



## **Guidance for Michigan Wildlife Rehabilitators to Reduce the Risk of Highly Pathogenic Avian Influenza Transmission**

April 6, 2022

Highly Pathogenic Avian Influenza (HPAI) virus (H5N1 Eurasian strain or EA H5) has been detected in wild birds in all waterfowl flyways in North America since December 2021. Subsequently, the virus has been detected in the eastern and central U.S. in healthy hunter-harvested and live-sampled waterfowl, and in wild birds found dead individually or during mortality events, as well as numerous backyard and commercial poultry flocks. In Michigan, the initial HPAI detection in a wild bird was a healthy mute swan in Monroe County collected on March 15, 2022. Shortly after, a mortality event involving at least 30 dead waterfowl (mostly Canada geese and a few tundra swans) at the St. Clair Flats State Wildlife Area was confirmed as a HPAI outbreak. Two snowy owls collected in Macomb County were also HPAI positive. In domestic birds, HPAI was detected in Kalamazoo (February 24) and Macomb (March 25) Counties in non-commercial mixed-species (non-poultry) flocks. The current HPAI outbreak is dynamic and continued vigilance is needed to protect the health of people, domestic animals, and wildlife.

Waterfowl and other aquatic birds, raptors, and scavengers are at elevated risk of infection, but any bird species is susceptible. Avian influenza viruses naturally circulate in waterbirds (waterfowl and shorebirds), with or without clinical signs. Avian predators or scavengers (eagles, other raptors, crows, ravens, gulls, or vultures) may be exposed when feeding on infected waterbirds especially during mortality events. In poultry, HPAI H5N1 is highly contagious and causes significant mortality. Avian influenza viruses are shed in bodily fluids such as saliva, nasal secretions, and feces. They can be transmitted directly from an infected bird or indirectly through people or objects contaminated with virus particles (e.g., animal crates, bedding, perches, feathers, food, water, clothing, footwear, vehicles).

Clinical signs of avian influenza are highly variable and nonspecific and could be due to other causes. Wild birds can also show no clinical signs (asymptomatic carriers). In general, signs may develop within 3-21 days after exposure and may include:

- Sudden death; increased mortality in a flock
- Neurological signs (tremors, abnormal head/neck position, circling, inability to stand, paralysis)
- Inappetence, weakness, lethargy, and/or diarrhea
- Difficulty breathing, sneezing, nasal discharge, and/or coughing
- Swelling of the head, eyelids, neck, and/or hocks; purple discoloration of legs

No known human infections have been detected in the US, however this strain (EA H5) of HPAI has the potential to infect people, birds, and some mammals. Wildlife rehabilitation facilities may receive infected species and inadvertently promote transmission because of close contact among species and caregivers. This could result in spillover to species that might otherwise not be exposed in a natural setting. The wide breadth of species that can be affected and the variation in clinical signs make it difficult to triage high-risk HPAI candidates. To minimize the introduction and spread of HPAI within the wildlife rehabilitation facility, we recommend the following:

### **General best management practices:**

- It is strongly recommended that no wild waterfowl are admitted for rehabilitation
- Use caution if admitting wild waterfowl, and in particular mallards and Canada geese. Strict isolation of new admissions is recommended.
- Use extreme caution if admitting wild birds that have had known or suspected contact with backyard chickens or domestic waterfowl or were temporarily held in a facility where chickens or waterfowl may be present (e.g., animal shelters, veterinary clinics).
- Use extreme caution to ensure that wild birds being rehabilitated do not come contact peafowl, mute swans, Muscovy, or any domestic, semi-domestic, hybrid, or feral gallinaceous birds.
- As a precaution, waterfowl should not be fed to other wild birds (e.g., raptors) or mammals undergoing rehabilitation.

### **Testing is required to diagnose HPAI:**

- Isolate/quarantine any birds on intake that are suspected of having HPAI based on clinical signs, species, or the location the bird was collected from (e.g. an area of ongoing HPAI outbreak).
- Continue to follow state and federal reporting requirements for intake or euthanasia of eagles and threatened/endangered bird species that are suspect of HPAI infection
- Consider immediate euthanasia of waterfowl, raptors, or scavengers with unexplained neurologic or respiratory signs.
- If you have a deceased bird that is a suspect HPAI case, freeze the bird until you can get it to a field office or the Wildlife Disease Lab where samples can be collected for testing the Michigan State University Veterinary Diagnostic Lab.
- Avian Influenza is a reportable disease. If a bird tests positive, the State Veterinarian (Dr. Nora Wineland) and the State Wildlife Veterinarian (Dr. Megan Moriarty, DNR) should be notified.

