I. Overview

Highly Pathogenic Avian Influenza (HPAI) virus outbreaks occur among poultry sporadically in the United States. In February 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 a commercial poultry facility followed by additional outbreaks in three U.S. states, marking the first HPAI (H5N1) virus detections in commercial poultry facilities in the nation since 2020. Since February 2022, additional HPAI (H5N1) outbreaks have been identified in poultry, including both commercial and backyard flocks in multiple states. A summary of the latest HPAI (H5N1) detections in the U.S. is available at [HPAI H5N1 Bird Flu: Current Situation Summary | Avian Influenza (Flu) (cdc.gov)](https://www.cdc.gov/flu/avianflu/hpai/hpai-interim-recommendations.html). On February 24, 2022, the Michigan Department Agriculture and Rural Development (MDARD) announced the state’s first confirmation of the presence of HPAI (H5N1) in a backyard flock of birds in Kalamazoo County.

HPAI (H5N1) virus infection has also been reported in livestock such as goats and cows. In March 2024, a similar HPAI (H5N1) virus was detected in dairy cows in Texas, and subsequently in cattle in several other states, including Michigan. As of May 31, 2024, three human cases of influenza A (H5N1) infection have been reported in the U.S., with two of them being Michigan residents. All three cases have been associated with exposure to known HPAI (H5N1)-infected dairy cows. Although the risk of infection is low for the general public, the Michigan Department of Health and Human Services (MDHHS) is coordinating with the Centers for Disease Control and Prevention (CDC) and local health departments 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 is available at [HPAI H5N1 Virus in Animals: Interim Recommendations for Prevention, Monitoring, and Public Health Investigations (cdc.gov)](https://www.cdc.gov/flu/avianflu/hpai/hpai-interim-recommendations.html).

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 (LHD) for any signs or symptoms of illness consistent with influenza. This document outlines the procedure for local public health to conduct active monitoring for those individuals who have been exposed to HPAI (H5N1) -infected birds or livestock.

II. Notification to Public Health

An exposed person is defined as someone with:

- Close exposure (within six feet) in the past 10 days to birds or other animals with confirmed avian HPAI (H5N1) 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, OR
- 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
• Visiting a live bird market with confirmed bird infections or associated with a case of human infection with HPAI (H5N1) virus.
• For birds: 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.
• For cattle: 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). Any person(s) handling and/or consuming raw/unpasteurized milk should be monitored.

LHDs may be informed of residents who have identified sick or dead bird(s) or of workers and farm residents who have been in contact with a potentially infected flock or dairy herd. In this case, LHDs are asked to notify MDHHS when residents have been exposed to sick or dead animals.

Notification of USDA-APHIS responders who may have been exposed as part of USDA’s response activities is expected to come through the CDC to MDHHS. MDHHS staff will typically be responsible for health monitoring for these individuals.

Household, community, and flock or dairy herd operation and farm staff will typically be monitored by the LHD. MDHHS may be able to assist in this monitoring upon request by the LHD.

HPAI (H5N1) positive test results from commercial/backyard poultry, and commercial cattle herds will come to MDHHS from MDARD. Wildlife positive results will come to MDHHS from the Michigan Department of Natural Resources (MDNR). MDHHS will in turn contact the LHD. MDARD may also contact LHDs directly for notifications.

Important Note: Identifying information about affected farms is not for public distribution. The Animal Industry Act (Public Act 466) protects the personal information of owners of animals that are or may be infected with a disease (MCL 287.709). This includes owners’ names and farm locations and should only be shared on a need-to-know basis.

