



Nebraska Department of Health and Human Services



# HEALTH ALERT NETWORK

## Update



TO: Nebraska Healthcare Providers & Laboratories

FROM: Joann Schaefer, M.D.                      Thomas J. Safranek, M.D.  
Chief Medical Officer                      State Epidemiologist  
State of Nebraska                              402-471-2937 PHONE  
402-471-8566 PHONE                      402-471-3601 FAX

RE: 2009-10 Influenza Season Update: Epidemiology, Lab Testing,  
Antiviral Guidance & Vaccine Guidance

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The Nebraska Department of Health & Human Services Division of Public Health (NDHHS-DPH) continues to work closely with our local health department (LHD) partners in addressing the various issues raised by the 2009 H1N1 flu virus. This Health Alert Network Update provides updated information and guidance regarding epidemiology, antiviral use and influenza vaccine.

### Epidemiology

- Nebraska surveillance data indicates that influenza is currently widely prevalent in all areas of the state **at levels comparable to the peak** of our influenza season this past March 2009. This is based on 1) weekly surveillance of 80 Nebraska laboratories performing rapid influenza tests; 2) weekly surveillance data from designated primary care physicians across the state who track influenza-like illness (ILI) in their practices; and daily surveillance of 13 primary care clinics operated by UNMC in the Douglas county area.
- The **only** strain of influenza circulating at the present time is the novel pandemic H1N1 (swine-like) influenza virus which first appeared this past Spring. At the present time this virus is sensitive to oseltamivir (Tamiflu) and zanamivir (Relenza). Of note: our laboratory surveillance has identified **neither influenza B, nor “seasonal” influenza A** since August 28.
- Younger age groups are disproportionately affected by the pandemic H1N1 flu virus. Infection in persons over 65 years of age is uncommon, and the infection rate in persons 25-64 years of age appears significantly lower than that in the 0-24 year age group.

## Recommendations on Laboratory Testing

- Not every patient with influenza-like illness needs to be tested; clinical diagnosis is sufficient for many/most patients.
- Rapid flu tests can detect pandemic H1N1 influenza A. Both the collection of a high-quality naso-pharyngeal swab and the training/skills of the test operator are critical to optimizing the sensitivity/specificity of these tests.
- False-positive and false-negative rapid flu tests can occur, and may be more common with the pandemic H1N1 strain than with the seasonal influenza strains.
- Hospitalized patients with suspected influenza should undergo a diagnostic workup using rapid flu tests, viral culture or PCR testing through the hospital's in-house and reference laboratories. Commercial laboratory testing for influenza PCR (LabCorp, Quest/Focus Laboratories) and respiratory viral culture is currently available, and should be utilized when indicated.
- Any hospitalized patient with a (+) flu test should have a nasopharyngeal specimen forwarded to the Nebraska Public Health Lab.
- Any hospitalized patient for whom influenza diagnostic laboratory testing can not be obtained through their reference laboratory can be tested through NPHL. Contact your local health department to arrange for this testing; complete a requisition (<http://www.dhhs.ne.gov/puh/epi/flu/docs/flunphltestrequisition.pdf>); keep the specimen refrigerated and in viral transport media following collection; indicate on the requisition that the patient is hospitalized; do not delay in shipping to NPHL (contact NPHL client services for advice on expedited courier service 1-866-290-1406).

## Antiviral Prescribing Guidance

The CDC has detailed guidance on-line for issues related to antiviral prescribing: (<http://www.cdc.gov/h1n1flu/recommendations.htm>).

This guidance is summarized here:

- Treatment with oseltamivir or zanamivir is recommended for all persons with suspected or confirmed influenza requiring hospitalization.
- Treatment with oseltamivir or zanamivir generally is recommended for persons with suspected or confirmed influenza who are at higher risk for complications (children younger than 5 years old, adults 65 years and older, pregnant women, persons with certain chronic medical or immunosuppressive conditions, and persons younger than 19 years of age who are receiving long-term aspirin therapy).
- Persons who are not at higher risk for complications or do not have severe influenza requiring hospitalization generally do not require antiviral medications for treatment or prophylaxis. However, any suspected influenza patient presenting with warning symptoms (e.g., dyspnea) or signs (e.g., tachypnea, unexplained oxygen desaturation) for lower respiratory tract illness should promptly receive empiric antiviral therapy.
- Clinical judgment is an important factor in antiviral treatment decisions for all patients presenting for medical care who have illnesses consistent with influenza.

