

# Epidemiological Alert Measles in the Americas Region

28 October 2024

Given the recent identification of measles clusters and cases in countries in the Americas Region, the Pan American Health Organization / World Health Organization (PAHO/WHO) recommends that Member States continue to strengthen vaccination, epidemiological surveillance, and rapid response activities, especially in populations known to be reluctant to be vaccinated and in communities surrounding or hosting these populations. The implementation of active community, institutional, and laboratory searches, in addition to complementary vaccination activities to close possible immunity gaps, is also recommended.

## Global overview

According to monthly measles and rubella surveillance data published by the World Health Organization (WHO) in 2024, as of 15 October 2024, 502,657 suspected measles cases were reported in 182 Member States in the six WHO regions, of which 283,667 (56%) were confirmed. In 2023, 623,410 suspected measles cases were reported in 176 WHO Member States, of which 321,922 (52%) were confirmed (1, 2).

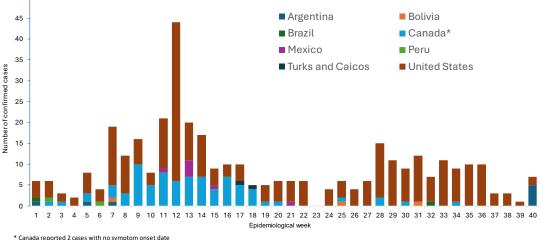
## Summary of the situation in the Americas Region

In 2024, between epidemiological week (EW) 1 and EW 40, in the Americas Region, there have been 14,373 suspected measles cases, of which 376 cases have been confirmed in Argentina (n= 11), the Plurinational State of Bolivia (n= 3), Brazil (n= 2), Canada (n= 82), the United States of America (n= 267), the Turks and Caicos Islands (n= 2), Mexico (n= 7), and Peru (n= 2) (**Figure 1**) (3, 4, 5, 6).

The distribution of confirmed cases by EW shows an increase in cases starting from EW 7 of 2024, with the maximum number of cases recorded in EW 12. Since EW 13 of 2024 there has been a general downward trend that continued up to EW 40. According to the information available on the confirmed cases, the age groups with the highest proportion of cases were those aged 1-4 years, 5-9 years, and 20-29 years, with 26%, 25%, and 25%, respectively. Regarding vaccination history, 57% of cases were not vaccinated, while this information was unknown or absent in 28% of cases (**Figure 2**) (4).

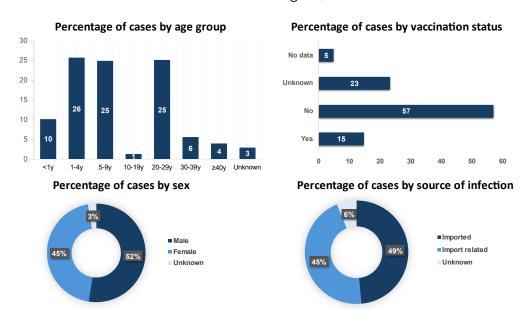
<sup>&</sup>lt;sup>1</sup> Includes cases confirmed by laboratory, clinical, or epidemiological criteria.

**Figure 1.** Confirmed cases of measles by epidemiological week in the Americas Region, 2024



**Source:** Adapted from the Pan American Health Organization. Integrated Surveillance Information System (ISIS) for polio, measles, rubella, and congenital rubella syndrome and country report to CIM/PAHO. Washington, D.C.: PAHO; 2024 [cited 16 October 2024]. Unpublished, and from the U.S. Centers for Disease Control and Prevention. Measles cases and outbreaks. Atlanta: CDC; 2024 [cited 15 October 2024]. Available from: <a href="https://www.cdc.gov/measles/data-research/index.html">https://www.cdc.gov/measles/data-research/index.html</a>.

**Figure 2.** Percent distribution of confirmed measles cases by age group, sex, vaccination status, and source of infection in the Americas Region, 2024.



**Source:** Adapted from the Pan American Health Organization. Integrated Surveillance Information System (ISIS) for polio, measles, rubella, and congenital rubella syndrome and country report to CIM/PAHO. Washington, D.C.: PAHO; 2024 [cited 16 October 2024]. Unpublished.

