



# New Hampshire Health Alert Network

## Health.Alert@nh.gov

**Message Type:** Alert  
**Status:** Actual  
**Severity:** Moderate  
**Sensitive:** Not Sensitive  
**Message Identifier:** NH-HAN #20100212 Mumps Outbreak  
**Delivery Time:** 12 hours  
**Acknowledgement:** No  
**Originating Agency:** NH Department of Health and Human Services, Division of Public Health Services

---

**DATE:** February 12, 2010 **TIME:** 1200 EST

**TO:** Infection Control Practitioners, Infectious Disease Specialists, Physicians, Nurses, NHHA, Hospital Emergency Departments, Community Health Centers, Influenza Sentinels, NH Schools, Manchester Health Department, EMS, Corrections, Dialysis & Transplant Clinics, Long-Term Care Facilities, Community Mental Health Centers, Occupational Health, Pharmacists, Home Care Providers, Post-Secondary Schools, Nashua Health Department, Public Health Network, DPHS Outbreak Team, DPHS Management Team, Laboratory Response Network, Poison Center

**FROM:** Jodie Dionne-Odom, MD, Deputy State Epidemiologist

**SUBJECT:** Mumps Outbreak

### **New Hampshire Department of Health and Human Services (NH DHHS) recommends:**

- **Awareness of a multi-state outbreak of mumps with 1,521 cases.**
- **Consider mumps in the differential diagnosis of patients presenting with parotid swelling or tenderness and fever, particularly among students in congregate settings.**
- **Verify that all patients are up-to-date on their MMR vaccination.**
- **Collect a buccal swab and serum sample from suspect cases for testing at the NH Public Health Laboratories.**
- **Cases with mumps should stay home for 5 days after parotitis onset and close contacts without documented immunity should stay home during days 12-25 after contact.**
- **Prompt reporting of all suspect mumps cases to NH DHHS at (603) 271 4496 (after hours 1-800-852-3345, ext. 5300).**

#### **A) Epidemiology**

The Centers for Disease Control and Prevention (CDC) and state health departments have been investigating a multi-state outbreak of mumps in the Northeastern US since summer 2009. The index case appears to have acquired the infection during travel to the United Kingdom. 1,521 US cases have been reported (as of January 29, 2010), mostly in New York and New Jersey among tradition-observant Jewish communities (97%). Most patients are male (76%) with a median age of 15 years and 25% are laboratory confirmed to date. There have been 19 associated hospitalizations but no deaths. A majority of cases (88%) had received at least one dose of mumps vaccine and 75% had received two doses.

In 2006, there was a large outbreak of mumps in the US with 6584 cases in eight midwestern states. Most were 18-24 years old and 84% of this group had received two doses of vaccine. In New Hampshire during 2009, a single case of mumps was reported and the annual range has been 1-5 cases per year since 2005.

CDC MMWR report with information about the multi-state outbreak (2/12/10):

[http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5905a1.htm?s\\_cid=mm5905a1\\_e](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5905a1.htm?s_cid=mm5905a1_e)

## B) Clinical Presentation

Mumps is normally an acute, viral, self-limited illness that presents as swollen, tender salivary glands (usually the parotids, causing acute parotitis). It can be associated with a 24-hour prodrome of fever, headache, malaise, myalgias and anorexia. In one study of 4000 mumps patients, 92% had parotitis, 59% had constitutional symptoms and 29% had fever. Children younger than five years are more likely to present with lower respiratory tract symptoms and those age 2-9 years appear most likely to present with acute parotitis. Fever lasts from 1-6 days but parotid enlargement can last longer.

Complications (seen in 5% in 2006) include central nervous system involvement (aseptic meningitis, hearing loss), orchitis, oophoritis and pancreatitis. Clinical infection generally provides long lasting immunity, as does vaccination (first introduced in 1967), but recent outbreaks among fully vaccinated individuals may indicate waning vaccine immunity. **The effectiveness of one dose of mumps containing vaccine is approximately 80% and immunity is 88-95% after the second dose.**

- **Infectious period** - 2 days before symptoms through 5 days after symptom onset
- **Incubation period** - 12-25 days after exposure

Those at higher risk of mumps infection include:

- Students, particularly those living in congregate settings (ie dorms)
- International travelers

## C) Testing

Mumps virus can be readily isolated during the first nine days of illness from a swab of the opening of Stensen's duct (buccal mucosa inside the cheek at the rear molars after massaging the area for 30 seconds). The highest yield is during the first three days of illness. Serologic assays (IgM or paired IgG), viral culture and RT-PCR can be performed at the NH Public Health Laboratories (PHL) to **confirm the diagnosis in suspected cases as defined below**. The swab should be placed in 2-3 mLs of viral transport media, kept cold and shipped with ice packs. Serologic results can be difficult to interpret. IgM should be positive by day 5 after symptoms and can be present for at least 6 weeks. Previously vaccinated persons may not have an IgM response. There is no known titer of IgG that correlates with protection against illness.

