.
- **Redouble efforts to achieve high vaccination coverage in reluctant populations**, including awareness-raising activities targeting local authorities, community and religious leaders, as well as other key social actors and government sectors, such as the education sector. In addition, conduct complementary vaccination activities in host communities or areas surrounding hesitant populations to close vaccination gaps and strengthen population immunity.

c.2 Surveillance

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

- **Adopt and adapt the recent PAHO guidelines** on the active case-finding surveillance strategy, available from: https://www.paho.org/en/documents/guidance-active-case-finding-acute-flaccid-paralysis-measles-and-rubella *(38)*.

- **Collect serum, nasopharyngeal swab, and urine samples** *(39)* from all suspected cases of measles or rubella for laboratory confirmation via serological and real-time RT-PCR molecular tests, and for the genomic sequencing to document the genotype and lineage associated with the infection.

- **Classify suspected cases** with positive IgM results based on clinical, epidemiological, and laboratory criteria, with the participation of surveillance, laboratory, and immunization representatives, as well as the National Commission for the Sustainability of Measles and Rubella Elimination.

c.3 Rapid Response

- **Review and—if necessary—adjust operational plans for preparedness and rapid response**, strengthening the capacity of health systems primarily in the risk areas mentioned in section ***c.1. Vaccination***.

- **Initiate a timely and effective response to imported cases of measles or rubella**, including the activation of trained rapid response teams and the implementation of national rapid response protocols *(40, 41)*.

- **Train health personnel**, with an emphasis on rapid response teams, in outbreak response. PAHO offers online self-paced courses for this purpose (in Spanish) on: 1) Rapid Response to Measles and Rubella Outbreaks in the Americas https://campus.paho.org/es/curso/brotes-sarampion-rubeola *(40)*; and 2) Measles Outbreak in the Post-Elimination Era: Case Study https://campus.paho.org/en/course/measles-case-study *(41)*.

d. Mass Gatherings and International Travelers

Regarding mass gatherings and international travelers in the Americas Region, consider the following recommendations:

- **Strengthening of epidemiological surveillance and vaccination.**
  PAHO recommends that countries review their performance in measles and rubella surveillance, as well as vaccination coverage levels, in order to identify areas of highest risk and implement preventive actions. Specifically, and in the context of the 2026 FIFA World Cup™, as well as other mass gathering events, countries should increase the sensitivity of their surveillance systems through the implementation of active case-finding to document the absence of measles and rubella cases and to provide information and vaccination services to travelers.

- **Regarding travelers**

  Before travel

PAHO/WHO recommends that Member States advise all travelers aged six months[3] or older who cannot provide proof of vaccination (with two doses of the measles-rubella vaccine) or immunity to **receive one dose of the measles-rubella vaccine**, **preferably two weeks before traveling to areas where measles or** rubella **transmission has been documented.**

It is recommended that health authorities inform travelers before departure about the signs and symptoms of measles and rubella, which include:

- Fever
- Rash
- Cough, runny nose, or conjunctivitis (red eyes)
- Joint pain
- Lymphadenopathy (swollen lymph nodes)

<u>During the trip</u>

Advise travelers that if they develop symptoms during their trip that lead them to suspect they have contracted measles or rubella, they should do the following:

- Seek immediate care from a healthcare professional.
- Avoid close contact with others for seven days starting from the onset of the rash. To reduce the risk of transmission (the measles contagious period is four days before to four days after the onset of the rash, and the rubella contagious period is seven days before to seven days after the onset of the rash; since it is difficult to differentiate between the two diseases, it is recommended to use the broader period) wearing a mask for seven days starting from the date the rash begins will reduce the risk of transmission.
- Stay at the place of accommodation (e.g., hotel or home, etc.), except to visit a doctor or as recommended by a healthcare professional. When going out, always wear a mask during the contagious period. Wear a mask in their accommodation, with the room closed, if living with unvaccinated people.

Health authorities should note that **a measles vaccination certificate is not a requirement for entry** into countries under the IHR (2005).

