



Nursing Matters

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Nursing Matters fact sheets provide quick reference information and international perspectives from the nursing profession on current health and social issues.

What is avian influenza (bird flu)?

Avian influenza or “bird flu” is an infectious disease, caused by the influenza A virus and occurring mainly in birds. Fifteen subtypes of the influenza A virus are known to infect birds, thus providing an extensive reservoir of influenza viruses’ potential within bird populations. Of greatest concern is the H5N1 subtype, which circulates among birds worldwide, is very contagious among birds, and can be deadly, but which does not usually infect humans. “Human flu” viruses refer to those subtypes that occur widely in humans. There are only three known A subtypes of human flu viruses (H1N1, H1N2 and H3N2), and it is likely that some genetic parts of current human influenza A viruses came from birds originally (<http://www.cdc.gov/flu/avian/gen-info/facts>).

Why is H5N1 of particular concern?

Of the 15 avian influenza virus subtypes, H5N1 is of particular concern for several reasons. H5N1 mutates rapidly to acquire genes from viruses infecting other animal species. It has a high pathogenicity and can cause severe disease in humans. Birds that survive infection excrete the virus for at least 10 days, orally and in feces, thus facilitating further spread at live poultry markets and by migratory birds. The spread of infection in birds increases the opportunities for direct infection of humans. If more humans become infected over time, the likelihood also increases that humans, if concurrently infected with human and avian influenza strains, could serve as the “mixing vessel” for the emergence of a novel subtype with sufficient human genes to be easily transmitted from person to person. Such an event would mark the start of an influenza pandemic (<http://www.who.int/csr/disease>).

How does bird flu spread?

Infected birds shed the flu virus in their saliva, nasal secretions, and droppings. Susceptible birds become infected when they have contact with contaminated excretions or surfaces that are contaminated with excretions. It is believed that most cases of bird flu infection in humans result from contact with infected poultry or contaminated surfaces. In rare instances, limited human-to-human spread of H5N1 virus has occurred. However, transmission has not been observed to continue beyond one person.

Do bird flu viruses infect humans?

Bird flu viruses do not usually infect humans. However, H5N1 viruses are constantly changing and there is concern that they might adapt over time to infect and spread among humans. During an outbreak of bird flu among poultry (domesticated chicken, ducks, turkeys), there is a possible risk to people who have contact with infected birds or surfaces that have been

contaminated with excretions from infected birds. In such situations, people should avoid contact with infected birds and contaminated surfaces, and should be careful when handling and cooking poultry.

What are the symptoms of bird flu in humans?

Symptoms of infection with H5N1 in humans have ranged from typical flu-like symptoms (fever, cough, sore throat and muscle aches) to eye infections, pneumonia, severe respiratory diseases (such as acute respiratory distress), other severe and life-threatening complications and death (<http://www.who.int/csr/disease>).


What are the infection control measures in health care settings?

(http://www.who.int/csr/resources/publications/influenza/Mask%20Clarification10_11.pdf)

During an influenza pandemic, health care workers will be at increased risk of exposure to and infection by influenza viruses. In a pandemic situation, WHO recommends use of facemasks by health care workers exposed to persons considered infected by influenza virus.

Available evidence suggests that transmission of human influenza viruses probably occurs largely through exposure to respiratory large-particle (> 5 m in size) droplets. Therefore, the use of surgical masks is considered beneficial and is recommended for all health care workers working within three feet (one metre) of patients who are considered potentially infectious with pandemic influenza. Health care facilities also may recommend that health care workers use such masks when entering a room occupied by a patient diagnosed with pandemic influenza. Hand hygiene should also be performed immediately after discarding a used mask. (For more information visit: http://www.who.int/csr/resources/publications/influenza/Mask%20Clarification10_11.pdf)

Is there a vaccine to protect humans from H5N1 virus?

There currently is no commercially available vaccine to protect humans against the H5N1 virus. However, vaccine development efforts are taking place. Research studies to test a vaccine to protect humans against H5N1 virus began in April 2005, and a series of clinical trials is underway. 

Useful websites

http://www.who.int/csr/disease/avian_influenza/en/index.html
<http://www.cdc.gov/flu/avian/gen-info/facts>
http://www.hc-sc.gc.ca/dc-ma/avia/index_e.html
<http://www.dh.gov.uk/>

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