- Treatment should be initiated as early as possible because studies show that treatment initiated early (i.e., within 48 hours of illness onset) is more likely to provide benefit.
- Treatment should not wait for laboratory confirmation of influenza because laboratory testing can delay treatment and because a negative rapid test for influenza does not rule out influenza. The sensitivity of rapid tests can range from 10 % to 70%.
- Testing for 2009 H1N1 influenza infection with real-time reverse transcriptase-polymerase chain reaction (rRT-PCR) should be prioritized for persons with suspected or confirmed influenza requiring hospitalization and based on guidelines from local and state public health authorities.
- Groups at higher risk for 2009 H1N1 influenza complications are similar to those at higher risk for seasonal influenza complications.
- Actions that should be taken to reduce delays in treatment initiation include:
  - Informing persons at higher risk for influenza complications of signs and symptoms of influenza and need for early treatment after onset of symptoms of influenza (i.e., fever, respiratory symptoms);
  - Ensuring rapid access to telephone consultation and clinical evaluation for these patients as well as patients who report severe illness;
  - Considering empiric treatment of patients at higher risk for influenza complications based on telephone contact if hospitalization is not indicated and if this will substantially reduce delay before treatment is initiated.
- In selected circumstances, providers might also choose to provide selected patients at higher risk for influenza-related complications (e.g., patients with neuromuscular disease) with prescriptions that can be filled or taken at the onset of symptoms after telephone consultation with the provider.
- Antiviral chemoprophylaxis generally should be reserved for persons at higher risk for influenza-related complications who have had contact with someone likely to have been infected with influenza.
- Based on global experience to date, 2009 H1N1 influenza viruses likely will be the most common influenza viruses among those circulating in the coming season, particularly those causing influenza among younger age groups. Circulation of seasonal influenza viruses during the 2009-10 season is also expected. Influenza seasons are unpredictable, however, and the timing and intensity of seasonal influenza virus activity versus 2009 H1N1 circulation cannot be predicted in advance.
- Persons with suspected 2009 H1N1 influenza or seasonal influenza who present with an uncomplicated febrile illness typically do not require treatment. However, some groups appear to be at higher risk for influenza-related complications.
- Currently circulating 2009 H1N1 viruses are susceptible to oseltamivir and zanamivir, but resistant to amantadine and rimantadine; however, antiviral treatment regimens might change according to new antiviral resistance or viral surveillance information.
- An April 2009 Emergency Use Authorization authorizes the emergency use of oseltamivir in children younger than 1 year old, subject to the terms and conditions of the EUA.

# Update on Vaccine Availability and Recommendations

## I. Seasonal (trivalent) flu Vaccine

- Detailed vaccine guidance for seasonal flu vaccine is available on-line at: <http://www.cdc.gov/flu/professionals/acip/>
- This vaccine is currently widely available. Providers should commence vaccinating target groups (see below) at the present time. Waning of immunity throughout the flu season is believed to be minimal and should not affect the decision to vaccinate at the present time.

### Persons Recommended to Receive Seasonal (trivalent) Flu Vaccine

#### Recommendations for Children Up To 18 Years:

- All children aged 6 months--18 years should be vaccinated annually.
- Children and adolescents at higher risk for influenza complications should continue to be a focus of vaccination efforts as providers and programs transition to routinely vaccinating all children and adolescents, including those who:
  - are aged 6 months--4 years (59 months);
  - have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, cognitive, neurologic/neuromuscular, hematological or metabolic disorders (including diabetes mellitus);
  - are immunosuppressed (including immunosuppression caused by medications or by human immunodeficiency virus);
  - are receiving long-term aspirin therapy and therefore might be at risk for experiencing Reye syndrome after influenza virus infection;
  - are residents of long-term care facilities; and
  - will be pregnant during the influenza season.
- Note: Children aged < 6 months cannot receive influenza vaccination. Household and other close contacts (e.g., daycare providers) of children aged < 6 months, including older children and adolescents, should be vaccinated.

#### Recommendations for seasonal (trivalent) flu vaccine: adults

- Annual vaccination against influenza is recommended for any adult who wants to reduce the risk of becoming ill with influenza or of transmitting it to others.
- Vaccination is recommended for all adults without contraindications in the following groups, because these persons either are at higher risk for influenza complications, or are close contacts of persons at higher risk:
  - persons aged 50 years and older;
  - women who will be pregnant during the influenza season;
  - persons who have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, cognitive, neurologic/neuromuscular, hematological or metabolic disorders (including diabetes mellitus);
  - persons who have immunosuppression (including immunosuppression caused by medications or by human immunodeficiency virus);
  - residents of nursing homes and other long-term care facilities;
  - health-care personnel;

- household contacts and caregivers of children aged <5 years and adults aged 50 years and older, with particular emphasis on vaccinating contacts of children aged <6 months;
- household contacts and caregivers of persons with medical conditions that put them at higher risk for severe complications from influenza.

## **II. Pandemic H1N1 (Swine) Influenza Vaccine**

- Recent studies suggest that the vaccine is well-matched to the current circulating strains of pandemic H1N1 flu, and that it has good immunogenicity (i.e., induces protective antibodies) after a single dose in adults.
- While the vaccine is projected to be available for distribution in early to mid October, and is expected to be widely available during subsequent weeks, we are unable to predict when individual providers will have access to this vaccine.
- Nebraska's 20 local health departments are expected to oversee distribution of the vaccine within their jurisdictions. Providers interested in accessing this vaccine should contact their LHD to make arrangements. The vaccine development and distribution is provided for through Federal governmental resources, and is expected to be provided free of charge to patients, with a provision for an administration fee.

### **The groups recommended to receive the 2009 H1N1 influenza vaccine include:**

- Pregnant women because they are at higher risk of complications and can potentially provide protection to infants who cannot be vaccinated;
- Household contacts and caregivers for children younger than 6 months of age because younger infants are at higher risk of influenza-related complications and cannot be vaccinated. Vaccination of those in close contact with infants younger than 6 months old might help protect infants by "cocooning" them from the virus;
- Healthcare and emergency medical services personnel because infections among healthcare workers have been reported and this can be a potential source of infection for vulnerable patients. Also, increased absenteeism in this population could reduce healthcare system capacity;
- All people from 6 months through 24 years of age;
- Children from 6 months through 18 years of age because cases of 2009 H1N1 influenza have been seen in children who are in close contact with each other in school and day care settings, which increases the likelihood of disease spread, and
- Young adults 19 through 24 years of age because many cases of 2009 H1N1 influenza have been seen in these healthy young adults and they often live, work, and study in close proximity, and they are a frequently mobile population; and
- Persons aged 25 through 64 years who have health conditions associated with higher risk of medical complications from influenza.