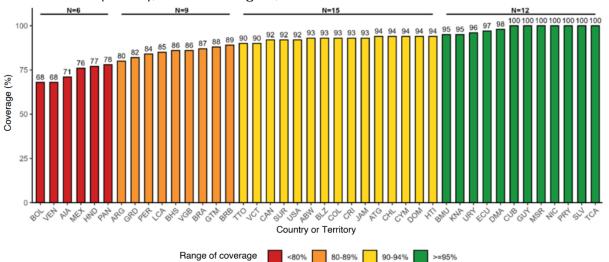
#### Vaccination coverage in the Americas Region

During 2024, the Pan American Health Organization / World Health Organization (PAHO/WHO) issued alerts on two occasions (29 January and 3 June) regarding the decline in coverage of the first and second doses of measles, mumps, and rubella vaccine (MMR1 and MMR2) and the occurrence of measles cases in countries and territories of the Americas Region (7, 8). Data on vaccination coverage for measles and other diseases in the Americas Region are available on the PAHO dashboard Immunization across the life course in the Americas, which is current as of October 3, 2024 (9).

An analysis of the range of MMR1 and MMR2 vaccine coverage for the year 2023 in the countries and territories of the Americas Region is presented. Regarding the application of the first dose of MMR1, 28.6% (12/42) of the countries and territories of the Region have coverage levels greater than 95%, 35.7% (15/42) have coverage levels between 90-94%, 21.4% (9/42) have coverage levels between 80-89%, and 14.3% (6/42) have coverage levels of less than 80% (**Figure 3**).

In regard to the application of the second dose of MMR2, only 16.7% (7/42) of the countries and territories have a coverage level of more than 95%, while 50.0% (21/42) have a coverage level of less than 80% (**Figure 4**). Coverage for the Americas Region is 87% for MMR1 and 76% for MMR2 (9).

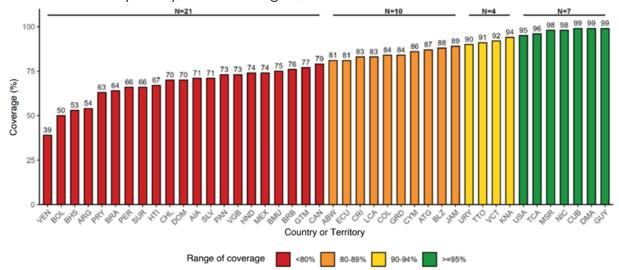
**Figure 3**. Distribution of countries and territories\* by range of coverage for the first dose of MMR vaccine (MMR1), Americas Region, 2023.



\*Note - the acronyms in alphabetical order used to indicate the country and/or territory are: ABW: Aruba; AIA: Anguilla; ARG: Argentina; ATG: Antigua and Barbuda; BHS: Bahamas; BLZ: Belize; BMU: Bermuda; BOL: Bolivia; 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; SLV: El Salvador; 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.

**Source:** Adapted from Pan American Health Organization. Integrated Surveillance Information System (ISIS) for polio, measles, rubella, and congenital rubella syndrome and country report to CIM/PAHO. Washington, D.C.: PAHO; 2024 [cited 16 October 2024]. Unpublished.

**Figure 4.** Distribution of countries and territories\* by range of coverage for the second dose of MMR vaccine (MMR2), Americas Region, 2023.



\*Note - the acronyms in alphabetical order used to indicate the country and/or territory are: ABW: Aruba; AIA: Anguilla; ARG: Argentina; ATG: Antigua and Barbuda; BHS: Bahamas; BLZ: Belize; BMU: Bermuda; BOL: Bolivia; 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; SLV: El Salvador; 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.

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The following is an update of the epidemiological situation in countries and territories that have reported confirmed measles cases in 2024.

In Argentina, between EW 1 and EW 40 of 2024, 11 cases of measles have been confirmed, eight of which correspond to the same transmission chain in a family (5). On 8 October, the National Ministry of Health of Argentina issued an epidemiological alert (10) upon confirmation of three cases of measles in Lamarque, Río Negro province, in persons with no history of travel, who had had contact with persons who had traveled and upon their return had presented compatible symptoms. On 4 October 2024, the rapid response team of the province of Río Negro initiated the outbreak investigation due to a rumor and subsequently identified symptomatic cases as well as persons who had no symptoms at the time but reported having previously had them. For this reason, samples were collected. As of EW 40 of 2024, eight cases were confirmed in this outbreak, two of which had a history of recent travel to Colonia Piraí, Santa Cruz de la Sierra, Bolivia (5), the same area where a confirmed case of measles had been reported in August. The remaining six cases are relatives of the two cases that had traveled. Other family contacts are under investigation. No symptomatic cases were reported outside the family. Investigations indicate that this outbreak originates from the two imported cases, where the six secondary cases related to this importation were later identified. All positive cases presented IgM antibody detection in the reference laboratory of the province and were confirmed in the National Reference Laboratory of INEI-ANLIS "Carlos G. Malbrán". Two cases also had measles virus viral genome detection by RtqPCR in urine and nasopharyngeal swab. The symptomatic persons identified had no

