

FREQUENTLY ASKED QUESTIONS WILD BIRDS AND AVIAN INFLUENZA

Since mid-December 2014, there have been several ongoing highly pathogenic avian influenza (HPAI) H5 incidents along the Pacific, Central and Mississippi Flyways. This FAQ was developed for wildlife rehabilitators to provide information and guidance on avian influenza (AI).

- **What is Avian Influenza (AI)?**

Avian influenza is a disease caused by infection with avian (bird) influenza (flu) Type A viruses. These viruses occur naturally among wild aquatic birds (such as ducks, gulls and shorebirds) worldwide and can infect domestic poultry (such as chickens, turkeys, quail and geese).

Influenza A viruses have many different subtypes and are named for the two types of proteins on the virus surface. These proteins are referred to as H and N. There are at least 16 forms of H and 9 forms of N in birds designated by a number (e.g., H5N2).

Since mid-December 2014, there have been several ongoing highly pathogenic avian influenza (HPAI) H5 incidents along the Pacific, Central and Mississippi Flyways. Cases in wild birds, captive wild birds, backyard poultry or commercial poultry have been reported. Details are available on the APHIS website. The HPAI strains detected recently in these flyways are H5N2, H5N8 and H5N1, but primarily H5N2 in turkey flocks.

- **Can AI affect humans?**

Avian flu viruses do not normally infect humans. However, sporadic human infections with avian flu viruses have occurred. The current strain (Highly Pathogenic H5N2) in the US that has been killing turkeys, chickens and raptors has not caused illness in humans. CDC considers the risk to people from these HPAI H5 viruses in wild birds, backyard flocks and commercial poultry, to be low.

- **What is Highly Pathogenic Avian Influenza (HPAI)?**

AI viruses are divided into two groups—highly pathogenic (HPAI) and low pathogenic (LPAI)—based on the ability of the virus to produce disease in domestic poultry and the severity of illness it can cause.

- o HPAI spreads rapidly and has a high death rate in domestic poultry. HPAI is an extremely infectious and fatal form of AI that typically kills 95-100% of an infected flock.
- o LPAI causes only minor illness in domestic poultry and occurs naturally in migratory waterfowl. The concern is that some LPAI virus strains are capable of mutating into HPAI viruses.

- **What are the signs of AI in domestic birds?**

Possible signs include sneezing, coughing, watery eyes, nasal discharge, twisted neck, and swollen sinuses, along with decreased feed and water intake, dehydration, decreased egg production, misshapen eggs, decreased fertility or hatchability, depression, huddling, diarrhea, lethargy and an increase in mortality. HPAI viruses usually cause severe illness in chickens and turkeys, with few birds within an infected flock surviving.

- **What are the signs of AI in wild birds?**

Wild birds infected with HPAI may not appear sick. However, illness and death have been observed in raptors and geese associated with infection by HPAI subtypes H5N2 and H5N8.

- **How is AI transmitted?**

AI viruses are shed in the feces and respiratory secretions of birds. The fecal-oral and respiratory transmission routes can rapidly spread the virus throughout a poultry flock. Clothes, shoes, shared equipment and vehicles can pick up the virus from the environment, therefore these are also transmission routes.

- **How can AI be prevented in poultry?**

The *most important thing* that can be done to prevent AI in a domestic poultry flock is **consistently** practicing biosecurity.

- **What is biosecurity?**

Biosecurity means doing everything you can to reduce the chances of moving an infectious disease from an affected area to a non-affected area, such as avian influenza (AI), being carried into a rehabilitation facility without quarantine, or release of an HPAI infected bird from a rehabilitation facility.

The U.S. Department of Agriculture recommends the following 6 simple steps to help keep birds healthy:

1. Keep your distance- Isolate your birds from visitors and other birds.
2. Keep it clean- Prevent germs from spreading by cleaning shoes, tools and equipment. Bleach (10% solution), Virkon®, and Rocal-D are potential disinfectants for use in the clinical setting.
3. Don't haul disease home- Also clean vehicles and cages.
4. Don't borrow disease from your neighbor- Avoid sharing tools and equipment with neighbors.
5. Know the warning signs of infectious bird diseases- Watch for early signs to prevent the spread of disease.
6. Report sick birds- Report unusual signs of disease or unexpected deaths.

- **How can AI be prevented in people?**

While there have not been any documented cases of wild birds transmitting HPAI directly to humans, even apparently healthy birds can be infected with organisms that can affect human health. General health recommendations follow that can help prevent transmission of diseases such as *Chlamydia* spp., *Salmonella* spp., *Campylobacter* spp, and HPAI.

Guidelines on how to safely handle sick or dead wildlife are available at

http://www.nwhc.usgs.gov/publications/wildlife_health_bulletins/WHB_05_03.jsp

The following recommendations were developed by the Department of Interior and U.S. Geological Survey (USGS), in consultation with the Centers for Disease Control and Prevention (CDC). Check with the Mississippi State Department of Health, the Mississippi Board of Animal Health, and the U.S. Department of Agriculture for current information on HPAI

(http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=avian_influenza.html).

General Recommendations:

- Thoroughly wash hands with soap and water (or with alcohol-based hand products if the hands are not visibly soiled). These viruses also are inactivated with many common disinfectants such as detergents, 10% dilution of household bleach, alcohol and other commercial disinfectants. The virus is more difficult to inactivate in organic material, such as feces or soil.
- The general public should observe wildlife, including wild birds, from a distance. This protects people from possible exposure to pathogens and minimizes disturbance to the animal.
- Avoid touching wildlife with bare hands. If there is contact with wildlife, do not rub eyes, eat, drink or smoke before washing hands with soap and water as described above.
- Do not pick up diseased or dead wildlife. Contact state, tribal or federal natural resource agency if a sick or dead animal is found.

Recommendations for individuals handling sick or dead birds associated with a mortality event:

- Follow the recommendations above and wear protective clothing, including coveralls, rubber boots, and latex or rubber gloves that can be disposed of or disinfected.
- Minimize exposure to mucosal membranes by wearing protective eyewear (goggles) and a particulate surgical mask (NIOSH N95 respirator/mask is preferable).
- Decontaminate work area and properly dispose of potentially infectious material including carcasses. For additional information, see the USGS Field Guide to Wildlife Diseases: www.nwhc.usgs.gov/publications/field_manual/chapter_4.pdf.

- Do not eat, drink or smoke while handling animals.

- **What should I do to report sick birds?**
If you suspect a problem, say something immediately. Report sick birds or unusual bird deaths to state officials. Wildlife rehabilitators and the public can report bird die-offs, especially raptors and waterfowl, through the Wildlife Health Event Reporter at <http://whmn.org/wher/>. These reports are being monitored daily by wildlife and animal health officials. Veterinarians should contact the Mississippi Board of Animal Health (601-359-1170 or animal disaster hotline 1-888-722-3106) or the USDA Veterinary Services office (601-936-8580).

References:

- USDA Questions and Answers: Avian Influenza Outbreaks in the United States, April 2015
- NWRA News, Special Feature: Frequently Asked Questions on Avian Influenza, Wednesday, December 6, 2006, Compiled by Erica A. Miller, DVM (Originally printed in "The Wildlife Rehabilitator," Volume 6, Issue 1, Winter 2006)
- www.nwhc.usgs.gov/publications/wildlife_health_bulletins/WHB_05_03.jsp