

Public health risk assessment related to measles: implications for the Americas Region – Second assessment, V2

18 February 2026

Risk assessment based on data available as of 27 January 2026

Overall risk
Regional
Very high

Confidence in available information
Regional
High

General risk statement

This rapid risk assessment (RRA) supersedes the assessment published on 24 March 2025 and aims to evaluate the current risk to public health in the Americas Region associated with the increase in measles outbreaks and cases during 2025 in some countries in the Region.

This risk assessment was conducted considering the following criteria: (i) the potential risk to human health, including the clinical and epidemiological behavior of the disease, the risk of exposure, indicators of magnitude and severity, based on the increasing trend in confirmed cases during 2024 and 2025; (ii) the risk of circulation, particularly in countries with low vaccination coverage; and (iii) the risk to public health in relation to early detection, prevention, and control capacities in countries, especially those with low measles vaccination coverage.

Following the declaration of measles elimination in the Americas Region in 2016, an unusual and steady increase in confirmed cases of this disease was observed between 2017 and 2019 (1). In 2019, the highest regional incidence rate was recorded, with 21.5 cases per million population (1); mainly due to large measles outbreaks in Venezuela and Brazil, this led to the reestablishment of endemic measles transmission and the loss of the elimination status (2). Between 2018 and 2023, the Americas Region reported a total of 49,187 confirmed cases of measles in 18 countries as a result of virus importation from other regions. Prior to 2025, the last endemic case of measles in the Americas Region had been reported by Brazil in June 2022 (2, 3). In 2024, the elimination of endemic measles in the Americas Region was reverified, after 466 confirmed cases of the disease were reported that year, all of which were imported or import-related (3). However, in 2025, there was an unusual increase in measles cases with confirmed cases in 13 countries, which included the reestablishment of endemic circulation of the disease in the Region, after more than 12 months of continuous circulation of the virus in Canada, as determined at the fifth annual meeting of the Pan American Health Organization (PAHO) Regional Commission for Monitoring and Revalidation of the Elimination of Measles, Rubella, and Congenital Rubella Syndrome, held 4-7 November 2025. Given this situation, PAHO announced on 10 November 2025, that the Region of the Americas has lost its verification as free from endemic measles transmission (4).

In 2025, between epidemiological week (EW) 1 and EW 53, 14,891 cases of measles were confirmed in the Americas Region, including 29 deaths, of which 22 (76%) occurred in the indigenous population (5). The cases were reported by Argentina (n= 36 cases), Belize (n= 44 cases), the Plurinational State of Bolivia (n= 597 cases), Brazil (n= 38 cases), Canada (n= 5,436 cases, including two deaths), Costa Rica (n= 1 case), El Salvador (n= 1 case), Guatemala (n= 1 case), Mexico (n= 6,428 cases, including 24 deaths), Paraguay (n= 49 cases), Peru (n= 5 cases), the United States of America (n= 2,242 cases, including three deaths), and Uruguay (n= 13 cases) (5). This total represents a 32-fold increase as compared to the 466 measles cases reported in 2024 (5).

In 2026, between EW 1 and EW 3 in the Americas Region, 1,031 measles cases were confirmed, with no deaths reported, in Bolivia (n= 10 cases), Canada (n= 67 cases), Chile (n= 1 case), Guatemala (n= 41 cases), Mexico (n= 740 cases), the United States of America (n= 171 cases), and Uruguay (n= 1 case) (5).

The risk to public health in the Americas Region for measles is considered **very high** due to the following factors:

- The persistence of active outbreaks in countries in the Region, including cases not related to known chains of transmission, the recent emergence of cases in new geographic areas, and the impact on indigenous populations and populations reluctant to be vaccinated (5).
- The lack of maintenance of an optimal level of vaccination coverage ($\geq 95\%$) in most countries and territories in the Region. According to the vaccination coverage for measles, mumps, and rubella (MMR1 and MMR2) reported by 45 countries and territories in the Americas in 2024, only 33% of them achieved coverage greater than 95% for MMR1 and only 20% achieved more than 95% coverage for MMR2. Regional coverage was 89% for MMR1 and 79% for MMR2 (5).
- The increase in the susceptible population¹ and the emergence of pockets of this population due to persistently low vaccination coverage related to factors such as the COVID-19 pandemic, increased vaccine hesitancy in some communities and population sectors, operational limitations or difficulties in administering vaccines as a control measure, and limited access to health services by particularly vulnerable populations (indigenous peoples, migrants, displaced persons, etc.) (2).

The overall risk of this event in the Americas Region, especially in countries with low vaccination coverage, is classified as "Very High" with a "High" confidence level based on the available information.

The rapid risk assessment will be reviewed if more epidemiological, clinical, or virological information becomes available.

Criteria		Assessment		Risk	Rationale
		Likelihood	Consequences		
Potential risk to human health	Regional	Almost certain	Moderate	High	<ul style="list-style-type: none"> • Measles is the most contagious disease worldwide and can cause serious illness, complications, and even death. The disease is most severe in infants and adults, who are at greater risk of complications, including death (3, 6, 7). • The greatest risk is severe infection and superinfection, which can occur especially in immunocompromised patients who have recovered from measles months after infection (3, 6, 7). When measles was common, nearly half of all deaths from other infectious diseases were related to measles infection and the immunosuppression it can cause (8). • In populations with high levels of malnutrition, lack of adequate health care, and low risk perception, measles can reach a case fatality rate of 10% (3). • Despite the availability of a safe and cost-effective vaccine, 29 measles-related deaths have been identified in the Region in 2025, of which 22 (76%) occurred in indigenous populations (5). • Reluctance to vaccinate in some communities complicates efforts, hindering the effectiveness of the specific response to outbreaks (3). During 2025, outbreaks and cases have been observed in communities with low vaccination coverage and reluctance to vaccinate (5). • There is no specific antiviral treatment for measles (3). • Indigenous populations and children under 5 years of age have shown greater vulnerability to this disease in the Americas Region (9). • Limited access to health services by particularly vulnerable populations (indigenous peoples, migrants, displaced persons) can delay diagnosis, increase mortality, and limit the response to the outbreak.

¹ Anyone who is not immune (unvaccinated and has not had the disease previously or is vaccinated but has not developed immunity).