**Mumps Case Definition:** Illness with acute onset of unilateral or bilateral swelling of the parotid or other salivary gland lasting more than 2 days and without other apparent cause. (Influenza, parainfluenza, coxsackievirus, echovirus and bacteria can also cause parotitis as well as other non infectious causes such as parotid duct stone, Sjogrens syndrome, drug reactions and tumor.)

Call the NH PHL with questions at (603) 271 4661 about testing or shipment and the NH PH Disease Control with questions about result interpretation at (603) 271 4496.

For additional information about mumps testing, see the CDC link:

<http://www.cdc.gov/mumps/clinical/qa-lab-test-infect.html>

## D) Treatment and Prevention

Since there is no specific antiviral therapy, treatment is supportive.

Vaccination is recommended by the ACIP (Advisory Committee on Immunization Practices) at 12-15 months with a 2<sup>nd</sup> dose at 4-6 years of age. Vaccination is not protective as post exposure prophylaxis. ACIP recommends vaccination with one dose of MMR for the following indications (when vaccination status is unknown or inadequate):

1. Those living in a community experiencing a mumps outbreak
2. Students in postsecondary educational institutions
3. Workers in healthcare facilities
4. International travelers

In the setting of a mumps outbreak, ACIP and the CDC recommend considering a second dose of MMR for children aged 1-4 years and adults who have received one dose.

**E) Infection Control**

Mumps is transmitted by aerosol or droplet spread. Contacts are defined by close contact (within 3 feet) of an infected individual or direct contact with their respiratory secretions. Standard and droplet precautions should be used in the inpatient setting and outpatients with symptoms of mumps should be asked to wear a surgical mask.

- Individuals with mumps should stay home until five days after symptom onset.
- Close contacts to a case with mumps who do not have immunity are recommended to stay home from day 12-25 following exposure.
- **Immunity** is defined by:
  1. physician documented history of mumps
  2. age 53 and older (born prior to 1957, presumed to have pre-existing immunity)
  3. documentation of mumps containing vaccine/vaccines:
    - one dose if 1-6 years old
    - two doses if 7-18 years old
    - one dose if 19-52 years old

**For questions or comments regarding the contents of this message, please contact:**

**NH DHHS Communicable Disease Control and Surveillance Section  
603-271-4496 (after hours 1-800-852-3345).**

---

## DEFINITION OF TERMS AND ALERTING VOCABULARY

### **Message Type**

Alert: Indicates an original alert  
Update: Indicates prior alert has been updated and superseded  
Cancel: Indicates prior alert has been cancelled  
Error: Indicates prior alert has been retracted

### **Status**

Actual: Communication or alert refers to a live event  
Exercise: Designated recipients must respond to the communication or alert  
Test: Communication or alert is related to a technical, system test and should be disregarded

### **Severity**

Extreme: Extraordinary threat to life or property  
Severe: Significant threat to life or property  
Moderate: Possible threat to life or property  
Minor: Minimal threat to life or property  
Unknown: Unknown threat to life or property

### **Sensitive**

Sensitive: Indicates the alert contains sensitive content  
Not Sensitive: Indicates non-sensitive content

**Message Identifier:** A unique alert identifier that is generated upon alert activation.

**Delivery Time:** Indicates the timeframe for delivery of the alert.

**Acknowledgement:** Indicates whether an acknowledgement on the part of the recipient is required to confirm that the alert was received, and the timeframe in which a response is required.

**Originating Agency:** A guaranteed unique identifier for the agency originating the alert.

**Alerting Program:** The program sending the alert or engaging in alerts and communications using PHIN Communication and Alerting (PCA) as a vehicle for their delivery.

You have received this message based upon the information contained within our emergency notification database.

If you have a different or additional e-mail or fax address that you would prefer to be used please contact:

Denise M. Krol, MS  
NH HAN Coordinator  
[Denise.Krol@dhhs.state.nh.us](mailto:Denise.Krol@dhhs.state.nh.us)

Business Hours 8:00 AM – 4:00 PM  
Tel: 603-271-4596  
Fax: 603-271-0545