

Enhanced Surveillance for Avian Influenza in Humans

Assumptions

- CDC will provide updated information and guidance on avian influenza through the Health Alert Network
- The current threat from a novel influenza virus with the potential to cause significant human illness and possibly a pandemic is the avian influenza A (H5N1) virus which has been widely circulating in poultry since December 2003 throughout Asia, Africa, and Europe.
 - This outbreak of influenza A (H5N1) virus has resulted in over 260 human cases in ten countries; over 160 of these cases have been fatal [data as of January 22, 2007].
 - All of these cases have had exposure to poultry.
 - No evidence of sustained person to person transmission of the virus has been documented, although there have been a few instances of limited person to person transmission.
 - If this novel virus does become efficiently transmitted from person to person, a pandemic would likely ensue.
- While H5N1 is the greatest current threat, other avian influenza subtypes have infected humans, and surveillance should be in place to detect other novel influenza viruses as well.

Surveillance Criteria and Epidemiologic Risk Factors

The current outbreak of influenza A (H5N1) in humans is still zoonotic in nature. The H5N1 virus has been transmitted directly from infected birds to humans in the vast majority of cases; there has been no evidence to suggest efficient person to person transmission of the H5N1 virus.

The primary risk factor associated with these H5N1 infections in humans is intense **direct contact with poultry**. All of the human cases have occurred in countries where a simultaneous outbreak of H5N1 in poultry is occurring.

Updated information on human cases of avian influenza is available on the World Health Organization website. The Animal World Health Organization maintains a list of countries experiencing the outbreak in animals. (Links to these websites are provided under Resources).

During a pandemic alert phase 3 with a novel influenza virus infecting humans but no / minimal evidence of person to person transmission (as in the current outbreak with influenza A [H5N1]), all patients with an influenza-like illness should be asked about:

- recent travel to countries where the novel virus has been identified in animals or humans
- exposure to anyone with suspected or known avian influenza
- intense exposure to poultry or domestic birds
 - Did the patient come within 3 feet of any live poultry or domesticated birds?
 - Did the patient visit a poultry farm, a household raising poultry, or a live bird market?
 - Did the patient touch any recently butchered poultry or surfaces where poultry was recently butchered?

Testing for avian influenza H5N1 infection in humans should be considered in the following situations

- A hospitalized patient with a radiographically confirmed pneumonia or severe respiratory illness for which an alternative diagnosis has not been established who has a **history of travel** within 10 days of symptom onset to a country with documented avian influenza infections in poultry or humans.
- A patient (hospitalized or ambulatory) with less severe influenza-like illness¹ with onset of symptoms within 10 days of contact with poultry, domestic birds, or a known or suspected novel influenza virus case patient within an affected country.
- A refugee from a country with outbreaks of avian influenza in poultry or humans who develops an influenza-like illness within 10 days of arrival to the United States.

Testing for novel virus infections (H5N1 or other) should also be considered in the following situations:

- A poultry or swine worker who develops an influenza-like illness with a history of exposure to infected² poultry or swine within 10 days of symptom onset.
- A laboratory worker who works with novel influenza viruses

¹For the purposes of enhanced surveillance for avian influenza infections in humans, influenza-like illness is defined as documented fever > 100.4°F (38.0°C) AND cough, sore throat, or shortness of breath.

² Poultry and swine would be considered infected if they tested positive for influenza through routine surveillance coordinated by the NC Department of Agriculture or if influenza testing was requested because of illness in the animals.

Testing for some novel influenza viruses (H5 and H7) is available through the State Laboratory of Public Health (SLPH) and the public health regional laboratories in North Carolina. To request testing for novel influenza viruses in humans, healthcare providers should call their local health department or the General Communicable Disease Control branch epidemiologist on-call at (919) 733-3419; an epidemiologist is available 24/7 for consultation regarding testing and management of patients with suspected novel influenza virus infections.

Resources

1. US DHHS Pandemic Influenza Plan has a supplement on surveillance (Supplement 1) which contains interim recommendations for the surveillance and diagnostic evaluation of cases of human infection with avian influenza A (H5N1) as well as a human influenza (H5) case screening and report form. These documents are available at <http://www.hhs.gov/pandemicflu/plan/sup1.html>
2. Situation updates on avian influenza infections in humans infections can be found at the World Health Organization website http://www.who.int/csr/disease/avian_influenza/en/
3. Up to date information on the current outbreak of avian influenza H5N1 in poultry can be found at the World Organization for Animal Health [Office International des Epizooties (OIE)] website http://www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm