**Public Health Monitoring Plan for USDA/APHIS Responders to Detections of Avian Influenza Virus in Poultry**

This document provides guidance to local, state, and federal public health authorities on monitoring of persons potentially exposed to avian influenza viruses during official United States Department of Agriculture Animal and Plant Health Inspection Service (APHIS) response activities in the United States. Response activities may include depopulation, disposal, and cleaning and disinfection activities related to affected birds or their environments, or other activities deemed by the Centers for Disease Control and Prevention (CDC) or APHIS to be response-related. Avian influenza viruses of public health concern include those viruses, which are known to have caused severe disease in humans, such as Eurasian lineage A/goose/Guangdong/1/96 (gs/GD)-like HPAI H5N1 virus and Asian lineage LPAI and HPAI H7N9 viruses. Avian influenza viruses that are similar to viruses known to cause severe disease in humans also are of public health concern because of their perceived potential to cause severe disease in humans. These include gs/GD HPAI H5 and North American lineage LPAI and HPAI H7 viruses associated with poultry outbreaks in the United States between 2014 and 2017. Other avian influenza viruses may be determined to be of public health concern based on specific circumstances.

The purpose of this monitoring plan is to facilitate timely identification of possible human infections with avian influenza viruses in order to ensure that exposed responders[1] receive prompt medical evaluation and treatment, if needed, and to prevent potential secondary spread.

**CDC recommends (https://www.cdc.gov/flu/avianflu/h5/infected-birds-exposure.htm) that all persons exposed to infected birds or virus-contaminated environments, with avian influenza viruses of public health concern, be monitored for illness for 10 days after their last exposure. State health departments should notify CDC immediately when testing any patient under investigation for avian influenza virus infection.**

***Although this monitoring plan is directed toward avian influenza outbreak responders, the guidance it contains may also be used to monitor persons who are not USDA or Contractor responders but have had exposure to birds infected with avian influenza viruses (e.g., workers or residents of farms where avian influenza viruses have been identified in birds). State and local public health departments should identify exposed persons who fall outside of the "responder" category and monitor them according to the guidance contained in this plan. Please refer to Sections 1-6 and Attachments 5 and 6 of this document for guidance that may be appropriate for non-responders.***

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[1] An APHIS responder is any APHIS employee qualified to fill an emergency response position in support of an agricultural or all-hazard incident.

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## Section 1: Background and rationale for monitoring exposed responders

In response to large poultry outbreaks of avian influenza virus in the United States in 2014 and 2015, the CDC and APHIS drafted joint monitoring recommendations for persons exposed to infected poultry in the United States. Given the risk of transmission from birds to humans for these viruses was unclear, stringent monitoring recommendations were drafted based on what was known about Eurasian lineage gs/GD HPAI H5 viruses.

These recommendations called for active monitoring of persons exposed to virus. Active monitoring meant that someone contacted each responder daily to assess the health status. Monitoring was recommended both during the exposure period as well as for 10 days after the last exposure for illness defined using a broad illness definition for respiratory illness or conjunctivitis. Persons found to be ill were swabbed and tested at the state public health laboratory using the CDC Human Influenza Virus Real-Time RT-PCR Diagnostic Panel for the detection of influenza viruses.

In addition, the recommendations meant that in a large response, large numbers of people were followed for long periods, which was very resource intensive. As such, the current recommendations for monitoring responders possibly exposed to avian influenza viruses in the United States may be too stringent. After several years of collecting response data, CDC and APHIS reviewed the data (including both responder data and risk assessment evaluations for gs/GD HPAI H5 and North American lineage LPAI and HPAI H7 viruses associated with poultry outbreaks in the United States between 2014 and 2017[2]) and revised the recommendations for monitoring based on the best available evidence (submitted for publication).

Results of the collected data indicated the following -

- Existing data from the Influenza Risk Assessment Tool (IRAT) suggests low to moderate risk (see https://www.cdc.gov/flu/pandemic-resources/monitoring/irat-virus-summaries.htm).
- No human infections detected.
- Risk to responders was low, although the power to say this with confidence varied by year and by virus.
- Most data were from responders wearing personal protective equipment (PPE), which could limit interpretation of the results.

Because of these findings, APHIS and CDC jointly reviewed the findings and determined that passive monitoring of persons wearing PPE and responding to certain H5 and H7 viruses that have no history of causing human infections could resume, both during mobilization and demobilization, replacing previous recommendations for active monitoring procedures of these persons.

[2] Eurasian A/goose/Guangdong/1/1996-lineage (gs/GD/96) HPAI H5N8 clade 2.3.4.4 virus; reassortants of gs/GD/96 H5N8 with North American wild bird lineage (LPAI) viruses (reassortant H5N2 and reassortant H5N1); North American wild bird lineage LPAI and HPAI H7N8 virus; and North American wild bird lineage LPAI and HPAI H7N9 virus

**Section 2: Outline of the revised monitoring plan**

Revised recommendations for monitoring based on the best available evidence includes the following proposals.

- If responding to a previously unreported avian influenza virus of public health concern, active monitoring recommendations remain the same.
- If responding to one of the assessed viruses[2], HPAI H5N8 and H5N2; LPAI and/or HPAI H7N8 or H7N9:
    - Active monitoring of persons exposed with no PPE or breach in PPE (no change to recommendation);
    - Passive monitoring of persons wearing PPE [change recommendation to have responders self-monitor and report any illness to safety officer (during response) or public health authorities (10-days post last exposure)];
    - Recommendations outline factors for reinstating active monitoring (e.g., new genetic or antigenic evidence suggesting an increase in animal-to-human transmission risk).

Consistent with the previous monitoring plan and the revised recommendations, the following procedures will continue.

- Upon response activation to avian influenza virus identification, APHIS will provide all APHIS responders with mobilization instructions, including a description of this monitoring plan, a list of signs and symptoms consistent with respiratory illness or conjunctivitis, and instructions to report symptoms to APHIS Safety Officers immediately (Attachment 1). Similarly, Contracting Officers or their designee will provide all contracted responders with mobilization instructions, including a description of this monitoring plan, a list of signs and symptoms consistent with respiratory illness or conjunctivitis, and instructions to report symptoms to their Contract Safety Officers immediately.
- APHIS and CDC will train all APHIS Safety Officers on the procedures specified in the monitoring plan (Attachment 2). APHIS and CDC will train all Contract Safety Officers on the procedures specified in the monitoring plan.
- APHIS will provide all APHIS responders, upon demobilization, with instructions for reporting any respiratory/conjunctival illness to the state/local public health office of their state of destination (typically, the state of residence) (Attachment 3). Contracting Officers or their designees will provide all contractor responders, upon demobilization, with instructions for reporting any respiratory/conjunctival illness to the state/local public health office of their state of destination (typically, the state of residence). CDC/Influenza Division will provide points of contact to be used.
- APHIS Liaison Officers will reach out to local/state emergency coordinators in the incident area to discuss local/state resources that may be available and to establish points of care for APHIS employees and contractors working in the area. The Liaison Officer will communicate all relevant resources and needs to the Safety Officer.
- APHIS and Contracting Officers (or their designees) will generate a daily report of demobilizing responders and share with Office of Interagency Coordination (OIC). OIC will consolidate the reports and deliver a report of daily demobilized responders to CDC/Influenza Division (Attachment 4). CDC/Influenza Division will distribute a report to the appropriate State Public

Health points of contact via secure, password-protected Epi-X notifications.

- CDC/Influenza Division will provide additional guidance (Attachment 5) to state and local health departments on how to follow up with any demobilized APHIS or contract responder in their state as needed.

**Section 3: Monitoring mobilized and demobilized responders**

Many state and local health departments have extensive experience monitoring people for signs and symptoms of infectious diseases. CDC recognizes that states may have established protocols or preferred methods for monitoring persons exposed to avian influenza infected birds or virus contaminated environments. Different monitoring protocols may be employed for a broad set of signs and symptoms that are consistent with influenza (beyond traditional influenza-like illness (ILI) symptoms), if possible.

CDC recommends that all persons exposed to infected birds or potentially contaminated environments involving a previously unreported avian influenza virus of public health concern should be monitored as per previous recommendations, i.e., that responders should be actively monitored for illness during their exposure and for 10 days after their last exposure.

In addition, CDC recommends that all persons exposed to infected birds or potentially contaminated environments, with one of the assessed viruses[2] HPAI H5N8 and H5N2; LPAI and/or HPAI H7N8 or H7N9 use the following procedures:

- Active monitoring of persons exposed with no PPE or breach in PPE (no change to the previous recommendation).
- Passive monitoring of persons wearing PPE, whereby responders are asked to self-monitor and report any illness to the safety officer during the response, or to the public health authorities for 10-days after their last exposure **(a change to the previous recommendation)**.

State health departments, APHIS Safety Officers, and Contractor Safety Officers should share responsibility for evaluation, monitoring and subsequent management of persons who develop illness during their deployment. State health departments are responsible for monitoring responders after their deployment (i.e., for 10 days after they are "demobilized", which is also considered the responder's 10-day post-exposure period).

For responders who become ill during their deployment or during their 10-day post-exposure period, state health departments should assist with evaluation and facilitate prompt patient isolation (home isolation is acceptable for patients who do not require hospitalization for illness) and RT-PCR testing for influenza at a state public health laboratory as appropriate.

State health departments also should notify CDC immediately when testing any patient under investigation for avian influenza virus infection. During a responder's deployment, the state health department in which the response activity is taking place should notify CDC immediately if they are testing a patient under investigation for avian influenza virus infection; after a responder's deployment (during their 10-day post-exposure monitoring period), the responder's state of residence should notify CDC immediately if testing a patient under investigation for avian influenza virus infection.

Additional guidance on testing persons for avian influenza virus infections, infection control recommendations, and treatment and prophylaxis of persons who may be infected with avian influenza viruses can be found at http://www.cdc.gov/flu/avianflu/healthprofessionals.htm.

For mobilized responders under active surveillance, APHIS Safety Officers or Contractor Safety Officers will monitor responders for illness and report to state or local health departments (see Attachment 2).

For demobilized responders under active surveillance, CDC recommends that state and local health departments implement a monitoring protocol that includes at least telephone contact during the 10-day post-exposure period as follows. More frequent or in-person monitoring may be employed as resources

permit. The following is a guideline for the minimum level of active monitoring recommended for demobilized responders.

- **Day 1 of post-exposure period (or upon return to state of residence):** Establish phone contact to: (i) evaluate for any illness consistent with influenza, (ii) describe parameters of monitoring plan, including what is expected of responders during days 2-9 (see below), (iii) provide additional instructions to follow if illness manifests (as needed), and (iv) verify and exchange contact information.

  Determine and record during first phone conversation the nature of the highest level of exposure during the most recent mobilization. Exposures may be categorized into (at least) the following three levels:
  i. No exposure to infected birds or their environment (e.g., administrative duties in an Incident Command post).
  ii. Exposure to infected birds and/or their environment while wearing recommended personal protective equipment (PPE) at all times.
  iii. Exposure to infected birds and/or their environment when not wearing recommended PPE (e.g., exposure prior to donning PPE or a breach in PPE during response activities).

- **Day 2 through Day 9 of post-exposure period:** Responders should observe themselves daily for signs and symptoms consistent with influenza, and contact state/local health department if signs or symptoms consistent with influenza develop.
- **Day 10 of post-exposure period:** Establish phone contact to verify health status and inform responder that their monitoring period has concluded.

When active monitoring of outbreak responders is ongoing, CDC is requesting the following information from state health departments:

- **Immediate** (telephone) notification when testing any case under investigation (CUI) for avian influenza virus infection.
- **Immediate** (telephone) notification of any respiratory specimen that tests positive for influenza A/H5 or A/H7 virus or is influenza A virus positive but unsubtypeable at the State Public Health Laboratory.
- A **daily** line list (emailed to VS ICG One Health, VS.SP.OHC@usda.gov)with information describing all CUIs, to include all mobilized or demobilized responders, and all other persons exposed to infected birds or contaminated environments. CDC will provide the line-list template.

**Section 4: Prophylaxis and antiviral treatment for responders**

Chemoprophylaxis is not routinely recommended for persons who used PPE while involved in depopulation, disposal, or cleaning and disinfection activities. Decisions to initiate antiviral chemoprophylaxis should be based on clinical judgement, with consideration given to the type of exposure and to whether the exposed person is at high risk for complications from influenza. If post-exposure antiviral chemoprophylaxis is initiated, treatment dosing for the neuraminidase inhibitors oseltamivir or zanamivir (one dose twice daily) is recommended in these instances instead of the typical antiviral chemoprophylaxis regimen recommended in some circumstances for seasonal influenza exposures (one dose once daily). For more information, please see Interim Guidance on Influenza Antiviral Chemoprophylaxis of Persons Exposed to Birds with Avian Influenza A Viruses Associated with Severe Human Disease or with the Potential to Cause Severe Human Disease.

If a responder develops signs or symptoms consistent with influenza during their monitoring period, prompt initiation of treatment with influenza antiviral medications is recommended while laboratory

testing is pending. Recommended treatment is two doses per day of oral oseltamivir or inhaled zanamivir for 5 days. When warranted, antiviral treatment should be initiated as early as possible, even if more than 48 hours has elapsed since illness onset.

There should be a low threshold to initiate treatment in symptomatic responders while laboratory testing is pending. If laboratory testing is negative for influenza virus, treatment can be stopped. For more detailed information please see Interim Guidance on the Use of Antiviral Medications for Treatment of Human Infections with Novel Influenza A Viruses Associated with Severe Human Disease. For responders who require antiviral treatment or post-exposure prophylaxis, state and federal stockpiles of oseltamivir may be available for use by state health departments. For further guidance, contact CDC/Influenza Division at 404-639-3747.

For specific dosage recommendations for treatment, or prophylaxis using treatment dosing, please see Influenza Antiviral Medications: Summary for Clinicians. Physicians should consult the manufacturer's package insert for dosing, limitations of populations studied, contraindications, and adverse effects. If exposure was time-limited and not ongoing, five days of medication (one dose twice daily), from the last known exposure is recommended.

**Section 5: Introduction to responder monitoring via text messaging**

Monitoring after demobilization is likely to be conducted by state and local health departments using telephone calls, which can be a slow and time-consuming process. CDC has partnered with the National Association of Country and City Health Officials (NACCHO) and Compliant Campaign to develop a monitoring system using two-way Short Message Service (SMS)/text messaging to aid in the process. Text messaging is a potentially more efficient method to elicit, manage, and act on any post-deployment influenza symptoms experienced by responders, and research studies have used text messaging to monitor for influenza symptoms with success. Participation in the text monitoring program would be voluntary for both the state/local health departments and the responders. Consenting responders residing in participating state and local municipalities would automatically receive one text message each day for 10 days asking whether or not the responder has symptoms consistent with influenza. State/local health officials would immediately be alerted to any affirmative answers and to any responders who fail to respond to two consecutive messages (i.e., two days of no response to the message). All information shared through the text messaging service would remain confidential and would not be shared beyond the appropriate state/local health officials. If a state is interested in using this platform, they should contact CDC/Influenza Division at 404-639-3747.

**Section 6: Criteria for implementing, suspending, and reinstating monitoring**

Recommendations for implementing, suspending, and reinstating monitoring of responders exposed to birds infected with avian influenza viruses will be informed by a risk assessment. The risk assessment should include the following.

- An analysis of the magnitude and distribution of outbreaks in birds
- New scientific data that change the understanding of transmission (e.g., genetic, antigenic, or animal-model evidence of increased or decreased infectivity due to a change in the virus)
- Epidemiologic evidence of a change in transmission risk (e.g., identification of human cases thought to be the result of animal-to-human or human-to-human transmission)

CDC's risk assessment is guided by an Influenza Risk Assessment Tool (IRAT; see https://www.cdc.gov/flu/pandemic-resources/national-strategy/risk-assessment.htm), which evaluates 10 risk elements associated with influenza viruses. These 10 elements can be categorized into the following three major areas: (i) properties of the virus, (ii) attributes of the population, and (iii) the ecology and epidemiology of the virus. The IRAT is intended to evaluate influenza A viruses that are not circulatingin the human population.

Possible contributing criteria for implementing avian influenza monitoring

- Identification of HPAI H5, and HPAI or LPAI H7 viruses in poultry flocks in the United States

Possible contributing criteria for suspending avian influenza monitoring

- Cessation of bird outbreaks in the United States
- Absence of human infection among a specified number of exposed persons or after a specified period of time (e.g., one season of bird outbreaks)
- Genetic and antigenic evidence suggesting that avian influenza viruses remain genetically unchanged after a specified period of time (e.g., one season of bird outbreaks)
- Alternate mechanisms for evaluating responders for illness are developed, which are thought to be adequate
- A series of IRAT assessment scores which indicate the risk of a pandemic posed by these avian influenza viruses is low

Possible contributing criteria for reinstating avian influenza monitoring

- New genetic or antigenic evidence suggesting an increase in animal-to-human transmission risk
- Identification of human infections with avian influenza viruses in persons exposed to infected birds during response activities
- A change in the scope or number of avian influenza identifications in birds (e.g., more states affected, new bird species affected) after monitoring activity has stopped
- Identification of a novel reassortant avian influenza virus in US poultry flocks

**Attachment 1: Mobilization Instructions (to be given to responders when beginning response activities)**

For more information, please see:

- CDC/Influenza Division (Information for People Exposed to Birds Infected with Avian Influenza Viruses of Public Health Concern): https://www.cdc.gov/flu/avianflu/h5/infected-birds-exposure.htm
- CDC/Influenza Division (Self-Observation Instructions for Demobilizing Bird Flu Responders): https://www.cdc.gov/flu/avianflu/h5/demobilizing-responders.htm

As a responder to animal health disease outbreaks, such as avian influenza, you may participate in activities that expose you to birds infected with avian influenza virus or potentially virus contaminated surfaces and environment during depopulation, disposal, and cleaning and disinfection of affected flocks. Although the risk of human illness due to avian influenza viruses is low and very few human infections with these viruses have been found in the United States to date, it is essential that you follow all United States Department of Agriculture (USDA) Animal and Plant Health Inspection Services (APHIS) and Centers for Disease Control and Prevention (CDC) precautions and instructions carefully. Correctly follow all personal protective equipment (PPE), biosecurity, and Safety Officer operating guidelines while on duty. Following these instructions will help to protect your health and the health of others working with you. Do not hesitate to ask questions to ensure your health and safety.

1. Monitor your health carefully **during your mobilization** and for **10 days** from the end of your mobilization. Look for new onset or worsening of any of the following signs and symptoms:
    - Fever (Temperature of 100°F [37.8°C] or greater) or feeling feverish/chills*
    - Cough
    - Sore throat
    - Difficulty breathing/Shortness of breath
    - Eye tearing, redness, or irritation
    - Headaches
    - Runny or stuffy nose
    - Muscle or body aches
    - Diarrhea

    *Fever may not always be present

    Having any of these signs or symptoms does not necessarily mean you are infected with an avian influenza virus, but it is important that you notify your Safety Officer right away so you can be evaluated and receive treatment if needed.

2. If you have any of the above signs or symptoms at any time during your deployment, contact the following people **immediately**. (The below information will be completed on site by the APHIS or Contractor Safety Officer).

    **In an emergency situation, seek medical attention immediately.**

    a. Safety Officer name (dates of operation): _____
        i. Primary Phone Number: _____
        ii. Mobile Phone Number: _____

    b. (If your Safety Officer changes during your mobilization)
    Safety Officer Name (dates of operation): _____
        i. Primary Phone Number: _____

ii. Mobile Phone Number: _____

c. If you are unable to contact your Safety Officer and need to seek medical attention, please give the following State/Local Public Health Department contact information to your physician and tell them you are an incident responder for the avian influenza virus outbreak in that state:
   i. State/Local Public Health Department _____
   ii. Phone Number: _____

The state/local public health department may ask you to seek medical attention to collect a respiratory specimen for a test that determines if you have an influenza virus infection. The RT-PCR test (to determine if you have influenza) will be conducted at no additional cost to you or your health insurance as long as the state/local public health department asks you to get tested and arranges for the testing. You are responsible for any other medical costs related to the care of your illness. Federal employees may file a workers' compensation claim anytime they perceive there is a work related injury or occupational illness. There must be medical documentation that supports that claim, otherwise it may be denied by the Department of Labor.

Thank you for your contribution to the response and for your cooperation to help ensure that your health and the health of other incident responders is monitored and well maintained. Your health and safety is our priority.

**Attachment 2: Instructions to APHIS and Contractor Safety Officers (to be given to USDA/APHIS Safety Officers and Contractor Safety Officers involved in avian influenza response activities)**

**Self-Monitoring Guidance:**

- It is important that all responders understand the importance of self-monitoring as part of an effective surveillance and reporting process. Frequent reminders of the importance of self-monitoring should be disseminated through effective communication channels at each Incident Command Post and should include a list of influenza signs and symptoms.
- APHIS and Contractor Safety Officers should provide direct points of communication and contact between incident responders and State and Local public health authorities. These responders rely on their Safety Officer to answer questions and should be available for assistance when responders report illness. It is the responsibility of the APHIS Safety Officer to follow the protocol below when reporting suspected avian influenza infection in responders to the state/local public health department (S/LPHD). Timely notification and coordination between health care facility staff, the S/LPHD, USDA/APHIS, and CDC is important to ensure that appropriate testing is conducted and appropriate medical care is delivered.

**Symptom Reporting Process:**

1. Concurrent with the beginning of avian influenza response activities, the APHIS or Contractor Safety Officer contacts the state public health department (contact info to be provided to APHIS by CDC upon response activation) for the jurisdiction where avian influenza response activities are occurring. Safety Officers should work with state public health officials regarding 1) location of the response, 2) approximate number of responders and 3) a point-of-contact at the state health department to notify in case signs and symptoms consistent with influenza are identified among any responders. APHIS and Contractor Safety Officers will update the state public health department with any change in the location of the response and significant changes in the number of responders mobilized in the state. Safety Officers should work with the state health department to identify options for obtaining respiratory specimens for avian influenza virus testing at the state public health laboratory.

2. Instruct incident responders to contact you, their designated Safety Officer immediately, if they have any symptoms consistent with influenza during mobilization (symptom list available below and in Attachment 1 "Mobilization Instructions"). Using effective communication channels, provide daily or frequent reminders to all responders of the importance of self-monitoring*; provide a list of flu symptoms. Visually assess any responders you interact with for signs and symptoms of influenza. Wear appropriate PPE while interacting with responders if responders display signs consistent with influenza.

   * Note: If the response is to a previously unreported avian influenza virus of public health concern, active monitoring of responders will be conducted.