history of vaccination against measles. The confirmed cases correspond to persons between 18 months and 34 years of age. The rapid outbreak response team of the province of Río Negro continues with the epidemiological investigation and the corresponding outbreak control actions (5). In this outbreak, genotype B3 (Sequence ID 8532), which was previously reported in the United States in measles cases in the state of Oregon, was identified (5).

Previously in Argentina, in January 2024, a case was confirmed in a 19-month-old infant with no history of vaccination in the province of Salta; the D8 genotype MVs/Patan.IND/16.19 lineage was detected. The source was not identified, therefore the case was classified as a source of unknown origin. There were no secondary cases (5). In February 2024, two cases were reported in the Autonomous City of Buenos Aires in a six-year-old male (imported case) and his 13-month-old brother (import-related). The children were residents of Barcelona, Spain, and were traveling in Argentina when they were detected. They were not vaccinated against measles. The genotype detected was B3, MVs/Manchester.GBR/44.23 lineage (5).

In **Bolivia**, between EW 1 and EW 41 of 2024, three cases of measles were confirmed. On 29 February 2024, the Bolivian Ministry of Health and Sports confirmed a case of measles in the city of Bermejo, Tarija Department, Bolivia. The case was a seven-year-old female who presented with fever on 13 February and onset of rash on 15 February. Samples were sent to the National Reference Laboratory of the National Center for Tropical Diseases (CENETROP per its acronym in Spanish) where the infection was confirmed by positive IgM for measles. The case had a history of recent travel to the city of El Alto in the department of La Paz, in the interior of the country. The child presented favorable clinical evolution. As of 15 October 2024, the source of infection has not been identified and no secondary cases have been detected (11).

In addition, on 3 July 2024, the Bolivia International Health Regulations National Focal Point (IHR NFP) reported a case of measles, the second case reported in 2024. The case was a two-year-old male resident of the department of Oruro, with onset of symptoms on 20 June. The laboratory report date was 1 July 2024 (positive IgM result) at the National Institute of Health Laboratories. The patient reported a history of travel to the municipality of Colquiri, in the department of La Paz, making this the probable place of exposure (12). The third confirmed measles case in Bolivia was reported on 8 August 2024, by the Bolivian Ministry of Health and Sports. It was an imported case corresponding to a 42-year-old person residing in the United States, of Russian origin, who was treated at a Resident Community Health Center, in the municipality of San Pedro, in the Russian colony Piraí, department of Santa Cruz. The case reported recent contact with a confirmed case of measles in the state of Oregon, in the United States (13,14). As of EW 40 of 2024, Bolivia has not reported any new cases of measles related to this importation, nor have any additional cases been identified (14).

In **Brazil**, between EW 1 and EW 39 of 2024, two cases of measles were confirmed. The first case was confirmed in the state of Rio Grande do Sul and the second in the state of Minas Gerais. The case in Rio Grande do Sul corresponded to a five-year-old male from Pakistan, with no history of vaccination, who entered the country on 26 December 2023 through Guarulhos/São Paulo airport. The case had a connection the same day at Porto Alegre/Rio Grande do Sul airport. On 27 December 2023, the case traveled by bus from Porto Alegre to Rio Grande, presenting nonspecific symptoms of measles and, due to a worsening health status, sought medical attention at the Emergency Care Unit on 2 January 2024, where the case remained isolated. On 4 January, a rash began and Koplik's spots, characteristic of a

measles case, were identified. The case was confirmed by serological tests performed at the Central Public Health Laboratory of Rio Grande do Sul (LACEN) and molecular biology tests (rRT-PCR and sequencing) performed at the Fiocruz Reference Laboratory in Rio de Janeiro, which confirmed measles, genotype B3. The case presented a favorable evolution, and no secondary cases of the disease were identified (15, 16).