Criteria		Assessment		Risk	Rationale
		Likelihood	Consequences		
Risk of dissemination	Regional	Highly likely	High	Very High	<ul style="list-style-type: none"> Measles is a highly contagious viral disease that is transmitted through the air and via droplets. It can easily infect those who are not immune. When outbreaks occur in areas with high population density and inadequate vaccination coverage, the disease is likely to spread rapidly (3). Secondary attack rates among susceptible household contacts have been reported to between 75% to 90%. Given the high efficiency of measles transmission, outbreaks have been reported in populations where only 3% to 7% of individuals were susceptible (1). Although most cases reported in the Region are imported or import-related, in 20% of cases the source of infection is unknown (5). Persistence of active outbreaks and emergence of new affected areas in the Region (5). Difficulty in maintaining adequate vaccination levels in the general population, particularly among those who are reluctant to be vaccinated, migrants, and other at-risk populations within the Region. Increase in the susceptible population and pockets of this population as a result of low vaccination coverage in recent years (Figures 1-2). Although there has been an improvement in measles-rubella surveillance indicators, there are still countries that do not meet the minimum notification rate of two suspected cases per 100,000 population, uniformly at the national level, in addition to other indicators. This could delay detection, notification, confirmation, and rapid response actions (10-12). The COVID-19 pandemic caused setbacks in surveillance and immunization efforts. The suspension of immunization services and declining vaccination coverage worldwide left millions of children vulnerable to preventable diseases such as measles. Global coverage levels for the second dose of the measles vaccine are even lower. Global gaps in vaccination coverage have created a pathway for the measles epidemic to spread globally (10-12). It is estimated that approximately 1.5 million children did not receive any dose of the measles vaccine in the Americas Region during 2024.
Risk of insufficient prevention and control capacity with available resources	Regional	Highly likely	High	Very High	<ul style="list-style-type: none"> Vaccine hesitancy is a significant problem in general, and particularly in some affected communities in countries of the Region. Misinformation could encourage vaccine refusal, which could delay the implementation of outbreak response vaccination activities. The occurrence of simultaneous outbreaks of arboviral diseases with fever and rash in some countries in the Region may hinder the timely detection of cases, especially in areas where health personnel are not trained to make an adequate differential diagnosis. Frequent turnover of health personnel creates gaps in knowledge and skills to respond quickly to measles and rubella outbreaks. Health services are overwhelmed due to the impact of concurrent public health emergencies.

Background information

Hazard assessment

Measles
<p>Measles is a highly contagious acute viral disease caused by the measles virus, which belongs to the <i>Morbillivirus</i> genus within the <i>Paramyxoviridae</i> family (1, 2). Humans are the only natural hosts of the virus. Sequential analyses of viral genes have shown that there are 24 genotypes of the measles virus worldwide (1). Detection of a specific viral genotype is useful for tracking transmission and identifying the likely source of an outbreak. Vaccination protects against all genotypes (1). The measles virus spreads easily when an infected person breathes, coughs, or sneezes, infecting susceptible individuals of any age. It can cause serious illness, complications, or death and remains one of the leading causes of mortality in young children globally (1-3).</p>

The measles virus is transmitted through the air or through droplets from the nose, mouth, or throat of an infected person that come into contact with the mucous membranes of the upper respiratory tract or conjunctiva, either through close personal contact or contact with respiratory secretions. The virus can remain active and contagious in the air or on surfaces for up to two hours. For this reason, it is highly infectious, and a person infected with measles can infect up to 18 individuals in a susceptible population. The virus can be transmitted from four days before the onset of rash (i.e., one to two days before the onset of fever) and up to four days after. Secondary attack rates among susceptible household contacts have been reported to be between 75% to 90%. Given the high efficiency of measles transmission, outbreaks have been reported in populations where only 3% to 7% of individuals were susceptible (1-3).

The virus first infects the respiratory tract before spreading to other organs. The incubation period is 7 to 21 days from exposure to the onset of rash, with a mean of 14 days (1-3).

Measles can be a serious disease. The first symptoms of measles are fever (up to 40°C), general malaise, conjunctivitis, cough, and rhinorrhea (runny nose), followed by a rash with raised, flat areas (maculopapular rash). The rash usually appears 14 days after exposure to the virus and spreads from the head to the trunk and lower extremities. There is no specific antiviral treatment available, and most people recover within two to three weeks. In populations with high levels of malnutrition and inadequate health care, measles can have a fatality rate of up to 10% (1-3).

The disease is more severe in infants² and adults³ than in children.⁴ Complications may result from viral replication or superimposed bacterial infection and include otitis media, pneumonia, laryngotracheobronchitis (croup), diarrhea, encephalitis, and blindness. Post-infectious encephalitis can occur in approximately 1 in 1,000 reported cases of measles. There may be 2 or 3 deaths per 1,000 reported cases of measles. In malnourished children and immunocompromised individuals, such as those living with HIV, those with cancer, or those treated with immunosuppressants, as well as in pregnant women, measles can also lead to serious complications (1-3).

In these countries, where malnutrition, especially vitamin A deficiency, and exposure to other infectious diseases are common, the fatality rate for measles is usually 3-6%, but can be as high as 30%, especially among displaced or isolated populations. In developed countries, measles-related death is rare, and the case fatality rate is usually 0.01-0.1%. Measles infection during pregnancy is associated with an increased risk of complications such as miscarriage, premature delivery, low birth weight, and maternal death (6, 13).

Since many diseases are accompanied by fever, rash, and various nonspecific symptoms, it is important to consider the differential diagnosis of measles. Laboratory tests are necessary for definitive diagnosis, as other infections can be confused with measles, such as infections with rubella virus, parvovirus B19, human herpes viruses 6 and 7, dengue virus, Zika virus, chikungunya virus, and *Streptococcus pyogenes* (1, 14, 15). Laboratory confirmation of measles is based on the detection of IgM antibodies against the measles virus using enzyme-linked immunosorbent assay (ELISA), or the detection of measles virus RNA by reverse transcription polymerase chain reaction (RT-PCR) in respiratory swabs (pharyngeal, nasal, or nasopharyngeal) or urine (14, 15).

Measles can be prevented through immunization. Administration of one dose of the vaccine at 12–15 months of age produces immunity in 93% of children; revaccination with a second dose increases immunity levels to 99%. In countries with low vaccination coverage, epidemics generally occur every two to three years and usually last two to three months, although the duration varies depending on population size, population density, and the immune status of the population. In countries with relatively high vaccination coverage, there are usually periods of five to seven years during which few cases occur. However, if the number of susceptible individuals increases enough to maintain widespread transmission, explosive epidemics can occur (1-3).

² Children between 1 and 23 months of age.

³ People between 19 and 44 years of age.

⁴ People aged 2 to 12 years.

Exposure assessment

Measles is one of six vaccine-preventable diseases that has been eliminated from the Americas Region (3). Most PAHO/WHO Member States introduced the measles, mumps, and rubella (MMR) vaccine between 1980 and the early 2000s. By 2002, endemic measles transmission in the Americas had ended for the first time.

After the elimination⁵ of measles in the Americas Region was declared in 2016, there was an unusual and steady increase in confirmed cases of this disease between 2017 and 2019 (1). In 2019, the highest regional incidence rate since elimination was recorded, namely 21.5 cases per million population (1). The increase in reported cases during 2019 was due to large measles outbreaks in Venezuela and Brazil, countries where endemic transmission of the disease was reintroduced (1). Between 2018 and 2023, the Region reported a total of 49,187 confirmed cases of measles in 18 countries (2). During this period, the last endemic case of measles in the Americas Region was reported by Brazil in June 2022 (2). In November 2024, the elimination of measles in the Region was reverified. In 2025, there was an unusual increase in measles in 13 countries in the Region, leading to the resumption of endemic circulation of the virus and PAHO's announcement on 10 November 2025, that the Region had lost its status as free of endemic measles transmission (4).