3. Safety Officers should follow the symptom reporting process below for <u>any</u> avian influenza incident responder who reports new onset or worsening of the following signs or symptoms, including:

- Fever (Temperature of 100°F [37.8°C] or greater) or feeling feverish/chills*
- Cough
- Sore throat
- Difficulty breathing/Shortness of breath
- Eye tearing, redness, or irritation
- Headaches
- Runny or stuffy nose
- Muscle or body aches
- Diarrhea

*Fever may not always be present

4. The APHIS Safety Officer will have the following initial communication with the APHIS avian influenza incident responder (Contractor Safety Officers will have the same initial communication):
    a. If this is a medical emergency, advise calling 911 immediately or going to nearest medical facility. If human infection with avian influenza virus is suspected, the 911 operator should be notified of that concern.
    b. Note the start and duration of the signs and symptoms the responder is experiencing.
    c. Note the activities the responder participated in during the previous 10 days and the specific locations of those activities.
    d. Note where the responder is currently staying and if they intend to travel outside the current jurisdiction within the next 2 days.
    e. Note whether the responder is staying with others (i.e., sharing a room) and if others are ill. Inform the symptomatic responder to self-isolate to prevent others from getting ill.
    f. The Safety Officer notifies the incident responder that the Safety Officer is sharing the responder's information with the S/LPHD for public health reasons so the S/LPHD can determine if testing for avian influenza flu is needed.
    g. Offer guidance on behaviors to prevent exposure of other individuals. Please see http://www.cdc.gov/flu/takingcare.htm for more information.

5. The Safety Officer notifies the appropriate S/LPHD immediately that a responder has reported symptoms consistent with influenza. The Safety Officer works with the employee, S/LPHD, and the health care facility to ensure appropriate medical care is delivered. In consultation with the clinical care provider, the S/LPHD will determine if avian influenza flu testing is needed and notify the health care facility as needed.
    - S/LPHD contact information will be provided.
    - Note – If Safety Officer is unaware of appropriate S/LPHD to contact, please immediately contact **CDC/Influenza Division at 404-639-3747 or after hours contact CDC/Emergency Operations Center (EOC) at 770-488-7100.**

6. The Safety Officer and S/LPHD official will have a follow-up conversation with the ill avian influenza responder:
    a. Provide directions to an agreed upon healthcare facility.
    b. The Safety Officer will inform the responder that medical care costs may vary depending on their personal health care plan and the local health care facility. If the S/LPHD was notified of symptoms and testing has been authorized, the RT-PCR influenza diagnostic test will be provided at no additional cost to the employee or their health insurance. Other costs associated with routine clinical care of the illness will be the responsibility of the responder. Federal employees may file a workers' compensation claim anytime they perceive there is a work related injury or occupational illness. There must be medical documentation that supports that claim, otherwise it may be denied by the Department of Labor.
    c. If the responder returns to his/her current location after receiving medical care, they should follow the advice of their physician and S/LPHD to reduce spread of any infectious disease. If a responder is being tested for avian influenza, patient isolation is recommended and no travel outside of the current jurisdiction should occur until test results are known.
    d. Emphasize the importance of compliance for ensuring the health of the ill responder and others.

7. The Safety Officer will notify the following person of the reported illness and whether avian influenza testing was authorized by the S/LPHD:
    a. VS Incident Coordination Group (ICG) Health & Safety – James McKee ((301) 436-3115) [james.e.mckee@usda.gov] & Patrick Newcomb ((301)-832-2974)[ patrick.newcomb@usda.gov].
    b. In turn, ICG Health & Safety will notify Dr. Richard Walker, VS ICG One Health and CDC/Influenza Division.
        i. Dr. Richard Walker, APHIS Medical Officer [Thomas.R.Walker@aphis.usda.gov]
        ii. VS ICG One Health [VS.SP.OHC@usda.gov]
        iii. CDC/Influenza Division at 404-639-3747 [Krista Kniss (krk9@cdc.gov), Katie Tastad (qwu5@cdc.gov) , and Angiezel Merced-Morales (png6@cdc.gov) ]
    c. Notify the other Safety Officers in the same incident responseunit/location of the reported illness to raise awareness of a potential human infection.

8. If a responder leaves a response location for any reason with the intent to return to the response location (e.g., due to family emergency or holiday), he/she should remain under the jurisdiction of the APHIS site Safety Officer for illness monitoring purposesand should contact the site APHIS site Safety Officer immediately if they develop signs or symptoms consistent with influenza. If a responder contacts the APHIS site Safety Officer due to illness while away from the response location, the APHIS site Safety Officer should (1) advise the responder to self-isolate and contact the public health department in the state where the responder is currently located, and (2) contact CDC/Influenza Division at 404-639-3747 [Krista Kniss (krk9@cdc.gov), Katie Tastad (qwu5@cdc.gov) and Angiezel Merced-Morales (png6@cdc.gov)].

**Attachment 3: Demobilization Instructions (to be given to responders upon completion of response activities)**

- For more information, please see: CDC/Influenza Division (Self-Observation Instructions for Demobilizing Bird Flu Responders): https://www.cdc.gov/flu/avianflu/h5/demobilizing-responders.htm

Thank you for your contribution to the Animal and Plant Health Inspection Service's (APHIS) response efforts. APHIS places the utmost priority on responder health and safety, and as an incident responder to the avian influenza outbreak, you may have participated in activities that exposed you to birds infected with avian influenza virus or potentially virus contaminated surfaces and environment during depopulation, disposal, and cleaning and disinfection of affected flocks. Although the risk of illness due to avian influenza viruses is low and few human infections with these viruses have been found in the United States to date, it is essential that you follow all APHIS and the Centers for Disease Control and Prevention (CDC) precautions and instructions carefully and monitor yourself for any signs or symptoms of illness for 10 days after the end of your mobilization. Early identification of a persons infected with avian influenza viruses is important for treatment and other appropriate response measures and to prevent possible spread to others.

Please follow the instructions below carefully:

1. Monitor your health carefully for **10 days** from the end of your mobilization. Look for new onset or worsening of any of the following signs and symptoms:
   - Fever (Temperature of 100°F [37.8°C] or greater) or feeling feverish/chills*
   - Cough
   - Sore throat
   - Difficulty breathing/Shortness of breath
   - Eye tearing, redness, or irritation
   - Headaches
   - Runny or stuffy nose
   - Muscle or body aches
   - Diarrhea

   *Fever may not always be present

2. If you have any of the above signs or symptoms at any time during the 10 days after your demobilization, please contact your state/local public health department **immediately**. Please see attached list for contact information for your state/local public health department.

**In an emergency situation, seek medical attention immediately.**

3. The state/local public health department may ask you to seek medical attention to collect a respiratory or conjunctival specimen for a test to determine if you have an influenza virus infection. The RT-PCR test to determine if you have influenza will be at no additional cost to you or your health insurance as long as the state/local public health department asks you to get tested and arranges for the testing. You are responsible for other medical costs related to the care of your illness. Federal employees may file a workers' compensation claim anytime they perceive there is

a work related injury or occupational illness. There must be medical documentation that supports that claim, otherwise it may be denied by the Department of Labor.

4. In addition to your self-monitoring, your contact information has been shared with state/local public health department officials so that they may contact you by phone, text, or email to verify that you are healthy. Contact frequency will vary by state based on your assessed risk and the procedure of the state, and can range from no contact to daily contact for the 10 days following your date of demobilization. State and local public health authorities also may provide you with additional instructions and information.
    a. Your contact information will not be shared outside of official public health channels and will only be used to contact you for the purpose of monitoring you for illness after exposure to avian influenza infected birds and/or potentially-contaminated environments.
    b. Any information you provide during this contact will be strictly confidential.

Thank you for your contribution to the avian influenza response and for your cooperation to help ensure that your health and the health of other incident responders is monitored and well maintained. Your health and safety is our priority.

**Attachment 4: Process For Identifying Demobilizing Responders (when appropriate)**

- APHIS will generate a daily demobilization spreadsheet The report will include all APHIS employees demobilized during the previous 24 hours.

- Each contract company will generate a daily demobilization spreadsheet.Each report will include all contract employees demobilized during the previous 24 hours.

- Each daily APHIS and contract demobilization spreadsheet will contain the following fields.
    - Report Date (This will be in the naming convention used for the report)
    - Organization
    - Incident:
    - Last Name
    - First Name
    - Incident Site (unique identifier which may include the State)
    - Group assigned (IMT section)
    - Position assigned
    - E-mail address
    - Primary Phone Number
    - Mobile Phone Number
    - State
    - City
    - County
    - Zip Code
    - Street address of destination (when available)
    - Mobilization date
    - Release Date (Demobilization date)

- APHIS will email a password-protected report to the VS ICG One health at VS.SP.OHC@usda.gov.

- Each contract company will email a password-protected report to VS ICG One Health, VS.SP.OHC@usda.gov.

- VS ICG One Health will distribute a daily report to CDC/Influenza Division regarding demobilized APHIS employees and contractors.

- CDC/Influenza Division will distribute sections of the list to the appropriate state public health department points of contact via Epi-X notifications (a secured password-protected website portal).

**Attachment 5: Guidance For Evaluating Exposed Responders (to be used by state and local health departments)**

*Note: The comments on this page (Attachment 5) are for use by public health authorities only and should not be provided to responders self-monitoring for illness after demobilizing.*

State health departments have requested more detailed guidance on how to determine whether an exposed responder should be tested for possible avian influenza virus infection. All potentially-exposed responders who exhibit signs or symptoms consistent with influenza should be tested. Since the risk of animal-to-human transmission of avian influenza viruses is currently considered to be low, and the list of signs and symptoms provided by CDC is broad, this may result in testing many people for influenza, the vast majority of whom will likely test negative for avian influenza virus infection. This may create a considerable burden on state and local public health resources and lead to a desire to limit testing to persons deemed to be "at greatest risk".

Avian influenza virus outbreaks in birds may occur during the peak of the influenza season in the United States, during which time many responders may become ill with seasonal influenza. This could result in a large number of people who would qualify for testing. These persons should be tested for influenza, as people with seasonal influenza who present with "classic" ILI signs and symptoms are exactly the people who should be tested for avian influenza virus infection under this monitoring plan. Without RT-PCR testing, it is not possible to determine whether a responder with ILI has a seasonal or avian influenza virus infection.

If resources permit, CDC/Influenza Division recommends that all exposed responders exhibiting signs or symptoms consistent with influenza be tested. If demand for testing exceeds local or state public health capacity, then prioritizing cases under investigation (CUIs) for testing may be considered. Unfortunately, CDC cannot offer a prioritization algorithm to address all CUIs; states must use their best judgement and consider each CUI on a case by case basis. However, here we describe some guiding principles:

- We recommend a low threshold for testing persons exposed to birds infected with avian influenza viruses or potentially-contaminated surfaces and environments. Currently, little is known about the clinical manifestation of human infection with these avian influenza viruses; however, human infection with these avian influenza viruses may share characteristics of human infection with other avian influenza viruses (e.g., Eurasian lineage HPAI H5 viruses and Asian lineage LPAI and HPAI H7N9 viruses), and a wide range of clinical presentations may be possible, including mild clinical illness such as conjunctivitis only or self-limited influenza-like illness.
- If prioritizing CUIs for testing, you may want to consider both (i) a patient's clinical signs and symptoms and (ii) the nature of his or her exposure. The signs and symptoms listed in the monitoring plan and provided here list more classic respiratory illness signs and symptoms in the *left* column, and other signs and symptoms in the *right* column. New onset or worsening of any sign or symptom from the left column should prompt testing for influenza. A CUI with an isolated sign or symptom from the right column (e.g., headache only, generalized fatigue, diarrhea only) may be of lower priority for testing, depending on the nature of the exposure. Direct and/or prolonged exposure (e.g., a breach in PPE that was not discovered until the end of an 8-hour culling shift) may mean that testing should be prioritized, even in CUIs with an isolated sign or symptom from the right column. The presence of multiple signs or symptoms from the right column may also mean that testing should be prioritized.

Monitor your health carefully **during your mobilization** and for **10 days** from the end of your mobilization. Look for new onset or worsening of any of the following signs and symptoms:

- Fever (Temperature of 100°F [37.8°C] or greater) or feeling feverish/chills*
- Cough
- Sore throat
- Difficulty breathing/Shortness of breath
- Eye tearing, redness, or irritation
- Headaches
- Runny or stuffy nose
- Muscle or body aches
- Diarrhea

*Fever may not always be present

- The comments on this page (Attachment 5) are for use by public health authorities only and should not be provided to responders self-monitoring for illness after demobilizing. Responders, APHIS, and Contractor Safety Officers should notify the state public health department if they experience any of the signs or symptoms on either column of the list.
- CDC will continue to evaluate guidelines for testing exposed persons as more information on the epidemiology and potential for transmission of these avian influenza viruses from animals to humans becomes available.
- If you have questions about whether testing is appropriate for a CUI and wish to discuss with CDC, please call the Influenza Division at 404-639-3747 during normal business hours and the CDC Emergency Operations Center at 770-488-7100 after hours.

Please note that previous human infections with certain avian influenza viruses have resulted in conjunctivitis (and sometimes this has been the only presenting sign). For that reason, if patients present for influenza testing as a CUI with conjunctivitis, CDC recommends obtaining both respiratory specimens (see https://www.cdc.gov/flu/avianflu/severe-potential.htm for more information), and a conjunctival specimen. If the state public health laboratory is not able to test the conjunctival specimen for influenza, it may be forwarded to CDC for testing.

For additional information on testing for patients under observation for potential avian influenza virus infection, (including specimen collection and processing) please see Interim Guidance on Testing, Specimen Collection, and Processing for Patients with Suspected Infection with Novel Influenza A Viruses with the Potential to Cause Severe Disease in Humans or Self-Observation for Illness for Responders to Poultry Outbreaks of Avian Influenza | Avian Influenza (Flu) (cdc.gov).

**Plan de vigilancia de la salud pública para los representantes de USDA/APHIS que responden a las detecciones del virus de la influenza aviar en las aves de corral**

Este documento proporciona orientación a las autoridades de salud pública locales, estatales y federales sobre el monitoreo de personas potencialmente expuestas a los virus de la influenza aviar durante las actividades de respuesta oficiales del Servicio de Inspección de Sanidad Animal y Vegetal (Agriculture Animal and Plant Health Inspection Service, APHIS) del Departamento de Agricultura de los Estados Unidos en los Estados Unidos. Las actividades de respuesta pueden incluir actividades de despoblación, eliminación y limpieza y desinfección relacionadas con las aves afectadas o sus entornos, u otras actividades que los Centros para el Control y la Prevención de Enfermedades (Centers for Disease Control and Prevention, CDC) o APHIS consideren relacionadas con la respuesta. Los virus de la influenza aviar de interés para la salud pública incluyen aquellos virus que se sabe que han causado enfermedades graves en humanos, tales como el virus HPAI H5N1 de linaje euroasiático A/goose/Guangdong/1/96 (gs/GD) y el virus LPAI de linaje asiático y virus HPAI H7N9. Los virus de la influenza aviar que son similares a los virus que se sabe que causan enfermedades graves en humanos también son motivo de preocupación para la salud pública debido a su aparente potencial de causar enfermedades graves en humanos. Estos incluyen los virus gs/GD HPAI H5 y LPAI y HPAI H7 de linaje norteamericano asociados con brotes en aves de corral en los Estados Unidos entre 2014 y 2017. Se puede determinar que otros virus de la influenza aviar son un problema de salud pública en función de circunstancias específicas.

El propósito de este plan de monitoreo es facilitar la identificación oportuna de posibles infecciones humanas con virus de la influenza aviar para garantizar que el personal expuesto reciba evaluación y tratamiento médico inmediatos, si es necesario, y para evitar una posible propagación secundaria.

**Los CDC recomiendan (https://www.cdc.gov/flu/avianflu/h5/infected-birds-exposure.htm) que todas las personas expuestas a aves infectadas o ambientes contaminados por virus, con virus de influenza aviar de interés para la salud pública, sean monitoreadas para detectar enfermedades durante 10 días después de su última exposición. Los departamentos de salud estatales deben notificar a los CDC de inmediato cuando realicen pruebas a cualquier paciente en virtud de una investigación para detectar una infección por el virus de la influenza aviar.**

***Aunque este plan de monitoreo está dirigido a la personal que responde a brotes de influenza aviar, la guía que contiene también se puede usar para monitorear a personas que no pertenecen al Departamento de Agricultura de los Estados Unidos (Department of Agriculture of the United States, USDA) o contratistas pero que han estado expuestas a aves infectadas con virus de influenza aviar (p. ej., trabajadores o residentes de granjas donde se han identificado virus de influenza aviar en aves). Los departamentos de salud pública estatales y locales deben identificar a las personas expuestas que quedan fuera de la categoría de "personal que responde" y monitorearlas de acuerdo con la guía contenida en este plan. Consulte las Secciones 1 a 6 y los Anexos 5 y 6 de este documento para obtener orientación que puede ser apropiada para el personal que presta servicios de respuesta.***

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Sección 2: Resumen del plan de seguimiento revisado
Sección 3: Supervisión de los equipos de respuesta movilizados y desmovilizados
Sección 4: Profilaxis y tratamiento antiviral para el personal de respuesta
Sección 5: Introducción al monitoreo del personal de respuesta a través de mensajes de texto
Sección 6: Criterios para implementar, suspender y restablecer el monitoreo
Anexo 1: Instrucciones de movilización (que se entregarán al personal de respuesta al comenzar las actividades de respuesta)

[1] Un representante de los servicios de respuesta del APHIS es cualquier empleado del APHIS calificado para ocupar un puesto de respuesta de emergencia en apoyo a un incidente agrícola o de todo riesgo.

Anexo 2: Instrucciones para el APHIS y los oficiales de seguridad del Contratista (que se entregarán a todos los oficiales de seguridad involucrados en las actividades de respuesta a la influenza aviar)
Anexo 3: Instrucciones de desmovilización (que se darán al personal de seguridad al finalizar las actividades de respuesta)
Anexo 4: Proceso para identificar al personal de respuesta desmovilizado
Anexo 5: Guía para evaluar al personal de respuesta expuesto (departamentos de salud estatales y locales)
Anexo 6: Preguntas frecuentes (documento separado para los departamentos de salud estatales y locales, previa solicitud)

**Sección 1: Antecedentes y fundamentos para monitorear al personal expuesto**

En respuesta a los grandes brotes en aves de corral del virus de la influenza aviar en los Estados Unidos en 2014 y 2015, los CDC y el APHIS redactaron recomendaciones conjuntas de monitoreo para las personas expuestas a aves de corral infectadas en los Estados Unidos. Dado que el riesgo de transmisión de aves a humanos para estos virus no estaba claro, se redactaron recomendaciones estrictas de monitoreo basadas en lo que se sabía sobre los virus H5 gs/GD HPAI de linaje euroasiático.

Estas recomendaciones requerían un monitoreo activo de las personas expuestas al virus. El monitoreo activo significó que alguien contactó a cada responsable del servicio de respuesta diariamente para evaluar el estado de salud. Se recomendó el monitoreo tanto durante el período de exposición como durante los 10 días posteriores a la última exposición para enfermedades definidas utilizando una definición amplia de enfermedades respiratorias o conjuntivitis. Se tomaron muestras de las personas que estaban enfermas y se analizaron en el laboratorio de salud pública estatal utilizando el panel de diagnóstico de RT-PCR en tiempo real del virus de la influenza humana de los CDC para su detección.

Además, las recomendaciones significaron que, en una amplia respuesta, se siguió a un gran número de personas durante largos períodos, lo que requería muchos recursos. Como tal, las recomendaciones actuales para monitorear al personal de respuesta posiblemente expuestos a los virus de la influenza aviar en los Estados Unidos pueden ser demasiado estrictas. Después de varios años de recopilar datos de respuesta, los CDC y el APHIS revisaron los datos (incluidos los datos del personal de respuesta y las pruebas de evaluación de riesgos para gs/GD HPAI H5 y los virus LPAI y HPAI H7 de linaje norteamericano asociados con brotes en aves de corral en los Estados Unidos entre 2014 y 2017[2]) y revisó las recomendaciones de seguimiento en función de la mejor evidencia disponible (presentada para su publicación).

Los resultados de los datos recopilados indicaron lo siguiente:

- Los datos existentes de la Herramienta de Evaluación de Riesgos de Influenza (Influenza Risk Assessment Tool, IRAT) sugieren un riesgo bajo a moderado (ingrese a https://www.cdc.gov/flu/pandemic-resources/monitoring/irat-virus-summaries.htm).
- No se detectaron infecciones humanas.
- El riesgo para el personal de respuesta fue bajo, aunque el poder para decir esto con seguridad varió según el año y el virus.
- La mayoría de los datos procedían de personal de respuesta que usaba equipo de protección personal (EPP), lo que podría limitar la interpretación de los resultados.

Debido a estos hallazgos, el APHIS y los CDC los revisaron conjuntamente y determinaron que se podría reanudar el monitoreo pasivo de personas que usan EPP y responden a ciertos virus H5 y H7 que no tienen antecedentes de causar infecciones humanas, tanto durante la movilización como la desmovilización, sustituyendo las recomendaciones anteriores para procedimientos de seguimiento activo de estas personas.

2 Eurasia A/goose/Guangdong/1/1996-lineage (gs/GD/96) virus HPAI H5N8 clado 2.3.4.4; reordenamientos de gs/GD/96 H5N8 con virus del linaje de aves silvestres de Norteamérica (LPAI) (reordenamiento H5N2 y reordenamiento H5N1); linaje de aves silvestres de Norteamérica LPAI y virus HPAI H7N8; y el virus LPAI y HPAI H7N9 del linaje de aves silvestres de Norteamérica

**Sección 2: Resumen del plan de seguimiento revisado**

Las recomendaciones revisadas para el monitoreo basadas en la mejor evidencia disponible incluyen las siguientes propuestas.

- Si se responde a un virus de la influenza aviar de interés para la salud pública no informado anteriormente, las recomendaciones de monitoreo activo siguen siendo las mismas.
- Si responde a uno de los virus evaluados2, HPAI H5N8 y H5N2; LPAI y/o HPAI H7N8 o H7N9:
    - Monitoreo activo de personas expuestas sin EPP o incumplimiento en el EPP usado (sin cambios en la recomendación).
    - Monitoreo pasivo de personas que usan EPP (cambiar la recomendación para que el personal de respuesta se autocontrole e informe cualquier enfermedad al funcionario de seguridad [durante la respuesta] o a las autoridades de salud pública [10 días después de la última exposición]).
    - Las recomendaciones describen los factores para restablecer el monitoreo activo (p. ej., nueva evidencia genética o antigénica que sugiera un aumento en el riesgo de transmisión de animal a humano).

