

Highly Pathogenic Avian Influenza

Evaluation and Monitoring Protocol

I. Overview

Highly Pathogenic Avian Influenza (HPAI) virus outbreaks occur among poultry sporadically in the United States. In 2022, The U.S. Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS) announced a highly pathogenic avian influenza (HPAI) (H5N1) virus outbreak in commercial poultry. HPAI (H5N1) virus has also been reported in livestock such as goats and cows. A summary of the latest human HPAI (H5N1) detections and monitoring in the U.S. is available at: [H5 Bird Flu: Current Situation](#). A summary of the latest animal (commercial and backyard flocks, wild birds, livestock, and mammals) HPAI (H5N1) detections in the U.S. is available at: [APHIS USDA Resources](#).

Although the risk of infection is low for the general public, the West Virginia Bureau for Public Health is coordinating with the Centers for Disease Control and Prevention (CDC) and local health departments (LHD) on appropriate human health measures in the event that people are exposed to infected or dead birds or livestock due to HPAI (H5N1). Interim recommendations for preventing exposures to HPAI (H5N1) viruses, infection prevention and control measures and monitoring of exposed persons are available at: [Highly Pathogenic Avian Influenza A\(H5N1\) Virus: Interim Recommendations for Prevention, Monitoring and Public Health Investigations](#).

As a general precaution, people exposed to HPAI (H5N1) infected birds, livestock, or other animals, including people wearing personal protective equipment (PPE), will be monitored by their local health department for any signs or symptoms of illness consistent with influenza. This document outlines the procedure for public health (state and local health departments) to conduct monitoring for those individuals who have been exposed to HPAI (H5N1) infected birds or livestock.

II. Human Exposure

An exposed person is defined as someone who has:

- Close exposure (within six feet) in the past 10 days to birds or other animals with confirmed avian HPAI virus infection. Bird or other animal exposures can include, but are not limited to, handling, slaughtering, defeathering, butchering, culling, or preparing birds or other animals for consumption, or consuming uncooked or undercooked food or related uncooked food products, including unpasteurized (raw) milk of the infected animal, **OR**

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- Direct contact with surfaces contaminated with feces, unpasteurized (raw) milk or other unpasteurized dairy products or bird or animal parts (e.g., carcasses, internal organs) from infected birds or other animals, **OR**
- Visited a live bird market with confirmed HPAI bird infections or associated with a case of human infection with HPAI virus.

This protocol is for monitoring following exposure to highly pathogenic avian influenza. Please use the West Virginia Avian influenza Surveillance and Investigation protocol for exposures to infected individuals or laboratory personnel: [Avian Influenza Surveillance Protocol](#)

Note: this includes farm residents, workers, response workers, or volunteers associated with commercial dairy/poultry operations, backyard flocks, and other non-commercial settings, as well as laboratorians and veterinary medicine providers.

III. Notification to Public Health

CDC may notify Public Health responders who may have been exposed as part of USDA's response activities. The Office of Epidemiology and Prevention Services (OEPS) will, in turn, notify local health departments if health monitoring is needed for these individuals.

The West Virginia Department of Agriculture (WVDA) notifies OEPS of HPAI detections among birds or livestock that require public health investigation. Monitoring of household members, community contacts, and individuals associated with affected flocks or dairy operations is generally conducted by the LHD. Upon request, OEPS can provide additional support if monitoring needs exceed local capacity.

Individuals Who May Be Exposed and Need Monitoring

- USDA Contract Responders
- Commercial Cattle/Farm State Responders
- Backyard or Hobby Farms/Not affiliated with response
- WVDA Responders
- APHIS Responders
- Any person(s) handling and/or consuming raw/undercooked eggs within these parameters should be monitored
 - For bird exposures: Assess whether there was any egg handling starting two days prior to the earliest sign of infection (date of first indication of illness in birds or collection date of the first test-positive samples). Eggs are considered part of the

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flock environment. This includes individuals who have consumed eggs that were distributed.