In 2025, between EW 1 and EW 53, 14,891 cases of measles were confirmed in the Americas Region, including 29 deaths, of which 22 (76%) were in indigenous populations (5). Cases were reported by Argentina (n=36 cases), Belize (n=44 cases), the Plurinational State of Bolivia (n=597 cases), Brazil (n=38 cases), Canada (n=5,436 cases, including two deaths), Costa Rica (n=1 case), El Salvador (n= 1 case), Guatemala (n= 1 case), Mexico (n= 6,428 cases, including 24 deaths), Paraguay (n= 49 cases), Peru (n= 5 cases), the United States of America (n= 2,242 cases, including three deaths), and Uruguay (n= 13 cases) (5). This total represents a 32-fold increase compared with the 466 measles cases reported in 2024 (5). Compared with the historical record of measles in the Region, the number of confirmed measles cases in 2025 was the highest since 2019, which was the year with the highest number of cases in the last 22 years (n= 23,269) (5).

In 2026, between EW 1 and EW 3, 1,031 measles cases were confirmed in the Americas Region, with no deaths reported. The cases were reported by Bolivia (n= 10 cases), Canada (n= 67 cases), Chile (n= 1 case), Guatemala (n= 41 cases), Mexico (n= 740 cases), the United States of America (n= 171 cases), and Uruguay (n= 1 case) (5). This total represents a 45-fold increase compared to the 23 measles cases reported in the same period in 2025 (5).

Table 1. Summary of measles cases reported in 2025 and 2026

Americas Region	
<p>In 2025, between epidemiological week (EW) 1 and EW 53, 14,891 measles cases were confirmed in the Americas Region, including 29 deaths, in Argentina, Belize, the Plurinational State of Bolivia, Brazil, Canada, Costa Rica, El Salvador, Guatemala, Mexico, Paraguay, Peru, the United States of America, and Uruguay. This total represents a 32-fold increase compared with the 466 measles cases reported in 2024 (5).</p> <p>In 2026, between EW 1 and EW 3, 1,031 measles cases were confirmed in the Americas Region, with no deaths reported. The cases were reported by Bolivia, Canada, Chile, Guatemala, Mexico, the United States of America, and Uruguay. This total represents a 45-fold increase compared to the 23 measles cases reported in the same period in 2025 (5).</p>	
Country/Territories	Context
Argentina	Between EW 1 and EW 53 of 2025, 36 cases of measles have been confirmed. The confirmed cases were reported in the Autonomous City of Buenos Aires (CABA) (n= 21), the provinces of Buenos Aires (n= 13), Entre Ríos (n= 1), and San Luis (n= 1). Of the total cases, 6 were imported, 15 were related to importation, 14 had no known source of infection, and 1 was

⁵ Measles elimination is defined as the interruption of measles transmission in a defined geographic area for at least 12 months, and it is verified once this interruption has been sustained for at least 36 months (2).

	<p>confirmed with the source of infection under investigation (5). The cases are distributed across an age range of 5 months to 40 years; 50% (n= 18) refer to children under 4 years of age, 19% (n= 7) to people between 5 and 19 years of age, and 31% (n= 11) to adults 20 years of age or older. The incidence rate by age group shows that the most affected group is children under 4 years of age (5.6 cases per 100,000 population) (5). Regarding vaccination history, 39% (n= 14) of cases were unvaccinated or had an unknown vaccination history, 17% had received one dose of DPT (n= 6), and 22% had received two doses of DPT (n= 8). Of the total number of cases, 6% required hospitalization (n= 2) (5). According to genotyping performed on samples from confirmed cases (n= 26), the following genotypes have been identified: B3 DSID 9240, D8 DSID 5963 Patán lineage, D8 DSID 9171 MVs/Ontario lineage.CAN/47.24 and genotype B3 DSID 6418 MVs/Quetta lineage.PAK/44.20 (5). No measles cases were confirmed between EW 1 and EW 3 of 2026 (5). During 2024, national MMR vaccination coverage reached 82.1% for the first dose and 46.4% for the second dose (5).</p>
Belize	<p>Between EW 1 and EW 53 of 2025, a total of 44 measles cases were confirmed. Of these, 13 were confirmed by laboratory testing and 31 by epidemiological link. Confirmed cases were identified in the districts of Cayo (n= 43) and Corozal (n= 1). Of the total confirmed cases, seven were imported and 37 were related to importation. Four of the imported cases reported a history of travel to Mexico between January and April 2025, while three imported cases reported a history of travel to Canada between May and September 2025 (5). The cases ranged in age from 0 to 45 years, with 18% (n= 8) under 5 years of age, 64% (n= 28) between 5 and 19 years of age, and 18% (n= 8) 20 years of age and older. Regarding measles vaccination history, 100% (n= 44) of cases were unvaccinated or had an unknown vaccination history at the time of diagnosis. Only one case required hospitalization (5). Between EW 1 and EW 3 of 2026, no cases of measles were confirmed (5). During 2024, national vaccination coverage with the MMR vaccine reached 83.5% for the first dose and 82.9% for the second dose (5).</p>
Bolivia	<p>Between EW 1 and EW 53 of 2025, 597 cases of measles were confirmed in 9 departments. Confirmed cases were reported in the departments of Santa Cruz (n= 467 cases), La Paz (n= 41 cases), Cochabamba (n= 36 cases), Beni (n= 14 cases), Potosí (n= 10 cases), Tarija (n= 12 cases), Oruro (n= 9 cases), Chuquisaca (n= 7 cases), and Pando (n= 1 case) (5). The cases are distributed across an age range from 0 months to 57 years; 12% (n= 72) refer to children under 1 year of age, 21% (n= 128) between 1 and 4 years of age, 20% (n= 122) between 5 and 9 years old, 14% (n=81) between 10 and 14 years old, 12% (n=70) between 15 and 19 years old, and 21% (n=124) 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 (113 cases per 100,000 population), followed by the 1-4 age group (24 cases per 100,000 population) (5).</p> <p>In terms of vaccination history, 82% (n= 492) of cases were unvaccinated or had an unknown vaccination history, 8% had received one dose of DPT (n= 49), 7% (n= 43) had two doses of DPT, and 2% (n= 13) had three or more doses. Of the total number of cases, 5% (n= 31) required hospitalization (5). According to the genotyping performed on samples from two confirmed cases, genotypes B3 and D8 have been identified (5).</p> <p>Between EW 1 and EW 3 of 2026, 10 cases of measles were confirmed. The cases were reported in two departments. The confirmed cases were reported in the departments of Santa Cruz (n= 9) and Tarija (n= 1). The cases refer to individuals aged 0 months to 41 years. Regarding vaccination status, none of the confirmed cases had a documented history of vaccination. During this period, no cases required hospitalization (5).</p> <p>During 2025, national vaccination coverage with MMR reached 82% for the first dose and 74% for the second dose (5).</p>