### **Quarantine and Biosecurity**

- Isolate new admissions and separate patients by species and age class.
- Quarantine suspect cases in a room or building away from other birds and mammals; a location with a separate entrance and HVAC system or ventilation is best.
- Rehabilitation staff treating or caring for affected or suspect birds should not handle or have contact with domestic poultry in any setting (e. g. facility, home, neighbor farm). Designated personnel should treat and care for quarantined birds. If staffing limitations preclude this measure, then treatment and care for quarantined birds should occur last.
- Rehabilitation staff should have dedicated clothing and personal protective equipment (PPE) for working with quarantined birds and cleaning cages (e.g., face shield/mask or N95 respirator, eye protection, gloves, apron, coveralls, boots. <https://www.cdc.gov/flu/avianflu/h5/worker-protection-ppe.htm>).
- Use footbaths with disinfectant when entering and exiting a room.
- Clean (remove organic debris) and disinfect cages and travel containers between patients. Use a 10% bleach solution or hospital grade virucide for disinfection. Allow adequate contact time.
- Clean and disinfect food and water bowls, utensils, bedding, perches, etc. between patients.
- Contaminated cage liners/supplies/materials should be double bagged for disposal.
- Release animals at the location of origin. If this is not possible, the animal should be released within 10 miles of its location of origin.

- Do not transport birds across state lines. Clinically affected birds should not be transported between facilities or to release sites unless they've tested HPAI negative.
- Provide adequate air exchange and air filtration. Be aware that transmission can occur through aerosols and airborne particles so try to avoid situations where this may occur such as rooms where air circulates between rooms or spaces holding susceptible species.
- Carcasses from euthanized or natural mortality birds should be double-bagged (disinfect the outside of the bag with 10% dilute bleach) and stored in a refrigerator or freezer
- Infection control with positive HPAI cases in rehabilitation settings is extremely difficult to manage and may be beyond the facility and staff capacity.

### **Human Health**

- Wash hands for > 20 seconds after handling affected birds, or contaminated surfaces. Do not eat, drink, or smoke while treating affected birds or cleaning/disinfecting cages.
- Currently there are not H5 vaccines approved in the United States for humans or animals; however, individuals working with wild or domestic birds should receive their annual seasonal influenza vaccine to lower risk of reassortment with seasonal flu strains in people.
- If rehabilitation staff develop flu-like symptoms, they should seek prompt medical care and let the provider know that there has been regular contact with wildlife including wild birds.

### **If HPAI is detected in a bird at a rehabilitation facility the following should occur:**

- Report any bird die-offs or unusual mortality events within your facility by calling the DNR's Wildlife Disease Lab at 517-336-5030.
- If domestic poultry or pet birds are experiencing severe illness or multiple death losses, contact MDARD at 800-292-3939.
- Do not take in or release any birds or mammals following notification of infection confirmation.
- Euthanize the HPAI-positive bird, double-bag (disinfect the outside of the bag) and save frozen until further guidance is provided by local authorities.
- MDARD or DNR will conduct a foreign animal disease investigation and may need to euthanize other suspected or exposed birds.
- The affected wildlife rehabilitation facility must be thoroughly cleaned and disinfected.
- State licensing authorities may require that all animals be tested on a recurring basis to ensure the absence of virus shedding in asymptomatic animals or facilities could be depopulated of susceptible species and the facility sanitized.

### **Official avian influenza updates and guidance:**

- National Wildlife Health Center: [Distribution of Highly Pathogenic Avian Influenza in North America, 2021/2022 | U.S. Geological Survey \(usgs.gov\)](#)
- USDA: [USDA APHIS | 2022 Detections of Highly Pathogenic Avian Influenza](#) and [Animal Care Tech Note: Protecting Captive Wild Birds From Highly Pathogenic Avian Influenza \(usda.gov\)](#)

If you have any questions or concerns, please contact the DNR's Wildlife Disease Lab at 517-336-5030. For more information see our website at <https://www.michigan.gov/dnr/managing-resources/wildlife/disease/avian-influenza-influenza-a-virus-bird-flu>