De conformidad con el plan de vigilancia anterior y las recomendaciones revisadas, se mantendrán los siguientes procedimientos.

- Tras la activación de la respuesta a la identificación del virus de la influenza aviar, el APHIS proporcionará a todo el personal de respuesta del APHIS instrucciones de movilización, incluida una descripción de este plan de monitoreo, una lista de signos y síntomas compatibles con enfermedades respiratorias o conjuntivitis, e instrucciones para informar los síntomas a los oficiales de seguridad del APHIS de inmediato (Anexo 1). De manera similar, los funcionarios de Contratación o su designado proporcionarán a todo el personal de respuesta contratado instrucciones de movilización, incluida una descripción de este plan de monitoreo, una lista de signos y síntomas consistentes con enfermedades respiratorias o conjuntivitis, e instrucciones para informar los síntomas a sus oficiales de seguridad contratados de inmediato.
- El APHIS y los CDC capacitarán a todos los oficiales de seguridad de APHIS sobre los procedimientos especificados en el plan de monitoreo (Adjunto 2). El APHIS y los CDC capacitarán a todos los oficiales de seguridad contractual sobre los procedimientos especificados en el plan.
- El APHIS proporcionará a todos el personal de seguridad del APHIS, después de la desmovilización, instrucciones para informar cualquier enfermedad respiratoria/conjuntival a la oficina de salud pública estatal/local de su estado de destino (generalmente, el estado de residencia) (Anexo 3). Los funcionarios de contratación o sus designados proporcionarán a todos el personal de respuesta del contratista, al momento de la desmovilización, instrucciones para informar cualquier enfermedad respiratoria/conjuntival a la oficina de salud pública estatal/local de su estado de destino (generalmente, el estado de residencia). La División de/Influenza los CDC proporcionarán puntos de contacto para poder utilizar.
- Los funcionarios de enlace del APHIS se comunicarán con los coordinadores de emergencias locales/estatales en el área del incidente para analizar los recursos locales/estatales que pueden estar disponibles y establecer puntos de atención para los empleados y contratistas del APHIS que trabajan en el área. El funcionario de enlace comunicará todos los recursos y necesidades relevantes al oficial de seguridad.
- El APHIS y los funcionarios de contratación (o sus designados) generarán un informe diario de la desmovilización del personal de respuesta y lo compartirán con la Oficina de Coordinación Interinstitucional (Office of Interagency Coordination, OIC). La OCI consolidará los informes y entregará un informe diario del personal de seguridad desmovilizado a los CDC/División de Influenza (Anexo 4). CDC/División de Influenza distribuirá un informe a los contactos de Salud Pública Estatal apropiados a través de notificaciones Epi-X seguras y protegidas con contraseña.

- La División de Influenza/los CDC proporcionarán orientación adicional (Adjunto 5) a los departamentos de salud estatales y locales sobre cómo hacer un seguimiento con cualquier APHIS desmovilizado o responsable del servicio de respuesta del Contratista en su estado, según sea necesario.

[EL RESTO DE ESTA PÁGINA SE DEJA EN BLANCO INTENCIONADAMENTE]

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**Sección 3: Supervisión de los equipos de respuesta movilizados y desmovilizados**

Muchos departamentos de salud estatales y locales tienen una amplia experiencia en el control de personas en busca de signos y síntomas de enfermedades infecciosas. Los CDC reconocen que los estados pueden haber establecido protocolos o métodos preferidos para monitorear a las personas expuestas a aves infectadas por influenza aviar o virus en ambientes contaminados. Se pueden emplear diferentes protocolos de monitoreo para un amplio conjunto de signos y síntomas que son consistentes con la influenza (más allá de los síntomas convencionales de enfermedades similares a la influenza [Influenza-Like Illness, ILI]), si es posible.

Los CDC recomiendan que todas las personas expuestas a aves infectadas o ambientes potencialmente contaminados que involucren un virus de influenza aviar de interés para la salud pública no informado anteriormente se deben monitorear según las recomendaciones anteriores, es decir, que el personal de respuesta debe monitorearse activamente para detectar enfermedades durante su exposición y durante 10 días después de su última exposición.

Además, los CDC recomiendan que todas las personas expuestas a aves infectadas o ambientes potencialmente contaminados, con uno de los virus evaluados[2] HPAI H5N8 y H5N2; LPAI y/o HPAI H7N8 o H7N9 utilizan los siguientes procedimientos:

- Monitoreo activo de personas expuestas sin EPP o incumplimiento con el EPP (sin cambios en la recomendación anterior).
- Monitoreo pasivo de personas que usan EPP, mediante el cual se les pide al personal de respuesta que se autocontrole e informe cualquier enfermedad al oficial de seguridad durante la respuesta, o a las autoridades de salud pública durante 10 días después de su última exposición **(un cambio a la recomendación anterior)**.

Los departamentos de salud estatales, los oficiales de seguridad del APHIS y los oficiales de seguridad de los contratistas deben compartir la responsabilidad de la evaluación, el seguimiento y el manejo posterior de las personas que desarrollan enfermedades durante su movilización. Los departamentos de salud estatales son responsables de monitorear al personal de respuesta después de su movilización (es decir, durante 10 días después de que se "desmovilicen", que también se considera el período posterior a la exposición de 10 días del personal de respuesta).

Para el personal de seguridad que se enferman durante su movilización o durante su período posterior a la exposición de 10 días, los departamentos de salud estatales deben ayudar con la evaluación y facilitar el aislamiento inmediato del paciente (el aislamiento en el hogar es aceptable para los pacientes que no requieren hospitalización por enfermedad) y las pruebas de RT-PCR para la influenza en un laboratorio estatal de salud pública según corresponda.

Los departamentos de salud estatales también deben notificar a los CDC de inmediato cuando realicen pruebas a cualquier paciente bajo investigación de la infección por el virus de la influenza aviar. Durante la movilización de un responsable del servicio de respuesta, el departamento de salud estatal en el que se lleva a cabo la actividad de respuesta debe notificar a los CDC de inmediato si están realizando pruebas a un paciente bajo investigación para detectar una infección por el virus de la influenza aviar; después de la movilización de un responsable del servicio de respuesta (durante su período de monitoreo posterior a la exposición de 10 días), el estado de residencia del responsable del servicio de respuesta debe notificar a los CDC de inmediato si se realiza una prueba a un paciente en investigación para detectar una infección por el virus de la influenza aviar.

Puede encontrar orientación adicional sobre las pruebas de detección de infecciones por el virus de la influenza aviar en personas, recomendaciones para el control de infecciones y tratamiento y profilaxis de personas que pueden estar infectadas con los virus de la influenza aviar en http://www.cdc.gov/flu/avianflu/healthprofessionals.htm.

Para el personal de seguridad movilizado bajo vigilancia activa, los oficiales de seguridad del APHIS o los oficiales de seguridad del Contratista monitorearán al personal de respuesta para detectar enfermedades e informarán a los departamentos de salud estatales o locales (consulte el Anexo 2).

Para el personal de respuesta desmovilizado bajo vigilancia activa, los CDC recomiendan que los departamentos de salud estatales y locales implementen un protocolo de monitoreo que incluya al menos contacto telefónico durante el período posterior a la exposición de 10 días de la siguiente manera. Se puede emplear un monitoreo más frecuente o en persona según lo permitan los recursos. La siguiente es una guía para el nivel mínimo de monitoreo activo recomendado para el personal de seguridad desmovilizado.

[EL RESTO DE ESTA PÁGINA SE DEJA EN BLANCO INTENCIONADAMENTE]

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- **Día 1 del período posterior a la exposición (o al regresar al estado de residencia):**Establecer contacto telefónico para: (I) evaluar cualquier enfermedad consistente con la influenza, (II) describir los parámetros del plan de monitoreo, incluyendo lo que se espera del personal de respuesta durante los días 2-9 (ver más abajo), (III) proporcionar instrucciones adicionales para acatar si la enfermedad se manifiesta (según sea necesario), y (IV) verificar e intercambiar información de contacto.

  Determinar y registrar durante la primera conversación telefónica la naturaleza del nivel más alto de exposición durante la movilización más reciente. Las exposiciones pueden clasificarse en (al menos) los siguientes tres niveles:

  i. Sin exposición a aves infectadas o a su entorno (p. ej., tareas administrativas en un puesto de Mando de Incidentes).
  ii. Exposición a aves infectadas y/o a su entorno mientras se usa el equipo de protección personal (EPP) recomendado en todo momento.
  iii. Exposición a aves infectadas y/o a su entorno cuando no se usa el EPP recomendado (p. ej., exposición antes de ponerse el EPP o una incumplimiento en el uso del EPP durante las actividades de respuesta).

- **Día 2 al día 9 del período posterior a la exposición:** Los personal de respuesta debe estar bajo observación a diario para detectar signos y síntomas consistentes con la influenza, y comunicarse con el departamento de salud estatal/local si se desarrollan signos o síntomas consistentes con la influenza.
- **Día 10 del período posterior a la exposición:** Establecer contacto telefónico para verificar el estado de salud e informar al responsable del servicio de respuesta que su período de monitoreo ha concluido.

Cuando se está llevando a cabo un monitoreo activo del personal de respuesta del brote, los CDC solicitan la siguiente información a los departamentos de salud estatales:

- Notificación **inmediata** (telefónica) al realizar pruebas de infección por el virus de la influenza aviar en cualquier caso en investigación (Case Under Investigation, CUI).
- Notificación **inmediata** (telefónica) de cualquier muestra respiratoria que resulte positiva para el virus de la influenza A/H5 o A/H7 o que resulte positiva para el virus de la influenza A, pero que no pueda ser subtipificada en el Laboratorio Estatal de Salud Pública.
- Una lista de líneas **diarias** (enviada por correo electrónico a VS ICG One Health, VS.SP.OHC@usda.gov)) con información que describa todos los CUI, para incluir a todo el personal de respuesta movilizado o desmovilizado, y a todas las demás personas expuestas a aves infectadas o ambientes contaminados. Los CDC proporcionarán la plantilla de lista de líneas.

**Sección 4: Profilaxis y tratamiento antiviral para el personal de respuesta**

La quimioprofilaxis no se recomienda rutinariamente para las personas que usaron EPP mientras participaban en actividades de despoblación, eliminación o limpieza y desinfección. Las decisiones de iniciar la quimioprofilaxis antiviral deben basarse en el juicio clínico, teniendo en cuenta el tipo de exposición y si la persona expuesta tiene un alto riesgo de complicaciones por la influenza. Si se inicia la quimioprofilaxis antiviral posterior a la exposición, se recomienda la dosificación del tratamiento para los inhibidores de la neuraminidasa oseltamivir o zanamivir (una dosis, dos veces al día) en estos casos en lugar del esquema típico de quimioprofilaxis antiviral recomendado en algunas circunstancias para las exposiciones a la influenza estacional (una dosis, una vez al día). Para obtener más información, consulte la Guía Provisional sobre la Influenza Quimioprofilaxis antiviral de personas expuestas a aves con virus de la influenza aviar A asociados con enfermedades humanas graves o con el potencial de causar enfermedades humanas graves.

Si un responsable del servicio de respuesta desarrolla signos o síntomas consistentes con la influenza durante su período de monitoreo, se recomienda el inicio inmediato del tratamiento con medicamentos antivirales contra la influenza mientras están pendientes las pruebas de laboratorio.

El tratamiento recomendado es de dos dosis por día de oseltamivir oral o zanamivir inhalado durante 5 días. Cuando esté justificado, el tratamiento antiviral debe iniciarse lo antes posible, incluso si han transcurrido más de 48 horas desde el inicio de la enfermedad.

Debe haber un umbral bajo para iniciar el tratamiento en personal de respuesta sintomático mientras las pruebas de laboratorio están pendientes. Si las pruebas de laboratorio son negativas para el virus de la influenza, se puede interrumpir el tratamiento. Para obtener más información, consulte la Guía provisional sobre el uso de medicamentos antivirales para el tratamiento de infecciones humanas con los nuevos virus de la influenza A asociados con enfermedades humanas graves. Para el personal de respuesta que requiere tratamiento antiviral o profilaxis posterior a la exposición, las reservas estatales y federales de oseltamivir pueden estar disponibles para uso de los departamentos de salud estatales. Para obtener más orientación, comuníquese con los CDC/División de Influenza al 404-639-3747.

Para obtener recomendaciones de dosis específicas para el tratamiento o la profilaxis con dosis de tratamiento, consulte Medicamentos antivirales contra la influenza: Resumen para médicos. Los médicos deben consultar el prospecto del fabricante para conocer la posología, las limitaciones de las poblaciones estudiadas, las contraindicaciones y los efectos adversos. Si la exposición fue temporal y no continua, se recomiendan cinco días de medicación (una dosis, dos veces al día), a partir de la última exposición conocida.

**Sección 5: Introducción al monitoreo del personal de respuesta a través de mensajes de texto**

Es probable que los departamentos de salud estatales y locales realicen el monitoreo después de la desmovilización mediante llamadas telefónicas, que pueden ser un proceso lento y que demanda tiempo. Los CDC han colaborado con la Asociación Nacional de Funcionarios de Salud del País y la Ciudad (National Association of Country and City Health Officials, NACCHO) y la Campaña de Cumplimiento para desarrollar un sistema de monitoreo que utiliza el Servicio de Mensajes Cortos (Short Message Service, SMS) bidireccional/mensajes de texto para ayudar en el proceso.

Los mensajes de texto son un método potencialmente más eficiente para obtener, manejar y actuar sobre cualquier síntoma de influenza posterior a la movilización experimentada por el personal de respuesta, y los estudios de investigación han usado mensajes de texto para monitorear los síntomas de la influenza con éxito. La participación en el programa de monitoreo de texto sería voluntaria tanto para los departamentos de salud estatales/locales como para el personal de respuesta. El responsable del servicio de respuesta que consienta y resida en los municipios estatales y locales participantes recibiría automáticamente un mensaje de texto por día durante 10 días preguntando si tiene o no síntomas consistentes con la influenza. Los trabajadores sanitarios estatales/locales serían alertados de inmediato sobre cualquier respuesta positiva y sobre cualquier responsable del servicio de respuesta que no conteste dos mensajes consecutivos (es decir, dos días sin respuesta al mensaje). Toda la información compartida a través del servicio de mensajes de texto permanecería confidencial y no se compartiría más que con los trabajadores sanitarios estatales/locales apropiados. Si un estado está interesado en usar esta plataforma, debe ponerse en contacto con los CDC/División de Influenza al 404-639-3747.

## Sección 6: Criterios para implementar, suspender y restablecer el monitoreo

Las recomendaciones para implementar, suspender y restablecer el monitoreo del personal de respuesta expuesto a aves infectadas con virus de la influenza aviar se basarán en una evaluación de riesgos. La evaluación de riesgos debe incluir lo siguiente.

- Un análisis de la magnitud y distribución de los brotes en aves
- Nuevos datos científicos que cambian la comprensión de la transmisión (p. ej., evidencia genética, antigénica o de modelo animal de un aumento o disminución de la ineficacia por un cambio en el virus)
- Evidencia epidemiológica de un cambio en el riesgo de transmisión (p. ej., identificación de casos humanos que se cree que son el resultado de la transmisión de animal a humano o de humano a humano)

La evaluación de riesgos de los CDC se guía por una Herramienta de Evaluación de Riesgos de Influenza (Influenza Risk Assessment Tool, IRAT); visite https://www.cdc.gov/flu/pandemic-resources/national-strategy/risk-assessment.htm), que evalúa 10 elementos de riesgo asociados con los virus de la influenza. Estos 10 elementos se pueden clasificar en las siguientes tres áreas principales: (I) propiedades del virus, (II) atributos de la población, y (III) la ecología y epidemiología del virus. La IRAT está diseñada para evaluar los virus de la influenza A que no están circulando en la población humana.

Posibles criterios que contribuyen a la aplicación del monitoreo de la influenza aviar

- Identificación de los virus H5 de la HPAI y HPAI o LPAI H7 en parvadas de aves de corral en los Estados Unidos.

Posibles criterios que contribuyen a suspender el monitoreo de la influenza aviar

- Cese de los brotes en aves en los Estados Unidos.
- Ausencia de infección humana entre un número específico de personas expuestas o después de un período específico (p. ej., una temporada de brotes en aves).
- Evidencia génica y antigénica que sugiere que los virus de la influenza aviar permanecen genéticamente sin cambios después de un período específico (p. ej., una temporada de brotes en aves).
- Se desarrollan mecanismos alternativos para evaluar al personal de respuesta con respecto a la enfermedad, que se cree que son adecuados.
- Una serie de puntajes de evaluación de la IRAT que indican que el riesgo de una pandemia planteada por estos virus de la influenza aviar es bajo.

Posibles criterios que contribuyen a restablecer la vigilancia de la influenza aviar

- Nueva evidencia génica o antigénica que sugiere un aumento en el riesgo de transmisión de animal a humano.
- Identificación de infecciones humanas por virus de la influenza aviar en personas expuestas a aves infectadas durante las actividades de respuesta.
- Un cambio en el alcance o el número de identificaciones de influenza aviar en aves (p. ej., más estados afectados, nuevas especies de aves afectadas) después de que se haya detenido la actividad de monitoreo.
- Identificación de un nuevo virus de la influenza aviar reordenado en parvadas de aves de corral de los EE. UU.

**Anexo 1: Instrucciones de movilización (que se entregarán al personal de respuesta al comenzar las actividades de respuesta)**

Para obtener más información, consulte:

- CDC/División de Influenza (Información para personas expuestas a aves infectadas con virus de la influenza aviar de interés para la salud pública): https://www.cdc.gov/flu/avianflu/h5/infected-birds-exposure.htm
- CDC/División de Influenza (Instrucciones de auto observación para desmovilizar al personal de respuesta de la influenza aviar): https://www.cdc.gov/flu/avianflu/h5/demobilizing-responders.htm

Como responsable del servicio de respuesta a brotes de enfermedades de salud animal, tales como la influenza aviar, puede participar en actividades que lo expongan a aves infectadas con el virus de la influenza aviar o superficies y medioambiente potencialmente contaminados con virus durante la despoblación, eliminación y limpieza y desinfección de las parvadas afectadas. Aunque el riesgo de enfermedad humana por los virus de la influenza aviar es bajo y hasta la fecha se han encontrado muy pocas infecciones humanas con estos virus en los Estados Unidos, es esencial que siga cuidadosamente todas las precauciones e instrucciones de los Servicios de Inspección de Sanidad de Plantas y Animales (APHIS) del Departamento de Agricultura de los Estados Unidos (USDA) y de los Centros para el Control y la Prevención de Enfermedades (CDC). Siga correctamente todas las pautas operativas del equipo de protección personal (EPP), la bioseguridad y el oficial de seguridad mientras esté de servicio. Seguir estas instrucciones ayudará a proteger su salud y de otras personas que trabajan con usted. No dude en hacer preguntas para garantizar su salud y seguridad.

1. Controle su salud cuidadosamente **durante su movilización** y durante **10 días** a partir del fin de su movilización. Evalúe la presencia de un nuevo inicio o empeoramiento de cualquiera de los siguientes signos y síntomas:
   - Fiebre (temperatura de 100 °F [37,8 °C] o más) o sensación de fiebre/escalofríos*
   - Tos
   - Dolor de garganta
   - Dificultad para respirar/falta de aliento
   - Lagrimeo, enrojecimiento o irritación de los ojos
   - Dolores de cabeza
   - Secreción o congestión nasal
   - Dolores musculares o corporales
   - Diarrea

   ** Es posible que la fiebre no siempre esté presente*

   Manifestar cualquiera de estos signos o síntomas no significa necesariamente que esté infectado con un virus de la influenza aviar, pero es importante que notifique a su oficial de seguridad de inmediato para que lo puedan evaluar y recibir tratamiento si es necesario.

2. Si experimenta alguno de los signos o síntomas anteriores en cualquier momento durante la movilización, póngase en contacto con los siguientes recursos **de inmediato**. (La información a continuación se completará en el sitio por el APHIS o el oficial de seguridad del Contratista).

   **En una situación de emergencia, busque atención médica de inmediato.**

   a. Nombre del oficial de seguridad (fechas de operación):_____
      i. Número de teléfono principal:_____
      ii. Número de teléfono móvil:_____

   b. (Si su oficial de seguridad cambia durante su movilización)
      Nombre del oficial de seguridad (fechas de operación):_____
      i. Número de teléfono principal: _____

ii. Número de teléfono móvil: _____

c. Si no puede comunicarse con su oficial de seguridad y necesita buscar atención médica, proporcione la siguiente información de contacto del departamento de salud pública estatal/local a su médico y dígale que usted es un responsable del servicio de respuesta al brote del virus de la influenza aviar en ese estado:
   i. Departamento de salud pública estatal/local _____
   ii. Número de teléfono: _____

El departamento de salud pública estatal/local puede pedirle que busque atención médica para recolectar una muestra respiratoria para una prueba que determine si tiene una infección por el virus de la influenza. La prueba RT-PCR (para determinar si tiene influenza) se llevará a cabo sin costo adicional para usted o su seguro médico, siempre que el departamento de salud pública estatal/local le pida que se someta a la prueba y que la organice. Usted es responsable de cualquier gasto médico adicional relacionado con el cuidado de su enfermedad.

Los empleados federales pueden presentar un reclamo de remuneración laboral en cualquier momento que perciban que hay alguna lesión relacionada con el trabajo o una enfermedad ocupacional. Se debe contar con documentación médica que respalde ese reclamo; de lo contrario, el Departamento de Trabajo puede rechazarlo.

Gracias por contribuir al servicio de respuesta y por su cooperación para ayudar a garantizar que su salud y la de otros responsables del servicio de respuesta ante incidentes se controlen y se cuiden bien. Su salud y seguridad es nuestra prioridad.