<p>Brazil</p>	<p>Between EW 1 and EW 53 of 2025, 38 cases of measles have been confirmed in the Federal District and six states of the country. Of the total cases, 10 are imported cases, 25 are related to importation, and 3 have an unknown source of infection. The confirmed cases were reported in the Federal District (n= 1 case) and in the states of Maranhão (n= 1 case), Mato Grosso (n= 6 cases), Rio de Janeiro (n= 2 cases), São Paulo (n= 2 cases), Rio Grande do Sul (n= 1 case), and Tocantins (n= 25 cases) (5). The cases are distributed across the following age groups: 29% (n= 11) of cases refer to children under 5 years of age, 21% (n= 8) between 5 and 19 years of age, and 50% (n= 19) to adults over 20 years of age. The incidence rate by age group shows that the most affected age group is children under 5 years of age (0.015 cases per 100,000 population), followed by the 20-29 age group (0.002 per 100,000 population) (5). Regarding the vaccination history of the cases, 95% (n= 36) were unvaccinated or had an unknown vaccination history, and 5% (n= 2) had a history of measles vaccination (5).</p> <p>Between EW 9 and EW 49 of 2025, 26 confirmed cases of measles were characterized by genomic analysis in Brazil. Phylogenetic analyses performed with reference strains revealed that two sequences detected in the state of Rio de Janeiro, in EWs 9 and 10, belong to genotype B3, with 99.8% genomic identity to the strain named MVs/Quetta.PAK/44.20 and the distinct sequence DSId (9299). In the Federal District, a sequence belonging to genotype D8 DSId (9267) was identified in EW 9, with 99.8% genomic identity to the strain named MVs/Pasaman Barat.IDN/13.22. In EW 14 and EW 15, two sequences of genotype B3 DSId (8841) were detected, corresponding to the strain named MVs/New South Wales.AUS/10.24, in the states of São Paulo and Rio Grande do Sul, respectively. Between EW 29 and EW 42, 20 measles cases were genomically characterized in the states of Tocantins, Maranhão, and Mato Grosso, all belonging to genotype D8 DSId (9171) lineage MVs/Ontario.CAN/47.24). In EW 49, genotype B3 DSId (6418), lineage MVs/Quetta.PAK/44.20, was detected in the state of São Paulo (5). Between EW 1 and EW 3 of 2026, there were no confirmed cases of measles in Brazil (5).</p> <p>During 2024, national MMR vaccination coverage reached 96% for the first dose and 80.6% for the second dose (5).</p>
<p>Canada</p>	<p>In Canada, between EW 1 and EW 53 of 2025, 5,436 cases of measles (n= 5,056 confirmed, n= 380 probable) were reported, including two deaths, in ten provinces: Alberta (n= 2,008), British Columbia (n= 424), Manitoba (n= 355), New Brunswick (n= 16), Northwest Territories (n= 1), Nova Scotia (n= 62), Ontario (n= 2,396), Prince Edward Island (n= 3), Quebec (n= 45), and Saskatchewan (n= 126). The number of weekly cases peaked in EW 18 of 2025, declined through EW 35, and has since remained stable at lower levels. Two deaths were reported in congenital measles cases born prematurely (5). Of the 5,436 cases reported in 2025, 98% (n= 5,313) were exposed in Canada, 2% (n= 98) were imported cases, and less than 1% (n= 25) had an unknown or under investigation source of exposure. 45% of cases were in people aged 5 to 17 years, followed by 29% aged 18 years and older, and 20% in children aged 1 to 4 years. In terms of vaccination history, 89% were unvaccinated, 3% had received one dose of a measles-containing vaccine, 4% had received two or more doses of a measles-containing vaccine, and 4% had an unknown vaccination status. The vaccination history by age group was as follows: the percentage of cases that had received one or more doses of a measles-containing vaccine was 2% in children aged 1 to 4 years, 3% in cases aged 5 to 17 years, and 18% in adults aged 18 years and older. 7% of cases were hospitalized (n= 400). Among confirmed cases with genotyping information available, genotype D8 was identified in 1,732 cases and genotype B3 in 51 cases (5).</p> <p>In 2026, in EW 1, 17 cases of measles were reported (13 confirmed and 4 probable). These cases were reported by four provinces: Alberta (n= 7), British Columbia (n= 2), Manitoba (n=</p>

	<p>6), and Saskatchewan (n= 2). Of the total cases reported in 2026, 94% (n= 16) were associated with the multijurisdictional outbreak that began in October 2024. 24% (n= 4) of cases were in children under 5 years of age, 59% (n= 10) aged 5 to 17 years, and 18% (n= 3) aged 18 years or older. In EW 1 of 2026, all reported cases were unvaccinated, and no hospitalizations were reported (5).</p> <p>Since 2024, a total of 4,966 confirmed cases and 414 probable cases have been linked to a multijurisdictional outbreak in Canada, which remains active. Most cases associated with the outbreak were unvaccinated or had unknown vaccination history (94%) and resided in interconnected communities with low vaccination coverage. In addition to the multijurisdictional outbreak described above, between EW 1 of 2025 and EW 1 of 2026, eleven outbreaks were reported, of which nine had been closed as of 21 January 2026. These outbreaks consisted of two or more epidemiologically or virologically related cases and were directly linked to imported cases (5).</p>
Chile	<p>In Chile, in EW 1 of 2026, one confirmed imported case of measles was reported in the Metropolitan Region. The case involved a 43-year-old woman who entered the country on 31 December 2025, from Spain and Uruguay. The case had no verifiable vaccination history but reported having received two doses of MMR vaccine. The case developed a rash on 30 December 2025 and was confirmed by RT-PCR on 9 January 2026, by the Chilean Institute of Public Health (ISP per its acronym in Spanish). No secondary cases or deaths related to this case have been reported in the country (5). During 2024, national MMR vaccination coverage reached 95.7% for the first dose and 79.2% for the second dose, and preliminary data for 2025 show MMR vaccination coverage of 86.8% for the first dose and 64.4% for the second dose (5).</p>
Costa Rica	<p>In Costa Rica, in EW 20 of 2025, an imported case of measles was confirmed in the province of Guanacaste. The case involved an 18-year-old woman who entered the country on 3 May 2025, from Canada (5). The case had no history of vaccination. The case developed a rash on 12 May and was confirmed by RT-PCR on 15 May by the Costa Rican Institute for Research and Teaching in Nutrition and Health (INCIENSA per its acronym in Spanish). No secondary cases or deaths have been reported (5). During 2024, national MMR vaccination coverage reached 102% for the first dose and 82.9% for the second dose (5).</p>
El Salvador	<p>In El Salvador, in EW of 2025, an imported case of measles was reported in the department of Santa Ana. The case involved a 24-year-old man who entered the country on 14 December 2025, after participating in a mass event that took place in Santiago de Atitlán, Guatemala, between 10 and 14 December. The case developed a rash on 24 December 2025 and was confirmed by RT-PCR and positive IgM on 30 December 2025, by the National Public Health Laboratory of El Salvador. No secondary cases or associated deaths were reported in the country (5). During 2024, national vaccination coverage with MMR reached 96.2% for the first dose and 90.1% for the second dose (5).</p>
Guatemala	<p>In Guatemala, in EW 43 of 2025, a confirmed case of measles was identified in a 2-year-old girl residing in the department of Guatemala, in which the source of exposure could not be identified. Additionally, between EW 51 of 2025 and EW 3 of 2026, (as of 21 January) 41 cases of measles in nine departments of the country, of which 31 are related to participation in a large international event in the municipality of Santiago Atitlán, Sololá, between 10 and 14 December 2025. The confirmed cases were reported in the departments of Sololá (n= 2), Guatemala (n= 9), Izabal (n= 3), Escuintla (n= 3), Totonicapán (n= 1), Quetzaltenango (n= 1), Jalapa (n= 1), Baja Verapaz (n= 1), and Petén (n= 2) (5).</p>

