

# **GUIDANCE FOR PERSONS EXPOSED TO AVIAN INFLUENZA ASSOCIATED WITH WATERFOWL AND OTHER NON COMMERCIAL AVIAN SPECIES**

## **RECOMMENDATIONS OF THE DELMARVA AVIAN INFLUENZA TASK FORCE June, 2010**

### **Summary**

In response to identification of Avian Influenza (AI) in poultry on the Delmarva Peninsula and reports of human illness in other countries associated with High Pathogenic Avian Influenza (HPAI) H5N1, a task force was formed to develop procedures for commercial poultry outbreaks. This task force expanded to provide guidance for persons exposed to wildfowl as previous testing has identified low pathogenic AI in wildfowl on the Delmarva Peninsula.

This document provides practical guidance related to human AI infection prevention and control, including education of persons who may come in contact with wildfowl (i.e., hunters, wildfowl processing), basic infection control, use of personal protective equipment (PPE), decontamination measures, vaccine use, surveillance for illness, and appropriate evaluation of persons who become ill.

### **Background**

Avian influenza viruses are influenza viruses that mainly infect birds. Although AI viruses do not usually infect humans, rare cases of human illness caused by AI have been documented throughout the world, including the United States. The human illnesses documented to have been caused by AI viruses have ranged from severe, sometimes fatal respiratory infections, such as those caused by the “high pathogenic avian influenza” (HPAI) H5N1 virus in Asia during 2004-2005, to mild illnesses like conjunctivitis, an inflammation of the lining of the eye. Other human AI infections appear to result in no symptoms. To date, most human AI infections have been acquired from direct contact with infected birds; person-to-person transmission might have occurred in several cases, but appears to be extremely uncommon. Although person-to-person transmission of AI appears to be rare; one major concern is that a person infected with AI could also become co-infected with a normal human influenza virus. Genetic material could be exchanged between the AI and the human influenza virus, which could result in a mutated AI virus that is spread easily from person-to-person. If this were to happen, a severe worldwide epidemic of influenza (pandemic) could ensue (3, 4).

Avian influenza viruses are known to circulate in wild bird species worldwide and more than 100 species have been identified with AI viruses. Most of these viruses cause little or no disease, especially in wild bird hosts. These so-called “low pathogenic” avian influenza (LPAI) viruses circulate among migratory bird populations and cross between migratory birds and unconfined domestic poultry (Early Detection and Response Plan for Occurrence of Highly Pathogenic Avian Influenza in Wild Birds U.S. Fish and Wildlife Service).

## Target Human Populations

- I. Department of Natural Resources (DNR) employees who capture waterfowl and perform avian disease surveillance
- II. Waterfowl hunters
- III. Waterfowl processors
- IV. Game Breeders
- V. Regulated shooting area (i.e., shooting preserve) operators
- VI. Waterfowl hunting outfitters and guides
- VII. Retriever training permittees and workers (routine training, field trials, hunt tests)
- VIII. Wildlife rehabilitators and animal shelters
- IX. Backyard poultry flock owners
- X. Other individuals who come in contact with waterfowl or other non commercial avian species (zoo workers, etc.)

Unless otherwise delineated, recommendations are for all target populations as listed above.

## Procedures

### Training/Education

Education material will include information about: the AI virus; transmission; symptoms in birds and humans; prevention and control measures for human transmission including annual seasonal influenza vaccination, basic hygiene, personal protective equipment, and proper cooking of wildfowl; who to contact if you identify ill or dead birds; and what to do if you are symptomatic.

### Target Population

- I. DNR employees who capture waterfowl and perform avian disease surveillance.  
Employer will provide education using brochures/fact sheets and website references with assistance of Public Health as needed.
- II. Waterfowl hunters  
Public education materials will be made available on DNR/DHMH websites. Materials including fact sheets will be distributed at public events such as hunting expos and agricultural fairs. Information about AI is provided to hunters in annual hunting season synopsis and guides where stamps and licenses are purchased.
- III. Waterfowl processors
- IV. Game Breeders
- V. Regulated shooting area (i.e., shooting preserve) operators
- VI. Waterfowl hunting outfitters and guides
- VII. Retriever training permittees and workers (routine training, field trials, hunt tests)
- VIII. Wildlife rehabilitators and animal shelters

Public education materials including U.S. Fish and Wildlife Service (USFWS) and DNR fact sheets and website references related to AI will be made

available to target populations III – VII when licenses and permits are purchased and during annual site visits made by DNR.

- IX. Backyard poultry flock owners  
Public education materials including USFWS and U.S. Department of Agriculture (USDA) Animal & Planet Health Inspection Service (APHIS) fact sheets and website references will be made available at locations where backyard flock registration materials are available, including extension services and stores that sell feed. Information, including guidance from APHIS is sent to registered flock owners in MD as well as to various wildlife associations such as Mid Atlantic Wildfowl, Guinea Fowl International, etc. In other states (DE and VA) this information is made available at university and state offices where backyard flocks are routinely tested for surveillance purposes.
- X. Other individuals who come in contact with waterfowl or other non commercial avian species (zoo workers, private waterfowl collections, etc.)  
Employers will provide training and education to employees using APHIS and USFWS material.