- Any person(s) handling and/or consuming raw/unpasteurized milk should be monitored
 - For cattle exposures: Assess for any handling of raw milk starting two days prior to the earliest sign of infection (date of first indication of illness in cattle or collection date of first test-positive samples). This includes individuals who have consumed unpasteurized milk that was distributed.

IV. Monitoring Protocol

A) Types of Monitoring

- **Active Monitoring- LHD is responsible for contacting individual(s)**
 - Recommended for individuals who have had unprotected (i.e. have not consistently or correctly used personal protective equipment (PPE)) exposures to HPAI A(H5N1) virus infected animals or their environments.
 - Local or state health departments contact exposed persons directly about the development of any signs and symptoms of infection, on a modified schedule (i.e., day 0, 5, and 10).
 - In special situations when virus elimination cannot be accomplished through depopulation, individuals may need to be monitored longer. Note: typically premises are placed under an extended 120-day quarantine period if a farm chooses not to depopulate infected/exposed animals.
- **Self Monitoring**
 - Recommended for persons who used the recommended personal protective equipment (PPE) and did not have a breach in that PPE use.
 - Exposed persons are provided with information on what symptoms to look for and who to contact if they develop any of those symptoms, as well as the symptom monitoring log.
 - Individuals should be instructed to reach out to LHD if they develop symptoms. LHD does not need to contact those who are being self-monitored.

B) State Health Department Responsibilities

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- Upon notification of exposed individuals, as soon as possible, notify LHD and Regional Epidemiologists (REs) via a verbal notification, followed up by an email.
- Leadership should be notified when a HPAI exposure has occurred, when an individual being monitored for HPAI experiences symptoms which warrants influenza testing, and at the completion of the monitoring period to report the outcome of the monitoring period.
- When notifying LHD and REs, the State health department should include the relevant information in the email:
 - The LHD lead, the RE, and the outbreak lead from the State health department
 - A copy of the symptom monitoring log
 - Flock: Summary of the situation pertaining to the animal side:
 - Address and phone numbers of flock owners and/or responders.
 - What species of birds are involved that are sick/dead and how many are healthy and remaining.
 - What type of flock (World Organization for Animal Health (WOAH) poultry or Non-WOAH poultry)
 - The classification by WVDA will determine their response efforts, therefore including this information to the LHD is essential.
 - WOAH poultry refers to commercial flocks, and Non-WOAH refers to non-commercial flocks/backyard flocks.
 - De-population efforts/timeline of depopulation efforts, if known.
 - If samples were collected and sent to the Moorefield Animal Diagnostic Laboratory National Animal Health Laboratory Network.
 - Cattle: Summary of the situation pertaining to the animal side:
 - Address and phone numbers of owners and/or responders
 - How many animals are sick/dead and how many are healthy and remaining
 - Information provided by WVDA
 - Cattle detections are less likely to occur in West Virginia due to a smaller, less populated dairy industry, but can occur.
 - Handling HPAI (H5N1) in cattle differs from flocks. Depopulation does not occur; instead cattle are quarantined and treated for HPAI (H5N1).
- Request that the LHD check the Respiratory Collection Kits they have on hand to make sure the kits are unexpired. If they do not have Respiratory Collection Kits or the kits are expired, please direct them to reorder supplies from the West Virginia Office of Laboratory Services (WV OLS) as soon as possible.

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- For healthcare, providing collecting specimens, maintaining proper infection control and using recommended personal protective equipment (PPE), which includes an N95 or higher level respiratory (or face mask if a respiratory is not available), eye protection, gloves and a gown.
- Educate the LHD on proper transportation of specimens to OLS for Category A shipping information: [OLS Packaging and Shipping Instructions](#)
- Specimens can be packaged and shipped via FedEx, or specimens can be dropped off by the LHD to OLS. The delivery method should be discussed with the LHD and OLS to ensure that someone is at the laboratory to receive the specimen.
- Collaborate with LHDs and OLS to ensure that specimens are shipped properly and in a timely manner to OLS. (More information is included in the testing section of this document).
 - The State health department (influenza coordinator or on-call staff) should notify the CDC when an individual under monitoring for HPAI exposure develops symptoms and testing is being planned. CDC notifications can be made:
 - During business hours by calling the CDC Influenza Division directly at: (404) 639-3747.
 - After business hours by calling the CDC Epidemiologist on-call at: (770) 488-7100. You may be asked to contact the CDC influenza Division via email at FluViewSupport@cdc.gov if no one is there to address your call from the Influenza team. Please include the State health department's influenza coordinator in the email to the CDC.