Regarding the second confirmed case, on 4 August 2024, the Brazilian Ministry of Health received information about a suspected case of measles in the state of Minas Gerais. The case corresponds to a 17-year-old vaccinated male from England who entered Brazil on 31 August 2024, through the Guarulhos/São Paulo airport. On the same day, the case took a cab to Belo Horizonte, in the state of Minas Gerais, presenting symptoms of productive cough, fever, body ache, and headache. The case first sought medical attention on 3 August. On 4 August, the case had onset of rash. The case was laboratory confirmed by rRT-PCR and sequencing was performed at the Fiocruz Reference Laboratory in Rio de Janeiro, confirming measles genotype D8 and Victória lineage. The case presented a favorable evolution, and no secondary cases of the disease were identified. In Brazil, the last endemic case of measles was reported in June 2022 (16).

In **Canada**, 80 laboratory-confirmed measles cases plus two cases by epidemiological link were reported between EW 1 and EW 41 of 2024, including one fatal case. Of the confirmed cases, 30 were imported, 45 were import-related, and seven were of unknown origin. 65% of cases were reported in the province of Quebec (n= 53), followed by 30% in the province of Ontario (n= 25). Sixty-two percent of cases were over 18 years of age, followed by 28% of cases in the under-five age group. The fatal case reported was a child under five years of age, with no history of vaccination, residing in the province of Ontario. B3 and D8 genotypes were identified in 53 and 18 of the confirmed cases, respectively (17, 18).

In the United States, between EW 1 and EW 42 of 2024, 269 confirmed measles cases were identified in 32 jurisdictions, including New York City, the District of Columbia, and the states of Arizona, California, Florida, Georgia, Idaho, Illinois, Indiana, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, Washington, West Virginia, and Wisconsin (6). A total of 15 outbreaks have been reported,<sup>2</sup> the largest in a migrant shelter in Chicago in the state of Illinois (19). Overall, 71% of the reported cases (n= 191) are associated with these 15 outbreaks. The onset of the rash of the last confirmed case in the United States is 13 October. 41% of the cases are in the under-five years age group (n=111), followed by the 5 to 19 years and older age group with 31% of the cases (n=83). Regarding the vaccination history in the confirmed cases, 66% were not vaccinated, 22% had no known vaccination history, 7% had received one dose of measles, rubella and mumps vaccine (MMR), and 4% had received two doses of MMR. Forty percent of the cases were hospitalized (n= 108) for isolation or management of complications. Hospital isolation was necessary during the Chicago, Illinois outbreak due to a lack of isolation facilities, which contributed to an increase in the typical annual measles hospitalization rate of 20%. Of the 211 cases in the United States not associated with the Chicago, Illinois outbreak, 29% (n= 61) were hospitalized. Measles virus genotype B3 was identified in 54 (20%) cases and measles virus genotype D8 was identified in 152 (78%) confirmed cases (6, 20).

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<sup>&</sup>lt;sup>2</sup> Definition of measles outbreak used by the United States: three or more related cases (6)

In **Mexico**, between EW 1 and EW 41 of 2024, seven cases of measles have been confirmed. The first case reported in 2024 was a four-year-old male who arrived in Mexico City on 14 March 2024 from London, England, with onset of rash on the same date, during the flight. The case was detected by the health authority at the Mexico City International Airport and was confirmed on 15 March by the Institute of Diagnosis and Epidemiological Reference (InDRE per its acronym in Spanish). Related to this case, the second, third, fourth, and fifth cases were identified, representing four additional cases: three adults and a six-month-old child who were in contact with the index case during the flight and at the airport in Mexico. For these cases, sequencing and genotyping studies identified the D8 genotype with MVs/Patan.IND/16.19 lineage. The sixth case corresponds to an 11-year-old male, resident of Mexico City, who had onset of symptoms on 10 April 2024, with no history of vaccination and no history of travel outside the area of residence. The epidemiological investigation concluded that it was a secondary case to the fourth case, with a source of infection associated with importation (21).

On 20 May 2024, a probable case of measles was identified by the Health Services of the State of Guanajuato, Mexico, in an 18-year-old male of Turkish nationality, with a history of travel to Guatemala and El Salvador. The case was laboratory confirmed as measles on 23 May. Sequencing and genotyping studies determined the case as D8 genotype with MVs/Bern.CHE/17.24/2 lineage. The case was followed up only by telephone, without being able to establish the exact residence within Mexico. Through the National Institute of Migration, it was confirmed that the patient moved to the United States on 25 May 2024 (21).