III. Monitoring Protocol
• Upon notification and risk assessment, the LHD, in coordination with MDHHS, will immediately initiate follow-up for the observation period (date of last exposure plus 10 days) using the following monitoring protocol:
  o Make initial contact to establish rapport, assess understanding and compliance, and set the schedule for follow-up.
  o Confirm employees have been or will be notified of potential exposure.
  o Provide fact sheet on HPAI (Spanish language version), a symptom monitoring log, and LHD contact information at initial contact.
  o Establish preferred communication mechanisms for worker contact (text, phone, email).
  o Instruct individuals to monitor themselves daily during their exposure period and for 10 days after the last known exposure for the presence of any influenza-like symptoms (e.g., cough, sore throat, congestion, shortness of breath, difficulty breathing, conjunctivitis, sneezing, fatigue, myalgia, headaches, nausea/vomiting, diarrhea, seizures and/or rash). Day 0 is the last day of exposure.
• Inform the individual if they become symptomatic, they should contact the LHD immediately.

• State or local health department staff should contact monitored individuals regularly by phone, text, or email. Individuals should be asked about symptoms of illness.
  o The frequency of monitoring contact may vary based on risk and exposure type and should be discussed between the LHD and MDHHS.
• MDHHS can facilitate automated text monitoring in coordination with People.Health. LHDs can discuss this methodology with MDHHS, if interested. See section XII for more information on text monitoring.
• Receiving monitoring information from an intermediary (e.g., corporate health clinic, farm operator) may be acceptable.
  o LHDs must arrange to receive regular summaries and reports from the intermediary, which would allow for rapid identification and testing of a monitored individual that becomes symptomatic.
  o It is critical that intermediaries responsible for monitoring and monitored individuals understand if a monitored individual becomes symptomatic state and/or local public health needs to be immediately notified, including details on the symptomatic individual. LHDs will then coordinate clinical assessment and appropriate specimen collection.
• During the final check-in of the monitoring period, individuals shall be notified that no further contact is necessary. They should be advised to contact the LHD if they have any questions in the future.

IV. Record Keeping and Reporting
• LHD will enter newly detected exposures into OMS using the appropriate outbreak ID for poultry exposures, “HPAI H5N1 POULTRY-2024-STATEWIDE”, or for cattle exposures, “HPAI H5N1 CATTLE-2024 STATEWIDE”.
• Monitoring information should be updated in the OMS. For instructions, reference the tip sheet Monitoring Contacts using the OMS and/or contact your regional epidemiologist.
• MDHHS will send state aggregate numbers of monitored persons to CDC weekly while active monitoring is underway.

V. Instructions for a Monitored or Exposed Person who becomes Symptomatic
If an individual reports ANY symptoms consistent with influenza (fever, respiratory symptoms or eye symptoms, as above) during the monitoring period:
• Individual should be reminded to self-isolate and call their LHD point of contact immediately.
• LHD should collect the following information, and document in the OMS record if possible:
  o Onset date
  o Signs/symptoms
  o Additional details about potential exposure to HPAI (H5N1)
  o Oseltamivir (Tamiflu) initiation? If so, date?
  o Specimen types and collection date(s)
• The LHD will make a referral for prompt medical evaluation, appropriate antiviral treatment, and testing for influenza A(H5N1) virus infection.
  o Before an individual seeks medical attention, the healthcare provider/healthcare facility should first be notified by phone to alert them of the individual’s symptoms and exposure history.
• Empiric initiation of antiviral treatment with oseltamivir should be considered.
  o Detailed guidance on dosing and treatment duration is available at Interim Guidance of the Use of Antiviral Medications for the Treatment of Human Infection with Novel Influenza A Viruses Associated with Severe Human Disease.
  o Provision of antiviral treatment at the point of care should NOT be a barrier for testing.
If antiviral treatment is indicated, it should be provided as soon as possible.

- MDHHS should be contacted immediately by the LHD to assess the situation and coordinate collection of respiratory specimen(s) for influenza testing by the MDHHS Bureau of Laboratories (BOL). Test Request Form: MDHHS-6097.

- For individuals with respiratory symptoms, the preferred specimen for testing at the Michigan Bureau of Laboratories (BOL) is a dual nasopharyngeal (NP) and oropharyngeal (OP) collection having both swabs (NP + OP) put into separate tubes of VTM. The NP swab in VTM is the preferred specimen type if only one is able to be collected for an individual with respiratory symptoms.