<u>Upon Return</u>

- If travelers suspect upon their return that they have contracted measles or rubella, they should contact their health care provider and inform the doctor about their trip.

[3] The dose of Measles, Mumps, and Rubella (MMR) or Measles and Rubella (MR) vaccine administered to children aged 6 to 11 months does not replace the first dose of the recommended schedule at 12 months of age.

- **For doctors and other health professionals**

  PAHO/WHO recommends:

  - Promote and verify that health sector personnel, including medical, laboratory, administrative, cleaning, and security staff, among others, have received a complete vaccination schedule (two doses) against measles and rubella.
  - Raise awareness among health workers, including those in the private sector, regarding the need for immediate reporting of all suspected cases of measles or rubella to ensure a timely response from national public health authorities, in accordance with the guidelines of the national surveillance and rapid outbreak response system.
  - Remind health care personnel of the need to inquire about patients' travel history and vaccination history.

- **Identification and contact tracing of confirmed cases of measles or rubella**
  - Conduct contact identification and tracing activities for contacts identified and present within the national territory, in accordance with the country's guidelines and directives.
  - Take into account the international implications that may arise during contact tracing, and consider the following scenarios and operational aspects when carrying out these activities:
    a. When a case is identified by the national authorities of another Member State and the national authorities are requested to locate the contact(s) whose most likely place of residence is their country. National authorities are urged to use all available coordination mechanisms to locate these individuals. The information available for this action may be limited, and efforts should be rational and based on existing resources. Health services should be alerted to the possibility of such contacts so that they remain vigilant and can promptly detect any suspected cases.
    b. When a case is identified locally, and depending on the stage of the disease's natural history at the time of detection, it may require:
       - *Current case*: National authorities should obtain information on the possible source of infection and the location of contacts abroad and accordingly notify the relevant national authorities in the country where the case is presumed to have been infected or where the contacts are located.
       - *Retrospectively identified case*: Based on the case's travel history, national authorities should notify the national authorities of the relevant country, as this situation could be the first indication of virus circulation or an outbreak in the other country or countries concerned.
         i. Conduct active institutional and community-based searches to rapidly detect cases among contacts not identified in the outbreak investigation, following the route of travel of the case(s).

Operational notes

For the international contact tracing of confirmed cases of measles or rubella, one of the following two scenarios of exposure to a confirmed case may arise:

- **When international modes of transport (e.g., airplanes, cruise ships, trains**) **are not involved**, national authorities should communicate with their counterparts in other countries through the National IHR Focal Point (NFP) or through other existing bilateral and multilateral programmatic mechanisms, with a copy to the WHO IHR Regional Contact Point. If deemed necessary, national authorities may request support from the WHO IHR Regional Contact Point in the Americas to facilitate communications related to international contact tracing.
- **When international modes of transport (e.g., airplanes, cruise ships, trains) are involved**, national port health authorities or their equivalents should activate existing mechanisms to obtain relevant information from companies (e.g., airlines) to locate travelers, or establish such mechanisms if they are absent. For subsequent communication among national authorities, see the previous point.

PAHO/WHO recommendations regarding advice for travelers are available in the 28 February 2025 PAHO/WHO Epidemiological Update on measles *(42)*.

Channels for disseminating the guidelines

PAHO/WHO recommends that national authorities consider disseminating the guidance in this epidemiological update through:

- Public awareness campaigns to promote and improve travelers' health before and after their trip so that they adopt responsible behaviors regarding measles vaccination and are aware of the signs and symptoms of measles. For this activity, it is also recommended to include healthcare services or travel clinics, airports, ports, train and bus stations, and airlines operating in the country, among others.
- Travel agencies, tourism-related entities, and diplomatic missions should also be aware of and disseminate the necessary recommendations that travelers should consider before their trip.
- Communicate the contents of existing national surveillance guidelines to physicians and other health care workers, and promptly disseminate any new protocols the country develops regarding travelers.

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