### Basic Infection Control

All education material provided about AI as well as other infections will include the importance of strict adherence to and proper use of hand hygiene after contact with waterfowl and backyard poultry; contaminated surfaces; or after removing gloves. Hand hygiene should consist of washing with soap and water for 15-20 seconds. This will happen at all breaks (lunch and bathroom), especially where smoking or eating will occur, and prior to leaving the affected area. Education will also include the following points:

1. Do not handle or butcher game birds that are obviously sick or are found dead;
2. Do not eat, drink, or smoke while cleaning game;
3. Wear rubber gloves and washable clothing when cleaning game;
4. Wash your hands with soap and water or alcohol wipes immediately after handling game;
5. Wash tools and working surfaces with soap and water, then disinfect with a 10 percent solution of chlorine bleach; and
6. Place uncooked game in a plastic bag or container for transport.
7. Cook game meat thoroughly; poultry should reach an internal temperature of 165 degrees Fahrenheit. (<http://www.pandemicflu.gov/health/hunters.html>)

### Personal Protective Equipment (PPE)

#### Target Population

- I. DNR employees who perform waterfowl capture and avian disease surveillance.

Recommended to wear impermeable gloves and goggles or safety glasses where there is no known AI infection. If AI is suspected, or there are otherwise sick or dead birds, add National Institution for Occupational Safety (NIOSH) approved N95 or better respirators, disposable gowns, and rubber boots or boot covers (ref Early Detection and Response Plan for Occurrence of Highly Pathogenic Avian Influenza in Wild Birds USFWS).

- II. Waterfowl hunters
- III. Waterfowl processors
- IV. Game Breeders
- V. Regulated shooting area (i.e., shooting preserve) operators
- VI. Waterfowl hunting outfitters and guides
- VII. Retriever training permittees and workers
- VIII. Wildlife rehabilitators and animal shelters
- IX. Backyard poultry flock owners
- X. Other individuals who come in contact with waterfowl or other non commercial avian species (zoo workers, etc.)

When no AI has been identified in the area, rubber or disposable gloves are recommended for use for target populations II – IX when handling or processing birds for consumption or when gathering eggs.

When AI has been identified in the area, additional guidance for target populations II - IX may be provided, or the affected area(s) may be closed following guidance of the local state or federal fish and wildlife agency(ies).

### Surveillance

All persons are encouraged to self monitor for symptoms of influenza and seek medical care promptly. Inform your health care provider of exposure to waterfowl or other non commercial avian species. Medical providers are responsible for reporting unusual manifestations of a communicable disease in an individual and should be encouraged to consult public health for symptomatic patients who have been potentially exposed to Avian Influenza.

Public health monitors reports of diseases locally and statewide.

Active surveillance for human infections will be completed by public health when highly pathogenic AI is documented in waterfowl or non commercial avian species. Active surveillance may include notification to the medical community to report cases, contacting state and private workers in the target populations for surveillance, press releases for community education related to obtaining medical care for influenza symptoms and/or other methods appropriate to the outbreak.

### Vaccine and Antiviral Drugs

Annual seasonal influenza vaccine is routinely recommended for all persons who want to reduce the risk of becoming ill with human influenza or of transmitting it to others. Protection from human influenza can prevent persons from becoming co-infected with

an avian and human influenza potentially causing viral mixing/mutation and a new virus emerging.

Seasonal human influenza vaccine is available at many public and private clinics, local health departments, and hospital sites. Low or no fee clinics are advertised. Medicare covers the cost of influenza vaccination.

Antiviral drugs may be recommended if a person has been exposed to AI. This will be dependant upon the timing of exposure and availability of antivirals. A medical provider must be consulted as antivirals are only available by prescription. Medical providers should consult with local public health officials for current guidance on use of antivirals. Employees/individuals are encouraged to discuss the potential for and/or actual exposure with their medical provider in the event post exposure antiviral medication would be needed.

#### Evaluation of Ill exposed persons

Medical providers treat persons with influenza routinely. Treatment and testing vary. Public Health recommendations should be sought for evaluation of persons potentially exposed to HPAI. Evaluation should include appropriate testing including oropharyngeal swab (obtained from local public health) and acute serum (convalescent serum may be obtained 2-8 weeks later if appropriate).

#### References:

1. CDC. "Interim Guidance for Protection of Persons Involved in U.S. Avian Influenza Outbreak Disease Control and Eradication Activities" February 17, 2004. Downloaded from <http://www.cdc.gov/flu/avian/pdf/protectionguid.pdf>
2. OSHA. "Avian Influenza Protecting Poultry Workers at Risk. Safety and Health Information Bulletins 12-13-2004" December 13, 2004. Downloaded from <http://www.osha.gov/dts/shib/shib121304.html>
3. CDC. "Avian Influenza Infection in Humans" January 19, 2005. Downloaded from <http://www.cdc.gov/flu/avian/gen-info/avian-flu-humans.htm>
4. CDC. "Key Facts About Avian Influenza (Bird Flu) and Avian Influenza A (H5N1) Virus" March 18, 2005. Downloaded from <http://www.cdc.gov/flu/avian/gen-info/facts.htm>
5. United States Department of Agriculture Interim Avian Influenza (AI) Response Plan January 2006. Downloaded from <http://www.aphis.usda.gov>