	<p>Of the total number of cases confirmed during 2026, 54% are male (n= 22). The cases range in age from 5 months to 46 years, distributed across the following age groups: 10% (n= 4) of cases refer to children aged 0 to 4 years, 10% (n= 4) are children aged 5 to 9 years, 5% (n= 2) are aged 10 to 14 years, 20% (n= 8) are aged 15 to 19 years, 5% (n= 2) are aged 20 to 24 years, 15% (n= 6) aged 25 to 29, 27% (n= 11) aged 30 to 39, and 10% (n= 4) aged 40 to 49. The incidence rate by age group shows that the most affected age group is 15 to 19 years old (0.46 cases per 100,000 population), followed by the 30 to 39 age group with 0.41 cases per 100,000 population (5). Regarding the vaccination history of the cases, 44% (n= 18) were not vaccinated, 12% (n= 5) had an unknown vaccination history, and 18% (n= 8) had verbal reference MMR doses. 17% of cases required hospitalization (n= 7), and no related deaths have been reported (5). Of the 41 rRT-PCR-positive samples from confirmed measles cases, 12 are undergoing genotyping (5).</p> <p>By 2024, the country achieved national MMR vaccination coverage of 91% for the first dose and 79% for the second dose (5).</p>
Mexico	<p>In Mexico, between EW 1 of 2025 and EW 2 of 2026, 7,168 cases of measles have been confirmed in 32 states of the country, with 24 deaths. Most of the confirmed cases were reported in the following states: Chihuahua (n= 4,495 cases, including 21 deaths), Jalisco (n= 1,034 cases, including one death), Chiapas (n= 432 cases), Michoacán (n= 261 cases), and Guerrero (n= 257 cases). Of the total cases, 275 were imported, 4,054 were related to importation, and 2,839 were confirmed with the source of infection under investigation (5).</p> <p>With regard to age group, confirmed cases of measles reported between EW 1 of 2025 and EW 2 of 2026 are most frequently distributed across the following age groups: aged 1-4 years (n= 1,097), followed by those aged 5-9 years (n= 836) and those aged 25-29 (n= 794). In terms of incidence rate, the under-one age group reported the highest rate with 42.52 cases per 100,000 population, followed by those aged 1-4 years and 5-9 years, with rates of 12.80 and 7.90, respectively. Of the confirmed cases, 50.9% are female (n= 3,650) (5).</p> <p>Regarding the vaccination history of confirmed cases, 91.2% (n= 6,534) had no history of vaccination, 6.2% (n=444) had one dose of MMR, and 2.65% (n= 190) had two or more doses of MMR documented in the national vaccination card. Of the total number of confirmed cases, 1,354 required hospitalization, of which 962 were from the state of Chihuahua (5). According to the genotyping performed on samples from confirmed cases (n= 220), genotypes D8 and B3 have been identified (5).</p> <p>Twenty-four deaths from measles complications have been confirmed, all in people with no history of vaccination, with comorbidities in some cases. The deaths are distributed among the states of Chihuahua (n= 21), Durango (n= 1), Jalisco (n= 1), and Sonora (n= 1) (5).</p>
Paraguay	<p>In Paraguay, between EW 30 and EW 53 of 2025, 49 cases of measles were confirmed, with cases reported in the departments of San Pedro (n= 47 cases) and Central (n= 2 cases). Of the total number of cases, 48 are related to importation and one refers to an imported case (5).</p> <p>In terms of demographic characteristics, 61% of cases (n= 30) were female. The age range of those affected is from 3 months to 54 years. Of the total, 45% (n= 22) of cases refer to children under 5 years of age, 39% (n= 19) to ages 5 to 19, and 16% (n= 8) to the 20+ age group. The incidence rate shows that the most affected age group is children under 1 year of age (7.2 cases per 100,000 population), followed by the 1-4 age group (3.7 per 100,000 population) and the 15-19 age group (1.3 cases per 100,000 population) (5).</p> <p>Regarding measles vaccination history, 76% of cases (n= 37) were unvaccinated or had an unknown vaccination history, while 14% had received a single dose of MMR (n= 7) and 10%</p>

	<p>had received two doses of MMR (n= 5). 14% of cases required hospitalization (n= 7). No related deaths were reported, and the last confirmed case was recorded in EW 39 (5). The Regional Reference Laboratory has reported genotype D8 in five samples sent from the National Reference Laboratory (5). In Paraguay, in 2025, national vaccination coverage with MMR reached 94% for the first dose and 87% for the second dose (5).</p>
Peru	<p>In Peru, between EW 19 and EW 53 of 2025, five cases of measles have been confirmed, all registered in the department of Lima. Of the total number of cases, three are imported cases and two are import-related. The cases range in age from 11 months to 34 years; one case refers to a child under one year of age, two cases refer to persons between 5 and 19 years of age, and two refer to adults aged 20 years and older. Regarding measles vaccination history, three of the cases were unvaccinated, one had an unknown vaccination history, and one had received two doses of MMR vaccine. Of the cases, two required hospitalizations; no related deaths have been reported (5).</p> <p>Genotyping of samples from two confirmed cases identified genotype D8 DSID 9171 and genotype MVs/Ontario.CAN/47.24 (DSId 9171). In Peru, in 2024, MMR vaccination coverage reached 97.6% nationwide for the first dose and 83.2% for the second dose (5).</p>
United States	<p>In the United States, between EW 1 and EW 53 of 2025, 2,242 confirmed cases of measles were reported, including three deaths. Of these, 2,217 measles cases were reported by 45 jurisdictions: Alabama (n= 1 case), Alaska (n= 4 cases), Arizona (n= 213 cases), Arkansas (n= 8 cases), California (n= 26 cases), Colorado (n= 35 cases), Connecticut (n= 1 case), Florida (n= 8 cases), Georgia (n= 10 cases), Hawaii (n= 2 cases), Idaho (n= 14 cases), Illinois (n= 14 cases), Indiana (n= 10 cases), Iowa (n= 9 cases), Kansas (n= 91 cases), Kentucky (n= 13 cases), Louisiana (n= 3 cases), Maryland (n= 3 cases), Michigan (n= 29 cases), Minnesota (n= 26 cases), Missouri (n= 6 cases), Montana (n= 36 cases), Nebraska (n= 5 cases), Nevada (n= 2 cases), New Jersey (n= 11 cases), New Mexico (n= 100 cases, including one death), New York City (n= 15 cases), New York State (n= 26 cases), North Carolina (n= 2 cases), North Dakota (n= 36 cases), Ohio (n= 40 cases), Oklahoma (n= 17 cases), Oregon (n= 1 case), Pennsylvania (n= 16 cases), Rhode Island (n= 1 case), South Carolina (n= 299 cases), South Dakota (n= 16 cases), Tennessee (n= 8 cases), Texas (n= 803 cases, including two deaths), Utah (n= 187 cases), Vermont (n= 2 cases), Virginia (n= 6 cases), Washington (n= 11 cases), Wisconsin (n= 36 cases), and Wyoming (n= 15 cases). A total of 25 measles cases were reported among international visitors to the United States (5).</p> <p>Of the total cases, 89% (n= 1,994) were associated with outbreaks (defined as three or more cases), with 49 outbreaks identified during 2025 (5). 26% percent (n=575) of cases were in children under 5 years of age, 44% (n= 983) were in people aged 5 to 19 years, 30% (n= 669) were in people over 20 years of age, and 1% (n= 15) were in people of unknown age. The incidence rate by age group shows that the most affected group was children under one year of age (3.59 cases per 100,000 population), followed by the group aged 1 to under 5 years (2.92 per 100,000 population) (5).</p> <p>Regarding the vaccination history of the cases, 93% were unvaccinated or had an unknown vaccination history, 3% had received a single dose of the MMR vaccine, and 4% had received two doses. Among the confirmed vaccinated cases, 22% were children under 5 years of age, 19% were people between 5 and 19 years of age, and 59% were adults over 20 years of age. 11% (n = 245) of cases required hospitalization, mainly in children under 5 years of age, with 18% (n = 106) of hospitalized cases concentrated in this age group (n = 575) (5).</p> <p>In the United States, during 2026, between EW 1 and EW 2, 171 confirmed cases of measles were reported. These cases were reported by nine jurisdictions: Arizona (n= 1 case), Florida (n= 2 cases), Georgia (n= 1 case), North Carolina (n= 2 cases), Ohio (n= 3 cases), Oregon (n=</p>

