

Measles

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Source: Pan American Health Organization (PAHO)

The disease

Measles is a highly contagious, serious disease caused by a virus. Before the introduction of measles vaccine in 1963 and widespread vaccination, major epidemics occurred approximately every 2–3 years and measles caused an estimated 2.6 million deaths each year.

The disease remains one of the leading causes of death among young children globally, despite the availability of a safe and effective vaccine. Approximately 89 780 people died from measles in 2016 – mostly children under the age of 5 years.

Measles is caused by a virus in the paramyxovirus family and it is normally passed through direct contact and through the air. The virus infects the respiratory tract, then spreads throughout the body. Measles is a human disease and is not known to occur in animals.

Accelerated immunization activities have had a major impact on reducing measles deaths. During 2000–2016, measles vaccination prevented an estimated 20.4 million deaths. Global measles deaths have decreased by 84% from an estimated 550 100 in 2000* to 89 780 in 2016.

Signs and symptoms

The first sign of measles is usually a high fever, which begins about 10 to 12 days after exposure to the virus, and lasts 4 to 7 days. A runny nose, a cough, red and watery eyes, and small white spots inside the cheeks can develop in the initial stage. After several days, a rash erupts, usually on the face and upper neck. Over about 3 days, the rash spreads, eventually reaching the hands and feet. The rash lasts for 5 to 6 days, and then fades. On average, the rash occurs 14 days after exposure to the virus (within a range of 7 to 18 days).

Most measles-related deaths are caused by complications associated with the disease. Serious complications are more common in children under the age of 5, or adults over the age of 30. The most serious complications include blindness, encephalitis (an infection that causes brain swelling), severe diarrhoea and related dehydration, ear infections, or severe respiratory infections such as pneumonia. Severe measles is more likely among poorly nourished young children, especially those with insufficient vitamin A, or whose immune systems have been weakened by HIV/AIDS or other diseases.

In populations with high levels of malnutrition, particularly vitamin A deficiency, and a lack of adequate health care, about 3–6%, of measles cases result in death, and in displaced groups, up to 30% of cases result in death. Women infected while pregnant are also at risk of severe complications and the pregnancy may end in miscarriage or preterm delivery. People who recover from measles are immune for the rest of their lives.

Who is at risk?

Unvaccinated young children are at highest risk of measles and its complications, including death. Unvaccinated pregnant women are also at risk. Any non-immune person (who has not been vaccinated or was vaccinated but did not develop immunity) can become infected.

Measles is still common in many developing countries – particularly in parts of Africa and Asia. The overwhelming majority (more than 95%) of measles deaths occur in countries with low per capita incomes and weak health infrastructures.

Measles outbreaks can be particularly deadly in countries experiencing or recovering from a natural disaster or conflict. Damage to health infrastructure and health services interrupts routine immunization, and overcrowding in residential camps greatly increases the risk of infection.

Transmission

The highly contagious virus is spread by coughing and sneezing, close personal contact or direct contact with infected nasal or throat secretions.

The virus remains active and contagious in the air or on infected surfaces for up to 2 hours. It can be transmitted by an infected person from 4 days prior to the onset of the rash to 4 days after the rash erupts.

Measles outbreaks can result in epidemics that cause many deaths, especially among young, malnourished children. In countries where measles has been largely eliminated, cases imported from other countries remain an important source of infection.

Treatment

No specific antiviral treatment exists for measles virus.

Severe complications from measles can be avoided through supportive care that ensures good nutrition, adequate fluid intake and treatment of dehydration with WHO-recommended oral rehydration solution. This solution replaces fluids and other essential elements that are lost through diarrhoea or vomiting. Antibiotics should be prescribed to treat eye and ear infections, and pneumonia.

All children diagnosed with measles should receive two doses of vitamin A supplements, given 24 hours apart. This treatment restores low vitamin A levels during measles that occur even in well-nourished children and can help prevent eye damage and blindness. Vitamin A supplements have been shown to reduce the number of deaths from measles by 50%.