In **Peru**, between EW 1 and EW 41 of 2024, two cases of measles were confirmed. The first case was a 21-year-old male, resident of the district of Surco, Lima, Peru, with no evidence of measles vaccination, with a history of travel to several European countries, with onset of symptoms on 2 January 2024. The case tested positive for IgM and PCR at the National Reference Laboratory on 27 January. The second case confirmed in Peru in 2024 was a tenmonth-old female who had no history of vaccination due to her age or travel history; the case is a resident of the district of Surco, Lima, Peru and had onset of symptoms and onset of rash on 4 and 7 February, respectively. The case tested positive for IgM and PCR on 14 February at the Peruvian National Reference Laboratory (22).

In the **Turks and Caicos** Islands, two cases of measles were reported during EW 20 of 2024 and confirmed by the Caribbean Public Health Agency (CARPHA) laboratory. These cases are the first measles cases reported in the Turks and Caicos Islands since 1991. The first case is a six-year-old male, resident of the island of Providenciales, with no history of measles vaccination and no history of travel and had onset of symptoms on 29 April 2024. The second case is a 21-year-old male, with no history of vaccination and no history of travel, resident of Providenciales Island, with onset of symptoms on 18 April 2024. These two cases are related by epidemiological link and, as of 15 October 2024, the source of infection has not been identified and no secondary cases have been detected (23).

## **Guidance to Member States**

The Pan American Health Organization / World Health Organization (PAHO/WHO) recommends that Member States continue their efforts to strengthen surveillance, rapid response, and achieve adequate vaccination coverage against measles, mumps, and rubella as these are the three major strategies to interrupt endemic transmission of these viruses.

There are several risk factors that could further the spread of measles or rubella virus from an imported case, these are: 1) low coverage of the first and second doses of measles, mumps and rubella vaccine (MMR1 and MMR2) in most countries and territories in the region; 2) gaps in the performance of measles/rubella integrated surveillance indicators (24); 3) active circulation of the virus in several countries in other regions of the world; 4) the significant increase in the movement of people within the Americas Region and from other regions of the world; and 5) the increase in dengue cases in the Region that could mask potential measles or rubella cases, due to the similarity of the clinical manifestations of these diseases.

Considering the aforementioned risk factors and the current regional context, recommendations related to vaccination, surveillance, and response are provided below (25, 26):

#### Vaccination

- a) Based on the results of the measles and rubella risk analysis, implement vaccination intensification activities to close the coverage gaps as a priority in high-risk municipalities, mainly in those that are considered tourist sites or through which there is a high transit of people, or with communities that are reluctant to be vaccinated.
- b) Consider the possibility of offering travelers or persons in transit through the country, the missing vaccine doses according to the age of the person and the appropriate vaccination schedule, either through medical brigades or fixed vaccination posts.
- c) Make additional efforts to provide vaccination coverage to reluctant populations, including awareness-raising activities for local authorities, community and religious leaders, or other social actors and government sectors, such as education, that are strategic partners. Likewise, carry out complementary vaccination activities in host populations or communities neighboring reluctant populations to close possible gaps in population immunity.

#### Surveillance

- a) Strengthen epidemiological surveillance in high-risk areas, border areas and areas with epidemiological silence through the implementation of active searches in health services and in the community.
- b) Implement active laboratory screening of serum samples collected for dengue or arboviral disease surveillance to detect measles and rubella cases that may have gone undetected. Guidance on measles and rubella testing in the Americas Region laboratory network is encouraged (27).
- c) Obtain serum, nasopharyngeal swab, and urine specimens (27) in any suspected measles or rubella case for laboratory confirmation by serological and molecular real-time RT-PCR

testing and genomic sequencing to document the genotype associated with the infection. If the laboratory does not have the capacity to diagnose measles and rubella, it is recommended that specimens be referred to the appropriate reference laboratory for testing to confirm or rule out the case, in a timely manner as defined in the surveillance system. Member States are encouraged to ensure proper storage, preservation, and transport of samples in accordance with international recommendations for the transport of infectious substances (28).

## Rapid response

- a) Review and adjust -if necessary- operational preparedness and rapid response plans; and strengthen the capacity of health systems mainly in the risk areas mentioned in the section on **Vaccination**.
- b) Initiate a timely response to imported cases of measles or rubella, including activation of trained rapid response teams and implementation of national rapid response protocols (29, 30).
- c) Establish adequate in-hospital case management to avoid nosocomial transmission, mainly in outbreak situations, maintaining an adequate referral flow of patients in isolation wards (at any level of care), avoiding contact with other patients in waiting rooms and/or hospital wards of patients hospitalized for other causes.

### Mass gatherings and international travelers

The following is a set of guidelines that health authorities can implement in the context of mass gatherings and international travelers.

#### In relation to travelers

## Before the trip

PAHO/WHO recommends to Member States that any traveler 6 months of age<sup>3</sup> and older who cannot show proof of vaccination or immunity be advised to **receive a dose of measles and rubella vaccine**, preferably MMR, **at least two weeks before traveling to areas where measles transmission has been documented.** PAHO/WHO recommendations regarding advice for travelers are available in the Epidemiological Update on measles published by PAHO/WHO on 27 October 2017 (31).

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

- o Fever.
- Exanthema.
- o Cough, coryza (runny nose) or conjunctivitis (red eyes),
- Joint pain,
- o Lymphadenopathy (swollen lymph nodes).

<sup>&</sup>lt;sup>3</sup> The dose of MMR or MR vaccine administered to children 6 to 11 months of age does not replace the first dose of the recommended scheme at 12 months of age.

## During the trip

Recommend to travelers that if during their trip they present symptoms that make them suspect that they have contracted measles or rubella, they should do the following:

- Seek immediate attention from a health care professional.
- Avoid close contact with others for seven days from the onset of the rash.
- o Remain in the place where you are staying (e.g., hotel or home, etc.), except to go to the doctor, or as recommended by the health care professional.
- Avoid traveling and visiting public places.

#### On their return

- o If travelers suspect that they have contracted measles or rubella upon return, they should contact their health service.
- o If the traveler presents any of the above symptoms, it is recommended to inform the physician about the trip.

## • Regarding physicians and other health professionals

PAHO/WHO recommends:

- o Promote the practice of requesting immunization/vaccination testing for measles and rubella in the health care sector (medical, administrative and security personnel).
- Sensitize private sector health care workers on the need for immediate notification of any measles or rubella case, to ensure a timely response by national public health authorities according to the standards of the national surveillance and response system.
- Continue to remind healthcare personnel of the need to inquire about patients' travel history.

## • Identification and contact tracing of confirmed measles cases

- Carry out activities for the identification and follow-up of contacts identified and present in the **national territory**, in accordance with the country's guidelines and directives.
- Take into account the international implications that may arise in the follow-up of contacts, and consider the following scenarios and operational aspects in the development of 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 persons. 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 can be vigilant in detecting suspected cases.
  - b. When a case is identified locally and depending on when detection occurs in the natural history of the disease, it may require:

- Current case: National authorities should obtain information on the possible location of contacts abroad and inform the relevant national authorities of the country where the contact is presumed to be located accordingly.
- Retrospectively identified case: according to the travel history of the case, the
  national authorities should inform the corresponding national authorities as this
  situation could be the first sign of virus circulation, or an outbreak, in the other
  country/countries concerned.
- c. Conduct active institutional and community searches in order to rapidly detect cases among those contacts that have not been identified in the outbreak investigation, following the route of travel of the case(s).

## Operational remarks

- If there is no involvement of international means of transport (e.g., planes, cruise ships, trains) in the possible exposure scenarios for a case/s, national authorities should communicate with their counterpart/s in the other countries through the relevant IHR National Focal Point (NFP) or through other existing bilateral and multilateral programmatic mechanisms, with a copy to the WHO Regional IHR Contact Point. If deemed necessary, national authorities may request the support of the WHO Regional IHR Contact Point for the Americas to facilitate communications related to international contact tracing.
- If international means of transport (e.g., aircraft, cruise ships, trains) are involved as a
  possible scenario in exposure to a case/s, the national port health authorities or the
  one acting in their stead should activate existing mechanisms to obtain relevant
  information from companies (e.g., airlines) in order to locate travelers or establish such
  mechanisms in case they are absent. For further communication between national
  authorities see above.

## Channels for the dissemination of guidelines

PAHO/WHO recommends that national authorities consider disseminating the guidelines in this document through:

- Public awareness campaigns to promote and improve the health of travelers before
  and after their trip so that they acquire responsible behaviors in relation to vaccination
  against measles and know the signs and symptoms of measles. For this activity, it is also
  recommended to take into account health care services or clinics for travelers,
  airports, ports, train and bus stations, airlines operating in the country, among others.
- Travel agencies, tourism-related entities and diplomatic corps should also be aware of and disseminate the necessary recommendations that a traveler should take into account prior to travel.
- Communication to physicians and other health workers of the contents of existing national surveillance guidelines, as well as timely dissemination of any new protocols that the country develops in relation to travelers.

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