NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

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To: All North Carolina Clinicians
From: Erica Wilson, MD, MPH, Medical Epidemiologist
Subject: 2019- 20 Influenza Season: **Update for NC Clinicians (4 pages)**
Date: October 14, 2019

This memo provides information and guidance to NC clinicians and information regarding updates for the 2019–2020 influenza season. As guidance may change during the influenza season, up to date information will be available at flu.nc.gov.

CLINICAL MANAGEMENT

- **Decisions regarding treatment should be based on clinical and epidemiologic information, rather than on test results.** Rapid tests cannot rule out influenza infection, and more time is required for other test types (e.g. PCR or viral culture). If clinically indicated, treatment should not be delayed while awaiting laboratory confirmation.

- Certain patients are at increased risk for influenza-related complications. These include:
  - Children younger than 5 years of age, especially those under 2 years of age
  - Adults 65 years of age or older
  - Pregnant women and women up to 2 weeks after the end of pregnancy
  - American Indians and Alaskan Natives
  - Persons with certain medical conditions including: Asthma; neurological and neurodevelopmental conditions; chronic lung diseases (such as COPD and cystic fibrosis); heart diseases (such as congenital heart disease, congestive heart failure and coronary artery disease); blood disorders (such as sickle cell disease); endocrine disorders (such as diabetes); kidney disorders; liver disorders; metabolic disorders (such as inherited metabolic disorders and mitochondrial disorders); and weakened immune system due to disease or medication (such as people with HIV, cancer, or those on chronic steroids).
  - People younger than 19 years of age who are receiving long-term aspirin therapy
  - People who are morbidly obese (Body Mass Index (BMI) of 40 or greater)
  - People who live in nursing homes or other long-term care facilities

- Not all patients with suspected influenza infection need to be seen by a health care provider. Patients who report febrile respiratory illness but do not require medical care *and are not at high risk for complications of influenza* should be instructed to stay at home in order to decrease opportunities for transmission. Patients should seek medical attention for any of the following:
  - Difficulty breathing or shortness of breath
  - Pain or pressure in the chest or abdomen
  - Sudden dizziness
  - Confusion
  - Severe or persistent vomiting

- Flu symptoms that improve but then return with fever and worse cough
- In babies, bluish gray skin color, lack of responsiveness, or extreme irritation
- Any other symptom that is severe or concerning

- Clinical judgment is an important factor in treatment decisions. Treatment is recommended as early as possible for individuals with suspected or confirmed influenza who have any of the following:
  - Illness requiring hospitalization,
  - Progressive, severe, or complicated illness, regardless of previous health status, or
  - Increased risk for severe disease (e.g. persons with certain chronic medical conditions, persons 65 or older, children younger than 2 years, and pregnant women).

Antiviral treatment can also be considered for any previously healthy, symptomatic outpatient not at high risk with confirmed or suspected influenza based on clinical judgment if treatment can be initiated within 48 hours of illness onset.

Treatment is most effective when started within 48 hours of illness onset. However, treatment of persons with prolonged or severe illness can reduce mortality and duration of hospitalization even when started more than 48 hours after onset of illness.

For outpatients with acute uncomplicated influenza, if antiviral treatment is prescribed, a neuraminidase inhibitor (oseltamivir, zanamivir, or peramivir) or baloxavir should be used. Information regarding currently circulating flu strains is available at flu.nc.gov. Detailed antiviral use- including testing and treatment for suspected oseltamivir-resistant influenza- is available at http://www.cdc.gov/flu/professionals/antivirals/index.htm.

TESTING

- Rapid influenza diagnostic test (RIDT) sensitivities are approximately 50–70% when compared with viral culture or reverse transcription polymerase chain reaction (RT-PCR). Therefore, a negative RIDT does NOT rule out infection and should not be used for treatment or infection control decisions during periods when influenza is known to be circulating. When available, rapid molecular assays are preferred over RIDTs because of increased sensitivity (90-95%) and specificity. Additional information is available at http://www.cdc.gov/flu/professionals/diagnosis.

- Confirmatory influenza testing at the North Carolina State Laboratory of Public Health (SLPH) is primarily intended for virologic surveillance, rather than diagnostic purposes. This testing will focus on the following groups:
  1. A sample of patients with influenza-like illness seen at facilities participating in the Influenza-Like Illness Network (ILINet).
  2. Patients critically ill with influenza-like illness but have no laboratory evidence of influenza infection.
  3. Patients who die with influenza-like illness but have no laboratory evidence of influenza infection; however, specimens from living patients are preferred.

- Testing at the SLPH can also be considered for other patients in the following circumstances if consultation with the local health department determines that such testing is necessary for surveillance or to determine which control measures are needed: outbreaks in institutional settings,

patients with recent swine or poultry exposure, and clusters of severe or unusual respiratory illness. If testing cannot be performed at SLPH, it can be requested from commercial or hospital-based laboratories. Guidance regarding specimen collection and transport is available at flu.nc.gov.