Prevention

Routine measles vaccination for children, combined with mass immunization campaigns in countries with high case and death rates, are key public health strategies to reduce global measles deaths. The measles vaccine has been in use for over 50 years. It is safe, effective and inexpensive. It costs approximately one US dollar to immunize a child against measles.

The measles vaccine is often incorporated with rubella and/or mumps vaccines. It is equally effective in the single or combined form. Adding rubella to measles vaccine increases the cost only slightly, and allows for shared delivery and

administration costs.

In 2016, about 85% of the world's children received 1 dose of measles vaccine by their first birthday through routine health services – up from 72% in 2000. Two doses of the vaccine are recommended to ensure immunity and prevent outbreaks, as about 15% of vaccinated children fail to develop immunity from the first dose.

Region of the Americas

Between 1 January and 7 August 2019, a total of 2,927 confirmed cases of measles, including one death, have been reported in 14 countries and territories of the Region of the Americas: Argentina (5 cases), the Bahamas (1 case), Brazil (1,045 cases), Canada (82 cases), Chile (4 cases), Colombia (175 cases), Costa Rica (10 cases), Cuba (1 case), Curaçao (1 case), Mexico (3 cases), Peru (2 cases), the United States of America (1,172 cases), Uruguay (9 cases), and the Bolivarian Republic of Venezuela (417 cases). Since the PAHO/WHO Epidemiological Update on Measles published on 18 June¹, there has been a 70% increase in the total number of confirmed cases of measles reported, with 7 countries and territories reporting additional confirmed cases: Brazil (923 cases), Canada (17 cases), Colombia (50 cases), Curaçao (1 case), Mexico (1 case), the United States (128 cases), and Venezuela (85 cases). In 2018, the highest proportion of confirmed cases in the Region of the Americas were reported in Brazil and Venezuela, while in 2019, the majority of confirmed cases have been reported from the United States (40%) and Brazil (36%).

The following is a summary of the epidemiological situation of measles for countries/territories that have reported confirmed cases in the past 6 weeks (18 June to 3 August). In Brazil, between epidemiological week (EW) 1 of 2018 and EW 31 of 2019, a total of 22,654 suspected cases of measles have been reported, of which 11,371 have been confirmed (10,326 in 2018 and 1,045 in 2019), including 12 deaths (all in 2018). Between 2018 and EW 31 of 2019, the cumulative national incidence rate is 5.4 cases per 100,000 population (5.0 cases per 100,000 population in 2018 and 0.4 cases per 100,000 population in 2019). In 2019, 9 federal units have reported confirmed cases: Amazonas (4 cases), Bahía (1 case), Minas Gerais (4 cases), Pará (53 cases), Rio de Janeiro (13 cases), Roraima (1 case), Santa Catarina (3 cases), São Paulo (965 cases), and Sergipe (1 case). However, only Bahía, Rio de Janeiro, and São Paulo have active outbreaks². In those federal units, genotype D8 has been identified. As of this Update, the most recent confirmed case in Brazil had rash onset on 25 July (EW 30 of 2019) and was reported in São Paulo State.

The epidemiological situation in the states of Bahía, Rio de Janeiro, and São Paulo is described below.

In the state of Bahía, between 1 January and 7 August 2019, a total of 167 suspected cases were reported, of which one case has been confirmed. The confirmed case had rash onset in EW 27 of 2019, and the most recent cases under investigation had rash onset in EW 30 of 2019. The age group for the confirmed case is 10 to 14 years. In the state of Rio de Janeiro, between 1 January and 7 August 2019, a total of 13 confirmed cases were reported. The most recent confirmed case had rash onset in EW 27 of 2019, and the most recent cases under investigation had rash onset in EW 30 of 2019. The three age groups with the highest cumulative incidence rates among confirmed cases are: children under 1 year (2.2 cases per 100,000 population); 1 to 4 years (0.13 cases per 100,000 population); and 5 to 9 years (0.10 cases per 100,000 population). In the state of São Paulo, between 1 January and 7 August 2019, a total of 965 confirmed cases were reported. The most recent confirmed case had rash onset in EW 30 of 2019, and the most recent cases under investigation had rash onset in EW 29 of 2019. Viral genotype D8 has been identified. The three age groups with the highest cumulative incidence rates among confirmed cases are: children under 1 year (9.5 cases per 100,000 population); 1 to 4 years (3.6 cases per 100,000 population); and 20 to 29 years (2.9 cases per 100,000 population).

