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Mumps at University of New Hampshire

Key Points and Recommendations:

- There have been six University of New Hampshire (UNH) students in the last two weeks with confirmed or probable mumps infection; all have been previously fully vaccinated. These students are close contacts of each other and there is not broader campus transmission currently identified.
- The New Hampshire Division of Public Health Services (NH DPHS) is working with UNH to target a third dose of the MMR vaccine to a select group of students within the affected social network based on [published CDC guidance](#). NH DPHS will be working with UNH to reach out to the individuals recommended to receive a third dose of vaccine. There is no recommendation for broader vaccination at this time.
- Mumps is an acute viral infection typically characterized by swelling and tenderness of one or more salivary glands, typically the parotid gland (parotitis). Patients can also develop non-specific prodromal symptoms of fever, headache, myalgia, and malaise.
- Providers should notify NH DPHS of any patient presenting with signs and symptoms consistent with mumps (even if individuals have been previously vaccinated) by calling 603-271-4496 (after hours 603-271-5300).
- Healthcare providers can contact NH DPHS with any testing requests for mumps, which would involve submission of a buccal swab for mumps PCR, and possibly blood for mumps serology (IgM) based on timing of symptom onset. See below for more detailed testing recommendations.

Situation:

The NH DPHS has identified four confirmed and two probable cases of mumps virus infection in students at the University of New Hampshire Durham campus over the last two weeks; all students have been fully vaccinated. Since 2012, the number of mumps outbreaks nationally has been increasing. Last year, there were more than 3,400 mumps infections reported in the United States from 48 different states and the District of Columbia. A majority of outbreaks have been in previously vaccinated individuals involving close-knit communities or institutional settings where people live in close contact with one another (e.g. colleges and universities).

Providers should be vigilant and ask patients presenting with parotitis or other symptoms consistent with mumps, about contact with students from UNH. Any patient diagnosed with confirmed or probable mumps should be isolated for 5 days from onset of parotitis and excluded from school, work, or public settings.

Background Information:

Mumps is a virus which causes an acute infection typically characterized by swelling and tenderness of one or more salivary glands, typically the parotid gland (parotitis). Patients can

also develop non-specific prodromal symptoms of fever, headache, myalgia, and malaise. Most individuals only have mild symptoms and recover completely in a few weeks. Individuals, however, can rarely develop meningitis/encephalitis, orchitis, and deafness.

Mumps is transmitted by respiratory droplet spread or by direct contact with an individual's respiratory secretions. Individuals are considered most infectious from 2 days prior to symptom onset until 5 days after. Incubation period for mumps after exposure usually is about 16-18 days but can range from 12-25 days.

The MMR vaccine is approximately 88% effective at preventing mumps after a 2-dose series, but it is still possible for vaccinated individuals to develop mumps. There is evidence of decreasing vaccine effectiveness over time, which is contributing to an increasing number of mumps outbreaks nationally in previously vaccinated populations living in close communal settings, like colleges and universities. A 3rd dose of the MMR vaccine has been studied in outbreak settings in these populations, and has been shown to increase immunity and help preventing transmission. There is limited information, however, about the full effectiveness and duration of immunity of a third dose of the MMR vaccine.

<https://www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm6701a7-H.pdf>

Testing for Mumps:

Testing should be considered in any person presenting with compatible signs and symptoms of mumps infection. A buccal swab specimen collected within 3 days after parotitis onset is the preferred specimen to confirm mumps infection. Detection of mumps immunoglobulin M (IgM) can also aid in the diagnosis of mumps; however, serologic tests (e.g. IgM) should be interpreted with caution because false negative results in vaccinated persons are common. The early collection of buccal swab specimens provides the best means of laboratory confirmation, particularly among suspected mumps patients with a history of vaccination.

Therefore, if it has been <3 days since symptom onset, providers should collect a buccal swab specimen for detection of viral RNA by PCR. If it has been 3 days or more since symptom onset, providers should collect a buccal swab specimen for PCR *and* a serum specimen for IgM testing. In some cases, the IgM response is not detectable until 5 days after symptom onset. NH DPHS can help determine the need for IgM testing based on timing of symptom onset and epidemiology.

For information on how to collect buccal swab samples, please review the information in the following link (including a short video): <https://www.cdc.gov/mumps/lab/specimen-collect.html>

See the CDC website for more information about mumps testing:

<https://www.cdc.gov/mumps/lab/index.html>

For more information about mumps and control of mumps in healthcare and school settings, please review the CDC website:

<http://www.cdc.gov/mumps/hcp.html>

- For any questions regarding this notification, please call the NH DHHS, DPHS, Bureau of Infectious Disease Control at (603) 271-4496 during business hours (8:00 a.m. – 4:30 p.m.).
- If you are calling after hours or on the weekend, please call the New Hampshire Hospital switchboard at (603) 271-5300 and request the Public Health Professional on-call.
- To change your contact information in the NH Health Alert Network, contact Adnela Alic at (603) 271-7499 or email Adnela.Alic@dhhs.nh.gov.

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Originating Agency: NH Department of Health and Human Services, Division of Public Health Services

Attachments: None

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