	<p>2 cases), South Carolina (n= 145 cases), Utah (n= 14 cases), and Virginia (n= 1 case). No measles cases were reported among international visitors (5). Of the total cases, 96% (n = 165) were associated with outbreaks identified in 2025. 25% (n= 42) of cases were in children under 5 years of age, 60% (n= 103) were in people between 5 and 19 years of age, 10% (n= 17) were in people over 20 years of age, and 5% (n = 9) were 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 (0.26 per 100,000 population), followed by the group aged 5 to under 20 years (0.16 per 100,000 population) (5).</p> <p>Regarding the vaccination history of cases during 2026, 95% were unvaccinated or had an unknown vaccination history, 2% had received a single dose of the MMR vaccine, and 2% had received two doses. Among the confirmed vaccinated cases, 25% were children under 5 years of age, 38% were people between 5 and 19 years of age, and 38% were adults over 20 years of age. One percent (n= 2) of cases required hospitalization, referring to children under 5 years of age and people between 5 and 19 years of age (5).</p> <p>During 2025 and 2026, of the 751 rRT-PCR-positive samples from confirmed measles cases that have undergone genotyping to date, 86% (n= 648) corresponded to genotype D8 and 14% (n= 103) to genotype B3. Among the detections of genotype D8, the majority, 88% (n= 567), were identified as distinctive sequence (DSId) 9171 (5).</p> <p>Vaccination coverage with the triple viral vaccine (MMR) in children has declined in recent years, from 95.2% during the 2019–2020 school year to 92.5% during the 2024–2025 school year (5).</p>
Uruguay	<p>In Uruguay, in EW 6 of 2025, a confirmed case of measles was reported in a foreign national with a history of travel to Argentina and no history of measles vaccination. This was an isolated case, with no evidence of secondary transmission documented in the subsequent period (5).</p> <p>Additionally, between EW 46 of 2025 and EW 3 of 2026, 13 cases of measles were confirmed in two departments of the country. The cases were reported in the departments of Montevideo (n= 1 case) and Rio Negro (n= 12 cases). Of the total cases, four were imported and nine were related to importation (5). The cases are distributed across an age range of 11 to 51 years; 23% (n= 3) refer to adolescents aged 11 to 15 years, and 77% (n= 10) refer to people aged 21 to 51 years. No cases were reported in children or older adults. The incidence rate by age group shows that the most affected group is 11 to 15 years old, with 1.26 cases per 100,000 population. Regarding vaccination history, 69.3% (n= 9) of cases were unvaccinated and 30.7% had received one dose of MMR vaccine (n= 4). Of the total, one case required hospitalization with a favorable outcome (5).</p> <p>During 2024, national DPT vaccination coverage reached 97% for the first dose and 95% for the second dose (5).</p>

Context assessment

According to estimates by the World Health Organization (WHO) and the US Centers for Disease Control and Prevention (CDC), there were 10.3 million cases of measles worldwide in 2023, 20% more than in the previous year, due to insufficient vaccination coverage worldwide. Although measles can be prevented with two doses of vaccine, more than 22 million children did not receive their first dose of measles vaccine in 2023 (16).

According to monthly measles and rubella surveillance data published by the WHO, from 1 January 2025 to 1 January 2026, a total of 552,699 suspected measles cases were reported in 179 Member States across the six WHO regions, of which 247,623 (44.8%) were confirmed. About 28% of cases were reported in the WHO Eastern Mediterranean Region, followed by the WHO African Region with 25% of cases and the WHO European Region

with 22% of cases (17). The increase in cases globally creates a greater risk of imported cases related to unvaccinated travelers from areas with high viral circulation.

In 2025, between EW 1 and EW 53, a total of 14,891 cases of measles were confirmed in 13 countries in the Americas Region, including 29 deaths, of which 22 (73%) occurred in indigenous populations. In 2026, between EW 1 and EW 3, 1,031 measles cases were confirmed in seven countries in the Americas Region, with no deaths reported. This total represents a 45-fold increase compared to the 23 measles cases reported in the same period in 2025 (5).

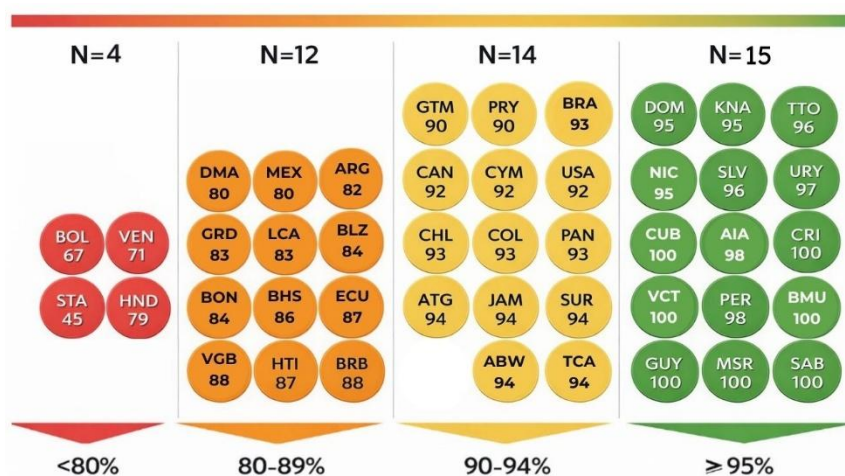
The persistence of active outbreaks in countries in the Region, including cases not related to known chains of transmission, the recent emergence of cases in new geographic areas, and the impact on indigenous populations and populations reluctant to be vaccinated, create a situation that may prolong the emergence of additional cases and make the implementation of control measures challenging.

Given the increase in outbreaks and cases in countries where arboviruses such as dengue, chikungunya, and Zika are circulating, health personnel may face challenges in the timely identification of suspected measles cases.