In Canada, between EW 1 and EW 29 of 2019, a total of 82 confirmed cases of

measles were reported in the provinces of Alberta, British Columbia, Manitoba, New Brunswick, Ontario, Quebec, Saskatchewan, and the Northwest Territories. Of the total confirmed cases, 65 were genotyped, for which genotype B3 (17 cases) and genotype D8 (48 cases) were identified, similar to those circulating globally.

In Colombia³, between EW 10 of 2018 and EW 30 of 2019, a total of 10,305 suspected cases of measles were reported (7,186 in 2018 and 3,119 in 2019), of which 383 were confirmed (2084 with rash onset in 2018 and 175 in 2019), including one death. The death, related to complications due to measles, corresponds to a 3-month-old Colombian male of the Wayúu indigenous ethnic group, from Uribia in La Guajira. Genotyping performed on samples for 112 cases identified genotype D8, similar to that circulating in Venezuela and other countries in the Region. In 2019, confirmed cases have been reported in the departments of Atlántico, César, Córdoba, Cundinamarca, La Guajira, Norte de Santander, and in the districts of Barranquilla, Cartagena, and Bogotá. In the past four weeks (EW 26 – EW 30), a total of 28 cases were confirmed, in La Guajira (21 cases), Norte de Santander (6 cases), and Cartagena District (1 case). The most recent confirmed case (imported) had rash onset on 2 July 2019, and the most recent suspected case under investigation had rash onset on 5 August 2019.

In Curaçao, one imported laboratory-confirmed case of measles has been reported. The case is a 51-year-old male resident of São Paulo, Brazil, with a history of travel to Europe. The case had a history of measles vaccination (one dose at the age of 4 years) and had rash onset on 17 July 2019. The viral genotype and lineage identified by the National Institute of Public Health and Environment (RIVM, per its acronym in Dutch) in the Netherlands in a urine sample was genotype D8, lineage MVs / Gir Somnath.IND/42.16, similar to the strain circulating recently in Europe. In Mexico, one laboratory-confirmed case of measles was recently reported in an 11-month-old female resident of Ecatepec Municipality, Mexico State. Rash onset was on 20 July 2019. The case had no history of travel outside of the country, and likely acquired the infection when in contact with European citizens during a mass gathering event in Mexico City. The viral genotype is pending. Between EW 1 and EW 29 of 2019, a total of 3 confirmed measles cases have been reported in Mexico, 2 classified as imported cases and the most recent classified as import-related. In the United States, between 1 January and 1 August 2019, a total of 1,1725 confirmed cases of measles were reported in 30 states: Alaska, Arizona, California, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Missouri, New Mexico, Nevada, New

Hampshire, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee, Texas, Virginia, and Washington. Currently, measles outbreaks are ongoing⁶ in 4 states: California (Los Angeles County), New York (New York City and Rockland County), Texas (El Paso), and Washington. These outbreaks are linked to travelers that visited other countries, such as Israel, Ukraine, and the Philippines. The majority of cases were unvaccinated.

