

# Health Advisory

## South Dakota Department of Health

The 24/7 contact number for the South Dakota Department of Health is: 1-800-592-1861

Current and past Alerts/Updates/Information can be viewed at:

<http://www.state.sd.us/doh/Alerts/>

To receive future Alerts/Updates/Information send your e-mail address to:

[james.holmes@state.sd.us](mailto:james.holmes@state.sd.us)

Web-based disease reporting is available in South Dakota at

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### Prevention & Control of Mumps in Healthcare Settings

#### Background

Mumps transmission has occurred in past outbreaks involving hospitals and long-term care facilities housing adolescents and young adults. Mumps is transmitted by contact with virus-containing respiratory secretions, including saliva; the portals of entry are the nose and mouth. The incubation period varies from 12 to 25 days and is usually 16 to 18 days. In unvaccinated persons, unilateral or bilateral parotitis occurs in approximately half of patients infected with mumps; 15-20% are asymptomatic and the remainder has nonspecific, flu-like symptoms. Although the virus has been isolated from saliva from 2 to 7 days before parotitis and may persist for as long as 9 days after onset of disease, the infectious period is considered to be from 3 days before to 9 days after symptom onset. The risk of transmission from infected individuals who are asymptomatic or have non-specific respiratory symptoms is not known.

Preventing transmission of mumps in healthcare settings consists of four major components:

- 1) **assessment of evidence of immunity** of healthcare workers, including: documentation of clinical disease, laboratory evidence, birth before 1957 or appropriate vaccination history,
- 2) **vaccination** of those without evidence of immunity,
- 3) **exclusion** of healthcare workers with active mumps illness as well as non-immune healthcare workers who are exposed to confirmed, probable or suspected mumps patients, and
- 4) **isolation** of patients in whom mumps is suspected.

Although birth before 1957 is usually considered proof of immunity, during an outbreak, birth before 1957 by itself should not be used as evidence of immunity in healthcare workers. During an outbreak, healthcare workers born before 1957 should be asked for documentation of clinical disease. Those without such documentation should be vaccinated.

#### Healthcare worker immune-status assessment

Prevention and control strategies should be applied in all healthcare settings where patient care occurs, including outpatient and long-term care facilities. An effective vaccination program is the best approach to prevent healthcare-associated mumps transmission. Vaccination with MMR vaccine is recommended unless otherwise contraindicated for all healthcare workers for whom immune status cannot be documented.

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The immune status of personnel should be determined by either of the following criteria:

- History of physician-diagnosed mumps
- Documentation of mumps vaccination (mumps or MMR vaccines)  
During an outbreak of mumps, 2 doses of MMR vaccine are recommended for healthcare personnel. Current recommendations for 2 doses of MMR for healthcare personnel have indirectly satisfied this requirement in most cases.

Serologic evidence of immunity (i.e., positive mumps IgG):

- In unvaccinated persons or persons with a history of mumps disease, presence of mumps specific antibodies should be considered evidence of natural infection and immunity. However, a history of physician-diagnosed mumps is considered reliable proof of immunity and antibody testing of such individuals is not recommended.
- Results of serum antibody tests in vaccinated persons are difficult to interpret and such testing is NOT recommended. In vaccinated persons, antibody levels are often lower than following natural infection, and commercially available tests may not detect such low levels of antibody. In addition, there is no data that correlates levels of serum antibody with protection from disease. Last, there are no data on the impact of additional (greater than 2) doses of mumps vaccine on antibody levels or protection from disease.

### **Healthcare worker exclusion**

Exclude healthcare workers with active mumps illness; and those who are non-immune and have been exposed to mumps. Exposure is defined as being within three feet of a patient with a diagnosis of mumps. Irrespective of their immune status, all exposed healthcare workers should be monitored for signs and symptoms of illness during the incubation period, 12-25 days after exposure.

- Healthcare workers with mumps illness should be excluded until 9 days after the onset of parotitis.
- A diagnosis of mumps should be considered in non-immune healthcare workers who develop non-specific respiratory infection symptoms during the incubation period after exposure to mumps, even in the absence of parotitis.
- Because 1 dose of MMR vaccine is about 80% effective in preventing mumps and 2 doses is about 90% effective, vaccinated health care workers should be educated about symptoms of mumps, including non-specific presentations, and should notify employee health if they develop these symptoms.
- Non-immune personnel should be excluded from the 12<sup>th</sup> day after the first exposure to mumps through the 26<sup>th</sup> day after the last exposure.
- Non-immune healthcare workers may return to work after receiving one dose of MMR vaccine, but should receive a second dose 28 days after the 1<sup>st</sup> dose.
- Healthcare workers who have received only one dose of MMR may continue to work, but should receive a 2<sup>nd</sup> dose as soon as possible provided there is a 28-day interval between the first and second dose.

### **Patient isolation:**

- In addition to standard precautions, patients with clinical signs and symptoms of mumps illness should be cared for using droplet precautions  
[www.cdc.gov/ncidod/dhqp/gl\\_isolation\\_droplet.html](http://www.cdc.gov/ncidod/dhqp/gl_isolation_droplet.html)

Droplet precautions should be maintained for 9 days after onset of parotitis.