[EL RESTO DE ESTA PÁGINA SE DEJA EN BLANCO INTENCIONADAMENTE]

[CONTINUA EN LA PÁGINA SIGUIENTE]

**Anexo 2: Instrucciones para el APHIS y los oficiales de seguridad del Contratista (que se entregarán a los oficiales de seguridad del USDA/APHIS y a los oficiales de seguridad del Contratista que participan en las actividades de respuesta a la influenza aviar)**

**Guía de autocontrol:**

- Es importante que todo el personal de respuesta comprenda la importancia del autocontrol como parte de un proceso eficaz de vigilancia y elaboración de informes. Los recordatorios frecuentes de la importancia del autocontrol deben difundirse a través de canales de comunicación eficaces en cada Puesto de Mando de Incidentes y deben incluir una lista de los signos y síntomas de la influenza.
- El APHIS y los oficiales de seguridad del Contratista deben proporcionar puntos directos de comunicación y contacto entre personal de respuesta ante incidentes y las autoridades de salud pública estatales y locales. Este personal de respuesta confía en su oficial de seguridad para responder preguntas, quien debe estar disponible para ofrecer asistencia cuando el personal de respuesta informen una enfermedad. Es responsabilidad del oficial de seguridad de APHIS seguir el protocolo que figura a continuación al informar sobre sospechas de infección por influenza aviar en el personal de respuesta al departamento de salud pública estatal/local (S/LPHD). La notificación oportuna y la coordinación entre el personal de los centros de atención médica, el S/LPHD, el USDA/APHIS y los CDC es importante para garantizar que se realicen las pruebas correspondientes y se brinde la atención médica adecuada.

**Proceso de comunicación de síntomas:**

1. En simultáneo con el comienzo de las actividades de respuesta a la influenza aviar, el APHIS o el oficial de seguridad del Contratista se comunica con el departamento de salud pública del estado (los CDC proporcionarán la información de contacto al APHIS al momento de la activación de la respuesta) para la jurisdicción donde se realizan las actividades de respuesta a la influenza aviar. Los oficiales de seguridad deben trabajar con los funcionarios de salud pública del estado con respecto a: (1) la ubicación de la respuesta; (2) el número aproximado de personas que prestaron servicios de respuesta; y (3) un punto de contacto en el departamento de salud del estado para notificar en caso de que se identifiquen signos y síntomas compatibles con la influenza en cualquier responsable del servicio de respuesta. El APHIS y los oficiales de seguridad del Contratista informarán al departamento de salud pública del estado cualquier cambio en la ubicación de la respuesta y cambios significativos en el número de personal de respuesta movilizado en el estado. Los oficiales de seguridad deben trabajar con el departamento de salud estatal para identificar opciones que permitan obtener muestras respiratorias para la prueba del virus de la influenza aviar en el laboratorio de salud pública estatal.

2. Indique al personal de respuesta ante incidentes que se comuniquen con usted, su oficial de seguridad designado, de inmediato, si tiene algún síntoma consistente con la influenza durante la movilización (lista de síntomas disponible a continuación y en el Anexo 1, "Instrucciones de movilización"). Use de canales de comunicación eficaces para proporcionar recordatorios diarios o frecuentes a todo el personal de respuesta acerca de la importancia del autocontrol*; proporcione una lista de los síntomas de la gripe. Evalúe visualmente a cualquier responsable del servicio de respuesta con los que interactúa para detectar signos y síntomas de influenza. Use el EPP adecuado cuando interactúa con personal de respuesta si el personal de respuesta muestra signos consistentes con la influenza.

* Nota: Si la respuesta es a un virus de la influenza aviar no informado previamente como de preocupación para la salud pública, se llevará a cabo un monitoreo activo del personal de respuesta.

3. Los oficiales de seguridad deben seguir el proceso de notificación de síntomas que se indica a continuación para cualquier responsable del servicio de respuesta ante incidentes de influenza aviar que informe un nuevo inicio o empeoramiento de los siguientes signos o síntomas, incluido lo siguiente:

- Fiebre (temperatura de 100 °F [37,8 °C] o mayor) o sensación de fiebre/escalofríos*
- Tos
- Dolor de garganta
- Dificultad para respirar/falta de aliento

* Es posible que la fiebre no siempre esté presente

- Lagrimeo, enrojecimiento o irritación de los ojos
- Dolores de cabeza
- Secreción o congestión nasal
- Dolores musculares o corporales
- Diarrea

4. El oficial de seguridad del APHIS tendrá la siguiente comunicación inicial con el responsable del servicio de respuesta ante incidentes de influenza aviar del APHIS (los oficiales de seguridad del Contratista tendrán la misma comunicación inicial):
   a. Si se trata de una emergencia médica, recomiende llamar al 911 de inmediato o acudir al centro médico más cercano. Si se sospecha de infección humana por el virus de la influenza aviar, se debe avisar al operador del 911 de este problema.
   b. Tenga en cuenta el inicio y la duración de los signos y síntomas que el responsable del servicio de respuesta está experimentando.
   c. Anote las actividades en las que participó el responsable del servicio de respuesta durante los 10 días anteriores y las ubicaciones específicas de esas actividades.
   d. Tenga en cuenta dónde se encuentra actualmente el responsable del servicio de respuesta y si tiene la intención de viajar fuera de la jurisdicción actual dentro de los próximos 2 días.
   e. Tenga en cuenta si el responsable del servicio de respuesta se quedará con otras personas (es decir, si comparte una habitación) y si hay personas enfermas. Informe al responsable del servicio de respuesta sintomático que se aísle para evitar que otros se enfermen.
   f. El oficial de seguridad notifica al responsable del servicio de respuesta ante incidentes que el oficial de seguridad está compartiendo la información del responsable del servicio de respuesta con el S/LPHD por razones de salud pública para que el S/LPHD pueda determinar si se necesitan pruebas para la influenza aviar.
   g. Ofrezca orientación sobre comportamientos para prevenir la exposición de otras personas. Visite http://www.cdc.gov/flu/takingcare.htm para obtener más información.

5. El oficial de seguridad notifica inmediatamente al S/LPHD correspondiente que un responsable del servicio de respuesta ha reportado síntomas consistentes con la influenza. El oficial de seguridad trabaja con el empleado, el S/LPHD y el centro de atención médica para garantizar que se brinde la atención médica adecuada. En consulta con el proveedor de atención clínica, el S/LPHD determinará si se necesitan pruebas de influenza aviar y notificará al centro de atención médica según sea necesario.
   - Se proporcionará información de contacto del S/LPHD.
   - Nota: si el oficial de seguridad no está al tanto del S/LPHD correspondiente para contactarse, comuníquese inmediatamente con los **CDC/División de Influenza al 404-639-3747 o, después del horario de atención, con los CDC/Centro de Operaciones de Emergencia (Emergency Operations Center, EOC) al 770-488-7100.**

6. El oficial de seguridad y el funcionario del S/LPHD tendrán una conversación de seguimiento con el responsable del servicio de respuesta que está enfermo con influenza aviar:
    a. Proporcione instrucciones para acudir a un centro de atención médica acordado.
    b. El oficial de seguridad informará al responsable del servicio de respuesta que los gastos de atención médica pueden variar según su plan de atención médica personal y el centro de atención médica local. Si se notificó al S/LPHD sobre los síntomas y se autorizó la prueba, la prueba de diagnóstico de influenza RT-PCR se proporcionará sin costo adicional para el empleado o su seguro médico. Otros costos asociados con la atención clínica de rutina de la enfermedad estarán a cargo del responsable del servicio de respuesta. Los empleados federales pueden presentar un reclamo de remuneración laboral en cualquier momento que perciban que hay alguna lesión relacionada con el trabajo o una enfermedad ocupacional. Se debe contar con documentación médica que respalde ese reclamo; de lo contrario, el Departamento de Trabajo puede rechazarlo.
    c. Si el responsable del servicio de respuesta regresa a su ubicación actual después de recibir atención médica, debe seguir los consejos de su médico y S/LPHD para reducir la propagación de cualquier enfermedad infecciosa. Si un responsable del servicio de respuesta se encuentra en examinación para la influenza aviar, se recomienda el aislamiento del paciente y no debe viajar fuera de la jurisdicción actual hasta que se conozcan los resultados de la prueba.
    d. Haga hincapié en la importancia del cumplimiento para garantizar la salud del responsable del servicio de respuesta enfermo y de los demás.
7. El oficial de seguridad notificará a la persona que figura a continuación acerca de la enfermedad reportada y si la prueba de influenza aviar fue autorizada por el S/LPHD:
    a. Grupo de Coordinación de Incidentes de VS (Incident Coordination Group, ICG) Health & Safety – James McKee ((301) 436-3115) [james.e.mckee@usda.gov] y Patrick Newcomb ((301)-832-2974)[patrick.newcomb@usda.gov].
    b. A su vez, ICG Health & Safety notificará al Dr. Richard Walker, a VS ICG One Health y a CDC/Influenza Division.
        i. Dr. Richard Walker, oficial médico del APHIS [Thomas.R.Walker@aphis.usda.gov]
        ii. VS ICG One Health [VS.SP.OHC@usda.gov]
        iii. CDC/División de Influenza al 404-639-3747 (Krista Kniss [krk9@cdc.gov], Katie Tastad [qwu5@cdc.gov] y Angiezel Merced-Morales [png6@cdc.gov])
    c. Notifique a los demás oficiales de seguridad en la misma unidad/ubicación de respuesta al incidente sobre la enfermedad reportada para generar conciencia sobre una posible infección humana.
8. Si un responsable del servicio de respuesta abandona un lugar de respuesta por cualquier motivo con la intención de regresar al lugar de respuesta (p. ej, por una emergencia familiar o vacaciones), esta persona debe permanecer bajo la jurisdicción del oficial de seguridad del sitio del APHIS para fines de monitoreo de enfermedades y debe comunicarse con el oficial de seguridad del sitio del APHIS del sitio inmediatamente si manifiesta signos o síntomas compatibles con la influenza. Si un responsable del servicio de respuesta se comunica con el oficial de seguridad del sitio del APHIS por una enfermedad mientras está lejos del lugar de respuesta, el oficial de seguridad del sitio del APHIS debe: (1) recomendarle al responsable del servicio de respuesta que se auto aísle y se comunique con el departamento de salud pública en el estado donde se encuentra actualmente el responsable del servicio de respuesta; y (2) comunicarse con los CDC/División de Influenza al 404-639-3747 [Krista Kniss (krk9@cdc.gov), Katie Tastad (qwu5@cdc.gov) y Angiezel Merced-Morales (png6@cdc.gov)].

**Anexo 3: Instrucciones de desmovilización (que se darán al personal de seguridad al finalizar las actividades de respuesta)**

- Para obtener más información, consulte: CDC/División de Influenza (Instrucciones de auto observación para desmovilizar al personal de respuesta de la influenza aviar): https://www.cdc.gov/flu/avianflu/h5/demobilizing-responders.htm

Gracias por su contribución a los esfuerzos de respuesta del Servicio de Inspección de Sanidad de Plantas y Animales (APHIS). El APHIS otorga la máxima prioridad a la salud y seguridad del personal de respuesta y, como responsable del servicio de respuesta ante incidentes al brote de influenza aviar, es posible que haya participado en actividades que lo expusieron a aves infectadas con el virus de la influenza aviar o superficies y ambientes potencialmente contaminados por el virus durante la despoblación, eliminación, limpieza y desinfección de parvadas afectadas. Aunque el riesgo de enfermarse por los virus de la influenza aviar es bajo y hasta la fecha se han encontrado pocas infecciones humanas con estos virus en los Estados Unidos, es fundamental que siga cuidadosamente todas las precauciones e instrucciones del APHIS y de los Centros para el Control y la Prevención de Enfermedades (CDC) y que se realice un seguimiento para detectar cualquier signo o síntoma de enfermedad durante 10 días después de que finalice su movilización. La identificación temprana de una persona infectada con el virus de la influenza aviar es importante para el tratamiento y otras medidas de respuesta apropiadas y para prevenir la posible propagación a otras personas.

Siga las instrucciones a continuación atentamente:

1. Controle su salud cuidadosamente durante **10 días** desde el final de su movilización. Evalúe la presencia de un nuevo inicio o empeoramiento de cualquiera de los siguientes signos y síntomas:
   - Fiebre (temperatura de 100 °F [37,8 °C] o más) o sensación de fiebre/escalofríos*
   - Tos
   - Dolor de garganta
   - Dificultad para respirar/falta de aliento
   - Lagrimeo, enrojecimiento o irritación de los ojos
   - Dolores de cabeza
   - Secreción o congestión nasal
   - Dolores musculares o corporales
   - Diarrea

   * Es posible que la fiebre no siempre esté presente
2. Si tiene alguno de los signos o síntomas anteriores en cualquier momento durante los 10 días posteriores a su desmovilización, comuníquese con el departamento de salud pública estatal/local **de inmediato**. Consulte la lista adjunta para obtener la información de contacto de su departamento de salud pública estatal/local.

   **En una situación de emergencia, busque atención médica de inmediato.**
3. El departamento de salud pública estatal/local puede pedirle que busque atención médica para recolectar una muestra respiratoria o conjuntival para realizar una prueba que determine si está contagiado con el virus de influenza. Para determinar si tiene influenza, la prueba RT-PCR se llevará a cabo sin costo adicional para usted o su seguro médico, siempre que el departamento de salud pública estatal/local le pida que se someta a la prueba y que la organice. Usted es responsable de los gastos médicos adicionales relacionados con el cuidado de su enfermedad. Los empleados federales pueden presentar un reclamo de remuneración laboral en cualquier momento que perciban que hay alguna lesión relacionada con el trabajo o una enfermedad ocupacional. Se debe contar con documentación médica que respalde ese reclamo; de lo contrario, el Departamento de Trabajo puede rechazarlo.

4. Además de su autocontrol, su información de contacto se ha compartido con los funcionarios del departamento de salud pública estatal/local para que puedan comunicarse con usted por teléfono, mensaje de texto o correo electrónico para verificar que su estado de salud es sano. La frecuencia de contacto se determinará en cada estado según su riesgo evaluado y el procedimiento del estado, y puede variar desde ningún contacto hasta el contacto diario durante los 10 días posteriores a su fecha de desmovilización. Las autoridades de salud pública estatales y locales también pueden proporcionarle instrucciones e información adicionales.

a. Su información de contacto no se compartirá fuera de los canales oficiales de salud pública y solo se utilizará para contactarlo a fin de monitorearlo su enfermedad después de una exposición a aves infectadas por influenza aviar y/o ambientes potencialmente contaminados.
b. Toda información que proporcione durante este contacto será estrictamente confidencial.

Gracias por contribuir al servicio de la respuesta a la influenza aviar y por su cooperación para ayudar a garantizar de que su salud y la del personal de respuesta ante incidentes esté bajo monitoreo y buen mantenimiento continuos. Su salud y seguridad es nuestra prioridad.

[EL RESTO DE ESTA PÁGINA SE DEJA EN BLANCO INTENCIONADAMENTE]

[CONTINUA EN LA PÁGINA SIGUIENTE]

**Anexo 4: Proceso para identificar al personal de respuesta desmovilizado**

- El APHIS generará una hoja de cálculo de desmovilización diaria. El informe incluirá a todos los empleados del APHIS desmovilizados durante las 24 horas previas.

- Cada empresa contratada generará una hoja de cálculo diaria de desmovilización. Cada informe incluirá a todos los empleados desmovilizados contratados durante las 24 horas previas.

- Cada hoja de cálculo diaria del APHIS y de la desmovilización de los contratos contendrá los siguientes campos.
    - Fecha del informe (estará en la convención de nomenclatura utilizada para el informe)
    - Organización
    - Incidente:
    - Apellido
    - Nombre
    - Sitio del incidente (identificador único que puede incluir el estado)
    - Grupo asignado (sección IMT)
    - Puesto asignado
    - Dirección de correo electrónico
    - Número de teléfono principal
    - Número de teléfono móvil
    - Estado
    - Ciudad
    - Condado
    - Código postal
    - Dirección de destino (cuando esté disponible)
    - Fecha de movilización
    - Fecha de liberación (fecha de desmovilización)

- El APHIS enviará por correo electrónico un informe protegido por contraseña al VS ICG One Health a través de VS.SP.OHC@usda.gov.

- Cada empresa contratada enviará por correo electrónico un informe protegido por contraseña a VS ICG One Health, VS.SP.OHC@usda.gov.

- VS ICG One Health distribuirá un informe diario a los CDC/División de Influenza con respecto a los empleados y contratistas desmovilizados del APHIS.

- Los CDC/División de Influenza distribuirá secciones de la lista a los puntos de contacto del departamento de salud pública estatal correspondientes a través de notificaciones Epi-X (un portal web seguro protegido por contraseña).

## Anexo 5: Guía evaluar al personal de respuesta expuesto (para los departamentos de salud estatales y locales)

Nota: *Los comentarios en esta página (Anexo 5) son para uso exclusivo de las autoridades de salud pública y no deben proporcionarse al personal de respuesta que se auto controlan para detectar enfermedades después de la desmovilización.*

Los departamentos de salud estatales han solicitado una guía más detallada sobre cómo determinar si un responsable del servicio de respuesta expuesto debe someterse a la prueba de una posible infección por el virus de la influenza aviar. Todo el personal de respuesta potencialmente expuesto que presente signos o síntomas compatibles con la influenza debe hacerse la prueba. Dado que actualmente se considera que el riesgo de transmisión de los virus de la influenza aviar de animal a humano es bajo, y la lista de signos y síntomas proporcionada por los CDC es amplia, esto puede dar lugar a que se realicen pruebas de influenza a muchas personas, cuya mayoría probablemente resulte negativa para la infección por el virus de la influenza aviar. Esto puede crear una carga considerable para los recursos de salud pública estatales y locales y generar la necesidad de limitar las pruebas a las personas que se consideran "en mayor riesgo".

Los brotes del virus de la influenza aviar en las aves pueden ocurrir durante el pico de la temporada de influenza en los Estados Unidos, tiempo durante el cual muchos responsables del servicio de respuesta pueden enfermarse de influenza estacional. Esto podría resultar en un gran número de personas que calificarían para las pruebas. Estas personas deben someterse a la prueba de la influenza, ya que las personas con influenza estacional que presentan signos y síntomas de ILI "típicos" son exactamente las personas a las que se les debe hacer la prueba para detectar la infección por el virus de la influenza aviar en virtud de este plan de monitoreo. Sin las pruebas RT-PCR, no es posible determinar si un responsable del servicio de respuesta con ILI tiene una infección por el virus de la influenza aviar o estacional.

Si los recursos lo permiten, los CDC/División de Influenza recomiendan que todo el personal de respuesta expuesto que presente signos o síntomas consistentes con la influenza se haga la prueba. Si la demanda de pruebas excede la capacidad de salud pública local o estatal, entonces se puede considerar priorizar casos en investigación (CUI) para la prueba. Desafortunadamente, los CDC no pueden ofrecer un algoritmo de priorización para abordar todos los CUI; los estados deben usar su mejor juicio y considerar cada CUI caso por caso. Sin embargo, aquí se describen algunos principios rectores:

- Recomendamos un umbral bajo para realizar pruebas a las personas expuestas a aves infectadas con virus de la influenza aviar o superficies y ambientes potencialmente contaminados. Actualmente, se sabe poco sobre la manifestación clínica de la infección humana con estos virus de la influenza aviar; sin embargo, la infección humana con estos virus de influenza aviar puede compartir características de la infección humana con otros virus de influenza aviar (p. ej., virus HPAI H5 de linaje euroasiático y virus LPAI y HPAI H7N9 de linaje asiático), y puede ser posible una amplia variedad de presentaciones clínicas, que incluyen alguna enfermedad clínica leve tal como conjuntivitis solamente o alguna enfermedad similar a la influenza autolimitada.
- Si prioriza los CUI para las pruebas, es posible que desee considerar tanto (I) los signos y síntomas clínicos de un paciente como (II) la naturaleza de su exposición. Los signos y síntomas enumerados en el plan de monitoreo y proporcionados aquí enumeran los signos y síntomas más típicos de las enfermedades respiratorias en la columna *izquierda* y otros signos y síntomas en la columna *derecha*. La nueva aparición o el empeoramiento de cualquier signo o síntoma de la columna izquierda deberían arrojar pruebas de influenza. Un CUI con un signo o síntoma aislado de la columna derecha (p. ej., dolor de cabeza solamente, fatiga generalizada, diarrea solamente) puede ser de menor prioridad para las pruebas, según la naturaleza de la exposición. La exposición directa y/o prolongada (p. ej., un incumplimiento con el EPP que no se descubrió hasta el final de un turno de sacrificio de 8 horas) puede significar que se debe priorizar la prueba, incluso en los CUI con un signo o síntoma aislado de la columna derecha. La presencia de múltiples signos o síntomas de la derecha también puede significar que hay que priorizar las pruebas.

Controle su salud cuidadosamente **durante su movilización** y durante **10 días** a partir del fin de su movilización. Evalúe la presencia de un nuevo inicio o empeoramiento de cualquiera de los siguientes signos y síntomas:

- Fiebre (temperatura de 100 °F [37,8 °C] o mayor) o sensación de fiebre/escalofríos*
- Tos
- Dolor de garganta
- Dificultad para respirar/falta

* Es posible que la fiebre no siempre esté presente

- Lagrimeo, enrojecimiento o irritación de los ojos
- Dolores de cabeza
- Secreción o congestión nasal
- Dolores musculares o corporales
- Diarrea

- Los comentarios en esta página (Anexo 5) son para uso exclusivo de las autoridades de salud pública y no deben proporcionarse al personal de respuesta que se auto controlan para detectar enfermedades después de la desmovilización. El personal de respuesta, el APHIS y los oficiales de seguridad del Contratista deben notificar al departamento de salud pública del estado si experimentan alguno de los signos o síntomas que se indican en las columnas de la lista.
- Los CDC continuarán analizando las pautas para evaluar a las personas expuestas a medida que se disponga de más información sobre la epidemiología y el potencial de transmisión de estos virus de influenza aviar de animales a humanos.
- Si tiene preguntas sobre si las pruebas son apropiadas para un CUI y desea hablar con los CDC, llame a la División de Influenza al 404-639-3747 durante el horario de atención normal, y al Centro de Operaciones de Emergencia de los CDC al 770-488-7100 fuera del horario de atención.

Tenga en cuenta que las infecciones humanas previas con ciertos virus de la influenza aviar han resultado en conjuntivitis (y, a veces, este ha sido el único signo manifestado). Por esa razón, si los pacientes se presentan para las pruebas de influenza como CUI con conjuntivitis, los CDC recomiendan obtener muestras respiratorias (visite https://www.cdc.gov/flu/avianflu/severe-potential.htm para obtener más información) y una muestra conjuntival. Si el laboratorio de salud pública del estado no puede analizar la muestra conjuntival para detectar la influenza, es posible que se envíe a los CDC para su análisis.

Para obtener información adicional sobre las pruebas para pacientes en observación de una posible infección por el virus de la influenza aviar (incluida la recolección y el procesamiento de muestras), consulte la Guía provisional sobre pruebas, Recolección y procesamiento de muestras para pacientes con sospecha de infección por los nuevos virus de la influenza A con el potencial de causar enfermedades graves en humanos o auto observación de enfermedades para personal de respuesta a brotes de influenza aviar en aves de corral | Influenza aviar (gripe) (cdc.gov).