This information is regularly updated on the United States Centers for Disease Control and Prevention (CDC) website, available at: <https://bit.ly/2iMFK71>. In Venezuela, the outbreak that began in 2017 remains ongoing. Between EW 26 of 2017 and EW 29 of 2019, a total of 10,329 suspected cases (1,307 in 2017, 8,005 in 2018⁷, and 1,017 in 2019) were reported, of which 6,923 were confirmed (727 in 2017, 5,779 in 2018, and 417 in 2019). In 2018, cases were confirmed by laboratory (2,272 cases), clinical diagnosis (2,899 cases), and epidemiological link (608 cases). In 2019, cases were confirmed by laboratory (189 cases), clinical diagnosis (170 cases), and epidemiological link (58 cases). In 2019, no deaths have been reported, whereas during 2017-2018, 81 deaths were reported: 2 in 2017 (in Bolívar) and 79 in 2018 (37 in Delta Amacuro, 27 in Amazonas, 9 in Miranda, 4 in the Capital District, 1 in Bolívar and 1 in Vargas) ⁸. The most recent laboratory-confirmed case had rash onset on 4 July 2019, from Jesús María Semprun Municipality, Jesús María Semprun Parish, Zulia State. The average national incidence rate during 2017-2019 is 22 cases per 100,000 population. The highest incidence rates have been reported in Delta Amacuro (215 cases per 100,000 population), the Capital District (127 cases per 100,000 population), Amazonas (85 cases per 100,000 population), Bolívar (56 cases per 100,000 population), Vargas (48 cases per 100,000 population), and Miranda (39 cases per 100,000 population). Confirmed cases with dates of rash onset between EW 1 and EW 29 of 2019 were reported from Zulia (229 cases), Anzoátegui (145 cases), Carabobo (17 cases), the Capital District (7 cases), Miranda (4 cases), Monagas (4 cases), Nueva Esparta (3 cases), Cojedes (2 cases), Yaracuy (2 cases), Aragua (1 case), Sucre (1 case), Amazonas (1), and Bolívar (1).

Measles in indigenous communities

In Brazil, a total of 183 suspected cases have been reported among indigenous populations, of which 145 were confirmed in Roraima State and 2 (both fatal) in Pará State. The majority of confirmed cases in Roraima State are from the Auaris Indigenous Health District, which borders Venezuela. In 2019, there have been no suspected cases of measles reported in indigenous communities. In Colombia,

between EW 10 of 2018 and EW 30 of 2019, 91 cases of measles were confirmed among indigenous populations (4 in 2018 and 87 in 2019), all among the Wayuu ethnic group in La Guajira Department. In Venezuela, between EW 1 and EW 52 of 2018, there were 541 confirmed cases of measles reported among indigenous populations in the states of Amazonas⁹ (162 cases, of which 135 were in the Sanema, 24 in the Yanomami¹⁰, 2 in the Yekuana and 1 in the Baniva ethnic groups); Bolivar (9 in the Kariña and 1 in the Pemón ethnic groups); the Capital District (1 case in the Wayú ethnic group); Delta Amacuro (332 cases, all in the Warao ethnic group); Monagas (22 cases, of which 20 were in the Warao, 1 in the Shaima, and 1 in the Eñepa ethnic groups); and Zulia (9 cases in the Wayú ethnic group). Additionally, 62 deaths were reported, of which 35 were in Delta Amacuro (all in the Warao ethnic group) and 27 were in Amazonas (26 in the Sanema and 1 in the Yanomami ethnic groups). In 2019, Venezuelan authorities have not reported any measles cases in the indigenous communities. Advice to national authorities Given the continued imported cases of measles from other regions and the ongoing outbreaks in countries and territories of the Region of the Americas, the Pan American Health Organization / World Health Organization (PAHO/WHO) reinforces the recommendations made since February 2015 to all Member States, to:

- Vaccinate to maintain homogenous coverage of 95% with the first and second doses of the measles, mumps and rubella (MMR) vaccine in all municipalities.
- Vaccinate at-risk populations (without proof of vaccination or immunity against measles and rubella), such as healthcare workers, persons working in tourism and transportation (hotels, airports, border crossings, mass urban transportation, and others), and international travelers.
- Maintain a vaccine stock of the measles-rubella (MR) and/or MMR vaccine and syringes/supplies for prevention and control actions of imported cases.
- Identify migratory flows, both external (arrival of foreigners or persons from the same country who visit countries with ongoing outbreaks) and internal (displaced populations) within each country, including indigenous populations and other vulnerable populations, in order to facilitate access to vaccination services according to the national scheme.