Ending or Continuing a Monitoring Period- State Health Department

- On day 10, if there are no additional exposures and the individual is asymptomatic, the State health department will notify LHD/RE and leadership that there is no further public health action needed and the case can be closed.
- Monitored individuals who have an additional exposure to HPAI should contact the state health department to discuss monitoring timelines.
- If an individual becomes symptomatic, please refer to the testing section of this document.

C) Local Health Responsibilities

- Make initial contact with the farm owner or individual who needs monitored to establish rapport, assess understanding and compliance, and schedule for follow-up. Ensure that responders are also being contacted and monitored. Please refer to *Appendix A* for sample questions to ask during the initial call with the individuals who need to be monitored.
- Assess risk category by exposure of the individuals who need monitored: [Risk Categories by Exposure](#).

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- Instruct individuals to monitor themselves daily during their exposure period and for 10 days after the last known exposure for the presence of influenza-like illness symptoms (e.g. cough, sore throat, congestion, shortness of breath, difficulty breathing, conjunctivitis, sneezing, fatigue, myalgia, headaches, nausea). Day 0 is the last day of exposure. See information regarding self-monitoring for individuals exposed to a confirmed HPAI (H5N1) infection: [Information for People Exposed to Birds or Other Animals Infected with Avian Influenza Viruses](#).
- The LHD or the individual can complete the [Symptom Monitoring Log](#).
- Instruct individuals to report any symptoms to the LHD right away.
- There is no quarantine requirement for people with exposure to HPAI (H5N1).
- The LHD/RE should provide updates to the Influenza Coordinator, once initial contact has been made, then on day 5 and 10 until monitoring is completed. Updates can be sent by email.
- Confirm if there are currently any human influenza-like illnesses among employees/family members, workers, or others on the farm potentially exposed.



It is critical that individuals being monitored understand if they become symptomatic the LHD needs to be notified immediately. LHDs will then need to coordinate specimen collection and assess symptoms.

Ending or Continuing a Monitoring Period- Local Health Department

- If the individual remains asymptomatic the LHD will then inform the state health department that the individual has remained symptom free.
 - The LHD will then notify the individual that there is no further public health action on this case and contact the LHD if they start to develop symptoms.
- Monitored individuals who have an additional exposure must re-start to day 1 and the individual should be monitored for an additional 10 days.
- After the final monitoring check-in, the LHD should send the final monitoring forms to the influenza coordinator or via fax to OEPS at (304) 558-6335 with attention to the Influenza Coordinator.
 - If immediate care is needed for an individual, instruct the individual to call 911 and inform the first responders of their exposure.
 - If possible, instruct the individual to notify LHD prior to seeking medical care to ensure appropriate infection control measures are implemented to reduce the risk of further exposure.
- The LHD should use the instructions in the [Interim Recommendations for Prevention, Monitoring, and Public Health Investigations](#).

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- If symptoms develop, the LHD should instruct the person to self-isolate, recommend testing, and empiric antiviral treatment with oseltamivir as soon as possible. (Please see further details under the Testing section of this document).