United States Department of Agriculture

# FY2016 HPAI Response

## *Interim Recommendations on PPE for Selected Activities*

April 25, 2016

*The NAHEMS Guidelines: Personal Protective Equipment* recommends use of Level C protection during an HPAI response. The *Highly Pathogenic Avian Influenza Standard Operating Procedures: 8. Health and Safety Personal Protective Equipment*, states that the Site Safety Officer (SSO), or designee, selects which PPE to use for individual tasks based on the job hazard analysis (JHA) performed. The purpose of this document is to provide greater detail to Safety Officers on the selection of PPE within Level C. Job hazard analyses should be conducted to determine the best fabric to protect against specific liquid splashes. In general, select the lowest level of fabric which provides sufficient protection to personnel. "Product Line by Hazard" provides comparisons and recommendations for typical chemical hazards.[1] In addition to respiratory protection and full-body protection, appropriate foot and hand protection must be worn.[2] For more information, please contact Deborah.I.Nelson@aphis.usda.gov at 515-450-6096.

| | Protective Suit Fabric[3] | | | | | | Respiratory Protection[4] | | |
|---|---|---|---|---|---|---|---|---|---|
| **Type of PPE** | **SMS (aka Proshield)** | **Microporous (laminates)** | ***Tyvek® (spun-bonded olefin such as polyethylene)** | ***Tychem® QC (Tyvek coated with polyethylene)** | **Tychem® SL, utilizing Saranex® 23-P film laminated to Tyvek®** | ***Tychem® F, proprietary barrier material** | **Single-use filtering facepiece available from the NVS** | **Half-facepiece air-purifying respirator with replaceable filter/cartridges** | **Full-facepiece air-purifying respirator with replaceable filter/ cartridges** |
| General Description | ♦ "Good for particulates – 50% holdout" (per Dupont representative)<br>♦ "A breathable fabric that offers a good barrier against hazardous particles and limited liquid splashes."[5]<br>♦ NOTE: Will not provide as much protection as Tyvek® from objects or surfaces that could damage or tear the fabric. | ♦ "Better for particulates – 95 to 97% holdout" (per Dupont representative)<br>♦ "Microporous PE Laminate offers a good barrier against hazardous particles and light liquid splashes, while the micropores allow for some breathability."[6]<br>♦ See NOTE under SMS. | ♦ "Best for particulates " (per Dupont representative)<br>♦ "Light-weight inherent barrier protection against hazardous dry particles and aerosols, and nonhazardous light liquid splash"[7] | ♦ "…used for light splash protection in a variety of industrial environments …provides excellent resistance against biohazards such as blood, body fluid, and viral contaminants …"[8] | ♦ "Chemical mixing, remediation, emergency medical response, paint spraying, and radioactive environments."[9] | ♦ "..strong, lightweight liquid splash protection … for personnel responding to an incident involving chemical, biological, or radioactive agents …"[10] | *N95<br>3M 8110<br>3M 8210<br>3M 8511<br>3M 9211+<br>Moldex 2700<br><br>*P95<br>3M 8271<br><br>*N100<br>3M 8233<br>3M 8293<br>Moldex 2360 | ♦ The minimum requirement is P100 filters; additional protection may be needed for organic vapors and/or ammonia.<br>♦ NOTE that organic vapor cartridges do NOT protect against ammonia unless specifically stated on the label.<br>♦ OSHA Assigned Protection Factor = 10. | ♦ The minimum requirement is P100 filters; additional protection may be needed for organic vapors and/or ammonia.<br>♦ NOTE that organic vapor cartridges do NOT protect against ammonia unless specifically stated on the label.<br>♦ OSHA Assigned Protection Factor = 50. |

| | Protective Suit Fabric[3] | | | | | | Respiratory Protection[4] | | |
|---|---|---|---|---|---|---|---|---|---|
| **Type of PPE** | **SMS (aka Proshield)** | **Microporous (laminates)** | ***Tyvek® (spun-bonded olefin such as polyethylene)** | ***Tychem® QC (Tyvek coated with polyethylene)** | **Tychem® SL, utilizing Saranex® 23-P film laminated to Tyvek®** | ***Tychem® F, proprietary barrier material** | **Single-use filtering facepiece available from the NVS** | **Half-facepiece air-purifying respirator with replaceable filter/cartridges** | **Full-facepiece air-purifying respirator with replaceable filter/ cartridges** |
| | ♦ Additional PPE (e.g., safety gloves with gauntlets) may be needed. | | | | | | | ♦ *½-facepieces (all in S, M, and L)<br>North 7700<br>MSA Advantage 420<br>3M 6000 Series<br>Survivair 2000S Series | ♦ *Full-facepieces<br>MSA Advantage 1000 (S, M, L)<br>North 7600 Series (S, M/L)<br>3M 6000 Series (S, M, L) |
| Contribution to WBGT[11] | +0.5°C = +0.9°F | (should be between SMS and Tyvek) | +1°C = +1.8°F | +11°C=+19.8°F (applicable to vapor-barrier coveralls) | | | N/A | N/A | N/A |
| Activities with low-to-moderate exposure to dry airborne particles (e.g., environmental monitoring, shoveling, compost heaps, dry cleaning with hand tools); low potential of splashing or soaking | Acceptable | Acceptable | Acceptable | Not indicated for use against particulates unless there is exposure to splashing of hazardous liquids or continual exposure to irritating liquids | Not indicated for use against particulates unless there is exposure to splashing of hazardous liquids or continual exposure to irritating liquids | Not indicated for use against particulates unless there is a high risk of exposure to chemical, biological, and/or radioactive agents<br>. | Acceptable | Acceptable | Acceptable |
| Activities with moderate-to-high potential of exposure to aerosols, such as produced by use of compressed air or water spray[12] | Not appropriate | Not appropriate | Not appropriate | Appropriate if indicated by job hazard analysis. | Appropriate if indicated by job hazard analysis.<br><br>"If during any of the high contact activities, especially cleaning, disinfecting and decontaminatin g, exposure to | Appropriate if indicated by job hazard analysis. | Not appropriate | Acceptable with appropriate eye protection[14] | Recommended; eye protection integral to facepiece |

| Protective Suit Fabric[3] | | | | | | | Respiratory Protection[4] | | |
|---|---|---|---|---|---|---|---|---|---|
| **Type of PPE** | **SMS (aka Proshield)** | **Microporous (laminates)** | ***Tyvek® (spun-bonded olefin such as polyethylene)** | ***Tychem® QC (Tyvek coated with polyethylene)** | **Tychem® SL, utilizing Saranex® 23-P film laminated to Tyvek®** | ***Tychem® F, proprietary barrier material** | **Single-use filtering facepiece available from the NVS** | **Half-facepiece air-purifying respirator with replaceable filter/cartridges** | **Full-facepiece air-purifying respirator with replaceable filter/ cartridges** |
| | | | | | moderate-to-large volumes of liquid is anticipated, a sealed seam Tychem® garment may be appropriate to reduce the risk of liquid contact."[13] | | | | |
| Activities with high potential of splashing or soaking, especially with irritating or hazardous liquids [15] | Not acceptable | Not acceptable | Not acceptable | Job hazard analysis should be conducted to determine the best fabric to protect against specific liquid splashes. In general, select the lowest level of fabric which provides sufficient protection to personnel. "Product Line by Hazard" provides recommendations for typical chemical hazards.[16] | | | Not acceptable | Acceptable with appropriate eye protection | Recommended |

*Available through the National Veterinary Stockpile.

[1] Product Line by Hazard, DuPont, http://safespec.dupont.com/safespec/media/documents/hazard_matrix.pdf

[2] Select foot protection which can be disinfected, and which provides protection from hazards such as objects piercing the sole (e.g., nails), slippery ground and floors, and falling or rolling objects. The best protection will be provided by cleanable, treaded pull-on overboots (e.g., Servus A380 yellow overboots) worn over sturdy work boots or shoes.

Gloves must be selected to protect against the chemicals in use (e.g., pesticides, solvents, etc.). A combination of glove types worn in layers may be needed to protect against biological and chemical hazards, and against rough surfaces or objects such as nails or protruding wires, which may damage the glove. Gauntlet gloves may be helpful for tasks such as reaching into cages. Consult the Safety Data Sheets for each chemical or http://www.cdc.gov/niosh/ncpc/ for further guidance.

[3] Items marked with an asterisk (*) are currently available through the National Veterinary Stockpile: Tyvek®, Tychem® QC, and Tychem® F, and all indicated respirator models. Other fabric types are presented for comparison, in order of increasing protection. Higher rated fabrics are commercially available if deemed necessary. Gloves must be selected to protect against the chemicals in use (e.g., pesticides, solvents, etc.). A combination of glove types worn in layers may be needed to protect against biological and chemical hazards, and against surfaces or objects which may damage the glove.

[4] Please note that individual state requirements may vary (for example, California requirements available at http://www.dir.ca.gov/Title8/5199-1.html).

[5] 3M Protective Apparel Product Guide, 3M, 2012.

[6] 3M Protective Apparel Product Guide, 3M, 2012.

[7] Tyvek® Coveralls, http://www.dupont.com/products-and-services/personal-protective-equipment/chemical-protective-garments/brands/tyvek-protective-apparel/products/tyvek-coveralls.html , accessed 27 June 2015.

[8] DuPont Tychem® QC Chemical Protective Clothing, http://www2.dupont.com/Personal_Protection/en_US/assets/downloads/tychem/K17394TychemQC.pdf, accessed 20 July 2015.

[9] DuPont Technical Data Sheet, DuPont™ Tychem® SL Lightweight Protection of DuPont ® Tyvek® Laminated with a Chemical-Resistant Saranex® Film, http://www2.dupont.com/Personal_Protection/en_US/assets/downloads/tychem/h91469tychemsltechdata.pdf , accessed 27 June 2015.

[10] DuPont Tychem F, http://www2.dupont.com/Personal_Protection/en_US/assets/downloads/tychem/h95939tychemftechdata.pdf .

[11] Per ACGIH® TLV for Heat Stress and Heat Strain, 2015.

[12] OSHA requires in 1910.242 Hand and portable powered tools and other hand-held equipment, paragraph (b), "Compressed air used for cleaning. Compressed air shall not be used for cleaning purposes except where reduced to less than 30 p.s.i. and then only with effective chip guarding and personal protective equipment."

[13] "Protective Clothing for Avian Flu," DuPont, 2013, accessed 27 June 2015 at http://safespec.dupont.com/safespec/media/documents/avian_flu.pdf .

[14] OSHA requires in 1910.133 Eye and face protection, paragraph (a)(1): "The employer shall ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation." A combination of eye/face protection may be required to protect against impact, dust, and chemicals. Single-use filtering facepieces and half-mask (elastomeric) air-purifying respirators provide no eye protection. Full facepiece elastomeric respirators provide some eye protection for infection control, which "...because of their design incidentally provide highly effective eye protection as well."

OSHA's e-tool on eye protection (https://www.osha.gov/SLTC/etools/eyeandface/ppe/selection.html) provides the following guidance:

> Impact
> While working in a hazardous area where the worker is exposed to flying objects, fragments, and particles, primary protective devices such as safety spectacles with side shields or goggles must be worn. Secondary protective devices such as face shields are required in conjunction with primary protective devices during severe exposure to impact hazards.
>
> Personal protective equipment devices for impact hazards:
> - Safety Spectacles: Primary protectors intended to shield the eyes from a variety of impact hazards.
> - Safety Goggles: Primary protectors intended to shield the eyes against flying fragments, objects, large chips, and particles.
> - Face Shields: Secondary protectors intended to protect the entire face against exposure to impact hazards.
>
> Dust
> ... Working in a dusty environment can causes eye injuries and presents additional hazards to contact lens wearers.
> Either eyecup or cover-type safety goggles should be worn when dust is present. Safety goggles are the only effective type of eye protection from nuisance dust because they create a protective seal around the eyes.
>
> Personal protective equipment devices for dust hazards:
> - Safety Goggles: Primary protectors intended to protect the eyes against a variety of airborne particles and harmful dust.
>
> Chemicals
> A large percentage of eye injuries are caused by direct contact with chemicals. These injuries often result from an inappropriate choice of personal protective equipment, that allows a chemical substance to enter from around or under protective eye equipment. Serious and irreversible damage can occur when chemical substances contact the eyes in the form of splash, mists, vapors, or fumes. When working with or around chemicals, it is important to know the location of emergency eyewash stations and how to access them with restricted vision. When fitted and worn correctly, goggles protect your eyes from hazardous substances. A face shield may be required in areas where workers are exposed to severe chemical hazards.
>
> Personal protective equipment devices for chemical hazards:
> - Safety Goggles: Primary protectors intended to shield the eyes against liquid or chemical splash, irritating mists, vapors, and fumes.
> - Face Shields: Secondary protectors intended to protect the entire face against exposure to chemical hazards.

[15] OSHA requires in 29 CFR 1010.151 *Medical services and first aid, Paragraph (c):* "Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use." OSHA does not further specify the type of eye wash fountain, but has stated that "While not having the force of a regulation under the OSH Act, the current ANSI standard addressing emergency eyewash and shower equipment (ANSI [Z]358.1-2004) provides for eyewash and shower equipment in appropriate situations when employees are exposed to hazardous materials." (https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=27089). The ANSI standard requires that eye wash fountains deliver 0.4 gallons per minute for 15 minutes (equivalent to 6 gallons of potable water or other medically acceptable fluid). These facilities should be located within 55' or 10-second travel time, without barriers or steps to impede travel. Employees must also be trained on chemical hazards (29 CFR 1910.1200, Hazard communication, specifically 29 CFR 1910.1200(h) Employee information and training).

[16] Product Line by Hazard, DuPont, http://safespec.dupont.com/safespec/media/documents/hazard_matrix.pdf .

United States Department of Agriculture | Food Safety and Inspection Service | Washington, D.C. 20250

## Executive Summary

# Interagency Risk Assessment for the Public Health Impact of Highly Pathogenic Avian Influenza Virus in Poultry, Shell Eggs, and Egg Products
May 2010

## Background

The United States Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS) developed a quantitative risk assessment for the highly pathogenic avian influenza virus(es) (HPAIV) in food in collaboration with the Department of Health and Human Services' (DHHS) Food and Drug Administration (FDA) and USDA's Animal and Plant Health Inspection Service (APHIS). The risk assessment was developed by an Interagency Workgroup formed from representatives of each of these three agencies. The risk assessment was peer reviewed by an external panel and public comments incorporated. The purpose of this risk assessment was to 1) estimate the exposure and potential human illness from consumption of HPAIV-contaminated poultry, shell eggs, and egg products from the index flock, and 2) examine the effectiveness of mitigation strategies to control HPAIV if detected in the United States.

## Public Health Context

Avian influenza viruses are typically species-specific, causing disease in birds. However, H5N1 and other H5 and H7 HPAI subtypes have recently become a zoonotic concern. In May 2010 the World Health Organization reported that worldwide from 2003-2010, there have been 498 confirmed HPAIV human illnesses, resulting in 294 deaths. Retrospective studies have determined that the majority of these cases are associated with close contact with live or dead HPAIV-infected birds likely caused by respiratory inhalation of infective droplets or self-inoculation (*e.g.*, by a human handler touching mucous membranes or conjunctiva after contact with avian fecal contamination, avian respiratory secretions, or avian body fluids), rather than consumption of poultry or shell eggs or egg products. Currently, there is no compelling epidemiological evidence linking the consumption of cooked poultry meat, shell eggs, or egg products to human illness caused by HPAIV. HPAIV is not considered to be a foodborne pathogen although the virus has been isolated from poultry muscle and the interior of eggs. Two HPAIV-confirmed human illnesses may have been related to the consumption of infected raw duck blood products, although contact with live or dead HPAIV-infected poultry could not be epidemiologically excluded. Despite this lack of evidence, the possibility of poultry and egg consumption as an exposure route to HPAIV remains a concern to food safety experts. In light of this and the recent HPAIV poultry and human illnesses in Asia, Africa, Europe, and the Middle East, the Interagency Workgroup developed this food safety risk assessment for HPAIV exposure and illnesses in humans from consumption of poultry meat, shell eggs, and egg products.

## Model Approach

The risk assessment model simulates human exposure and potential illness from consumption of H5 and H7 HPAI strains that can make humans ill and lead to death. Exposure from HPAIV is modeled separately for poultry meat and for shell eggs. Each model consists of three modules representing production, processing, and consumer preparation. The production module assumes introduction of HPAIV into the index flock of a single U.S. meat or egg poultry house following HPAIV entry into the U.S. A bird-to-bird transmission model simulates HPAIV spread to estimate within-flock prevalence of HPAIV at the farm and for poultry meat production, during transportation. For an infected flock destined for meat production the transmission model simulates an increase in the prevalence of HPAIV in the flock until substantial bird mortality would allow the disease to be detected or the undetected flock is sent to slaughter. In the processing module, it was assumed birds sent to slaughter are subject to federal inspection, which could result in the removal of infected birds. The likelihood an infected bird is identified due to visible pathology was dependent on how long the bird was infected before slaughter. The amount of HPAIV in each serving of poultry is related to the time between infection and slaughter. For the shell egg model, egg production continues to be simulated until substantial bird mortality would allow the disease to be detected. Routine inspection of shell eggs sent to processing prior to flock detection would not detect HPAIV within shell eggs, but may identify non-specific markers of HPAI. Therefore, for the purpose of the model, shell eggs with visible pathology (*e.g.*, thin-shelled, soft-shelled, or abnormally small) are removed from commerce and are not included in the risk estimates. The consumer preparation module examines the impact of cooking and cross-contamination on levels of HPAIV, thereby resulting in estimates of the level of HPAIV ingested by the consumer. The predicted amount of contaminated poultry meat or number of infected eggs available for human consumption is used along with a dose-response function to estimate the number of potential human illnesses. Other routes of exposure such as inhalation, mucosal contact, and wound exposures by food preparers and consumer contact with contaminated raw poultry and shell eggs, as well as farm and processing occupational exposures, are not addressed in this risk assessment.

**Results**

This risk assessment has been developed as a tool to evaluate mitigation scenarios should HPAIV be identified in the U.S. The number of human illnesses predicted serves as a basis to assess the magnitude and effectiveness of mitigation strategies. Given the uncertainty regarding the dose-response relationship and the uncertainty regarding the likelihood of human illness from consumption of poultry and eggs, the model-predicted number of human illnesses should not be considered an absolute value, and it should not be used outside of the context of the scenario analysis described below. Using scenario analysis, the following outputs were identified:

1. *Poultry Model*

- If a flock is exposed to HPAIV, the model predicts an approximate 95 and 98% probability that a chicken and turkey flock, respectively, would be identified as HPAIV-positive before slaughter and not enter commerce. This is because flocks infected early in the grow-out period will have enough time to demonstrate significant mortality (≥ 0.1 to 0.6% flock morality over a single day) on the farm, resulting in identification of the flock as HPAIV-positive.

- There is an approximate 5 and 2% probability that an HPAIV-infected chicken or turkey flock, respectively, may go to slaughter without detection of the disease. This would happen when HPAIV infects a flock that is approaching market weight with not enough time for the flock to demonstrate significant mortality on the farm. In these instances, some fraction of HPAIV-contaminated poultry meat may enter commerce.

- On-farm HPAIV testing as a potential mitigation strategy has the greatest impact of lowering predicted illnesses. Approximately 94% of illnesses are mitigated if flocks are tested immediately before being sent for slaughter.

- Increased on-farm surveillance of daily flock mortality is predicted to reduce human exposure and illness. However, the model predicts that relying on a single day of flock mortality to detect all HPAIV-infected, but undetected flocks is impractical. This is because a flock may have few dead birds if infected late in its grow-out period as about 36 to 42 hours are required before infected birds die from HPAI.

- Increased surveillance at processing during FSIS' antemortem inspection is predicted to reduce human exposure and illness. However, the model predicts that using the number of dead birds following transportation to trigger detection of all HPAIV-positive flocks is impractical given that a flock may have few dead birds if infected late in its grow-out period.

- Cooking poultry to the FSIS recommendation of 165°F is predicted to inactivate the virus and result in negligible risk to public health from HPAIV-contaminated poultry meat.

    - Cross-contamination of HPAIV from contaminated poultry to foods not likely to be cooked resulting in oral uptake increased the number of predicted illnesses by approximately 1.3%. Consumer messages should continue to emphasize measures to prevent the potential cross-contamination of HPAIV and other microbiological hazards.

    - Use of morbidity and feed intake as an early detection system were evaluated. Incorporation of visible morbidity resulted in a 95.5% chance an infected chicken flock would not be sent to slaughter. Expected human illnesses decreased by about 8-fold. Incorporation of feed intake resulted in a 96% chance an infected chicken flock would not be sent to slaughter and expected human illnesses decreased by approximately 23-fold.

2. *Shell Egg and Egg Products Model*

- If a 100,000 hen flock becomes infected with HPAIV, the baseline scenario predicts that 1,083 HPAIV-contaminated eggs are produced before the flock is discovered as HPAIV-positive. However, the baseline model predicts no human illnesses because > 99.99% of HPAIV-positive eggs would still be in the distribution chain at the time of diagnosis and not yet be available for consumers to purchase. This assumes that all HPAIV-positive eggs can be removed from distribution.

- As a mitigation strategy, removing HPAIV-positive shell eggs from commerce will reduce potential exposure. Effectiveness is dependent on how many days of eggs production are removed. The model predicts that greater than 98% of potentially contaminated shell eggs can be removed from commerce given a 2 day market withdrawal.

- In-shell pasteurization of HPAIV-positive eggs is predicted to inactivate the virus and result in negligible risk to public health.

- Data from USDA's Agricultural Research Service show that FSIS time and temperature recommendations, at the standard industry moisture content, for egg product processing are sufficient to inactivate HPAIV, therefore this risk assessment model does not quantitatively assess the risk of illness from HPAIV-contaminated egg products.

**Summary**

This quantitative risk assessment provides a science-based, analytical approach to collate and incorporate available data into a mathematical model, and it provides risk managers a decision-support tool to evaluate the effectiveness of interventions to reduce or prevent foodborne illness from HPAIV in the U.S. This risk assessment can also be used to target risk communication messages, identify and prioritize research needs, and provide a framework for coordinating efforts with stakeholders. The risk assessment is being used to help guide APHIS's HPAI emergency response planning and FDA's HPAI preparedness.

