

## Avian Influenza (“Bird Flu”) and the Significance of its Transmission to Humans

This OSACH Fast Fact is intended to provide information about the current status of Avian Influenza and some control measures that employers should be aware of in the event of an outbreak.

*Influenza viruses have been a constant and unwelcome companion to the human race from its inception. We normally maintain an uneasy truce with them as they induce sickness and discomfort and cull only the weakest among us on a seasonal basis. Occasionally, however, a particularly virulent and contagious variety appears, causing global outbreaks, or pandemics, which result in widespread severe illness and numerous fatalities. The “Spanish Flu” of 1918 and the “Hong Kong Flu” of 1968 are examples. The recent appearance of Avian Flu and its ability to spread at alarming rates have sparked fears of another destructive pandemic. It is in our own best interests, therefore, to learn about and gird ourselves against this emerging potential threat.*

### What is it?

Avian influenza is an infectious disease of birds caused by type A strains of the influenza virus. To date, all outbreaks of the highly pathogenic form have been caused by influenza “A” virus of subtypes H5 and H7.

### How is it spread?

Migratory waterfowl are the natural reservoir of avian influenza viruses, and these birds are also the most resistant to infection. The virus is shed in saliva, nasal secretions and feces. Domestic poultry, including chickens and turkeys, are susceptible to epidemics of rapidly fatal influenza. At this time, the virus is not spread from birds to humans nor from person to person.

### Can Avian Influenza A viruses infect humans?

Although these viruses do not usually infect humans, there have been several confirmed cases since 1997 in Asia and Europe. There have been no reports at this time of human-to-human transmission. So far the spread of H5N1 virus from person to person has been limited and has not continued beyond one person.

### What are the symptoms of Avian Influenza in humans?

The reported symptoms have ranged from typical influenza-like symptoms such as fever, cough, sore throat, and muscle aches, to eye infections, pneumonia, acute respiratory distress, viral pneumonia and other severe life-threatening complications.

### A constantly mutating virus: two Consequences

Genetic composition of influenza viruses can change as they replicate in humans and animals, resulting in new variants. Furthermore, the influenza A virus can swap genetic materials with other viruses, resulting in new subtypes that differ from both “parent” viruses but share some of their characteristics. It is feared that new subtypes may arise in persons concurrently infected with human and avian influenza strains, and that some of these subtypes may be highly pathogenic as well as readily transmissible from person to person. An influenza pandemic could then result due to the lack of immunity to the new subtype and lack of existing vaccines.

### Why H5N1 is of particular concern

Of the 15 avian influenza virus subtypes, H5N1 is of particular concern for several reasons:

- it mutates rapidly
- it can acquire genes from viruses infecting other animal species
- it can cause severe disease in humans

### Current precautions for protection in an outbreak situation

- Educate staff regarding proper hand hygiene using soap and water and friction and/or other standard hand disinfection procedures as outlined by Health Canada, the Ministry of Health and Long-Term Care, or the Centers for Disease Control and Prevention. Ensure that staff adhere to proper hand hygiene procedures.
- Ensure that personnel have access to personal protective equipment (PPE), including gloves, safety glasses or face masks, gowns, and respirators.
- Ensure that all personnel receive training and instruction on the use of PPE and that all personnel required to wear respirators are successfully fit tested.
- Wear protective outer clothing (e.g. coveralls, impermeable aprons, surgical gowns with long cuffed sleeves, protective shoe covers, rubber boots) that can be either discarded or cleaned and disinfected after use.
- Ensure that disposable PPE is properly removed and discarded after use to avoid recontamination.
- Ensure that non-disposable PPE is cleaned and disinfected after use, then stored so as to prevent potential contamination between uses.
- Vaccinate with the current season’s influenza vaccine to reduce the possibility of dual infection with avian and human influenza viruses.
- Ensure that workers are aware of all the symptoms of influenza, and instruct them to report to their health provider or occupational health service if they exhibit any of these.
- With the exception of visiting a health care provider, individuals who become ill should be advised to stay at home until 24 hours after a fever has been resolved, unless an alternative diagnosis is established or diagnostic test results indicate there has been no infection with influenza A virus.
- Ensure that patient care areas receive thorough environmental cleaning with an effective, proven hospital-grade detergent and/or disinfectant.

### The law requires employers to put measures and procedures in place to protect workers

The Health Care and Residential Facilities regulation requires every employer, in consultation with the joint health and safety committee (JHSC) or health and safety representative, to establish measures and procedures for the health and safety of the workers that include but are not limited to:

- safe work practices
- safe working procedures
- the control of infections
- the use of appropriate disinfectants and decontaminants
- the use, wearing, care, and limitations of personal protective equipment
- job-specific training and educational programs for workers

### What else should be considered?

The joint health and safety committee can be a valuable resource in auditing their organization’s infection control and housekeeping programs to ensure that policies and procedures are being followed.

### For more information...

Visit the following web sites:

1. Ontario Safety Association for Community & Healthcare (OSACH): [www.osach.ca](http://www.osach.ca)
2. Health Canada: [www.hc-sc.gc.ca/english/](http://www.hc-sc.gc.ca/english/)
3. Centers for Disease Control and Prevention: [www.cdc.gov/](http://www.cdc.gov/)
4. World Health Organization: [www.who.int/en/](http://www.who.int/en/)



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For more information, please contact:

**Ontario Safety Association for Community & Healthcare**

4950 Yonge Street, Suite 1505, Toronto, Ontario Canada M2N 6K1

Tel. (416) 250-7444 • Toll Free 1-877-250-7444 • Fax (416) 250-7484 • Web Site: [www.osach.ca](http://www.osach.ca)

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