INFECTION CONTROL

- Facilities should use a hierarchy of controls approach to prevent the exposure to and transmission of influenza to healthcare personnel and patients within healthcare settings. Given the difficulty of distinguishing influenza from other causes of respiratory illness, consistent infection control measures should be applied for ALL patients who present with acute febrile respiratory illness (further information is available at https://www.cdc.gov/niosh/topics/flu/infectioncontrol.html). Infection control guidance for healthcare settings can be found at http://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm

- Outpatient medical providers who are referring patients with suspected or confirmed influenza infection to emergency departments or other medical facilities should call ahead to alert the facility that the patient is arriving and have patient wear a surgical mask when entering the hospital. The patient should also be instructed to notify the receptionist or triage nurse immediately upon arrival of their respiratory symptoms.

CONTROL MEASURES

- Annual vaccination against influenza is the best way to prevent infection and is recommended for everyone ≥6 months of age who does not have a medical contraindication to vaccination. It's especially important for:
  - People who are at high risk of developing serious complications like pneumonia if they get sick with the flu, and
  - People who live with or care for others who are high risk of developing serious complications.
- Flu vaccination should begin soon after vaccine becomes available. Vaccine should continue to be offered throughout the flu season. Evidence from some clinical trials indicates that protection against viruses that are antigenically similar to those contained in the vaccine extends at least for 6–8 months, particularly in nonelderly populations.

- All patients with confirmed or suspected influenza infection should be instructed to stay at home for at least 24 hours after resolution of fever (100°F [37.8°C]) *without* the use of a fever-reducing medication.

- Household contacts should be instructed to monitor themselves closely for illness. If they develop illness, they should stay at home and follow the guidance on home respiratory isolation.

- Chemoprophylactic use of antiviral medications is recommended to control outbreaks among high risk persons in institutional settings.
- Post-exposure chemoprophylaxis with either oseltamivir or zanamivir could also be considered for close contacts of cases (confirmed or suspected) who are at high risk for complications of influenza, including pregnant women if antivirals can be started within 48 hours of the most recent exposure.

  CDC does not recommend widespread or routine use of antiviral medications for chemoprophylaxis to limit the potential emergence of antiviral resistant viruses. An emphasis on close monitoring and early

initiation of antiviral treatment if fever and/or respiratory symptoms develop is an alternative to chemoprophylaxis after a suspected exposure for some persons.

- Detailed guidance regarding antiviral chemoprophylaxis is available at http://www.cdc.gov/flu/professionals/antivirals/index.htm.

- Please use every opportunity to educate patients regarding the importance of good respiratory hygiene, hand washing, and other basic protective measures. Also, please check that pneumococcal vaccine has been administered to all patients for whom it is indicated, including those 65 or older.

SURVEILLANCE AND TRACKING

- **In North Carolina, all influenza-associated deaths (adult and pediatric), are reportable to the Local Health Department.** An influenza-associated death is defined for surveillance purposes as a death resulting from a clinically compatible illness that was confirmed to be influenza (any strain) by an appropriate laboratory or rapid diagnostic test. There should be no period of complete recovery between the illness and death. A death should *not* be reported if:
    1. There is no laboratory or rapid test confirmation of influenza virus infection,
    2. The influenza illness is followed by full recovery to baseline health status prior to death, or
    3. After review and consultation, there is an alternative agreed upon cause of death.

- NC DPH conducts intensive surveillance for influenza using several systems. These include surveillance of all visits to emergency departments across the state, as well as surveillance and laboratory testing of patients seen by providers in our Influenza-Like Illness Network (ILINet) - over 60 practices across the state. NC DPH monitors hospitalizations and deaths that could be related to influenza in order to better understand the severity of the virus. The testing and surveillance strategies used by NC DPH are consistent with recommendations from CDC and make use of the strong influenza surveillance systems in place in North Carolina.

- Influenza surveillance is different from other types of disease surveillance conducted by state and local health departments. Because flu is easily spread from person-to-person and affects a large percentage of the population, testing and reporting of every person with flu-like illness is not a practical or reliable way to monitor flu activity. For this reason, surveillance of influenza in North Carolina is not based on the reporting of individual cases.

- Please contact your local health department to report influenza-like illness in patients with recent swine/poultry exposure or any outbreaks of influenza-like illness (i.e. fever plus cough or sore throat), particularly among young children.

NOVEL INFLUENZA VIRUSES

- Highly Pathogenic Avian Influenza (HPAI) A H5 viruses were first identified in birds in the United States in December 2014 and have infected wild birds and poultry in multiple states since then. No human infections with these viruses have been detected. However, similar avian influenza viruses have infected people in other countries. Some of these human infections have been severe or even fatal.

- Influenza A H3N2 variant viruses (also known as “H3N2v”) with the matrix (M) gene from the 2009 H1N1 pandemic virus were first detected in people in July 2011. Investigations into H3N2v cases indicate that the main risk factor for infection is prolonged exposure to pigs, mostly in fair settings.

- For other avian influenza viruses (e.g. H5N1, H7N9) information is available at http://www.cdc.gov/flu/avianflu/h5. For additional influenza A H3N2v virus information is available at http://www.cdc.gov/flu/swineflu/h3n2v-cases.htm

Updates about novel influenza will be available at flu.nc.gov. Clinicians should contact their Local Health Departments or the Communicable Disease Branch epidemiologist on-call 24/7 number (919-733-3419) for questions about influenza.

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