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NH DIVISION OF Public Health Services
Improving health, preventing disease, reducing costs *for all*
Department of Health and Human Services

Influenza Circulating in New Hampshire, 2016-2017

Key Points and Recommendations:

1. Influenza virus has begun circulating in New Hampshire for the 2016-2017 season.
2. The updated 2016-2017 influenza immunization recommendations can be reviewed here: http://www.cdc.gov/mmwr/volumes/65/rr/rr6505a1.htm?s_cid=rr6505a1_e
3. Healthcare providers should encourage influenza vaccination for everyone six months of age or older who does not have a medical contraindication.
4. Antiviral therapy with neuraminidase inhibitors is recommended for individuals with confirmed or suspected influenza infection that is severe, progressive, results in hospitalization, or occurs in individuals who are at higher risk of complications. Treatment has been shown to reduce duration of symptoms and complications when administered early, and should not be delayed while awaiting test results.
5. Influenza testing can be arranged at the NH Public Health Laboratories (PHL). To acquire influenza specimen collection kits, contact the NH Public Health Laboratories office at 1-800-852-3345, extension 4605, or 603-271-4605.

Epidemiology:

The New Hampshire Division of Public Health Services (NH DPHS) Public Health Laboratories has confirmed the first respiratory sample positive for seasonal influenza virus (influenza AH3) for this 2016-2017 season. This case was confirmed in an adult with influenza-like illness (ILI) in Rockingham County. Nationwide, there has been a slight increase in positive influenza tests and a small number of localized influenza outbreaks caused by influenza A (H3N2) viruses.

The previous 2015-2016 influenza season was overall predominated by the influenza A (H1N1) pdm09 virus, although influenza A (H3N2) viruses were more commonly identified early in the season. Last influenza season was also characterized nationally by lower influenza activity that peaked later in the season, and there was a lower percentage of outpatient visits for influenza-like illness (ILI), lower hospitalization rates, and a lower percentage of deaths attributed to pneumonia and influenza (P&I) compared with the preceding three seasons. In New Hampshire (NH) we do not track hospitalizations for influenza, but based on death certificate review we identified nineteen influenza-related deaths during the 2015-2016 season, including one pediatric influenza-related death. The total influenza-related deaths are within the range observed in past NH influenza seasons dating back to 1997 when this measure was first tracked.

Vaccination:

Preliminary vaccine effectiveness data for the prior 2015-2016 influenza season indicates that among children and adolescents aged 2-17 years of age, the live attenuated influenza vaccine (LAIV) was not effective. The preliminary estimate for vaccine effectiveness of the LAIV against any virus was 3%, compared to estimated vaccine effectiveness for the inactivated influenza vaccine (IIV) which was 63%.

For this reason, the Centers for Disease Control and Prevention's Advisory Committee for Immunization Practices recommends that the LAIV vaccine (i.e. the nasal spray vaccine), should not be used this season.

The IIV is available in both trivalent and quadrivalent preparations. For 2016-2017, the trivalent influenza vaccines will contain the following virus strains: A/California/7/2009 (**H1N1**) virus, A/Hong Kong/4801/2014 (**H3N2**) virus, and B/Brisbane/60/2008 (**Victoria** lineage) virus. This represents a change in the influenza A (H3N2) and influenza B lineage viruses compared to the 2015-2016 trivalent vaccine. The quadrivalent vaccine will contain these three virus strains in addition to the B/Phuket/3073/2013 (**Yamagata** lineage) virus; both influenza B virus strains were present in the quadrivalent vaccine last season, but were switched in the trivalent vaccine this season.

All persons aged ≥6 months who do not have contraindications should be vaccinated annually, especially those who are at increased risk for severe complications from influenza and those who live with or care for persons at higher risk for influenza-related complications, including healthcare professionals. Persons with a history of influenza illness or vaccination in past years should be encouraged to get the vaccine again this year due to natural waning of immunity and changes in circulating virus. It takes about 14 days for antibodies to form after vaccination, so vaccination is encouraged now given the presence of circulating virus in New Hampshire. Individuals should ideally be vaccinated by October before influenza is widely circulating in the community, and vaccination should be offered as long as influenza virus is circulating.