Although unlikely, the risk assessment demonstrates that some amount of HPAIV-contaminated poultry and shell eggs could enter commerce. The data indicate that there is a 3- or 5.5-day window during which potentially HPAIV-positive poultry or shell eggs, respectively, could escape detection. The model predicts that consumption of HPAIV-contaminated poultry and shell eggs poses a negligible risk if properly cooked. At the same time, data suggest that some people will undercook these products and could become exposed and possibly ill.

The model shows that preventive measures, such as HPAIV-flock testing and increased inspection, would result in increased detection of HPAIV-contaminated flocks and reduce the risk of HPAIV illnesses by preventing the consumption of contaminated poultry. In addition, effectively recalling shell eggs would substantially reduce the risk to consumers from HPAIV-contaminated shell eggs.

# Characterization of highly pathogenic avian influenza virus in retail dairy products in the US

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Running head: HPAIV RNA detection in milk

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**Abstract**

In March 2024 Clade 2.3.4.4b H5N1 highly pathogenic avian influenza virus (HPAIV) was detected in dairy cattle in the US and it was discovered that the virus could be detected in raw milk. Although affected cow's milk is diverted from human consumption and current pasteurization requirements are expected to reduce or eliminate HPAIV from the milk supply, a study was conducted to characterize whether the virus could be detected by quantitative real-time RT-PCR (qrRT-PCR) in pasteurized retail dairy products and if detected, to determine whether the virus was viable. From April 18 to 22, 2024 a total of 297 samples of Grade A pasteurized retail milk products (23 product types) were collected from 17 US states and represented products from 132 processors in 38 states. Viral RNA was detected in 60 samples (20.2%) with titer equivalents of up to 5.4$\log_{10}$ 50% egg infectious doses ($EID_{50}$) per ml, with a mean and median of 3.0$\log_{10}$/ml and 2.9$\log_{10}$/ml respectively. Samples that were positive for type A influenza by qrRT-PCR were confirmed to be clade 2.3.4.4 H5 HPAIV by qrRT-PCR. No infectious virus was detected in any of the qrRT-PCR positive samples in embryonating chicken eggs. Further studies are needed to monitor the milk supply but these results provide evidence that infectious virus did not enter the US pasteurized milk supply before control measures for HPAIV were implemented in dairy cattle.

**Importance**

Highly pathogenic avian influenza virus (HPAIV) infections in US dairy cattle were first confirmed in March 2024. Because the virus could be detected in raw milk a study was conducted to determine whether it had entered the retail food supply. Pasteurized dairy products were collected from 17 states in April 2024. Viral RNA was detected in 1 in 5 samples but infectious virus was not detected. This provides a snap-shot of HPAIV in milk products early in the event and reinforces that with numerous safety measures, infectious virus in milk is unlikely to enter the food supply.

## Introduction

Cow's milk and milk products are an important source of nutrition for humans. In the US, "Grade A" milk is regulated by a federal-state partnership, the National Conference on Interstate Milk Shipments (NCIMS), and is administered through adopted regulations, the Pasteurized Milk Ordinance (PMO) (https://www.fda.gov/media/140394/download). The NCIMS helps the industry produce a safe and wholesome product for the consumer. This regulatory system has multiple layers to ensure food safety. Cows with mastitis and other disease conditions that could affect milk quality and safety are milked separately, and the abnormal milk is not included in the supply for human consumption. Milk is also typically picked up from the farm at regular intervals, and the bulk milk (milk pooled from 600-700 cows) is routinely tested for commonly used antibiotics and other substances before pasteurization (https://www.fda.gov/food/food-compliance-programs/national-drug-residue-milk-monitoring-program). Samples are also analyzed on a recurring basis for somatic cell and bacterial plate counts to monitor quality management practices.

Pasteurization is another pivotal layer of the federal-state milk safety system. The primary method for pasteurization of fluid milk is typically through a continuous flow pasteurizer by high temperature short time; 72°C for 15 seconds is the most used approved method by regulation in the US according to the PMO. Variations in pasteurization time and temperatures are allowed that achieve the same goal of killing pathogenic bacteria and to reduce spoilage bacteria that will in effect increase the shelf life of the milk. The milk is then packaged and sent to retail markets with strict temperature controls that further ensures the safety and quality of the product.

Infection of dairy cattle with clade 2.3.4.4b H5N1 highly pathogenic avian influenza virus (HPAIV) was first reported in the US on March 25, 2024 (1). Diagnostic testing of milk from the initial cases detected viral RNA by real-time RT-PCR. The potential for HPAIV to enter the food supply is believed to be mitigated because symptomatic cows have decreased milk quality and production thus preventing the milk from entering the food supply due to milk safety controls. Poor quality milk is

normally diverted from the milk supply for human consumption. However, because HPAIV has never been described in dairy cattle, milk has not been monitored for the virus.

Historically, documentation of influenza A virus infection in cattle has been sparse with only a few reports of clinical disease (2-4), and there has not been evidence of sustained transmission among cows (5). More recently, serologic studies on respiratory disease or drops in milk production were reported in Northern Ireland that were associated with a rise in convalescent antibody titers to influenza A subtypes that are consistent with human seasonal influenza but no virus was isolated to confirm the lineage present (3). Several experimental studies from the 1950s clearly show that the direct inoculation of the human PR8 influenza A virus strain or Newcastle disease virus into the udder of lactating dairy cows or goats could result in infection with measurable virus shedding, however, the studies did not describe clinical disease or mastitis in the challenged animals (6-9). Until the recent outbreak of clade 2.3.4.4b HPAIV in dairy cattle with sustained transmission, infection of bovines with type A influenza was not previously reported and therefore was not considered to be an important pathogen of cattle which delayed initial recognition of the infection.

Because the clade 2.3.4.4b H5 HPAIVs belong to the goose/Guangdong/1996 H5 HPAIV lineage, which is known to have zoonotic potential (10), the objective of this study was to screen pasteurized retail dairy products for the presence of viral RNA. Positive samples were subsequently evaluated for the presence of live virus in embryonating chickens eggs. Importantly, human infections with clade 2.3.4.4 H5 HPAIV are rare and numerous risk assessments have concluded that the risk to the general public is very low (https://www.ecdc.europa.eu/en/infectious-disease-topics/z-disease-list/avian-influenza/threats-and-outbreaks/risk-assessment-h5, https://www.who.int/publications/m/item/assessment-of-risk-associated-with-recent-influenza-a%28h5n1%29-clade-2.3.4.4b-viruses, https://www.fao.org/animal-health/situation-updates/global-aiv-with-zoonotic-potential/en).

**Results**

**Virus detection.** A total of 297 samples representing 23 pasteurized dairy product types (Supplementary Table) were collected from 17 states which represent products produced at 132 processing locations in 38 states. Of these, 20.2% (60/297) were positive for the detection of influenza A RNA by qrRT-PCR (Table 1). Virus titer equivalents for positive samples ranged up to 5.4$\log_{10}$ 50% egg infectious doses ($EID_{50}$) per ml, with a mean and median of 3.0$\log_{10}$/ml and 2.9$\log_{10}$/ml respectively (Supplementary Table). Fluid milk with different fat contents represented 64.0% (n=190) of the products tested and 75% (n=60) of the samples in which influenza A was detected by qrRT-PCR.

A subset of the samples positive for type A influenza by qrRT-PCR (n=30) were confirmed to be clade 2.3.4.4 HPAIV by a lineage specific qrRT-PCR test; 100% (30/30) were positive.

A total of 60 samples that were positive for type A influenza were tested for infectious virus by standard testing in ECE. Infectious virus was not detected in any samples (Supplementary Table).

## Discussion

In March 2024 HPAIV was discovered in the milk of infected dairy cattle in the US. Samples were collected from retail markets in April 2024 to assess a variety of products to provide data for an initial safety risk assessment of the national milk supply. Samples were selected to be representative of dairy processors in states that have confirmed HPAIV infected dairy cattle, and states that have not reported infected herds. Of note, due to the complexity of the milk distribution system, the location of where milk was processed may not correlate with the location where the milk was produced. Commercial milk is typically pooled from several dairy farms and routed for bulk processing (i.e., pasteurization) and distribution to multiple states is a common industry practice. For example, a product could have been produced by cows in one state, then processed in a different state, and then sold commercially in a third state.

Most importantly, although viral RNA was detected by qrRT-PCR in 20.2% of the samples, no infectious virus was detected by testing for replication in ECE, which is a highly sensitive bioassay for avian influenza virus detection (11, 12). Positive qrRT-PCR indicates that some viral RNA entered the

milk supply, however, it can't be determined at what stage, if any, the virus was infectious. First, cows rapidly develop antibodies after infection which are present in milk and will inactivate the virus. Second, virus is inactivated by pasteurization and possibly the high shear force of homogenization. Work with continuous flow pasteurization is in progress to confirm the conditions for virus inactivation.

This study has several limitations that make wider extrapolation of HPAIV RNA levels in pasteurized dairy products difficult. First, the sample size is small. The scope of this study was to obtain an initial snap-shot of whether dairy products had evidence of virus in retail milk samples after the detection of virus in raw milk from dairy cows. Further, some samples were intentionally collected from regions with known HPAIV infected dairy herds, therefore these data likely provide a higher positivity rate than would be expected from a random testing process. Since the recognition of dairy cattle infection with HPAIV, farmers are more aware of the disease, and diagnostic testing can occur in many of the USDA approved laboratories in the National Animal Health Laboratory network. Currently, dairy cattle must be tested before moving across state lines (https://www.aphis.usda.gov/sites/default/files/dairy-federal-order.pdf) helps mitigate contaminated milk from entering the human food supply. Finally, regardless of the specific detection of HPAIV infection, cows will develop mastitis which will also result in removing their milk from the food supply.

In general, numerous measures in the milk production process will greatly reduce, if not eliminate, the risk for infectious influenza A virus entering the retail milk supply. First, approximately 99% of the US commercial milk supply (https://downloads.usda.library.cornell.edu/usda-esmis/files/4b29b5974/hq37xb74r/s1786b07q/mlkpdi24.pdf) that is produced on dairy farms in the US comes from farms that participate in the Grade "A" milk program and follow the PMO (https://www.fda.gov/media/140394/download), which includes numerous layers of quality controls that help ensure the safety of dairy products. Second, the US federal-state milk safety system requires that milk from sick cows is diverted for further processing or is destroyed.

More studies are needed to characterize the risk of HPAIV entering the milk supply long term but this study provides initial evidence that infectious HPAIV has not reached the US retail milk supply. A

150 combination of the previously implemented sanitary control measures (e.g., PMO) and new HPAIV
151 specific measures are expected to further ensure a safe milk supply.
152
153 **Materials and Methods**
154 **Retail dairy product sample collection.**
155 The US Food and Drug Administration (FDA) collected 297 samples at retail locations in 17 states
156 between April 18 and 22, 2024. Sample sites were selected by local FDA Milk Specialists and field staff,
157 in the Office of Regulatory Affairs. Samples were shipped directly by overnight courier to the US
158 National Poultry Research Center, USDA- Agricultural Research Service where testing was conducted.
159 Sample collection was designed to include both products processed in states where HPAIV infections in
160 dairy herds had been confirmed by the National Veterinary Services Laboratories, APHIS-USDA, at the
161 time of collection, as well as samples from states with no confirmed infections in dairy herds. Within
162 these bounds, sample collection was random and based on retail availability. Samples represented
163 pasteurized retail dairy products produced at 132 processors in 38 states (AR, AZ, CA, CO, CT, FL, GA,
164 IA, ID, IL, IN, KS, KY, MA, ME, MI, MN, MO, NC, ND, NE, NH, NJ, NV, NY, OH, OK, OR, PA, SC,
165 TN, TX, UT, VA, VT, WA, WI, WV). Samples included fluid milk (whole, 1%, 2%, skim), cream (heavy
166 cream, light cream, and similar), half & half, cottage cheese (and similar), sour cream, and yogurt
167 (Supplementary Table). All samples were Grade A pasteurized dairy products regulated under the PMO.
168 (https://www.fda.gov/media/140394/download, https://www.fda.gov/food/guidance-documents-
169 regulatory-information-topic-food-and-dietary-supplements/milk-guidance-documents-regulatory-
170 information) by FDA and its state milk regulatory partners.
171 **Sample processing.** Samples were immediately processed after receipt. Product with temperatures >7°C
172 were discarded and are not included in the sample numbers of this study. Samples were assigned a unique
173 accession number and the original packaging was labeled and stored at 4°C. Product origin (US state) and
174 product type were recorded.

Approximately 50ml of each product was portioned into sterile containers. Each sample was processed for RNA extraction and quantitative real-time RT-PCR (qrRT-PCR) as described below. Positive samples with titer equivalents of $\geq 3.9\log_{10}$ 50% egg infectious doses ($EID_{50}$)/ml based on qrRT-PCR were quantified in embryonating chicken eggs (ECE) and samples with titers $\leq 3.8\log_{10}$ $EID_{50}$/ml were tested for viable virus in ECE as described below. The cut-off for quantification was selected because it was expected that, if present, the quantity of infectious virus would be lower than the quantity detected by qrRT-PCR and quantification of low levels would not be informative.

**RNA extraction.** RNA was extracted from fluid homogenized dairy products using the MagMax magnetic bead extraction kit (Thermo Fisher Scientific, Waltham, MA) in accordance with manufacturer's instruction. Semi-solid products (e.g., sour cream, yogurt, cottage cheese) were extracted using a hybrid procedure with Trizol LS (Thermo Fisher Scientific) and the MagMax magnetic bead kit. Semi-solid products were portioned by spatula based on weight (approximately 0.25g). Briefly, VetMAX Xeno (Thermo Fisher Scientific) was used as an extraction and internal positive control was added to the Trizol LS for each reaction prior to sample addition. Then 0.25ml or 0.25g of product was added to 0.75ml of Trizol LS and mixed. The mixture was incubated at room temperature for 7-10minutes and 0.2ml of chloroform was added and mixed, incubated at room temperature for an additional 7-10minutes and centrifuged for 10minutes at 15,000xg at 4°C. RNA was recovered from 0.05ml of the aqueous phase by the MagMax magnetic bead kit in accordance with the kit instructions.

**Quantitative real-time RT-PCR.** A qrRT-PCR test targeting the influenza A M gene was run on a QuantStudio5 (Thermo Fisher Scientific) as described (13). The primers and probe for the internal control were used as directed by the kit instructions. Titer equivalents were determined by including a standard curve derived from RNA extracted from a 10-fold dilutions series of quantified avian influenza virus stocks (14). A subset of the influenza A qrRT-PCR positive samples were tested with and additional qrRT-PCR test that is specific for the 2.3.4.4b H5 lineage with a highly pathogenic cleavage site (15).

**Virus detection and quantification in embryonating chickens eggs.** All samples (1ml) were treated for 1hr at ambient temperature (approximately 21°C) with antibiotics (final concentration: penicillin G 1000

IU/ml, streptomycin 200 µg/ml, gentamicin100 µg/ml, kanamycin 65 µg/ml, amphotericin B 2 µg/ml). Then dilutions were made in brain heart infusion (BHI) broth with antibiotics for samples that were quantified. Semisolid samples were mixed 1:1 (0.5g:0.5ml)) with brain heart infusion broth prior to inoculation into ECE or dilution. Samples were inoculated for virus detection (undiluted for 2 passages) or quantified using standard methods (16, 17). Hemagglutination assay was used to confirm the presence of avian influenza virus (18).

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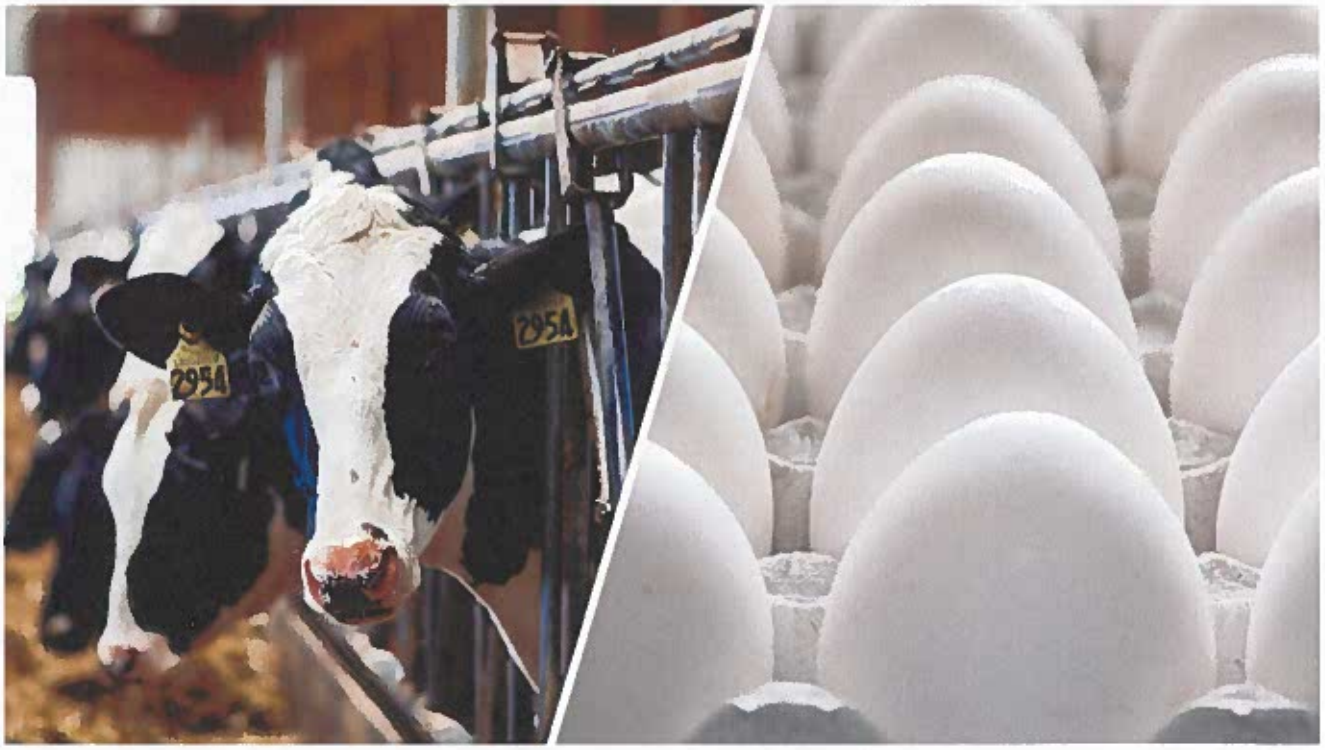
**Table 1.** Detection of influenza A in pasteurized retail dairy products by quantitative real-time RT-PCR. Titer values are expressed as $\log_{10}$ 50% egg infectious doses determined by a standard curve using quantified virus. No infectious virus was detected in any of the qrRT-PCR positive samples.

| Product | # positive / total tested (% positive) | Mean titer equivalents (± standard deviation) |
|---|---|---|
| Whole milk | 16/68 (23.5) | 3.0 ± 1.1 |
| 2% reduced fat milk | 16/58 (27.6) | 3.1 ± 1.2 |
| 1% low fat milk | 9/28 (32.1) | 3.1 ± 1.2 |
| Skim milk | 4/36 (11.1) | 3.3 ± 0.7 |
| Half and half | 6/25 (24.0) | 2.3 ± 1.0 |
| Yogurt | 0/14 (0) | Not applicable |
| Cream | 3/17 (17.6) | 2.3 ± 0.9 |
| Cottage cheese | 1/21 (4.8) | 2.6 ± 0.0 |
| Sour cream | 5/30 (16.7) | 3.4 ± 1.2 |
| Total | 60/297 (20.2) | 3.1 ± 1.1 |

# Updates on Highly Pathogenic Avian Influenza (HPAI)



Highly Pathogenic Avian Influenza (HPAI) is a disease that is highly contagious and often deadly in poultry, caused by highly pathogenic avian influenza A (H5) and A (H7) viruses; it is also known as bird or avian flu. HPAI viruses can be transmitted by wild birds to domestic poultry and other bird and animal species. Although bird flu viruses do not normally infect humans, sporadic human infections have occurred. It is important to note that "highly pathogenic" refers to severe impact in birds, not necessarily in humans.

## Ongoing Work to Ensure Continued Effectiveness of the Federal-State Milk Safety System

What's New | Previous Updates

Background | U.S. Agency Response | Testing Results | Additional Resources

### What's New

May 20, 2024

In our May 10 update, we announced that all 297 samples from the FDA's initial survey of retail dairy products were found to be negative for viable Highly Pathogenic H5N1 Avian Influenza (H5N1 HPAI) virus. Today, for continued transparency, the FDA is providing additional information on our retail sample survey (see Testing Results).

## Previous Updates

**May 10, 2024**

The FDA, alongside our federal and state partners, is continuing to take a stepwise approach to our scientific analysis of commercial milk safety during the first-of-its-kind detection of HPAI H5N1 in dairy cattle. While our initial assessment of the milk safety system continues to be affirmed by sampling and testing of retail dairy products, there remain a number of collective activities being undertaken to ensure the continued effectiveness of the federal-state milk safety system. The FDA will continue to follow a sound scientific process to inform the agency's public health decisions related to food safety.

Last week we announced preliminary results of a study of 297 retail dairy samples, which were all found to be negative for viable virus. The FDA is today announcing that all final egg inoculation tests associated with this retail sampling study have been completed and were also found to be negative for viable HPAI H5N1 virus. These confirmatory test results mark the completion of our laboratory research efforts related to these 297 retail dairy samples. Additional sampling and other surveillance activities will continue.

While our retail sampling test results to date are clear about the safety of the commercial milk supply and representative of real-world scenarios, additional scientific work is being undertaken to validate the criteria for pasteurization relative to the HPAI H5N1 virus and will include tests using pasteurization equipment typically used by milk processors. Today, we'd like to share more about our additional research efforts.

The established pasteurization process set forth in federal regulation (21 CFR 1240.61) and the Pasteurized Milk Ordinance (PMO) provides specific temperature and time requirements (https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-131) for effective elimination of known pathogens in the milk supply. To further validate pasteurization effectiveness against this recently detected virus, the FDA previously noted it was testing samples of pooled raw milk routed for commercial processing to characterize potential virus levels that the pasteurization process must eliminate. Our pasteurization

study is designed to better replicate real-world conditions to deliver the pasteurization treatment parameters set forth in the CFR and PMO, and to assess their effectiveness in inactivating HPAI H5N1 in bovine milk and other dairy products.

The results from this study will help further the FDA's understanding of pasteurization efficacy against anticipated concentrations of virus under real-world processing conditions. The pasteurization study is ongoing and we anticipate making preliminary results available in the near future.