V. Testing

- For symptomatic individuals, the LHD should recommend prompt medical evaluation, testing, and empiric initiation of antiviral treatment with oseltamivir as soon as possible.
- Testing and specimen collection should be initiated as soon as possible if the individual under monitoring develops symptoms during their monitoring period.
- The LHD should always wear PPE when collecting specimens. Please refer to high exposure setting PPE recommendations: [Personal Protective Equipment for Avian Influenza A Viruses in the Workplace](#).
- The LHD should discuss isolation and testing with the contact. The LHD may use the Respiratory Collection Kits on hand at the LHD (must be unexpired) to collect the specimen or partner with a local healthcare provider to collect the specimen and have it sent to WV OLS.
- **LHD should contact the State Health Department (Influenza Coordinator) so arrangements can be made with OLS and specimen transportation.**
 - During business hours, contact the State health department influenza coordinator. If the influenza coordinator is unable to be reached, call the epidemiologist on-call.
 - After hours and on weekends, please notify the epidemiologist on-call.
 - After calling the epidemiologist on-call, call WV OLS answering service at OLS's main number at (304) 558-3530, and follow the prompts for the answering service to reach the after-hours laboratorian.
- The following respiratory specimens should be collected as soon as possible after illness onset:
 - A nasopharyngeal swab, **AND**
 - A nasal swab combined with an oropharyngeal swab (e.g., two swabs collected separately and combined into one viral transport media vial).
 - If the person has conjunctivitis (with or without respiratory symptoms), when possible both a conjunctival swab and nasopharyngeal swab should be collected and tested separately. However, conjunctival swabs may be tested without a respiratory sample when testing with CDC's H5 assay if a paired respiratory sample is not available.

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- If the above specimens cannot be collected, a single nasal swab or oropharyngeal swab is acceptable.
- Testing for patients with severe respiratory disease should include a lower respiratory tract specimen:
 - An endotracheal aspirate or bronchoalveolar lavage (BAL) fluid from intubated patients or induced sputum.
 - The specimens listed above have a higher yield for detecting HPAI A(H5N1) viruses.
 - Multiple respiratory tract specimens from different sites should be obtained from the same patient on at least two consecutive days.

VI. Chemoprophylaxis Treatment

- The absence of fever should not supersede clinical judgment when evaluating a patient for illness compatible with novel influenza A virus infection.
- Chemoprophylaxis with influenza antiviral medications can be considered for any person meeting epidemiologic exposure criteria (Please refer to the [Avian Influenza Protocol](#) to determine if the individual meets the criteria for testing).
- Decisions to initiate post-exposure antiviral chemoprophylaxis should be based on clinical judgment, with consideration given to the type of exposure, duration of exposure, time since exposure, and known infection status of the birds or animals the person was exposed to. Please refer to [Interim Guidance on the Use of Antiviral Medications for Treatment of Human Infections with Novel Influenza A Viruses Associated with Severe Human Disease](#).

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- Centers for Disease Control and Prevention. (2024). Highly Pathogenic Avian Influenza A(H5N1) Virus: Interim Recommendations for Prevention, Monitoring, and Public Health Investigations. <https://www.cdc.gov/bird-flu/prevention/hpai-interim-recommendations.html>
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Appendix A

Sample Questionnaire

When contacting a **farm owner (backyard/hobby or commercial flock)** that needs to be monitored, please ask the following questions:

- When was the last time you were around the infected flock?
- Are you or anyone in your home experiencing influenza-like illness (cough, sore throat, runny nose, myalgia, conjunctivitis) or has been diagnosed with influenza?
- Did you wear personal protective equipment (PPE) while around the infected flock?
- Was there ever a breach in PPE? Examples of a breach in PPE can include gaps, tears, and holes.
- Are you an egg distributor?
 - Assess whether there was any egg handling starting *two days prior to the earliest sign of infection* (date of first indication of illness in birds or collection date of the first test-positive samples). Eggs are considered part of the flock environment. Any person(s) handling and/or consuming raw/undercooked eggs within these parameters should be monitored.
- Were there any additional individuals around the infected animals? (extended family, neighbors, etc.) This will help us determine if there are additional contacts that need to be monitored.
- Have you contacted anyone about the sick/dead flock, such as a veterinarian? If so, what steps have been taken to deal with the sick/dead flock?

When contacting a **USDA/APHIS/WVDA responder(s)** who returned from deployment, please ask the following questions:

- When was the last day you were around the infected animal(s)?
- Are you or anyone in your home experiencing influenza-like illness? (cough, sore throat, runny nose, myalgia, conjunctivitis) or has been diagnosed with influenza?
- Was there a breach in PPE during your deployment? Examples of a breach in PPE can include gaps, tears, and holes.
- Are you familiar with the monitoring process and symptom tracking?

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