

“Seasonal” versus “Avian” Influenza Testing

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With the holiday season behind and more winter ahead, we are faced with the reality that influenza season has gathered momentum. Increased regional influenza activity has been seen throughout Nebraska to date, with the Nebraska Public Health Laboratory (NPHL) confirming viral isolates of influenza types A and B. The most up-to-date state-wide information on influenza activity in Nebraska from Nebraska Health and Human Services System (NHHSS) can be accessed through the NPHL website (www.nphl.org).

A number of questions regarding how and more specifically what type of diagnostic testing the NPHL will provide as part of the NHHSS surveillance efforts have been received. To address these questions about “seasonal” influenza as well as the threat of a pandemic (i.e. world-wide epidemic) avian influenza A/(H5N1) outbreak we have prepared a document (*Pandemic Influenza Laboratory Testing Guidelines*) that can be accessed on the home page of our website (www.nphl.org).

It is important to emphasize that the World Health Organization (WHO) has stated that no influenza virus outbreaks of A/(H5N1) due to human to human transmission have occurred anywhere in the world. The avian influenza A/(H5N1) activity that is occurring in southeast Asia and other parts of the world is due to transmission from birds. The WHO however, has placed the *global community* at a Pandemic Alert Phase 3 stage (on a scale of 1 to 6) to signify the occurrence of human infections with a new subtype of influenza A/(H5N1). According to the WHO (www.who.int) as of February 13, 2006, there have been 169 cases of human avian influenza A/(H5N1) with 91 fatalities reported to WHO since 2003. Since 2003, the human cases have occurred in Cambodia, China, Indonesia, Iraq, Thailand, Turkey, and Vietnam.

A pandemic influenza outbreak is a serious issue to consider. If a pandemic were to occur, some Centers for Disease Control and Prevention models forecast that as many as 90 million people in the U.S. would become ill. Of these, 45 million people may need outpatient medical care, 128 thousand to 1.5 million could require ICU care, 65 to 742 thousand could require mechanical ventilation, and as many as 209 thousand to 1.9 million fatalities could occur. Contrast that with the typical “seasonal” influenza that usually causes about 36,000 deaths in the U.S.; about one-tenth of what is predicted in an avian influenza pandemic. In addition, state and federal planning agencies are being told to anticipate that up to 40% of the workforce will be affected either by illness or because they would be caring for sick relatives or fearful about coming to work. Obviously, our medical care system would be severely stressed.

To monitor “seasonal” influenza activity in Nebraska and to prepare for the possible appearance of avian influenza, the NPHL continues to work with NHHSS state epidemiologists to establish a state-wide laboratory surveillance network that connects with all hospitals and with some private clinics. These facilities participate by sending clinical specimens (influenza A or B antigen positive) to the NPHL for either confirmation or serotyping or for archival banking for the possibility of future testing when deemed necessary. Over 70 hospital and clinic facilities are currently enrolled in the statewide surveillance network, which is more than twice as many as last year.

Seasonal influenza surveillance and laboratory testing protocols should continue to be followed until the alert status is changed. If human cases of avian influenza A/(H5N1) are found in the United States or human to human transmission occurs in the world, the NHHSS officials will inform laboratories what new steps should be taken for testing purposes.

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