Nebraska Department of Health and Human Services

HEALTH ALERT NETWORK

Department of Health & Human Services
DHHS
NEBRASKA

TO: Nebraska Healthcare Providers, Laboratories, and Public Health
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RE: 2016-17 Influenza Vaccination and Testing Guidelines
DATE: October 31, 2016

By this time, health-care providers should be offering influenza vaccination to all persons aged ≥6 months without contraindications. Influenza vaccination is an especially high priority for pregnant women (see Influenza Immunization During Pregnancy Toolkit) and people with chronic health conditions. Health care personnel need influenza vaccine as they will be evaluating and treating patients with influenza, and will be having direct or indirect contact with high risk patients (pregnant women, older adults, persons with disabilities, and persons with chronic medical conditions).

Flu vaccination can reduce the risk of flu-associated hospitalization, including among children and older adults. A 2014 study showed that flu vaccine reduced children's risk of flu-related pediatric intensive care unit (PICU) admission by 74% during flu seasons from 2010-2012. Another study published in the summer of 2016 showed that people 50 years and older who got a flu vaccine reduced their risk of hospitalization from flu by 57%. Preventing influenza among health care personnel can help reduce the spread of influenza in resident populations http://www.cdc.gov/flu/toolkit/long-term-care/index.htm. This reinforces the importance of aggressive use of flu vaccine in long-term care (LTC) facility residents, and in all personnel working in hospitals, LTC facilities, and outpatient settings.

Influenza Vaccine Formulations for 2016-2017 Flu Season
http://www.cdc.gov/mmwr/volumes/65/rr/rr6505a1.htm?s_cid=rr6505a1_w
All 2016-17 influenza trivalent (three-component, standard and high dose) vaccines are made to protect against the following three viruses:

- A/California/7/2009 (H1N1)pdm09-like virus
- A/Hong Kong/4801/2014 (H3N2)-like virus
- B/Brisbane/60/2008-like virus (B/Victoria lineage).

Quadrivalent (four-component, standard dose) influenza vaccines include all of the trivalent components PLUS B/Phuket/3073/2013-like virus (B/Yamagata lineage).

The annual evolution of circulating flu strains and the flu vaccines from 1990 to the present can be found here: History of Flu Vaccine and Circulating Strains

2016-2017 Influenza Vaccine Recommendations: What's Different This Season?

1) Only injectable flu shots are recommended for use this season. In light of its low effectiveness against influenza A(H1N1)pdm09 in the United States during the

2013–14 and 2015–16 seasons, ACIP withdrew Live Attenuated Influenza Vaccine (LAIV) (FLUMIST™) for the 2016-17 season.

2) The H3N2 component was changed to: A/Hong Kong/4801/2014 (H3N2)-like.
3) There are new vaccines on the market this season.
    - FLUAD™ (trivalent, inactivated) which contains MF59, a type of adjuvant, and is licensed for use in people 65 years and older.
    - FLUCELVAX™, (quadrivalent, inactivated) made with virus grown in cell culture will also be available for the first time this season and is licensed for use in people 4 years and older.
4) The recommendations for vaccination of people with egg allergies have changed.
    - Anyone with an egg allergy can receive any licensed flu vaccine, however the vaccine should be administered in an inpatient or outpatient medical setting and they should be supervised by a health care provider who is able to recognize and manage severe allergic conditions.
    - People with egg allergies no longer have to wait 30 minutes after receiving their vaccine.

Emerging Knowledge Base on Flu Vaccines – Standard vs High Dose

Data from clinical trials among persons 65 years and older demonstrate an enhanced immune response and reduced clinical infection with trivalent high dose inactivated vaccine (which contains 4x the concentration of flu antigen in the standard dose) when comparing use of trivalent standard dose. A study published in 2014 indicated the high-dose vaccine was 24.2% more effective in preventing flu in adults 65 years of age and older relative to a standard-dose vaccine.

Antiviral Drug Use

Three FDA-approved influenza antiviral drugs are recommended for use in the United States during the 2016-2017 influenza season: oseltamivir (Tamiflu®), zanamivir (Relenza®), and peramivir (Rapivab®). More information about antiviral drugs and antiviral drug resistance can be found at http://www.cdc.gov/flu/antivirals/index.htm and http://www.cdc.gov/flu/about/qa/antiviralresistance.htm.

Infection Control

Basic infection control methods such as covering your cough, staying away from people who are sick (“social distancing”) and handwashing prevent the spread of influenza and other respiratory viruses.

Recommendations on Laboratory Testing

Once influenza activity and sustained spread has been documented in a community or geographic area, most ambulatory patients with an uncomplicated illness consistent with influenza can be diagnosed clinically. This can be done using established definitions of influenza-like illness (ILI) and do not require influenza testing for clinical management, including antiviral treatment decisions. Influenza testing of patients who are not severely ill is a clinical decision. When interpreting the test results, clinicians should consider the following factors:

- Patient’s period of illness (influenza diagnostic tests more likely to be positive when the specimen is obtained during the first three days of illness when viral shedding is highest)

- State and local influenza surveillance data regarding circulating influenza and other respiratory viruses that can cause ILI. Website updated weekly during flu season: http://www.dhhs.ne.gov/flu - Weekly Flu Report
- Sensitivity and specificity of the rapid influenza diagnostic tests (RIDT) **during periods of high influenza activity:**
    - A negative test result does not rule out influenza virus infection. The RIDTs are less sensitive than rRT-PCR
    - A positive RIDT result has a high positive predictive value
    - RIDTs do not provide information on the influenza A subtype (e.g., 2009 H1N1 vs. H3N2). Since most circulating influenza A viruses have similar antiviral susceptibilities, subtype information is not needed to inform clinical care.
    - A positive RIDT test for influenza A virus can be assumed to be the reported circulating subtype, and does not require confirmatory typing.
- In certain situations, public health authorities will request identification of the influenza virus type with an RT-PCR assay.
    - Any laboratory can send positive RIDT specimens to the Nebraska Public Health Laboratory (NPHL) **until one positive test is confirmed** out of that laboratory. Collection materials will not be provided.
    - Any hospital can send specimens from a positive RIDT for a **hospitalized patient** with ILI to NPHL for confirmatory testing. Collection materials will not be provided.
    - ILINet sentinel providers and sentinel laboratories are to send specimens on patients with ILI according to DHHS guidelines.
    - Contact DHHS or your Local Public Health Department for guidance in the event of an influenza outbreak, http://dhhs.ne.gov/lhd.

For specific clinical laboratory questions please contact NPHL client services at 1-866-290-1406 or visit the NPHL website at http://www.nphl.org/. To submit an influenza specimen to NPHL, complete the Special Influenza Microbiology Requisition indicating that the specimen meets the criteria for public health testing, http://dhhs.ne.gov/flu. **Specimens must meet the specified criteria and be accompanied by the Special Influenza Microbiology Requisition for testing by NPHL at public health expense.**