

January 23, 2017**Health Advisory****North Dakota Department of Health Reminds Providers of
Current Mumps Outbreaks in the United States and Canada**

Mumps is a contagious vaccine-preventable disease that is uncommon in the United States due to the Measles, Mumps, and Rubella (MMR) vaccine. In the past year, however, mumps outbreaks have been occurring across the United States and in Manitoba. As of December 2016, 5,311 cases have been reported in the United States, many occurring on college campuses. So far this year, three suspected cases of mumps have been reported to the NDDoH.

The most recognizable symptom of mumps is parotitis (acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary glands). Other symptoms include fever, headache, earache, muscle or joint pain, painful swelling of the testicles in men and swelling of the ovaries in women, causing abdominal pain. Mumps vaccination is not 100% effective, so mumps should be suspected in individuals meeting the clinical case definition even with a history of MMR vaccination.

Health care providers should consider mumps in patients presenting with the above symptoms, but should also test for influenza, as influenza is currently widespread in North Dakota and can present similar symptoms. If health care providers are suspecting mumps, a buccal swab should be collected for RT-PCR testing, the case should be advised to exclude themselves from activities (i.e., work, school, child care) for five days after the onset of parotitis, and the case must be reported to the NDDoH immediately.

Testing:

The NDDoH recommends providers collect a buccal swab for RT-PCR testing if a provider suspects mumps. According to the Centers for Disease Control and Prevention (CDC), PCR is the preferred test for mumps.

- A buccal swab should be collected as soon as disease is suspected, ideally within three days and not more than eight days after parotitis onset.
- A buccal swab should be obtained by massaging the parotid gland area for 30 seconds before swabbing. Synthetic swabs are preferred over cotton swabs.
- Sensitivity of RT-PCR is enhanced if the swab is processed within 24 hours.
- Place the swab in 2mL of standard viral transport medium. The swab should remain in viral transport medium for at least one hour.
- Samples should be maintained at 4° C and shipped on cold packs within 24 hours. If shipping is delayed, samples may be preserved by freezing (-70° C) and then shipped on dry ice.

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If it has been more than eight days after the onset of symptoms, a serum specimen may be obtained to test for mumps IgM antibodies. In an unvaccinated individual, IgM is detectable after five days of symptom onset and reaches maximum levels about a week after the onset of symptoms. The levels may remain elevated for weeks to months. IgM response may not be detected in individuals who have been vaccinated. Tests for IgM are not reliable and tend to produce both false positives and false negatives, which is why a buccal swab for RT-PCR should be collected.

The NDDoH Division of Laboratory Services offers mumps serology and PCR testing.

- Mumps PCR: \$51
- Mumps Virus Antibody IgM and Total Ig IFA: \$26
- Mumps Virus Antibody IgG IFA: \$26

Patient Management

Patients infected with mumps are infectious from 2 days before onset of symptoms to 5 days after and should be excluded from activities (i.e., work, school, child care) during this period. Mumps is spread by droplets of saliva or mucus from the mouth, nose, or throat of an infected person, usually when the person coughs, sneezes or talks. If a patient is clinically diagnosed with mumps, regardless of laboratory testing, the case must be reported to NDDoH. Cases should be reported by calling 701.328.2378 or online at www.ndhealth.gov/Disease/Disease%20Reporting/Report.htm.

Mumps Immunization

It is important to ensure your patients are up to date on their MMR vaccine. Two doses of MMR should be given to children at 12 to 15 months and 4 to 6 years. Adults who are not up to date with their MMR vaccine should receive one dose of MMR. Adults should receive a second dose 28 days later if they:

- Are a student in a postsecondary educational institution
- Work in a health care facility
- Plan to travel internationally

Generally, adults born prior to 1957 are considered immune to mumps because they most likely had the disease.

Two doses of MMR vaccine or proof of immunity to mumps is recommended for all staff working at a health care facility. Health care facilities should be aware of employees' immunization status, and health care workers should be brought up to date on their MMR vaccine. For more information about mumps vaccination of health care personnel, please visit www.cdc.gov/mmwr/preview/mmwrhtml/rr6007a1.htm.

Please contact the NDDoH Division of Disease Control, at 701.328.2378 or toll-free at 800.472.2180 with any questions or concerns regarding this issue.

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Categories of Health Alert messages:

- *Health Alert conveys the highest level of importance; warrants immediate action or attention.*
- *Health Advisory provides important information for a specific incident or situation; may not require immediate action.*
- *Health Update provides updated information regarding an incident or situation; no immediate action necessary.*
- *Health Information provides general information that is not necessarily considered to be of an emergent nature.*

This message is being sent to local public health units, clinics, hospitals, physicians, tribal health, North Dakota Nurses Association, North Dakota Long Term Care Association, North Dakota Healthcare Association, North Dakota Medical Association, and hospital public information officers.