- Individuals with conjunctivitis (with or without respiratory symptoms) MUST have two samples collected: conjunctival swab AND NP swab. If only conjunctival swab is collected, it will need to be shipped to CDC for influenza testing by MDHHS BOL, which may delay results.

- A viral respiratory test requisition MDHHS-6097 should be completed and accompany specimens being sent to the Michigan Bureau of Laboratories.

- Specimen tubes should be labeled with two unique identifiers that match what is on the test requisition (i.e., first name, last name and date of birth). Specimen tubes should also be labeled with the specimen source and date of collection.

- After collection, specimens should be sent on frozen cold packs to Michigan Bureau of Laboratories.
  - If specimens will not arrive to the Michigan Bureau of Laboratories within 72 hours of their collection specimens should be frozen and sent on dry ice.

- Additional information regarding collection, packaging, and shipping of specimens to the Michigan Bureau of Laboratories can be found in the Virus Isolation Specimen Submission Instructions DCH-0772.

- Testing at MDHHS BOL should not preclude influenza testing at a healthcare facility, but it is recommended specimens be collected for both. In addition, it is recommended that healthcare facilities pursue PCR-based tests over rapid EIAs due to the low predictive value positive during times of low seasonal influenza activity. However, a positive EIA (rapid test) is actionable. If EIA is negative, PCR testing should be conducted.

- Link to Template for Standing Orders for Influenza Testing of Persons Potentially Exposed to Avian Influenza.

### VI. Follow-up to influenza A (H5N1) Confirmed and Presumptive Positive Cases

- LHDs are requested to reiterate isolation guidance to the presumptive/confirmed case and, if not already completed, gather information on household contacts, including their current health status. Household contacts should be enrolled in monitoring.

- LHDs are also asked to first complete the [CDC Novel Influenza A Virus Case Screening Form](https://www.cdc.gov/vhf/ofa/h5n1/virus-case-screening-form.html) for persons under investigation (PUI), and the [CDC Novel Influenza A Virus Case Report Form](https://www.cdc.gov/vhf/ofa/h5n1/virus-case-report-form.html) and attach both to the presumptive/confirmed case in MDSS. Please prioritize the following questions in the CRF, if not already documented when initial specimens were collected:
  - Onset date.
  - Signs/symptoms.
    - Does the case still have symptoms? If not, resolution date? If yes, are symptoms improving?
    - Has the case started oseltamivir? If yes, when?
    - How many household members does the case have?
      - Note: contacts should be entered into the OMS
    - Are any of the household members symptomatic?
    - Have household members been offered oseltamivir?
Are there any pets in the household?
Are any pets experiencing symptoms?
  ▪ If yes, see Guidance for Domestic Animals Section X below.
Does the case have raw milk products in the household?

Farm/Dairy Questions
Does the case know when animals on the farm started getting sick?
Does the case work with sick animals?
What job duties does the case have on the farm?
What types of PPE does the case wear?
Can the case think of any specific exposure to potentially infectious material?
Are any other farm workers ill?

• Isolation Recommendations - presumptively positive influenza A(H5N1) human case should remain isolated until symptoms have completely resolved.
• Serology testing may be requested by MDHHS and/or CDC. Ideally a paired acute and convalescent serum specimen can be collected.
  o Acute serum should be collected as soon as possible after positive/presumptive test result
  o Convalescent serum should be collected >=14 days from the original acute serum draw.
  o All samples from patients with confirmed influenza A (H5N1) must be shipped to the CDC within 30 days of the very first PCR date to comply with select agent guidelines.
  o Please reach out to MDHHS with questions or anticipate collecting convalescent serum to be sent to the CDC.
• Repeat or additional testing of confirmed or presumptive influenza A(H5N1) human cases may be requested by CDC or MDHHS. Consultation and discussion between MDHHS and LHD staff is recommended in order to follow latest/current guidance from CDC.
• Please see HPAI (H5N1) Testing at BOL PowerPoint for additional details on specimen collection and testing at MDHHS BOL.