- Implement a plan to immunize migrant populations in high-traffic border areas, prioritizing those considered at-risk, including both migrants and local residents, in these municipalities.
- Increase vaccination coverage in order to increase population immunity.
- Strengthen epidemiological surveillance for measles to achieve timely detection of all suspected cases in public, private, and social security healthcare facilities in order to contain the risk through timely public health actions and ensure that samples are received by laboratories within 5 days of collection and that laboratory results are available in a timely manner.
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During an outbreak and when it is not possible to confirm the suspected cases by laboratory, classifications of a confirmed case may be based on clinical criteria (fever, rash, cough, coryza and conjunctivitis) and epidemiological link, in order to not delay the response actions.

- Strengthen epidemiological surveillance in border areas to rapidly detect and respond to highly suspected cases of measles.
- Provide a rapid response to imported measles cases to avoid the re-establishment of endemic transmission, through the activation of rapid response teams trained for this purpose, and by implementing national rapid response protocols when there are imported cases. Once a rapid response team has been activated, continued coordination between the national and local levels must be ensured, with permanent and fluid communication channels between all levels (national, sub-national, and local).
- During outbreaks, establish adequate hospital case management to avoid nosocomial transmission, with appropriate referral of patients to isolation rooms (for any level of care) and avoiding contact with other patients in waiting rooms and/or other hospital rooms. Additionally, PAHO/WHO recommends that Member States advise all travelers aged 6 months¹¹ and older who cannot show proof of vaccination or immunity to receive the measles and rubella vaccine, preferably the triple viral vaccine (MMR), at least two weeks prior traveling to areas where measles transmission has been documented. PAHO/WHO recommendations regarding advice for travelers are available in the 27 October 2017 PAHO/WHO Epidemiological Update on Measles.

RECOMMENDATIONS TO TRAVELERS

Travelers, regardless of age, who go to countries outside the Americas that do not prove prior measles vaccination should receive a dose of the vaccine

Some countries in Europe, Africa and Asia do not have very extensive vaccine coverage against measles. In this sense, it is recommended that professionals from the area of tourism and travelers residing in Brazil, who are destined for countries belonging to other continents other than the Americas, should seek a health post at least fifteen days before travel to be vaccinated.

In the recent return trip abroad, travelers should be aware: if they develop fever, red spots on the body, accompanied by a cough or runny nose or conjunctivitis, they may be signs and symptoms of measles within 30 days of their return. It is recommended that you immediately seek a health service, inform your travel itinerary, remain in social isolation and avoid circulating in public places.

VOCÊ SABIA QUE...

pode pegar Sarampo?
Sarampo é uma doença grave?
Sarampo não é uma doença só de criança?
Sarampo tem complicações e pode levar à morte?
Sarampo pode ser prevenido com vacina?

Como se pega ?

O sarampo é uma doença que passa com facilidade de uma pessoa para outra, por meio da fala, tosse e do espirro.



Quais são os sintomas?

- Febre maior que 38° C.
- Mal-estar geral.
- Dor de cabeça.
- Olhos vermelhos/Conjuntivite.
- Tosse.
- Manchas vermelhas que aparecem primeiro no rosto e atrás das orelhas. Depois, elas se espalham por todo o corpo e costumam descamar.

Vacinar toda criança a partir de 1 ano de idade com a Tríplice Viral contra o Sarampo, Caxumba e Rubéola e aos 15 meses com a Tetraviral contra Sarampo, Rubéola, Caxumba e Varicela. Vacinar os adultos até 49 anos com a Tríplice Viral ou com a Dupla Viral contra Sarampo e Rubéola.

Fique atento!

Se você viajou ou teve contato com pessoas que viajaram para fora do Brasil ou para lugares com surto de Sarampo e que estão com sintomas da doença procure a Unidade de Saúde mais próxima.

Não esqueça!

Leve a sua Caderneta de Vacinação até a Unidade de Saúde mais próxima para verificar se suas vacinas estão em dia.