Because of the vaccine composition change for this season, children aged 6 months to 8 years old who are undergoing their first season of vaccination, or who have not previously received 2 or more total doses of influenza vaccine before July 1, 2016, should receive 2 doses of influenza vaccine this season administered at least 4 weeks apart. The two previous doses need not have been given during the same season or consecutive seasons in order to qualify for only one dose of vaccine this season. Further guidance on which children should receive 2 doses is available at:
http://www.cdc.gov/mmwr/volumes/65/rr/rr6505a1.htm?s_cid=rr6505a1_w#T2_down

Vaccinating Persons with Egg Allergy:

For the 2016–2017 influenza season, ACIP recommends the following:

1. Persons with a history of egg allergy who have experienced only hives after exposure to egg should receive influenza vaccine. Any licensed and recommended influenza vaccine that is otherwise appropriate for the recipient's age and health status may be used.
2. Persons who report having had reactions to egg involving symptoms other than hives, such as angioedema, respiratory distress, lightheadedness, or recurrent emesis; or who required epinephrine or another emergency medical intervention, may similarly receive any licensed and recommended influenza vaccine that is otherwise appropriate for the recipient's age and health status. The selected vaccine should be administered in an inpatient or outpatient medical setting (including but not necessarily limited to hospitals, clinics, health departments, and physician offices). Vaccine administration should be supervised by a health care provider who is able to recognize and manage severe allergic conditions.
3. A previous severe allergic reaction to influenza vaccine, regardless of the component suspected of being responsible for the reaction, is a contraindication to future receipt of the vaccine.

Treatment:

Antiviral treatment with oseltamivir, zanamivir, or peramivir is recommended as soon as possible for patients with confirmed or suspected influenza who have severe, complicated, or progressive illness; who require hospitalization; or who are at higher risk for influenza-related complications. Antiviral therapy is most effective when started early in disease course, ideally within 48 hours of the onset of illness. Initiation of treatment should not be delayed while awaiting test results.

Detailed guidance on use of antiviral medications is available at:
http://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm

Diagnostic Testing:

Several tests are available to help with influenza diagnosis, including rapid influenza diagnostic tests (RIDTs), immunofluorescence, viral culture, and RT-PCR. Healthcare providers using rapid tests should be aware that while useful, there are limitations to RIDTs (variable sensitivity) and negative RIDT test results should be interpreted with caution given the potential for false negative results.

The NH Public Health Laboratories (PHL) performs RT-PCR for influenza virus detection and subtyping year around. Specimens from persons with ILI (defined as fever 100°F [37.8°C] or higher with cough and/or sore throat) may be tested at the NH PHL by RT-PCR.

The approved specimen types for influenza RT-PCR testing at the NH PHL are nasopharyngeal swabs, nasal swabs, throat swabs, nasal aspirates, nasal washes, dual nasopharyngeal/throat swabs, broncheoalveolar lavage, bronchial wash, tracheal aspirate, sputum, and lung tissue from human patients with signs and symptoms of respiratory infection.

To conduct RT-PCR testing for influenza:

- Collect the specimen as soon as possible after illness onset.
- Collection should be by trained personnel using droplet precautions.
- Place the sample in viral transport media and store and transport at 4°C within 48 hours of collection.

To acquire influenza specimen collection kits, contact the NH Public Health Laboratories office at 1-800-852-3345, extension 4605 or 603-271-4605.

- For additional information on the 2016-2017 Influenza Season from CDC refer to their website at: http://www.cdc.gov/flu/about/season/flu-season-2016-2017.htm
- For any questions regarding the contents of this message, please contact NH DHHS, DPHS, Bureau of Infectious Disease Control at 603-271-4496 (after hours 603-271-5300).
- To change your contact information in the NH Health Alert Network, contact Thom Flynn at 603-271-7499 or Thomas.Flynn@dhhs.nh.gov

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Attachments: None

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