VII. Post-exposure Chemoprophylaxis of Exposed Persons
• Risk assessment is an area in need of additional research and knowledge. Additional information is expected to become available as the public health and animal health investigations progress in Michigan and nationally.
  o For small scale backyard poultry and wild bird HPAI (H5N1) detections, local public health may be responsible for conducting risk assessments for individuals to determine level of exposure and need for chemoprophylaxis.
  o For large scale commercial poultry and cattle situations, additional input may be needed from farm/facility staff, associated veterinarians, and/or state and federal animal and public health experts.
• Chemoprophylaxis with influenza antiviral medications can be considered for all exposed persons. State and local public health can discuss based on relevant risk factors.
• Decisions to initiate chemoprophylaxis should be based on clinical judgement, with consideration given to the type of exposure, clinical compatibility of illness and to whether the exposed person is at high risk for complications from influenza. Additional information along with treatment frequency and dosing can be found at Recommendations for Influenza Antiviral Treatment and Chemoprophylaxis (cdc.gov)
• The LHD should be prepared to provide chemoprophylaxis medications for high-risk individuals. Collecting appropriate specimens (from symptomatic exposed people) remains a high priority. Provision of antivirals should not be a barrier for testing.
• Chemoprophylaxis provided to contacts should be entered into OMS in the ‘Additional Assessments’ section of the ‘Data Points’ tab.
• In a large-scale event, the Strategic National Stockpile (SNS) would be available to provide the necessary quantities of chemoprophylaxis medications.
• [Link to CDC website]

VIII. Non-compliance
• Any issues with non-compliance will be immediately reported to MDHHS. These will be evaluated in coordination with the LHD on a case-by-case basis.

IX. Public Health Monitoring Procedures for USDA/APHIS Avian Influenza Responders
• During deployment, state/local health departments, USDA-APHIS Safety Officers, and Contractor Safety Officers are expected to share responsibility for evaluation, monitoring, and subsequent management of persons who develop illness.
• After deployment (during the 10-day post-exposure period), State/local health departments are primarily responsible for monitoring responders. If the responder will be leaving Michigan during their monitoring period, MDHHS Travelers Health will notify the appropriate state health department.
• See “Public Health Monitoring Plan for USDA/APHIS Responders to Detections of Avian Influenza Virus in Poultry”.

X. Guidance for Domestic Animals (e.g., Cats)
Highly pathogenic avian influenza (HPAI) (H5N1) virus has been detected in several mammals including wild, stray, feral, and domestic cats. Humans may be exposed to the virus through contact with the saliva, feces or droppings, and other body fluids of infected animals. The following guidelines apply to persons exposed to pets or other animals that have tested positive for HPAI (H5N1), are in ownership of an animal that has tested positive for HPAI (H5N1) or are otherwise involved in the handling and treatment for an HPAI (H5N1) positive animal.

Recommendations for Pet Owners
• Limit contact between pets and wild birds, ill livestock, and environments where the virus could be present.
• Wash your hands thoroughly after touching or interacting with animals outside your household.
• Avoid contact with sick or dead wildlife.

Be on the lookout for symptoms like decreased energy and appetite leading up to neurologic signs (lack of coordination, inability to stand, tremors, seizures). Respiratory signs such as nasal discharge, coughing, and sneezing may or may not occur.

Isolation of sick animals suspected of being infected with HPAI (H5N1)
• If possible, isolate the animal and ensure testing is being performed by a veterinarian. Remove the sick animal from other animals and family members, other than a single caregiver, and ensure someone who serves as a caregiver is not considered high risk. If the cat is an indoor/outdoor cat, recommend isolating cat inside to limit exposure to other animals or be further exposed to other animals.
• Consider the animal’s water and food source (commercial food, raw meat, raw milk) and discontinue use of any raw food sources (i.e., avoid any unprocessed, potentially infective materials). Refrain from shared food and water sources between cat and other animals. If other animals are present, closely monitor for any signs of illness.

• Take note of other pets in the household, consider exposure, and obtain testing for those animals. A household animal may be considered a risk, despite displaying no signs or symptoms.

