

# THIS IS AN OFFICAL NH DHHS HEALTH ALERT

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## Influenza Circulating in New Hampshire, 2017-2018

### Key Points and Recommendations:

1. Influenza virus has begun circulating in New Hampshire for the 2017-2018 season. Healthcare providers should encourage influenza vaccination for everyone six months of age or older who does not have a medical contraindication.
2. The updated 2017-2018 influenza immunization recommendations can be reviewed here: <https://www.cdc.gov/mmwr/volumes/66/rr/rr6602a1.htm>
3. For children 6 through 35 months of age, there are now two different influenza vaccine options (FluLaval and Fluzone); however, these two vaccines are administered at different volumes, so healthcare providers should take caution to administer the correct volume depending on the vaccine used (see below for more information).
4. All pregnant women without a medical contraindication should continue to receive a flu vaccine during any trimester of their pregnancy to protect themselves and their babies.
5. 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 should not be delayed while awaiting test results.
6. 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:

Nationwide, CDC has received reports of localized influenza outbreaks across the U.S., and influenza infection has been identified in New Hampshire residents already this season.

The previous 2016-2017 influenza season was overall predominated by the influenza A (H3N2) virus, although influenza B virus became the predominant virus starting the last week in March 2017 and remained the predominant virus through the end of the season. Last influenza season hospitalizations and mortality rates were elevated nationally, but within the range that has been observed during previous seasons when influenza A (H3N2) viruses predominated. Influenza activity peaked during early February 2017. In New Hampshire (NH) we do not track outpatient visits or hospitalizations for influenza, but based on our death certificate review we identified forty-seven influenza-related deaths during the 2016-2017 season, including two pediatric influenza-related deaths. 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:

For the current 2017-2018 season, both quadrivalent and trivalent influenza vaccines will be available. Both inactivated influenza vaccine (IIV) and recombinant influenza vaccine (RIV) will be available in trivalent and quadrivalent formulations. Similar to last season, **the live**

**attenuated influenza vaccine (LAIV) is not recommended for use during the 2017-2018 season** due to concerns about its effectiveness against H1N1 virus strains during the 2013-2014 and 2015-2016 seasons.

**2017–2018 influenza vaccine composition:**

- Trivalent influenza vaccines contain:
  - an A/Michigan/45/2015 (H1N1) pdm09–like virus (**New!**)
  - an A/Hong Kong/4801/2014 (H3N2)-like virus
  - a B/Brisbane/60/2008–like virus (Victoria lineage).
- Quadrivalent influenza vaccines contain the above three viruses and an additional influenza B strain, a B/Phuket/3073/2013–like virus (Yamagata lineage).
- Compared with the 2016-2017 influenza vaccine, this represents a change in the influenza A (H1N1) virus component.

All persons aged  $\geq 6$  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.

**Vaccinating Children:**

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, 2017, 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:  
<https://www.cdc.gov/mmwr/volumes/66/rr/rr6602a1.htm>

This season, **a new vaccine (FluLaval) has been approved for use in children 6 through 35 months of age**. FluLaval lowered the minimum age for use from 3 years old to 6 months. Therefore, for children 6 through 35 months of age, there are currently two influenza vaccines licensed for use by the FDA (FluLaval and Fluzone); however, these two influenza vaccines are administered at different doses in this age group. Care should be taken to administer the appropriate volume which is dependent on the vaccine used.

**Take Care to Use Correct Volume for Dose in Children**

- For any dose needed, children 6 through 35 months of age may receive either:
  - 0.5 mL FluLaval Quadrivalent (IIV4) intramuscularly, or
  - 0.25 mL Fluzone Quadrivalent (IIV4) intramuscularly.
  - Note that dose volume differs for these two brands. Care should be taken to administer the correct dose.
- Children 3 through 17 years of age may receive 0.5 mL intramuscularly of an age-appropriate IIV formulation.

### **Vaccinating Pregnant Women:**

Pregnant and postpartum women are at higher risk for severe influenza illness and complications. Therefore, all pregnant women without a contraindication should receive the influenza vaccine annually. Vaccination will also help to protect newborns for whom vaccination is not recommended (children <6 months of age). Healthcare providers should be aware that a study published recently in the journal *Vaccine* on September 13, 2017 ([Association of Spontaneous Abortion with Receipt of Inactivated Influenza Vaccine Containing H1N1pdm09 in 2010-11 and 2011-12](#)) found that women vaccinated early in pregnancy with a flu vaccine containing the pandemic H1N1 (H1N1pdm09) component and who also had been vaccinated the prior season with a H1N1pdm09-containing flu vaccine had an increased risk of spontaneous abortion (miscarriage) in the 28 days after vaccination. This study does not quantify the risk of miscarriage and does not prove that flu vaccine was the cause of the miscarriage. Earlier studies have not found a link between flu vaccination and miscarriage. There is an ongoing investigation to study this issue further among women who were pregnant and eligible to receive flu vaccine during the 2012-13 through 2014-15 flu seasons. Because influenza vaccine protects pregnant women and their babies from influenza and serious complications, the Advisory Committee on Immunization Practices (ACIP), the American College of Obstetricians and Gynecologists (ACOG), and the Centers for Disease Control and Prevention (CDC) continue to recommend that pregnant women get a flu vaccine during any trimester of their pregnancy. ACOG and the CDC have more information available at:

- <https://www.acog.org/About-ACOG/News-Room/Statements/2017/It-is-Safe-to-Receive-Flu-Shot-During-Pregnancy>
- <https://www.cdc.gov/flu/professionals/vaccination/vaccination-possible-safety-signal.html>

### **Vaccinating Persons with Egg Allergy:**

For the 2017–2018 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 (i.e., any IIV or RIV) 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 (i.e., any IIV or RIV) 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, and 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 diagnostic tests (RDTs), immunofluorescence, viral culture, and RT-PCR. Healthcare providers using rapid tests should be aware that while useful, there are limitations to rapid tests (variable sensitivity) and a negative rapid test in someone with ILI may be a false negative result.

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 Public Health Laboratories (PHL) by RT-PCR.

The approved specimen types for RT-PCR testing at the NH PHL are nasopharyngeal swabs, nasal swabs, throat swabs, nasal aspirates, nasal washes, dual nasopharyngeal/throat swabs, bronchoalveolar 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. Further guidance regarding influenza diagnostic testing is available at: <https://www.cdc.gov/flu/professionals/diagnosis/molecular-assays.htm>

- ▶ For additional information on the 2017-2018 Influenza Season from CDC refer to their website at: <https://www.cdc.gov/flu/about/season/flu-season-2017-2018.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 1-800-852-3345 ext.5300).
- ▶ To change your contact information in the NH Health Alert Network, Neil Twitchell at 603-271-5194 or [neil.twitchell@dhhs.nh.gov](mailto:neil.twitchell@dhhs.nh.gov)

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**Attachments:** None

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