

# MUMPS

## REPORTING INFORMATION

- Class A(2)
- Report by the close of the next business day
- [Confidential Case Report Card](#) (3812.11, rev. 12/81), [lab report](#) (3833.11), or telephone
- The [Mumps Surveillance Worksheet](#) is to be completed by the local health department and sent to the ODH Immunization Program, 246 N. High Street, PO Box 118, Columbus, OH 43266-0118.

## AGENT

Mumps virus, a member of the genus paramyxovirus.

## CASE DEFINITION

### Clinical case definition

An illness with acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary gland, lasting  $\geq 2$  days, and without other apparent cause

### Laboratory criteria for diagnosis

- Isolation of mumps virus from clinical specimen, or
- Significant rise between acute- and convalescent-phase titers in serum mumps immunoglobulin G antibody level by any standard serologic assay, or
- Positive serologic test for mumps immunoglobulin M (IgM) antibody

### Case classification

Probable: a case that meets the clinical case definition, has noncontributory or no serologic or virologic testing, and is not epidemiologically linked to a confirmed or probable case

Confirmed: a case that is laboratory confirmed or that meets the clinical case definition and is epidemiologically linked to a confirmed or probable case. A laboratory confirmed case does not need to meet the clinical case definition.

### Comment

Two probable cases that are epidemiologically linked would be considered confirmed, even in the absence of laboratory confirmation. False-positive IgM results by immunofluorescent antibody assays have been reported.

## SIGNS AND SYMPTOMS

Approximately 20% - 40% of mumps infections are either subclinical or unrecognized due to the lack of salivary gland swelling. The most recognizable symptoms of mumps are the unilateral or bilateral swelling of the parotid glands and a moderately elevated temperature. Parotitis tends to occur within the first two days and may first be noted as earache and tenderness on palpation of the angle of the jaw. Other symptoms include anorexia, abdominal pain, and headache. Orchitis is a complication that occurs in up to 20 percent of postpubertal males, but sterility rarely occurs. The onset of orchitis may occur prior to or in the absence of parotitis. Females may experience oophoritis and/or mastitis with mumps infection. Other complications include pancreatitis, arthritis, deafness, meningitis, and encephalitis. The possible relationship between mumps and diabetes is not well understood.

## DIAGNOSIS

Mumps virus can be recovered from saliva, mouth washings, and urine during the acute phase of the illness and also from the CSF in the early stages of meningoencephalitis.

## EPIDEMIOLOGY

### Source

Humans are the only known host.

**Occurrence**

Mumps infections occur with greater frequency during late fall, winter, and early spring months. The majority of the cases occur in unimmunized individuals 5-14 years of age.

**Mode of Transmission**

By direct contact with the saliva of an infected person and by droplet spread.

**Period of Communicability**

The patient might be infectious from six days prior to overt parotitis to nine days after. The most infectious period is two days prior to onset of parotitis. No carrier state is thought to exist although individuals experiencing asymptomatic infection are capable of spreading the virus.

**Incubation Period**

Usually 16 to 18 days but may range from 12 to 25 days.

**PUBLIC HEALTH MANAGEMENT****Case**Investigation

The Mumps Surveillance Worksheet should be completed on all cases. Cases should be monitored to determine whether an outbreak is occurring.

Isolation

The Ohio Administrative Code ([OAC 3701-3-13 \[Q\]](#)) states that "a person with mumps shall be isolated, including exclusion from school or child care center, for nine days after the onset of parotid swelling."

**Contact**

Contacts born prior to 1957 can be considered immune. Those born in 1957 or later should have proof of mumps immunization or have a history of physician-diagnosed disease. All other contacts should be immunized for mumps. Mumps vaccine administered after exposure will not prevent or modify the disease but will protect the individual if the exposure did not result in infection.

**Prevention and Control**

A live attenuated mumps vaccine was licensed in the United States in 1967. Protective and long-lasting immunity develops in 90% of the recipients. Susceptible children, adolescents, and adults should be immunized unless the vaccination is contraindicated. Mumps vaccine may be given to individuals 12 months of age or older in combination with measles and rubella vaccines. For details, consult the ODH Immunization Manual.