• Due to the novelty of HPAI (H5N1) in household cats and other domestic animals, the length of infectivity and viral shedding for these animals is not known.

For specimen submission from ill cats, follow guidance documents at MDARD and Michigan State University Veterinary Diagnostic Laboratory (VDL) websites https://cvm.msu.edu/vdl/news/2024/h5n1-highly-pathogenic-avian-influenza-in-cats

• Report all positive results in cats and other domestic animals to MDARD’s State Veterinarian’s office using the following phone numbers:
  o 800-292-3939 (daytime)
  o 517-373-0440 or 412-847-2255 (after-hours)

**Human Symptom Monitoring After Exposure to Sick Animals**

• All people with direct or close exposure to HPAI (H5N1) infected animals should be monitored for symptoms for 10 days after their last known exposure.

• For more information and guidelines regarding human symptom monitoring, please see section III (Monitoring Protocol) above.

**Antiviral Chemoprophylaxis**

• Antiviral chemoprophylaxis with oseltamivir is recommended for all family members, including children, who were exposed to any HPAI (H5N1) positive cat or other animal.

• For more information, including dosage recommendations, please see section VII (Post-exposure Chemoprophylaxis of Exposed Persons) above.

**Considerations for Veterinarians and Veterinary Staff**

• As with anyone exposed to HPAI (H5N1)-infected birds or livestock, veterinarians and staff exposed to HPAI (H5N1)-infected animals (including those wearing recommended PPE) should be monitored for signs and symptoms of acute respiratory illness beginning after their first exposure and for 10 days after their last exposure. For more information regarding human symptom monitoring, please see section III above.

• When handling or interacting with cats that might be infected or have been exposed to bird flu viruses, veterinarians and staff should wear the appropriate PPE, which CDC details at this webpage: Considerations for Veterinarians: Evaluating and Handling of Cats Potentially Exposed to Highly Pathogenic Avian Influenza A(H5N1) Virus | Avian Influenza (Flu) (cdc.gov)

**XI. Resources and Contact Information**
The influenza A (H5N1) situation in Michigan is evolving and guidance will continue to be updated. Please refer to the following websites for the most current information:

• Michigan Department of Agriculture and Rural Development (MDARD): www.michigan.gov/avianinfluenza
• Michigan Department of Health and Human Services: [www.michigan.gov/emergingdiseases](http://www.michigan.gov/emergingdiseases), [www.michigan.gov/cdinfo](http://www.michigan.gov/cdinfo) and [michigan.gov/influenzaA](http://michigan.gov/influenzaA)

• Centers for Disease Control and Prevention: [Avian Influenza Current Situation Summary | Avian Influenza (Flu) (cdc.gov)](http://cdc.gov)

• USDA Detections of HPAI: [USDA APHIS | Detections of Highly Pathogenic Avian Influenza](http://usda.gov)
  o [USDA HPAI Detections in Livestock](http://usda.gov)
  o [USDA HPAI Detections in Poultry](http://usda.gov)

**MDHHS Contact Information:**

Communicable Disease Division main line: 517-335-8165 (9 a.m. to 5 p.m.) and 517-335-9030 (after hours).
A. Information on Symptom Monitoring through Automated Text Messaging

Automated text messaging provides exposed persons, including exposed farm contacts with an accessible, convenient, and timely way to report their symptoms during the monitoring period. This allows for swift response and further follow up of symptomatic individuals for control measures, access to testing and treatment if necessary.

