Fact Sheet

Avian Influenza

Medical and Public Health Professionals

What is Avian or Bird Flu?
Avian influenza ("bird flu") occurs naturally in birds. Wild birds (geese and ducks) often carry the virus, but usually do not get sick. Wild birds can spread avian influenza to domesticated birds (chickens, ducks, and turkeys) and other animals which become sick and often die. Avian influenza does not typically infect humans, but the current H5N1 strain has resulted in a small number of human infections, over half of which have been fatal.

Where has avian influenza been discovered?
H5N1 avian influenza has been identified in Asia, Africa, Europe and the Middle East. Human cases have been confirmed in several areas impacted by bird infections, with the exception of Europe. Close direct contact with infected/ill domestic poultry, visiting or participating in live animal markets, or consuming bird blood or bird meat not thoroughly cooked has been documented for the majority of confirmed human cases.

What are the symptoms of avian influenza in humans?
People infected with the current strand of the avian virus (H5N1) have shown everything from typical human influenza-like symptoms (fever, cough, sore throat, and muscle aches) to pneumonia, severe respiratory diseases, and other life-threatening complications. Symptoms of avian influenza may depend on which specific virus subtype and strain caused the infection.

How is avian influenza detected in humans?
Avian influenza cannot be diagnosed by symptoms alone. Laboratory testing is required. Early testing involves collecting a swab from the nose or throat during the first few days of illness. Specimens collected in Iowa should be sent to the University Hygienic Laboratory (UHL). If it is late in the illness, avian influenza may be diagnosed by looking at the immune system's response to the virus once during the initial phases of infection then again a few weeks later.
Public health should be notified of any patient suspected of having avian influenza. If testing is required to rule out suspected disease, public health and UHL must be notified as soon as possible. Notifying public health and UHL early will help expedite testing and any necessary public health actions.

Does the current strain of Avian Influenza have the potential to become a pandemic?
Experts agree three criteria or circumstances must exist for a pandemic to occur:

- The virus must have the ability to infect humans and cause high mortality (death);
- Existence of a global human population that is immunologically naïve; and
- Efficient and sustained human-to-human spread.

Although the current Avian H5N1 strain meets the first two criteria to some degree, it has not met the third. Additionally, research has shown no genetic "reassortment" or changes have occurred among the avian and human influenza viruses. All the H5N1 strains isolated from confirmed human cases have only had genes from the avian H5N1 strain, meaning the strain has not mixed with other types of influenza.

Is there a vaccine for Avian Influenza?
There is not a vaccine for avian influenza. Researchers are working with national governments to develop a vaccine. Even if a vaccine for H5N1 is developed, it might not match the actual pandemic strain because a major mutation must occur before H5N1 can cause a pandemic. It is most likely that a vaccine will be created after the pandemic strain is identified and it could take six to nine months after a pandemic starts for a vaccine to be developed. Once developed, only small amounts would be available.

Will antiviral medication be effective against avian influenza?
Laboratory studies suggest that two prescription medicines approved for human influenza viruses, oseltamivir (Tamiflu™) and Zanamivir (Relenza™) may work in treating avian influenza infection in humans. Both have been used to successfully treat cases of avian influenza in other countries. Avian influenza has shown resistance to adamantanes, an antiviral medication that has been used to treat influenza in the past, in part due to widespread use in poultry.