



Merlin disease code: 05590 Measles (Rubeola)

[Paper case report form](#)



Specimens for all cases must be sent to the Bureau of Public Health Laboratories

Merlin extended data required

## Clinical criteria for diagnosis

### Confirmatory:

Both of the following in the absence of a more likely diagnosis:

- Fever (does not need to reach  $\geq 101.0^{\circ}\text{F}$  [ $>38.3^{\circ}\text{C}$ ])
- **And** rash (does not need to last  $\geq 3$  days).

### Presumptive:

All of the following in the absence of a more likely diagnosis:

- Generalized maculopapular rash of  $\geq 3$  days;
- **And** temperature  $\geq 101.0^{\circ}\text{F}$  ( $\geq 38.3^{\circ}\text{C}$ );
- **And** cough, coryza, or conjunctivitis.

## Laboratory criteria for case classification

### Confirmatory:

One or more of the following:

- Isolation of measles virus<sup>1</sup> from a clinical specimen,
- **Or** detection of measles virus-specific nucleic acid<sup>1</sup> from a clinical specimen using polymerase chain reaction (PCR),
- **Or** IgG seroconversion<sup>1</sup> or a significant rise in measles IgG antibody<sup>1</sup> level between acute- and convalescent-phase specimens using any evaluated and validated method,
- **Or** positive serologic test for measles IgM antibody.<sup>1,2</sup>

<sup>1</sup>Not explained by MMR vaccination during the previous 6-45 days.

<sup>2</sup>Not otherwise ruled out by other confirmatory testing or more specific measles testing in a public health laboratory.

## Epidemiological criteria for case classification

A person who is epidemiologically linked to a laboratory-confirmed measles case.

## Case classification

### Confirmed:

Either of the following:

- A person with confirmatory clinical criteria and confirmatory laboratory criteria
- **Or** a person with confirmatory clinical criteria and epidemiological criteria.

### Probable:

A person with presumptive clinical criteria and noncontributory or no measles laboratory testing.

## Criteria to distinguish a new case from previous reports

Not applicable.

## Comments

### **Epidemiologic classification of internationally imported and U.S.-acquired cases**

- **Internationally imported case:** An internationally imported case is defined as a case in which measles results from exposure to measles virus outside the U.S. as evidenced by at least some of the exposure period (7–21 days before rash onset) occurring outside the U.S. and rash onset occurring within 21 days of entering the U.S. and there is no known exposure to measles in the U.S. during that time. All other cases are considered U.S.-acquired.
- **U.S.-acquired case:** A U.S.-acquired case is defined as a case in which the patient had not been outside the U.S. during the 21 days before rash onset or was known to have been exposed to measles within the U.S.

### **U.S.-acquired cases are subclassified into four mutually exclusive groups:**

- **Import-linked case:** Any case in a chain of transmission that is epidemiologically linked to an internationally imported case.
- **Imported-virus case:** A case for which an epidemiologic link to an internationally imported case was not identified, but for which viral genetic evidence indicates an imported measles genotype, i.e., a genotype that is not occurring within the U.S. in a pattern indicative of endemic transmission. An endemic genotype is the genotype of any measles virus that occurs in an endemic chain of transmission (i.e., lasting  $\geq 12$  months). Any genotype that is found repeatedly in U.S.-acquired cases should be thoroughly investigated as a potential endemic genotype, especially if the cases are closely related in time or location.
- **Endemic case:** A case for which epidemiological or virological evidence indicates an endemic chain of transmission. Endemic transmission is defined as a chain of measles virus transmission that is continuous for  $\geq 12$  months within the U.S.
- **Unknown source case:** A case for which an epidemiological or virological link to importation or to endemic transmission within the U.S. cannot be established after a thorough investigation. These cases must be carefully assessed epidemiologically to assure that they do not represent a sustained U.S.-acquired chain of transmission or an endemic chain of transmission within the U.S.

Internationally imported, import-linked, and imported-virus cases are considered collectively to be import-associated cases.