Vaccination coverage in the Americas Region

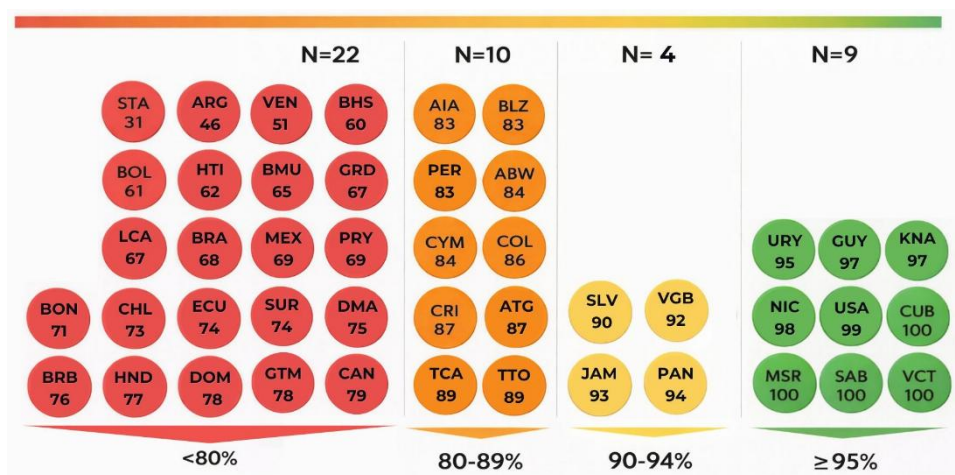
By 2024, there was a slight increase in regional coverage of the first and second doses of the measles, mumps and rubella (MMR1 and MMR2) vaccine compared to 2023: from 87% to 89% for MMR1 and from 76% to 79% for MMR2. Forty-five countries and territories in the Americas reported MMR1 and MMR2 vaccination coverage to PAHO. With regard to the administration of the first dose of MMR1, 33% (n= 15/45) of the countries and territories in the Region reported coverage greater than 95%, 31% (n= 14/45) reported coverage between 90-94%, 27% (n= 12/45) reported coverage between 80% and 89%, and 9% (n= 4/45) reported coverage below 80% (**Figure 1**) (18). With regard to the administration of the second dose of MMR2, only 20% of countries and territories (n= 9/45) reported coverage levels above 95%, while 49% (n= 22/45) reported coverage levels below 80% (**Figure 2**) (18).

Figure 1. Distribution of countries and territories* by coverage range for the first dose of the measles, rubella, and mumps vaccine (MMR1) in the Americas Region, 2024.



Source: Adapted from the Pan American Health Organization/World Health Organization. Immunization coverage throughout the life course in the Americas. Washington, D.C.: PAHO/WHO; 2026 [accessed 21 January 2026]. Available from: <https://paho-cim.shinyapps.io/immunization-dashboard/#> (18).

Figure 2. Distribution of countries and territories* by coverage range for the second dose of the measles, rubella, and mumps vaccine (MMR2) in the Americas Region, 2024.



Source: Adapted from Pan American Health Organization/World Health Organization. Immunization coverage throughout the life course in the Americas. Washington, D.C.: PAHO/WHO; 2026 [accessed 21 January 2026]. Available from: <https://paho-cim.shinyapps.io/immunization-dashboard/#> (18).

***Note:** ABW: Aruba; AIA: Anguilla; ARG: Argentina; ATG: Antigua and Barbuda; BHS: Bahamas; BLZ: Belize; BMU: Bermuda; BOL: Bolivia; BON: Bonaire; BRA: Brazil; BRB: Barbados; CAN: Canada; CHL: Chile; COL: Colombia; CRI: Costa Rica; CUB: Cuba; CYM: Cayman Islands; DMA: Dominica; DOM: Dominican Republic; ECU: Ecuador; GRD: Grenada; GTM: Guatemala; GUY: Guyana; HND: Honduras; HTI: Haiti; JAM: Jamaica; KNA: Saint Kitts and Nevis; LCA: Saint Lucia; MEX: Mexico; MSR: Montserrat; NIC: Nicaragua; PAN: Panama; PER: Peru; PRY: Paraguay; SAB: Saba; SLV: El Salvador; STA: Saint Eustatius; SUR: Suriname; TCA: Turks and Caicos Islands; TTO: Trinidad and Tobago; URY: Uruguay; USA: United States of America; VCT: Saint Vincent and the Grenadines; VEN: Venezuela; VGB: British Virgin Islands.

Table 2. Strengths and vulnerabilities of countries and territories in the Americas Region with regard to measles, January 2026.

Strengths	Vulnerabilities
Coordination <ul style="list-style-type: none"> In 2022, PAHO/WHO published the new Regional Framework for Monitoring and Re-verification of the Elimination of Measles, Rubella, and Congenital Rubella Syndrome in the Americas, which updated the basic principles, essential criteria, and components of the original 2011 action plan for verifying measles elimination in each country. 	Coordination <ul style="list-style-type: none"> Frequent turnover and rotation of health authorities and personnel in the ministries of health of several countries hinder the coordination of monitoring, training, and cooperation activities to sustain the elimination of measles, rubella, and congenital rubella syndrome (CRS).
Surveillance <ul style="list-style-type: none"> PAHO/WHO has published guidelines for use at the national and district levels, including case definitions, instructions for sample collection and referral to laboratories, and guidance on managing control efforts. The regional Integrated Measles and Rubella Surveillance System (ISIS) is in place, to which 21 countries and the non-Hispanic Caribbean region individually report each suspected and confirmed case of measles, rubella, and CRS. PAHO has issued regional epidemiological alerts and updates along with recommendations for Member States (19). Several countries in the region have surveillance capabilities that have enabled them to respond immediately and effectively to the identification of imported cases, quickly interrupting circulation and demonstrating the strength of the control measures implemented (vaccination of affected age groups, active community and institutional searches, isolation of cases, and contact tracing). 	Surveillance <ul style="list-style-type: none"> High turnover of health personnel and the negative impact of the COVID-19 pandemic have led to gaps in knowledge of basic concepts of surveillance and rapid response to outbreaks, including essential practices. Consistency in the performance of surveillance indicators at the national and subnational levels, including the reporting of suspected cases, given that there are municipalities that do not report suspected cases or comply with the negative reporting criteria (silent municipalities) in the countries of the Americas.
Laboratory <ul style="list-style-type: none"> A regional network of measles and rubella laboratories has been in place in the Americas since 1995. It comprises 21 national laboratories, two regional reference laboratories, one specialized global laboratory, and 110 subnational laboratories. As part of the laboratory support and technical expertise provided by PAHO in the post-elimination phase (once elimination has been declared), technical guidance has been continuously developed and disseminated on testing strategies, correlation and interpretation of results, training, and technology transfer to improve the capacity of national laboratories to provide results that enable accurate 	Laboratory <ul style="list-style-type: none"> Failure to obtain blood, respiratory, or urine samples for serological and virological testing to facilitate case confirmation. Decreased positive predictive value of IgM tests related to low disease prevalence; additional samples and laboratory tests are required for proper case classification.

