

Mumps in Kansas and Surrounding Areas

Large outbreaks of mumps have occurred in many states this year, and outbreaks are ongoing in the nearby states of Arkansas (approximately 2,700 cases) and Missouri (approximately 370 cases, most associated with the University of Missouri in Columbia, Missouri). Many individuals have been infected despite being immunized with two doses of MMR vaccine. Outbreaks can still occur in highly vaccinated communities, particularly in close-contact settings.

The Kansas Department of Health and Environment (KDHE) along with the Lawrence-Douglas County Health Department, the Crawford County Health Department, the Thomas County Health Department and the Riley County Health Department are investigating outbreaks of mumps. There have been 14 cases of mumps in Lawrence, KS; eight cases in Pittsburg, KS; three cases in Manhattan, Kansas; and three cases in Colby, KS. KDHE is investigating whether additional persons were potentially exposed to mumps at wrestling meets in Kansas. A letter has been sent to the Kansas State High School Activities Association warning of this potential exposure and is also included in this KS-HAN.

Health care providers across Kansas should be vigilant in identifying, testing, and reporting patients with suspected mumps, especially those epidemiologically linked to the University of Kansas, Pittsburg, KS, Kansas State University, and the University of Missouri, or Northwest Arkansas.

Health care providers should report all persons with suspected mumps to KDHE's epidemiology hotline at 877-427-7317 within 4 hours, prior to receipt of laboratory results, to be in compliance with Kansas reporting regulations. Timely reporting will allow the collection of specimens for confirmatory testing at the KDHE laboratory and will enable prevention and control measures to be implemented.

Suspected mumps patients who are not hospitalized shall remain at home and limit exposure to susceptible (unvaccinated) individuals for five days from the onset of illness. This includes exclusion from school and childcare facilities. If a patient with suspected mumps must leave their residence to seek medical care, a surgical mask should be worn at all times and contact with others minimized.

For hospitalized mumps patients, CDC recommends a 5-day period of isolation after onset of parotitis, which includes the use of droplet precautions (gown, gloves, and mask (as needed)) in addition to standard precautions in healthcare settings. Droplet precautions include the placement in a private room if possible and use of a mask by healthcare workers when working within 6 feet of the patient infected with mumps. Negative pressure rooms are not required.

[About Mumps Disease](#)

Mumps is an acute viral infection. Transmission occurs from person to person through direct contact with respiratory secretions or saliva or indirect contact through fomites. The average incubation period for mumps is 16 to 18 days, with a range of 12 to 25 days. The mumps virus has been isolated from 7 days before through 9 days after parotitis onset; however, the maximum infectiousness occurs in the 2 days before through 5 days after parotitis onset. Transmission also likely occurs from persons with asymptomatic infections and from persons with prodromal symptoms in the absence of parotitis.

The symptoms of mumps typically begin with body aches, loss of appetite, fatigue, headache, and low grade fever, and progresses to parotitis. Parotid swelling is unilateral initially, but later becomes bilateral in a majority of cases. Earache on the side of parotitis and discomfort with eating acidic foods are common. Other salivary glands (submandibular and sublingual) under the floor of the mouth also may swell but do so less frequently. Fever usually resolves within 3 to 5 days, and parotid swelling resolves within 7 to 10 days. Morbilliform rash has been reported in mumps cases. Increased serum amylase levels can be observed during the first week of illness. One-third of mumps cases have subclinical infection or mild respiratory illness. Adolescents and adults have more severe illness than young children.

Most persons with mumps will recover completely though serious complications can occur. Complications include orchitis (testicular inflammation in males), aseptic meningitis, and rarely encephalitis, pancreatitis, deafness, and death. Mumps orchitis is usually unilateral, and more common in those 15 to 29 years of age.

About Laboratory Testing

There are two laboratory tests available for mumps testing, a polymerase chain reaction (PCR) test which is a confirmatory test and serology (IgM and IgG) test.

At the **first** health care provider visit **and** after consultation and approval from KDHE, a buccal swab should be collected for PCR if within the appropriate timeframe.

- **The buccal swab should be sent to KDHE's State Public Health Laboratory (KHEL) for PCR testing.**
 - For KHEL PCR testing, prior authorization is required from KDHE. **Contact KDHE's epidemiology hotline at 877-427-7317 before shipping a buccal swab specimen.**
 - Buccal swab: collected with a commercially supplied, sterile Dacron or polyester-tipped swab with a plastic or aluminum shaft that is placed in Viral Transport Media (VTM)
 - If possible, collect within 3 days of parotitis.
 - Do not collect more than 5 days have passed since parotitis onset.

- Do not use cotton or calcium alginate-tipped swabs or those with wooden shafts.
 - The buccal cavity is the space near the upper rear molars between the cheek and teeth. Massage the parotid (salivary) gland for 30 seconds and then swab the area between the cheek and gum by sweeping the swab near the upper molar and lower molar area.
 - Refer to [Illustration of Parotid Gland and Instructions](#) for further guidance (www.cdc.gov/mumps/lab/detection-mumps.html)
- Specimens are to be refrigerated and shipped in insulated boxes with cold packs. Refer to KHEL instructions for viral specimen packaging at:
 - www.kdheks.gov/labs/downloads/Virus_pictorial_guide.pdf and
 - www.kdheks.gov/labs/downloads/Universal_Form_Instructions_Handout.pdf
- Properly packaged and approved specimens should be mailed to:

Kansas Health & Environmental Laboratories
Attention: Virology/Serology Unit
6810 SE. Dwight Street
Topeka, KS 66620
- **Serology specimens should be sent to a commercial reference laboratory for IgM and IgG titers. KDHE recommends serology testing in persons that are not vaccinated. Serology results in vaccinated persons can be difficult to interpret.**
 - Blood, 3-5 ml collected in serum clot separator tubes, collected at two different times during illness (acute and convalescent)
 - First: Collect within 3-7 days after symptom onset
 - *If first specimen is collected ≤ 3 days after parotitis onset in an unvaccinated person, collect a second IgM sample 5-7 days after symptom onset.*
 - Second: Collect if the first IgM test is negative. Collect 2 weeks after first specimen.

[For Assistance or More Information](#)

Please contact KDHE's Epidemiology Hotline (877-427-7317), or see KDHE's Disease Investigation Guideline for mumps

(http://www.kdheks.gov/epi/Investigation_Guidelines/Mumps_Disease_Investigation_Guideline.pdf) or CDC's mumps website (<https://www.cdc.gov/mumps>).