

Mumps

2024 Case Definition

NOTE: A surveillance case definition is a set of uniform criteria used to define a disease for public health surveillance. Surveillance case definitions enable public health officials to classify and count cases consistently across reporting jurisdictions. Surveillance case definitions are not intended to be used by healthcare providers for making a clinical diagnosis or determining how to meet an individual patient's health needs.

Background

Mumps is caused by infection with a paramyxovirus and is transmitted person to person through direct contact with saliva or respiratory droplets of a person infected with the virus. Mumps typically presents with parotitis or other salivary gland swelling. Parotitis may be unilateral or bilateral and usually lasts 3-7 days. Prodromal symptoms can occur before parotitis and include fever, myalgia, anorexia, malaise, and headache. The most common complications of mumps include orchitis, oophoritis, mastitis, pancreatitis, hearing loss, meningitis, and encephalitis. Mumps may present only with non-specific or respiratory symptoms or may be asymptomatic.

Clinical Criteria

In the absence of a more likely alternative diagnosis, an acute illness characterized by:

- Parotitis or swelling of other (non-parotid) salivary gland(s) of any duration, **OR**
- At least one of the following mumps-associated complication(s):
 - Orchitis
 - Oophoritis
 - Aseptic meningitis
 - Encephalitis
 - Hearing loss
 - Mastitis
 - Pancreatitis

Laboratory Criteria

Confirmatory Laboratory Evidence:^a

- Positive reverse transcriptase polymerase chain reaction (RT-PCR) for mumps-specific nucleic acid^b, **OR**
- Isolation of mumps virus, **OR**
- Significant rise (i.e., at least a 4-fold rise in a quantitative titer or seroconversion^c) in paired acute and convalescent serum mumps immunoglobulin G (IgG) antibody.^b

Supportive Laboratory Evidence:

- Positive test for serum mumps immunoglobulin M (IgM) antibody.^{b,d}

Note: The categorical labels used here to stratify laboratory evidence are intended to support the standardization of case classifications for public health surveillance. The categorical labels should not be used to interpret the utility or validity of any laboratory test methodology.

^a *A negative laboratory result in a person with clinically compatible mumps symptoms does not rule out mumps as a case.*

^b *Not explained by MMR vaccination during the previous 6-45 days.*

^c *Seroconversion is defined as a negative serum mumps IgG followed by a positive serum mumps IgG.*

^d *May be ruled out by a negative convalescent mumps IgG antibody using any validated method.*

Epidemiologic Linkage

- Exposure to or contact with a confirmed mumps case, **OR**
- Member of a group or population identified by public health authorities as being at increased risk for acquiring mumps because of an outbreak.

Criteria to Distinguish a New Case from an Existing Case

The following should be enumerated as a new case:

- Person with a new onset of symptoms that meets the criteria for a confirmed or probable case, **OR**
- Person not previously enumerated as a case with a newly available laboratory result that meets the criteria for a confirmed case, **OR**
- Person was previously reported but not enumerated as a confirmed or probable case (e.g., suspect), then subsequently available information meets the criteria for a confirmed or probable case.

- Person was previously enumerated as a case followed by a documented period of recovery **AND** newly meets the criteria for a confirmed or probable case.*

** Mumps generally confers life-long protection. There have been a few reports of recurrent mumps that have occurred weeks to months after the prior acute onset of mumps infection. However, data on the timing between two mumps infections is unknown. CDC consultation is encouraged for case classification of persons with possible recurrent mumps.*

Case Classification

Suspect

- Meets the clinical criteria but does not meet laboratory or epidemiologic linkage criteria, **OR**
- Meets supportive laboratory evidence but does not meet the clinical criteria **AND** has documentation that mumps was suspected.

Probable

- Meets clinical criteria **AND** epidemiologic linkage criteria, **OR**
- Meets supportive laboratory evidence **AND**
 - Meets clinical criteria of:
 - ≥2-day duration of parotitis or other salivary gland swelling **OR**
 - a mumps-related complication

AND

- Does NOT meet epidemiologic linkage criteria**

***These are considered sporadic cases.*

Confirmed

- Meets confirmatory laboratory evidence.