Today, the agency is also announcing an additional $8 million is being made available to support its ongoing response activities to ensure the safety of the commercial milk supply. This funding will support the agency's ability to validate pasteurization criteria, conduct surveillance at different points in the milk production system, bolster laboratory capacity and provide needed resources to train staff on biosecurity procedures.

Additionally, these funds will help support HPAI H5N1 activities in partnership with state co-regulatory partners, who administer state programs as part of the federal/state milk safety system. It may also allow the FDA to partner with universities on critical research questions.

To date, the totality of evidence – including studies on the effectiveness of pasteurization against multiple pathogens, recent studies on the effectiveness of pasteurization of HPAI H5N1 in eggs at lower temperatures than generally used in dairy products, negative retail sample results to date, and real-world evidence from the last 100 years of the PMO — continues to indicate that the commercial milk supply is safe.

At the same time, the FDA also continues to advise against the consumption of raw milk (milk that has not been pasteurized). The FDA and CDC have long standing information regarding the increased risk of foodborne illness associated with numerous pathogens that may be present in raw milk. This increased risk exists for both humans and other animals that might drink raw milk. Additional guidance on raw milk and milk handling can be found on our website (/food/resources-you-food/raw-milk).

We are committed to continuing to initiate, support, and collaborate on research and surveillance of milk production, processing, and pasteurization to further our public health goals.

**May 1, 2024**

The FDA is announcing an additional set of results from our national commercial milk sampling study underway in coordination with USDA. The study includes 297 total retail dairy samples. New preliminary results of egg inoculation tests on a second set of 201 quantitative polymerase chain reaction (qRT-PCR)-positive retail dairy samples, including cottage cheese and sour cream, in addition to fluid milk, show that pasteurization is effective in inactivating HPAI H5N1.

This additional preliminary testing did not detect any live, infectious virus.

In addition to preliminary results released late last week on an initial set of 96 retail milk samples, these results reaffirm our assessment that the commercial milk supply is safe.

To ensure the safety of milk-derived products for our youngest populations, the FDA also tested samples of retail powdered infant formula and powdered milk products marketed as toddler formula. All qRT-PCR results of formula testing were negative, indicating no detection of HPAI H5N1 viral fragments or virus in powdered formula products so no further testing was required for these samples. The FDA is continuing to identify additional products that may be tested.

The FDA is also continuing to test samples of pooled raw milk that has been routed to pasteurization and processing for commercial use. This will be used as a basis to characterize potential virus levels that pasteurization may encounter – and will be used to inform studies to further validate pasteurization.

As this situation evolves, the FDA will continue to consider all ongoing scientific research related to the effectiveness of pasteurization for HPAI in bovine milk. We are also committed to continued surveillance of milk production, processing and pasteurization to help ensure the safety of the milk supply. Our state partners are integral to this process, and we are working with them on a continual basis. We will also continue working with our state co-regulators on managing this emerging disease.

The FDA continues to advise strongly against the consumption of raw milk and recommends that industry does not manufacture or sell raw milk or raw milk products.

**April 26, 2024**

The FDA has received additional results from an initial limited set of geographically targeted samples as part of its national commercial milk sampling study underway in coordination with USDA. The FDA continues to analyze this information; however, preliminary results of egg inoculation tests on quantitative polymerase chain reaction (qRT-PCR)-positive retail milk samples show that pasteurization is effective in inactivating HPAI.

This additional testing did not detect any live, infectious virus. These results reaffirm our assessment that the commercial milk supply is safe.

In addition, several samples of retail powdered infant formula were tested, as well as powdered milk products marketed as toddler formula. All qRT-PCR results of formula testing were negative, indicating no detection of viral fragments or virus in powdered formula products.

The FDA is further assessing retail samples from its study of 297 samples of retail dairy products from 38 states. All samples with a PCR positive result are going through egg inoculation tests, a gold-standard for determining if infectious virus is present. These important efforts are ongoing, and we are committed to sharing additional testing results as soon as possible. Subsequent results will help us to further review our assessment that pasteurization is effective against this virus and the commercial milk supply is safe.

Epidemiological signals from our CDC partners continue to show no uptick of human cases of flu and no cases of HPAI H5N1, specifically, beyond the one known case related to direct contact with infected cattle.

**April 25, 2024**

Today, the FDA received some initial results from its nationally representative commercial milk sampling study. The agency continues to analyze this information; however, the initial results show about 1 in 5 of the retail samples tested are quantitative polymerase chain reaction (qRT-PCR)-positive for HPAI viral fragments, with a greater proportion of positive results coming from milk in areas with infected herds. As previously noted and outlined in our summary below, qRT-PCR-positive results do not necessarily represent actual virus that may be a risk to consumers. Additional testing is required to determine whether intact pathogen is still present and if it remains infectious, which would help inform a determination of whether there is any risk of illness associated with consuming the product. The FDA is further assessing any positive findings through egg inoculation tests, a gold-standard for determining if infectious virus is present. Early work by NIH-funded investigators indicates an absence of infectious virus in their studies of retail milk. To date, the retail milk studies have shown no results that would change our assessment that the commercial milk supply is safe. Epidemiological signals from our CDC partners continue to show no uptick of human cases of flu and no cases of HPAI H5N1, specifically, beyond the one known case related to direct contact with infected cattle. These important efforts are ongoing, and we are committed to sharing results from both the qRT-PCR and egg inoculation tests as soon as possible.

## Background

The U.S. Department of Agriculture (USDA), the U.S. Food and Drug Administration (FDA), and the Centers for Disease Control and Prevention (CDC), along with state partners, continue to investigate (https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/livestock) an outbreak of highly pathogenic avian influenza (HPAI) virus impacting dairy cows in multiple states. Infection with the virus is causing decreased lactation, low appetite, and other symptoms in affected cattle.

The FDA and USDA have indicated that based on the information currently available, our commercial milk supply is safe because of these two reasons:

1) the pasteurization process and

2) the diversion or destruction of milk from sick cows.

The pasteurization process has served public health well for more than 100 years. Pasteurization is a process that kills harmful bacteria and viruses by heating milk to a specific temperature for a set period of time to make milk safer. Even if virus is detected in raw milk, pasteurization is generally expected to eliminate pathogens to a level that does not pose a risk to consumer health. However, pasteurization is different than complete sterilization; sterilization extends shelf life but is not required to ensure milk safety. While milk is pasteurized, not sterilized, this process has helped ensure the health of the American public for more than 100 years by inactivating infectious agents.

Nearly all (99%) of the commercial milk supply that is produced on dairy farms in the U.S. comes from farms that participate in the Grade "A" milk program (/food/guidance-documents-regulatory-information-topic-food-and-dietary-supplements/milk-guidance-documents-regulatory-information) and follow the Pasteurized Milk Ordinance (/food/milk-guidance-documents-regulatory-information/pasteurized-milk-ordinance-centennial) (PMO), which includes controls that help ensure the safety of dairy products. Pasteurization and diversion or destruction of milk from sick cows are two important measures that are part of the federal-state milk safety system.

### U.S Agency Response

There are a number of collective activities being undertaken to ensure the continued effectiveness of the federal-state milk safety system. In addition to these specific research activities, the FDA is collaborating closely with CDC's (https://www.cdc.gov/flu/avianflu/index.htm) food safety group, as well as its surveillance

team that's monitoring emergency department data and flu testing data for any unusual trends in flu-like illness, flu, or conjunctivitis. To date, surveillance systems do not show any unusual trends or activity.

As noted by USDA (https://www.aphis.usda.gov/sites/default/files/hpai-dairy-faqs.pdf) and some press reports from the World Health Organization (WHO) and other sources, the presence of the virus has been detected in raw milk. Based on available information, pasteurization is likely to inactivate the virus, however the process is not expected to remove the presence of viral particles. Therefore, some of the samples collected have indicated the presence of HPAI using quantitative polymerase chain reaction (qRT-PCR) testing.

During the course of the outbreak, the FDA has been evaluating milk from affected animals, in the processing system, and on the shelves. We are completing a large representative national sample, to better understand the extent of these findings. Because qRT-PCR findings do not represent actual virus that may be a risk to consumers, the FDA is further assessing any positive findings through egg inoculation tests, a gold-standard for determining viable virus. To date, we have seen nothing that would change our assessment that the commercial milk supply is safe. Results from multiple studies will be made available in the next few days to weeks.

Sound science is critical to informing public health decisions like those made by the FDA related to food safety and we take this current situation and the safety of the milk supply very seriously. We recognize the importance of releasing further, actionable information.

**Review of Available Data**

Given that the detection of H5N1 in dairy cows is a novel and evolving situation, no studies on the effects of pasteurization on HPAI viruses (such as H5N1) in bovine milk have previously been completed although considerable scientific literature is available that has informed our current understanding.

The established pasteurization process set forth in the PMO provides specific times and temperature requirements [i] for effective pasteurization of known pathogens in the milk supply. Data from previous studies [ii, iii], that serve as the underpinnings of the FDA's current milk supply safety assessment show that pasteurization is very likely to effectively inactivate heat-sensitive viruses, like H5N1, in milk from cows and other species. Additionally, data [iv, v, vi] shows thermal inactivation of HPAI (H5N1) has been successful during the pasteurization process for eggs, which occurs at lower temperatures than what is used for milk.

**Ongoing Research**

U.S. government partners have been working with deliberate speed on a wide range of studies looking at milk along all stages of production -- on the farm, during processing and on shelves -- using well- established methodologies used previously to confirm pasteurization effectiveness for known pathogens.

This work is a top priority, and we are proceeding in an efficient, methodical, and scientific fashion to ensure the continued effectiveness and safety of the federal-state milk safety system.

Laboratory benchtop tests are the first part of this ongoing work. This includes testing laboratory generated samples inoculated with high levels of a recently isolated and closely related avian flu virus and samples of raw, unpasteurized milk directly from cows in affected herds with and without symptoms to understand how, and at what levels, heat treatment (pasteurization) inactivates the virus.

While this information is important, this testing alone cannot provide a complete picture as these samples are not representative of what we would expect to see in the real-world from milk routed to pasteurization and processing for commercial use.

In addition to lab testing, a critical step in the scientific confirmation process includes testing of milk that is representative of real-world scenarios in which milk is typically pooled in large amounts from numerous healthy cows from numerous farms before pasteurizing and processing.

Work is underway to test samples of milk in systems that represent current industry practices using the range of temperature and time combinations that are used in pasteurization processes.

Additional analysis is underway of milk on store shelves across the country in addition to work to evaluate any potential differentiation for various types of dairy products (e.g., whole milk, cream).

We are aware that universities or other entities are conducting work in this area, particularly universities and consortia supported by the National Institutes of Health. We look forward to reviewing all results generated from various scientific studies, testing methods and the product(s) used as we continue assessing all the data and information available. We are committed to collaborating with the broad community to come to sound scientific conclusions regarding this situation -- which it's important to understand takes time.

### Precautions for Raw Milk

The FDA has a long-standing recommendation (https://www.fda.gov/food/milk-guidance-documents-regulatory-information/questions-and-answers-regarding-milk-safety-during-highly-pathogenic-avian-influenza-hpai-outbreaks#rawmilkcheese) to consumers not to consume raw milk (milk that has not been pasteurized). Because of the limited information available about the possible transmission of H5N1 virus via raw milk, the FDA continues to recommend that industry does not manufacture or sell raw milk or raw milk products, including raw milk cheese, made with milk from cows showing symptoms of illness, including those infected with avian influenza viruses or exposed to those infected with avian influenza viruses.

Importantly, the FDA has also recommended (https://www.fda.gov/food/milk-guidance-documents-regulatory-information/questions-and-answers-regarding-milk-safety-during-highly-pathogenic-avian-influenza-hpai-outbreaks#industry) producers take precautions when discarding milk from affected cows so that the discarded milk does not become a source of further spread. Producers should consult with their state regulatory authorities for specific recommendations or requirements; however, such precautions should include heat treatment, pasteurization or its equivalent, of discarded milk prior to dumping in lagoons or application of waste solids and ensuring biosecurity around lagoons (e.g., ensuring that animals and birds do not have access to lagoons). Any raw milk or raw milk products from exposed cattle that are fed to calves (or to other animals, such as farm cats) should be heat treated or pasteurized.

**Conclusion**

The PMO and pasteurization continue to provide important measures to assure milk safety. Given this is the first time we have seen this virus affect cows, these are the first studies that have been initiated to look at the effectiveness of pasteurization on HPAI viruses such as H5N1 in bovine milk.

As previously noted, the FDA is collaborating closely with CDC's (https://www.cdc.gov/flu/avianflu/index.htm) food safety group, as well as its surveillance team that's monitoring emergency department data and flu testing data for any unusual trends in flu-like illness, flu, or conjunctivitis. To date, surveillance systems do not show any unusual trends or activity. Information about associated human cases linked with this outbreak in dairy cows are available on the CDC website (https://www.cdc.gov/flu/avianflu/avian-flu-summary.htm).

The FDA and USDA are working closely to collect and evaluate additional data and information specific to H5N1 in dairy cattle and to support state counterparts as this emerging disease in dairy cattle is managed. These important efforts are ongoing, and we

are committed to sharing results as soon as possible. In the meantime, the FDA and USDA continue to indicate that based on the information we currently have, our commercial milk supply is safe.

**Footnotes**

i. 21 CFR part 131 -- milk and cream. (n.d.). https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-131 (https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-131)

ii. Pitino, M. A., O'Connor, D. L., McGeer, A. J., & Unger, S. (2021). The impact of thermal pasteurization on viral load and detectable live viruses in human milk and other matrices: a rapid review. Applied Physiology Nutrition and Metabolism, 46(1), 10–26. https://doi.org/10.1139/apnm-2020-0388 (https://doi.org/10.1139/apnm-2020-0388) (http://www.fda.gov/about-fda/website-policies/website-disclaimer)

iii. Jay, J. M., Loessner, M. J., Golden, D. A., & Keller, H. B. (2005). Food Protection with High Temperatures. In Modern Food Microbiology (pp. 415–441). https://link.springer.com/chapter/10.1007/0-387-23413-6_17 (https://link.springer.com/chapter/10.1007/0-387-23413-6_17) (http://www.fda.gov/about-fda/website-policies/website-disclaimer)

iv. Chmielewski, R. A., Beck, J. R., & Swayne, D. E. (2011). Thermal inactivation of avian influenza virus and Newcastle disease virus in a fat-free egg product. Journal of Food Protection, 74(7), 1161–1169. https://doi.org/10.4315/0362-028x.jfp-10-415 (https://doi.org/10.4315/0362-028x.jfp-10-415) (http://www.fda.gov/about-fda/website-policies/website-disclaimer) https://doi.org/10.4315/0362-028x.jfp-10-415 (https://doi.org/10.4315/0362-028x.jfp-10-415) (http://www.fda.gov/about-fda/website-policies/website-disclaimer)

v. Chmielewski, R. A., Beck, J. R., & Swayne, D. E. (2013). Evaluation of the U.S. Department of Agriculture's egg pasteurization processes on the inactivation of high-pathogenicity avian influenza virus and velogenic Newcastle disease virus in processed egg products. Journal of Food Protection, 76(4), 640–645. https://doi.org/10.4315/0362-028x.jfp-12-369 (https://doi.org/10.4315/0362-028x.jfp-12-369) (http://www.fda.gov/about-fda/website-policies/website-disclaimer)

vi. Chmielewski, R. A., Beck, J. R., Juneja, V. K., & Swayne, D. E. (2013). Inactivation of low pathogenicity notifiable avian influenza virus and lentogenic Newcastle disease virus following pasteurization in liquid egg products. Lebensmittel-Wissenschaft Und Technologie [Food Science and Technology], 52(1), 27–30. https://doi.org/10.1016/j.lwt.2013.01.002 (https://doi.org/10.1016/j.lwt.2013.01.002_) (http://www.fda.gov/about-fda/website-policies/website-disclaimer)

## Testing Results

In our May 10 update, we announced that all 297 samples from the FDA's initial survey of retail dairy products were found to be negative for viable Highly Pathogenic H5N1 Avian Influenza (H5N1 HPAI) virus. Today, for continued transparency, the FDA is providing additional information on our retail sample survey.

The samples taken as part of this survey were collected at retail locations in 17 states by milk specialists in the FDA's Office of Regulatory Affairs. USDA Agricultural Research Service's U.S. National Poultry Research Center (ARS) analyzed these samples using stepwise, scientific methods. This testing included first conducting quantitative real time polymerase chain reaction (qRT-PCR) screening to determine if any of the retail samples contained H5N1 viral nucleic acid. The samples that were found to contain viral nucleic acid during qRT-PCR screening were followed with gold-standard egg inoculation testing conducted by ARS to determine if they contained live virus. None of the samples were positive for live virus. ARS scientists are currently obtaining peer review of their analysis as a first step to publishing these results. The prepublication is available at https://www.medrxiv.org/content/10.1101/2024.05.21.24307706v1 (https://www.medrxiv.org/content/10.1101/2024.05.21.24307706v1) (http://www.fda.gov/about-fda/website-policies/website-disclaimer).

While the FDA collected the 297 samples at retail locations in 17 states, these retail samples represent products produced at 132 processing locations in 38 states. The information in the first chart below shows the state in which the product was processed. Because the intent of our study was to assess a variety of products, samples were selected to be representative of processors in states that have been reported to have impacted dairy cattle and those that have not. Of note, the location of where milk was processed does not indicate where the milk was produced. This is because milk could be produced from cows on a farm or farms a few states away, processed (pasteurized) in a different state, and then be available for purchase in yet another state.

The charts below provide additional details on the samples taken as part of our survey of retail dairy products.

As noted previously, qRT-PCR-positive results do not necessarily represent live virus that may be a risk to consumers. Therefore, viability testing by egg inoculation was performed on the qPCR samples that were positive for viral nucleic acid. All of these samples did not detect any viable virus. If samples tested by qRT-PCR were negative, no further testing was

performed since those samples did not contain HPAI viral nucleic acid. These findings further support our assessment that the milk safety system including pasteurization is effective against this virus and that the commercial milk supply remains safe.

**Retail samples were collected between April 18-22 and represent a snapshot in time. This testing did not detect any live, infectious virus.**

### Table 1: Breakdown of Retail Sample Results by State Where Milk Was Processed

| State Where Milk Was Processed (May Not Relate to Where Milk Was Produced) | Detection of Live Virus in Retail Product(s) | Number of Retail Product Samples Tested | Retail Product Samples Negative for Viral RNA (qRT-PCR Screening -) | Retail Product Samples Positive for Viral RNA (qRT-PCR Screening +) | Retail Product Sample Results for Live Virus (Viability Testing by Egg Inoculation) |
|---|---|---|---|---|---|
| AR | No | 5 | 0 | 5 | 0 |
| AZ | No | 5 | 4 | 1 | 0 |
| CA | No | 21 | 21 | 0 | Not Performed (Negative qRT-PCR) |
| CO | No | 8 | 5 | 3 | 0 |
| CT | No | 2 | 2 | 0 | Not Performed (Negative qRT-PCR) |
| FL | No | 10 | 9 | 1 | 0 |
| GA | No | 8 | 8 | 0 | Not Performed (Negative qRT-PCR) |
| IA | No | 11 | 11 | 0 | Not Performed (Negative qRT-PCR) |
| ID | No | 4 | 4 | 0 | Not performed (Negative qRT-PCR) |
| IL | No | 5 | 5 | 0 | Not Performed (Negative qRT-PCR) |
| IN | No | 9 | 8 | 1 | 0 |
| KS | No | 7 | 1 | 6 | 0 |
| KY | No | 4 | 1 | 3 | 0 |
| MA | No | 4 | 4 | 0 | Not Performed (Negative qRT-PCR) |

| State Where Milk Was Processed (May Not Relate to Where Milk Was Produced) | Detection of Live Virus in Retail Product(s) | Number of Retail Product Samples Tested | Retail Product Samples Negative for Viral RNA (qRT-PCR Screening -) | Retail Product Samples Positive for Viral RNA (qRT-PCR Screening +) | Retail Product Sample Results for Live Virus (Viability Testing by Egg Inoculation) |
|---|---|---|---|---|---|
| ME | No | 2 | 2 | 0 | Not Performed (Negative qRT-PCR) |
| MI | No | 13 | 9 | 4 | 0 |
| MN | No | 16 | 13 | 3 | 0 |
| MO | No | 10 | 7 | 3 | 0 |
| NC | No | 5 | 4 | 1 | 0 |
| ND | No | 2 | 2 | 0 | Not Performed (Negative qRT-PCR) |
| NE | No | 3 | 3 | 0 | Not Performed (Negative qRT-PCR) |
| NH | No | 1 | 1 | 0 | Not Performed (Negative qRT-PCR) |
| NJ | No | 3 | 3 | 0 | Not Performed (Negative qRT-PCR) |
| NV | No | 4 | 4 | 0 | Not Performed (Negative qRT-PCR) |
| NY | No | 38 | 38 | 0 | Not Performed (Negative qRT-PCR) |
| OH | No | 8 | 5 | 3 | 0 |
| OK | No | 12 | 2 | 10 | 0 |
| OR | No | 10 | 10 | 0 | Not Performed (Negative qRT-PCR) |
| PA | No | 2 | 2 | 0 | Not Performed (Negative qRT-PCR) |
| SC | No | 3 | 0 | 3 | 0 |
| TN | No | 3 | 3 | 0 | Not Performed (Negative qRT-PCR) |
| TX | No | 26 | 13 | 13 | 0 |
| UT | No | 5 | 5 | 0 | Not Performed (Negative qRT-PCR) |

| State Where Milk Was Processed (May Not Relate to Where Milk Was Produced) | Detection of Live Virus in Retail Product(s) | Number of Retail Product Samples Tested | Retail Product Samples Negative for Viral RNA (qRT-PCR Screening -) | Retail Product Samples Positive for Viral RNA (qRT-PCR Screening +) | Retail Product Sample Results for Live Virus (Viability Testing by Egg Inoculation) |
|---|---|---|---|---|---|
| VA | No | 6 | 6 | 0 | Not Performed (Negative qRT-PCR) |
| VT | No | 2 | 2 | 0 | Not Performed (Negative qRT-PCR) |
| WA | No | 8 | 8 | 0 | Not Performed (Negative qRT-PCR) |
| WI | No | 11 | 11 | 0 | Not Performed (Negative qRT-PCR) |
| WV | No | 1 | 1 | 0 | Not Performed (Negative qRT-PCR) |

## Table 2: Breakdown of Retail Sample Results by Product Type

| Product Category | Number of Retail Product Samples | Detection of Live Virus in Retail Product | Retail Product Samples Negative for Viral RNA (qRT-PCR Screening -) | Retail Product Samples Positive for Viral RNA (qRT-PCR Screening +) | Percent of Retail Product Samples Positive for Viral RNA (via qRT-PCR screening) | Retail Product Sample Results for Live Virus (Confirmatory Virus Culture) |
|---|---|---|---|---|---|---|
| Skim Milk | 36 | No | 32 | 4 | 11.1% | 0/4 |
| 1% Milk | 28 | No | 19 | 9 | 32.1% | 0/9 |
| 2% Milk | 58 | No | 42 | 16 | 27.6% | 0/16 |
| Whole Milk | 68 | No | 52 | 16 | 23.5% | 0/16 |
| Cottage Cheese | 21 | No | 20 | 1 | 4.8% | 0/1 |
| Cream | 17 | No | 14 | 3 | 17.6% | 0/3 |
| Half and Half | 25 | No | 19 | 6 | 24.0% | 0/6 |
| Sour Cream and Similar | 30 | No | 25 | 5 | 16.7% | 0/5 |

| Product Category | Number of Retail Product Samples | Detection of Live Virus in Retail Product | Retail Product Samples Negative for Viral RNA (qRT-PCR Screening -) | Retail Product Samples Positive for Viral RNA (qRT-PCR Screening +) | Percent of Retail Product Samples Positive for Viral RNA (via qRT-PCR screening) | Retail Product Sample Results for Live Virus (Confirmatory Virus Culture) |
|---|---|---|---|---|---|---|
| Yogurt | 14 | No | 14 | 0 | 0 | NA |
| **Total** | **297** | **None** | **237** | **60** | **20.2%** | **0/60** |

This retail sampling study was designed to assess the effectiveness of the PMO milk safety system; it was not designed to assess the prevalence of H5N1 in dairy herds. It is important to underscore that milk purchased for the retail study in a particular state does not mean that it was produced or processed in that state. Commercial milk is typically pooled from many dairy farms, pasteurized in bulk and distributed to a variety of states. Even if a sample was collected in one particular state, the milk in a consumer package could have come from cows on several farms located in several states, pasteurized in a different state from the states where the milk was produced, and available for purchase in yet another state.