**Enrollment Process**

- Regional Epidemiologist notifies LHD of non-negative HPAI (H5N1) farm and offers text messaging for symptom monitoring (Spanish translation options are available).
- LHDs that choose to enroll in text monitoring receive additional communication from MDHHS with introductory and educational messages about recent HPAI (H5N1) exposure and text monitoring to be shared with the impacted farm(s) or exposed contact(s). Text messaging will not be initiated until this information has been shared with the contacts.
- The MDHHS Flex Unit uses the following information on the non-negative farm to develop text messages:
  - LHD name and impacted county.
  - What kind of farm – cattle or poultry.
  - Official outbreak name (MI###, COUNTY ##).
  - Number of possible exposed contacts.
  - Names and telephone numbers of exposed contacts.
  - Phone number for contacts to reach the LHD.
  - Email of LHD staff to access the spreadsheet where monitoring results populate.
- An initial text message, daily symptom monitoring message (and reminders), and educational messages like those outlined below are sent to reported contacts. Automated text symptom monitoring is completed through the People.Health application.
- Designated MDHHS and LHD staff actively review results from daily symptom monitoring reported by contacts in their jurisdiction for prompt response, including during after-hours, on weekends and on holidays.
- Contacts monitored until 10 days after the last exposure.

**Symptom Monitoring Text Message Cadence and Outline**

- **Educational message shared with non-negative farm contacts** - Sent prior to initiating text messages:
  
  There is concern about Highly Pathogenic Avian Influenza (HPAI) H5N1, also referred to as “bird flu,” that have infected some cattle on this farm. We do not fully know the risk for humans exposed to these cattle but expect that the risk is low. However, when HPAI (H5N1) is found on a farm, either in poultry or cattle, public health agencies work together to monitor the health of the people who may have been exposed to ill animals or their surroundings. Your local health department, -Insert LHD name here- (Insert LHD abbreviation here), is working with the State of Michigan to use text messages to check-in with you daily to see how you are feeling. Those working with cattle or poultry will receive a welcome text message and then a text message every day at 10 AM from -Insert text phone number here. These daily text messages will provide a link to a website with a question that will ask you if you have any symptoms of illness. The language of the survey can be changed between English and Spanish by clicking the flag at the top right
corner of the page. Examples of symptoms will be given. You will need to click yes or no. If you do not click yes or no by 12 PM, you will receive reminder text messages with the same question, and if you do not click yes or no by 6 PM, you will receive another reminder text messages with the same question. If you report any illness, (Insert LHD abbreviation here), will reach out to you to talk about your symptoms and, if needed, connect you with testing and medicine. These daily check-ins are important because there is medicine that can help you if it is given early in the illness. If you do become ill, public health can also help with ideas to prevent further transmission. Your employer has provided us with only the information needed such as your names, date of births and phone numbers for the health department to do this outreach. We will not ask for any other personal information.

You will be receiving the daily message until the health department determines that there is no longer an exposure risk. We do not have an end date, currently. More information will be shared with you as we learn more about the illness in the cattle or poultry. Although this outreach is voluntary, we take your health very seriously and ask that you do the same. This will provide the health department with the fastest way to provide guidance, should you become sick.

- **Initial Text Message - Sent Once at 9:58 a.m.:**
  Hello! The -Insert LHD name here-(Insert LHD abbreviation here) is contacting you because you may have been exposed to Highly Pathogenic Avian Influenza (HPAI) (H5N1) from infected -cattle or poultry-. You can expect to receive a daily text message from the public health department to see how you’re feeling and to ask if you’ve had any signs or symptoms of illness. Please note that although the survey question will always be the same, it’s important to answer each day with how you are feeling. If you have questions, please call (Insert LHD abbreviation here) at -InsertLHD phone number here.

- **Symptom Monitoring Message - Sent Daily at 10 a.m.:**
  Hello, this is your daily health text message from -Insert LHD name here-. Please fill out this brief, confidential health form. (survey link).

- **Symptom Monitoring Reminder - Sent at 12:00 PM & 6:00 p.m., if contact is missing a response:**
  Hello, this is a reminder from -Insert LHD name here-(Insert LHD abbreviation here). Please fill out this brief, confidential health form. (survey link).

  - **Question once survey link is accessed:**
    In the past 24 hours, have you had any of the following symptoms: fever, chills, diarrhea, vomiting, sore throat, cough, red/itchy eye(s), congestion, runny nose, headache, body aches, or rash?
    - Yes or No.

- **Post-submission message**
  “Thank you for your participation. These daily check-ins will continue during the monitoring period. If you clicked yes, then (Insert LHD abbreviation here) will be following up.”