<p>case classification and optimize the response of countries' surveillance systems to detect imported viruses and provide laboratory-based guidance for the study of transmission chains.</p> <ul style="list-style-type: none"> • Technical assistance and follow-up with laboratories in countries that have reported cases/outbreaks. 	
<p>Immunization</p> <ul style="list-style-type: none"> • PAHO/WHO promotes increased coverage of routine vaccination programs and mass preventive vaccination campaigns (follow-up campaigns) to reach populations that the regular program has not been able to reach and to provide an additional opportunity to complete vaccination schedules. • The Revolving Fund (RF) for Access to Vaccines provides technical cooperation to national immunization programs to improve vaccine demand planning, strengthen supply chain management and forecasting capabilities, and ensure their financing and sustainability (20, 21). • Publication of guidelines for stock management. • Countries in the Region have implemented the methodology of "Microplanning of High-Quality Vaccination Activities" in routine programs or vaccination intensification campaigns. This methodology allows for a focus on detailed planning at the local level to optimize access and timely response to outbreaks of vaccine-preventable diseases. 	<p>Immunization</p> <ul style="list-style-type: none"> • In some countries in the Region, reaching certain vulnerable populations, such as indigenous groups, rural farmers, and others in remote and hard-to-reach geographic areas, can pose challenges in the implementation of vaccination activities. • Some individuals and population groups remain reluctant to be vaccinated due to beliefs and misinformation about vaccines. • The accumulation of susceptible individuals due to low vaccination coverage, coupled with the absence of follow-up vaccination campaigns or the implementation of follow-up campaigns that fail to meet high-quality criteria, such as vaccination coverage equal to or greater than 95% at the national level and in at least 80% of the country's municipalities, within a period of 16 weeks.
<p>Risk Communication and Community Engagement</p> <ul style="list-style-type: none"> • Strengthening coordination among partners. • In countries where outbreaks have occurred, risk communication and community engagement have been improved to strengthen commitment to immunization and recommended measures. • Countries in the Region have Safe Vaccination Committees, which play a key role in risk communication and in developing messages and technical information for different target public. They also assist in the analysis and response to events supposedly attributable to vaccination or immunization (ESAVI), ensuring an evidence-based approach. 	<p>Risk Communication and Community Engagement</p> <ul style="list-style-type: none"> • Limited understanding of risk perception and health-seeking behaviors of affected populations and low level of knowledge about measles. • Low level of information regarding the risk for travelers going to areas with active outbreaks.

References

1. Pan American Health Organization/World Health Organization. Measles Elimination: A Practical Guide. Washington, D.C.: PAHO/WHO; 2007. Available from: <https://www.paho.org/en/documents/measles-elimination-field-guide>.
2. Pan American Health Organization/World Health Organization. Plan of Action for the Sustainability of Measles, Rubella, and Congenital Rubella Syndrome Elimination in the Americas 2018-2023: Final Report – 6 August 2024. Washington, D.C.: PAHO/WHO; 2024. Available from: <https://iris.paho.org/items/eadb9fcf-51d4-42e1-b278-85294fc53ebc>.
3. Pan American Health Organization/World Health Organization. Measles. Washington, D.C.: PAHO/WHO; 2025 [accessed 4 February 2026]. Available from: <https://www.paho.org/en/topics/measles>.
4. Pan American Health Organization/World Health Organization. PAHO calls for regional action after loss of measles elimination status in the Americas. Washington, D.C.: PAHO/WHO; 2025. Available from: <https://www.paho.org/en/news/10-11-2025-paho-calls-regional-action-americas-lose-measles-elimination-status>.
5. Pan American Health Organization/World Health Organization. Epidemiological Alert: Measles in the Region of the Americas, 3 February 2026. Washington, D.C.: PAHO/WHO; 2025. Available from: <https://www.paho.org/en/documents/epidemiological-alert-measles-americas-region-3-february-2026>.
6. World Health Organization. Measles. Geneva: WHO; 2025 [accessed 4 February 2026]. Available from: <https://www.who.int/news-room/fact-sheets/detail/measles>.
7. Heymann D.L.: Editor. Control of Communicable Diseases Manual. 21st ed. Washington, D.C.: American Public Health Association; 2022.
8. Mina et al. Long-term measles-induced immunomodulation increases overall childhood infectious disease mortality. Science. 2015 May 8;348(6235):694-9. Available from: <https://pubmed.ncbi.nlm.nih.gov/25954009>.
9. Pastor, D., Bravo, P., Durón, R., Tirso, C., Ortiz, C., Rey, G. Risk factors and control measures in measles outbreaks in countries of the Region of the Americas, 2017-2023. Pan American Journal of Public Health 2024; 48:10 p. Washington, D.C.: PAHO/WHO; 2024. Available from: <https://doi.org/10.26633/RPSP.2024.105>.
10. Pan American Health Organization/World Health Organization. Bulletin 2022 Epidemiological Weeks 1-52 Measles, Rubella, and Congenital Rubella Syndrome - Vol. 28, EW 1-52 of 2022. Washington, D.C.: PAHO/WHO; 2024. Available from: <https://www.paho.org/en/documents/bulletin-2022-epidemiological-weeks-1-52-measles-rubella-congenital-rubella>.
11. Pan American Health Organization / World Health Organization. Bulletin 2023 Epidemiological Weeks 1-52 Measles, Rubella, and Congenital Rubella Syndrome - Vol. 29, EW 1-52 of 2023. Washington, D.C.: PAHO/WHO; 2024. Available from: <https://www.paho.org/en/documents/bulletin-2023-epidemiological-weeks-1-52-measles-rubella-congenital-rubella>.
12. Pan American Health Organization / World Health Organization. Weekly Measles-Rubella Bulletin (53) – 3 January 2026. Washington, D.C.: PAHO/WHO; 2026. Available from: <https://www.paho.org/en/documents/measles-rubella-weekly-bulletin-53-3-january-2026>.
13. World Health Organization. Guide for clinical case management and infection prevention and control during a measles outbreak. Geneva: WHO; 2025. Available from: <https://iris.who.int/bitstream/handle/10665/331599/9789240002869-eng.pdf>.
14. World Health Organization. Measles vaccines: WHO position paper, April 2017. Geneva: WHO; 2017. Available from: <https://www.who.int/publications/i/item/who-wer9217-205-227>.

15. Pan American Health Organization. Tool for the diagnosis and care of patients with suspected arbovirus infection. Washington, D.C.: PAHO; 2016. Available from: <https://iris.paho.org/items/6defabc5-b2cf-4884-9e83-33c8bfc0469d>.
16. World Health Organization. Measles cases on the rise worldwide: 10.3 million people infected in 2023. Geneva: WHO; 2017. Available at: <https://www.who.int/es/news/item/14-11-2024-measles-cases-surge-worldwide--infecting-10.3-million-people-in-2023>.
17. World Health Organization. Immunization data—Provisional measles and rubella data. Geneva: WHO; 2025 [accessed 4 February 2026]. Available from: <https://www.who.int/news/item/14-11-2024-measles-cases-surge-worldwide--infecting-10.3-million-people-in-2023>.
18. Pan American Health Organization/World Health Organization. Immunization coverage throughout the life course in the Americas. Washington, D.C.: PAHO/WHO; 2025 [accessed 4 February 2026]. Available from: <https://paho-cim.shinyapps.io/immunization-dashboard/#>.
19. Pan American Health Organization/World Health Organization. Epidemiological updates and alerts. Available from: <https://www.paho.org/en/epidemiological-alerts-and-updates>.
20. Pan American Health Organization/World Health Organization. Reports of the Technical Advisory Group (TAG) on Vaccine-Preventable Diseases. Washington, D.C.: PAHO/WHO; 2025. Available from: <https://www.paho.org/en/technical-advisory-group-vaccine-preventable-diseases>.
21. Pan American Health Organization/World Health Organization. Immunization Toolkit: Revolving Fund for Access to Vaccines. Washington, D.C.: PAHO/WHO; 2025. Available from: <https://www.paho.org/en/topics/immunization/immunization-toolkit/immunization-toolkit-revolving-fund-access-vaccines>.