

# MUMPS QUICKSHEET



**Kentucky Public Health**  
Prevent. Promote. Protect.

## SYMPTOMS

### PRODROME

Nonspecific and may include:

- myalgia
- anorexia
- malaise
- headache
- low grade fever

### PAROTITIS

Inflammation and swelling of the parotid glands. Can be unilateral or bilateral. Usually occurs within the first two days of symptom onset and may present as an earache or tenderness on palpation of the angle of the jaw

### COMPLICATIONS

- orchitis (inflammation of the testicles)
- encephalitis (inflammation of the brain)
- meningitis
- oophoritis (inflammation of an ovary)
- mastitis (inflammation of the breast)
- pancreatitis (inflammation of the pancreas)
- myocarditis (inflammation of heart muscle)
- arthritis (inflammation of joints)
- nephritis (inflammation of the kidneys)

### DIFFERENTIAL FOR PAROTITIS

- cytomegalovirus
- parainfluenza virus
- influenza A
- Coxsackie A
- echovirus
- lymphocytic choriomeningitis virus
- HIV
- Staphylococcus aureus
- nontuberculous Mycobacterium

\*Mumps is the only cause of epidemic parotitis

ETIOLOGIC AGENT  
*Mumps virus*

COMMUNICABILITY

- 2 days before through 5 days after onset of parotitis

INCUBATION PERIOD

- Usually 16 to 18 days (range, 12 to 25 days)

TRANSMISSION

- Infectious respiratory droplet secretions (e.g., kissing, sharing saliva-contaminated objects like water bottles, or being coughed or sneezed on)

EXPOSURE

- During unprotected face-to-face (<3 feet) contact with an infectious person for at least 5 minutes

MUMPS VACCINES

- MMR (MMR-II)
- MMRV (ProQuad)

## KENTUCKY MUMPS OCCURRENCE

MMWR Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Confirmed Case Count	0	0	0	1	2	16	7	1	2	1	0	0
Probable Case Count	0	2	2	2	2	79	13	9	6	4	4	2

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## CASE CLASSIFICATION

### SUSPECT CASE

- At least one of these: Parotitis, acute salivary gland swelling, orchitis, oophoritis, aseptic meningitis, encephalitis, hearing loss, mastitis, or pancreatitis **AND** absence of a more likely diagnosis, **OR**
- A positive test for serum mumps immunoglobulin M (IgM) antibody\*<sup>^</sup> **AND** documentation that mumps was suspected.

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

<sup>^</sup>May be ruled out by a negative convalescent mumps IgG antibody using any validated method.

### PROBABLE CASE

- At least one of these+: Parotitis, acute salivary gland swelling, orchitis, oophoritis, aseptic meningitis, encephalitis, hearing loss, mastitis, or pancreatitis **AND** absence of a more likely diagnosis, **OR**
- A positive test for serum mumps immunoglobulin M (IgM) antibody\*<sup>^</sup>

+Duration of parotitis or swelling of other (non-parotid) salivary gland(s) must be ≥2 days. These probable cases are considered "sporadic cases" of mumps because they are not epidemiologically linked to another confirmed case or to an outbreak.

### CONFIRMED CASE

Positive RT-PCR for mumps-specific nucleic acid\*, **OR** Isolation of mumps virus, **OR**

Significant rise (i.e., at least a 4-fold rise in quantitative titer or seroconversion<sup>~</sup>) in paired acute and convalescent serum mumps IgG antibody\*

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

<sup>~</sup>Seroconversion is defined as a negative serum mumps IgG followed by a positive serum mumps IgG.

### OUTBREAK

- If there are 3 or more cases in 49 days (7 weeks) (3 or more household cases do not count as an outbreak)

\*Enter the outbreak in the [REDCap project: 2024 DEHP Outbreak Management](#)

[CDC | Mumps Outbreak Case/Contact Investigation Form](#)

### EPIDEMIOLOGIC LINKAGE EVIDENCE

- 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.

## SPECIMEN COLLECTION FOR LABORATORY TESTING

Test Name	Specimens to take	Timing for specimen collection	Transport requirements
Virus isolation RT-PCR <i>*Preferred specimen</i>	Buccal/parotid swabs; CSF only for aseptic meningitis; urine for cases of orchitis	Ideally 0-3 days after parotitis onset but up to 10 days	Transport specimens at 4°C if tests are to be performed within 72 hours; otherwise, freeze at -70°C until tests can be performed.
IgM antibody	Serum	Ideally 3 days after parotitis onset	Ship frozen on dry ice

Buccal/ oropharyngeal (OP) swab in Viral Transport Media (VTM) specimen by PCR ([CDC Video on how to collect a Buccal Swab](#)) ([CDC | Illustration of Parotid Gland and Instructions for Collection of Buccal Fluid](#))

\*Testing can be coordinated via DLS for high suspicion cases. A negative laboratory result in a person with clinically compatible mumps symptoms does not rule out mumps as a case.

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## MANAGEMENT

### CONTROL MEASURES

- Although vaccination after exposure to mumps may not prevent disease, the vaccine will protect persons from subsequent exposures. If ongoing exposure is expected, quarantine and/or vaccinating contacts may be of use.
- Persons who are unsure of their mumps disease history or mumps vaccination history should be vaccinated.
- Droplet precautions should be maintained for 5 days after the onset of parotitis, other salivary gland swelling, or other symptoms.
- Immunoglobulin is not effective and not recommended.
- A 3rd dose of MMR should be considered in ongoing outbreaks of highly vaccinated persons in certain congregate settings.
- In the setting of an outbreak, exclusion of individuals without documented or presumptive immunity should be considered for 25 days.

### SCHOOL

- Children should be excluded from school or daycare for 5 days after onset of swelling
- Unvaccinated students without other prior evidence of immunity who have exemptions for medical, religious, or other reasons should be considered for exclusions.
- People who have a history of 1 dose of MMR vaccine should be allowed to remain in the outbreak setting and are recommended to receive their second vaccine dose.

### HEALTHCARE WORKERS

If a confirmed or probable case has visited a healthcare setting, healthcare workers in that setting with unprotected exposure who do not have documented immunity to mumps (two documented doses of MMR or serologic evidence of immunity) should be brought up to date. Immune Globulin (IG) preparations are not effective as postexposure prophylaxis for mumps.

### CASE INVESTIGATION

1. Confirm the clinical presentation of the patient.
2. Collect the following information:
  - a. Demographic information
  - b. Reporting source
  - c. Clinical information
  - d. Laboratory
  - e. Vaccine information
    - i. in settings with high immunization coverage, most mumps cases occur in fully vaccinated people.
  - f. Travel history

The [Mumps Surveillance Worksheet](#) can serve as a guide for data collection during investigation of reported cases.