To further validate pasteurization effectiveness against the recently identified H5N1 virus, we are undertaking a pasteurization study designed to better replicate real-world conditions. Preliminary results from this work are expected in the near future.

**Data Considerations**

Multiple tests are used to assess the safety of food items. Understanding how and why different methodologies are used and work, as well as how results fit into the larger picture, is critical to interpret any findings.

- **Quantitative polymerase chain reaction (qRT-PCR)** is a screening tool used to determine the presence or absence of an organism's genetic material in a sample. A positive qRT-PCR means that the genetic material from the targeted pathogen was detected in the sample, but that does not mean that the sample contains an intact, infectious pathogen. That's because qRT-PCR tests will also detect the residual genetic material from pathogens killed by heat, like pasteurization, or other food safety treatments. **Importantly, additional testing is required to determine whether intact pathogen is still present and if it remains infectious, which determines whether there is any risk of illness associated with consuming the product.**
- **Embryonated Egg Viability Studies** are considered the "gold standard" for sensitive detection of active, infectious virus. These studies are one of the types of additional tests necessary following PCR testing. These studies are done by injecting an embryonated

chicken egg with a sample and then evaluating to see whether any active virus replicates. While this provides the most sensitive results, it takes a longer time to complete than other methods.

- **Madin-Darby Canine Kidney (MDCK) Cell Culture** is different type of additional test used following PCR testing to detect live, infectious virus. This is done by injecting a sample into specific tissue cells to determine whether any live virus is present and replicates. This method can usually be done more quickly than embryonated egg viability studies, but it is not as sensitive and may provide false negative results when the amount of virus in the sample is very low.

## Additional Resources

- Questions and Answers Regarding the Safety of Eggs During Highly Pathogenic Avian Influenza Outbreaks (/food/egg-guidance-regulation-and-other-information/questions-and-answers-regarding-safety-eggs-during-highly-pathogenic-avian-influenza-outbreaks)
- Questions and Answers Regarding Milk Safety During Highly Pathogenic Avian Influenza (HPAI) Outbreaks (/food/milk-guidance-documents-regulatory-information/questions-and-answers-regarding-milk-safety-during-highly-pathogenic-avian-influenza-hpai-outbreaks)
- Influenza Diagnostic Tests (/medical-devices/in-vitro-diagnostics/influenza-diagnostic-tests)

Was this helpful? Yes No

# Secure Milk Supply Plan

## In the Event of a Foot and Mouth Disease Outbreak

SMS SECURE MILK SUPPLY
www.securemilksupply.org

### What is the Secure Milk Supply (SMS) Plan?

- Provides a workable business continuity plan for dairies that are under movement restrictions but ***not infected*** with foot and mouth disease (FMD)
- Offers movement guidance for producers, haulers, processing plants, and officials managing the outbreak
- Provides biosecurity and surveillance tools for producers

### How will the U.S. respond to a Foot and Mouth Disease (FMD) outbreak?

- Response will focus on stopping the spread of this animal disease
- Control Areas will be set up around FMD infected and surrounding farms
- Movement restrictions will be put in place for animals and animal products (milk!) in Control Areas

Business Continuity

Movement Guidance

Biosecurity

Surveillance

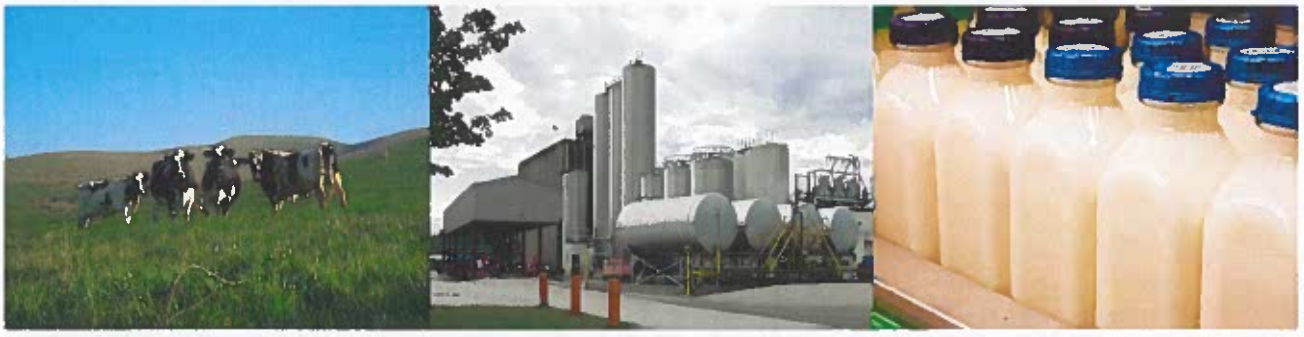
### Why is the Secure Milk Supply Plan needed?

- Help dairies in Control Areas whose cattle have no signs of FMD continue to move milk
- Limit milk disposal problems and lost income for dairies, haulers, processors, and grocers
- Maintain the supply of milk and milk products to consumers because FMD is not a public health or food safety concern

### How can you voluntarily participate in the Secure Milk Supply Plan?

- Contact your State Animal Health Official to request a Premises Identification Number (PIN)
- Visit the Secure Milk Supply website securemilksupply.org
- Develop your dairy's SMS Plan using the materials available in English and Spanish

**The Secure Milk Supply Plan is funded by USDA.**



# Secure Beef Supply Plan

In the Event of a Foot and Mouth Disease Outbreak

SBS SECURE BEEF SUPPLY
www.securebeef.org

## What is the Secure Beef Supply Plan?

- Provides a workable business continuity plan for operations that are under movement restrictions but ***not infected*** with foot and mouth disease (FMD)
- Offers movement guidance for producers, haulers, packing/processing plants, and officials managing the outbreak
- Provides biosecurity and surveillance tools for producers

## How will the U.S. respond to a Foot and Mouth Disease (FMD) outbreak?

- Response will focus on stopping the spread of this animal disease
- Control Areas will be set up around FMD infected and surrounding operations
- Movement restrictions will be put in place for animals and animal products in Control Areas

Business Continuity

Movement Guidance

Biosecurity

Surveillance

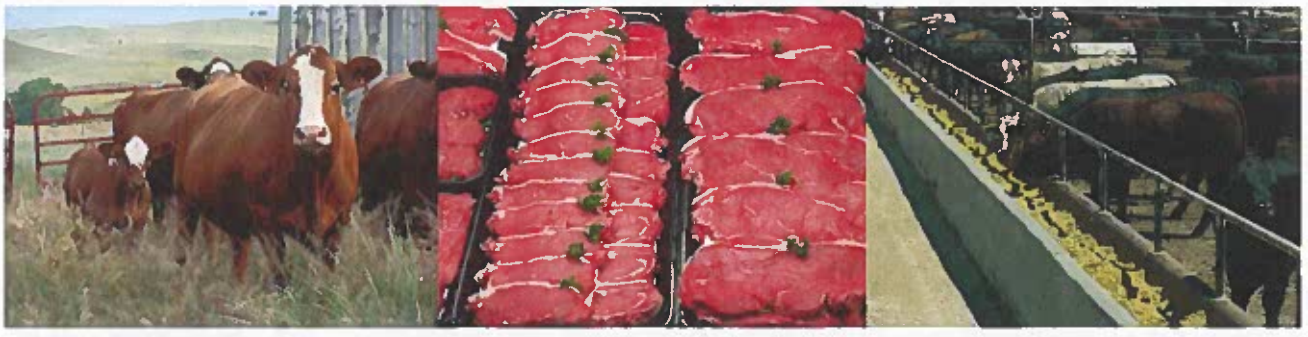
## Why is the Secure Beef Supply Plan needed?

- Help operations in Control Areas whose cattle have no signs of FMD continue to move cattle
- Limit lost income for operations, haulers, packers/processors, and grocers
- Maintain the supply of beef products to consumers because FMD is not a public health or food safety concern

## How can you voluntarily participate in the Secure Beef Supply Plan?

- Contact your State Animal Health Official to request a Premises Identification Number (PIN)
- Visit the Secure Beef Supply website securebeef.org
- Develop your operation's SBS Plan using the materials available in English and Spanish

**The Secure Beef Supply Plan is funded by USDA.**



USDA Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

# Highly Pathogenic Avian Influenza (HPAI)

## Indemnity and Compensation When Your Flock Is Infected

If your flock is infected with highly pathogenic avian influenza (HPAI), the U.S. Department of Agriculture (USDA) will provide indemnity and compensation for some of your losses and costs. Here's what you can expect.

### Indemnity Payments for Birds and Eggs

USDA pays for birds and eggs that must be destroyed. We do not pay for birds that died from HPAI. The amount of your indemnity payment is based on your flock inventory and standard indemnity values.

USDA and State animal health officials work with you to prepare an inventory as soon as HPAI is identified in your flock. The inventory lists all living animals in the flock and the current number of eggs on hand (if applicable). USDA uses standardized indemnity tables for birds that are specific to your industry segment and the species you have; we use standardized values for eggs that are specific to their use (table eggs or hatching eggs). To calculate the final amounts you will receive, we multiply the value per animal or egg by the number of live animals or eggs.

### Making a Claim

Because you will only be indemnified for live birds and HPAI spreads quickly and can be fatal to flocks, it is critical that you report sick birds immediately and begin the indemnity process quickly if you have an infected flock.

1. Work with your case manager or Field Reimbursement Specialist to fill out and sign an indemnity request form.
2. USDA will begin depopulation work and prepare the initial indemnity value. You'll receive paperwork indicating the indemnity amount.
3. Register your business with the U.S. Government System for Award Management (SAM): sam.gov/content/entity-registration
4. Complete and sign the paperwork (including your bank information and SAM registration information) and return it to your case manager or Field Reimbursement Specialist.
5. You'll receive payment from USDA via direct deposit in about 2–3 weeks. If you appeal the initial indemnity value (see "Fair Market Value of Your Birds" at right) and your appeal is successful, additional funds would be deposited at a later time.

### Fair Market Value of Your Birds

USDA indemnity values are updated annually based on nationally recognized data from our Agricultural Marketing Service and the National Agricultural Statistics Service, the Livestock Marketing Information Center, and other sources as appropriate. If you feel these national averages don't adequately represent the fair market value of your birds, you may appeal the values by notifying your case manager or Field Reimbursement Specialist in writing within 15 days of receiving your initial indemnity value estimate.

To support your appeal, you'll need to obtain an independent, third-party appraisal report, prepared by a qualified appraiser, on the value of your birds. Any documentation you have (for example, your own inventory, receipts, etc.) will be useful to an appraiser. The appraisal can be completed after you've notified us of your intent to appeal; it does not need to be completed within the 15-day timeframe mentioned above.

### Compensation for Other Costs

Compensation is handled separately from indemnity and covers several categories. Your case manager or Field Reimbursement Specialist will help you fill out the required paperwork for these claims.

#### Depopulation and Disposal

USDA or our contractors may carry out depopulation and disposal work and pay the costs directly. If you choose to assist in this work or hire your own contractors, we must approve those costs in advance and agree on the methods used. We then reimburse you based on receipts and records of work done.

*(see other side)*

Depopulation must be done under Federal and State supervision and in line with applicable regulations. Water-based foam and carbon dioxide gas are the most humane and effective options available in an emergency situation with large numbers of birds.

Disposal methods include composting, onsite burial, incineration, rendering, and landfilling. The method(s) chosen must follow all State environmental laws. Other factors we consider include the size of the flock, space requirements, and local conditions.

### Materials Destroyed

We will also compensate you for materials, such as contaminated feed or egg packaging, that must be destroyed because they cannot be safely or adequately cleaned. To receive compensation for these items, your Field Reimbursement Specialist must review and approve the items in writing **before** you remove or disassemble them.

### Virus Elimination

We pay flat rates for virus elimination activities, including barn preparation, a cleaning step, and a disinfection step. The amounts are calculated based on the area of the structures housing animals and eggs. Direct and early payment of a standard amount gives you the resources to conduct these activities yourself or retain and oversee contractors to do the work.

If you decide to fallow your premises instead of completing virus elimination work, you are not eligible for virus elimination payments.

## Questions?

Talk with your case manager or Field Reimbursement Specialist, or call the nearest USDA Veterinary Services office (www.aphis.usda.gov/animal-health; click on "Contact Us").

DEFEND THE FLOCK

Learn more about how to protect your flock from HPAI and other diseases:
aphis.usda.gov/animalhealth/defendtheflock ▪ cdc.gov/flu/avianflu

USDA Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

# USDA Support for Producers with Affected Dairy Premises

On April 24, USDA announced a Federal Order effective as of April 29, as part of its ongoing efforts to protect the U.S. livestock industry from the threat posed by highly pathogenic avian influenza (HPAI or H5N1) in dairy cattle. The Federal Order (FO) requires mandatory testing prior to the interstate movement of lactating dairy cattle and mandatory reporting of positive influenza A test results in livestock. USDA is taking these actions to address any risks to animal health, public health, and the safety of our food supply. To help producers enhance their biosecurity practices, USDA is offering additional support for producers who have HPAI confirmed positive dairy herds so they have tools to eliminate the virus and can protect their animals, themselves, their families, and their employees.

## Eligibility

Dairy producers with premises that have been confirmed positive for HPAI are eligible for USDA support to conduct activities that best fit their operations. Support for these interventions is available for a period of up to 120 days from the date of confirmation of H5N1 in cattle on the affected premises.

## Enrollment and Verification

Interested producers will contact the Area Veterinarian in Charge to enroll.

Producers will work with USDA personnel to develop a plan for their premises—detailing planned testing and movement, biosecurity practices and other planned activities. Following the development of this plan, the producer will draft a Detailed Financial Plan (DFP) to include all the planned activities, purchases and services associated with the actions they select (from the list below) that will be eligible for USDA financial support.

In order to assure fiscal accountability with federal funds, USDA personnel—a Field Reimbursement Specialist or their designee—will conduct a review every 30 days to monitor the progress in implementing the components of the action(s) which they have chosen to implement (e.g., is PPE being used appropriately, is the enhanced biosecurity plan being implemented).

The producer will be provided with information to sign up for a System for Award Management (SAM) registration, which will provide for the mechanism of payment or offered an alternative method of payment (e.g., providing an EFT form for direct deposit payments, requesting a paper check be drafted), although these other options will result in less timely payments compared to SAM.

## Payments

Every 30 days, the producers will be provided a form (VS 1-23) to review and sign verifying the costs associated with actions below per mechanism established above.


APHIS-21-025 | May 2024

## Actions

**Protect against the potential for disease spread between humans and animals.** USDA will provide financial support for producers with affected herds who supply PPE to employees and/or provide outerwear uniform laundering and facilitate the participation of their workers in a USDA/CDC workplace and farmworker study.

- A flat rate per employee will be offered to producers who elect this option, up to $2,000 per affected premises per month.
- Producers will need to provide proof of purchase of PPE or the cost of laundering services as well as acknowledgement from CDC of their participation in the study.

**Support producers in biosecurity planning and implementation.** USDA will provide support to develop biosecurity plans based on existing secure milk supply plans. This includes recommended enhanced biosecurity for individuals that frequently move between dairy premises—milk haulers, veterinarians, feed trucks, AI technicians, etc.

- Producers can elect to hire private entities to develop site specific plans, conduct biosecurity trainings, and perform audits.
  - Producers would be compensated up to $1,500 per affected premises for these services after verification and inclusion on the DFP.
- Producers could elect to work with State personnel who would develop site specific plans, conduct biosecurity trainings, and perform audits.
  - States would be compensated under a cooperative agreement based on the flat rates for activities chosen by the producer.
- USDA will provide a $100 payment to producers who purchase and install an in-line sampler for their milk system on an affected premises.

**Provide funding for heat treatment to dispose of milk from sick cows in a bio secure fashion.** This will provide producers a safe option to dispose of their milk from sick cows. Heat treatment performed in accordance with standards set by FDA is the only currently available method considered to effectively inactivate the virus in milk from sick cows.

- If a producer establishes a system to heat treat all waste milk from sick cows before disposal, USDA will pay the producer up to $2,000 per month, up to $8,000 total, per affected premises.

**Reimburse producers for veterinarian costs associated with confirmed positive HPAI premises.** USDA will provide support to producers to cover veterinary costs necessarily incurred for treating cattle infected with HPAI, as well as fees for veterinarians to collect samples for testing.

- This can include veterinary fees and/or specific supplies needed for treatment and sample collection.
- Veterinary costs are eligible for reimbursement from the initial date of positive confirmation at NVSL for that premises, up to $10,000 per premises.

**Offset shipping costs for influenza A testing at laboratories in the National Animal Health Laboratory Network.** USDA will pay for the cost for of shipping samples to NAHLN labs for testing.

- USDA will pay actual shipping costs, not to exceed $50 per shipment for up to 2 shipments per month for each affected premises.

U.S. FOOD & DRUG ADMINISTRATION

June 6, 2024

Dear State, Territorial, Local and Tribal Health Partners:

We are grateful for your continued partnership as we collectively work to address new developments related to the presence of High Pathogenic Avian Influenza A H5N1 (HPAI H5N1) in dairy cattle. The assistance and feedback we have received from our regulatory partners at state Departments of Agriculture and Health is invaluable.

We share a common goal of ensuring the safety of our nation's milk supply. To that end, we are providing our latest thinking and science-based recommendations on unpasteurized, raw milk with respect to HPAI H5N1 virus. Evidence demonstrates that cattle infected with the HPAI H5N1 virus shed the virus in their milk. All raw milk produced from herds with HPAI H5N1 infections has the potential to contain infectious HPAI H5N1 virus since it will not be subject to pasteurization.

Given the current and potential future risks that HPAI H5N1 virus poses to our nation's public health, as well as the health of our nation's food-producing animals and wildlife, it is important to work together to minimize additional exposure of humans and other animal species to the HPAI H5N1 virus to reduce the potential for additional HPAI H5N1 infections and reduce the virus's opportunity to adapt to new hosts. Because raw milk has the potential to contain viable (live) HPAI H5N1 virus, it represents a potential route of consumer exposure to the virus. Based on the limited research and information available, we do not know at this time if the HPAI H5N1 virus can be transmitted to humans through consumption of raw milk and products made from raw milk from infected cows. However, exposures on affected farms are associated with three documented cases of H5N1 illness in dairy workers.

While the introduction into interstate commerce of raw milk for human consumption is prohibited under the FDA's authority[1], we know that a number of states permit the intrastate sale of raw milk for human consumption, with varying structures and requirements to these state programs. Because of our concerns related to HPAI H5N1 virus in raw milk, we are providing the following recommendations for states as we continue to work together to address this novel issue:

- Distribute messaging to the public about the health risks of consuming raw milk and raw milk products. Health risks include illness, miscarriages, stillbirths, kidney failure and death. (source: Food Safety and Raw Milk | FDA)

- Monitor dairy cattle herds for signs of illness that would indicate infection with the HPAI H5N1 virus.
    - Producers should continue to discard milk, with suitable protocols, from symptomatic cows.
    - Any raw milk or raw milk products from exposed cattle that are fed to calves or any other animals should be heat-treated or pasteurized. Exposed cattle are those located on a premises

[1] 21 CFR 1240.61.

**U.S. Food and Drug Administration**
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with cattle with suspected or confirmed infections with HPAI H5N1 viruses. Many State Cooperative Extension Service programs have published detailed information on how to pasteurize or otherwise effectively treat waste milk before using it to feed calves (for example, Penn State - Pasteurization of Non-Saleable Milk[2]).

- Implement a surveillance testing program in your state to identify the presence of HPAI H5N1 virus in dairy herds that might be engaged in producing raw milk for intrastate sale. For states that implement such a surveillance testing program, sharing data and testing results with their dairy regulatory partners (state, FDA, and USDA) will allow for coordinated management of this novel virus. Upon request, FDA will provide technical assistance and methodologies for sampling or testing.

- For states that permit the sale of raw milk within their state, use regulatory authorities or implement other measures, as appropriate, to stop the sale of raw milk that may present a risk to consumers. This may include restricting the introduction of raw milk that may contain viable HPAI H5N1, for human or animal consumption, within a defined geographic area, or within your state. If HPAI H5N1 virus is identified within a herd, there is a risk that viable HPAI H5N1 virus could be present in raw milk from the herd, even when clinically ill cows are segregated.

We are committed to continuing to work with our partners to minimize the risks of HPAI H5N1 virus in raw milk and raw milk products. Last month, CDC provided guidance to healthcare professionals on communicating with the public about the risks of consuming raw milk[3]. In addition, USDA announced a voluntary dairy herd status program along with potential resources on May 30, 2024[4].

The FDA is responsible for protecting the public health by ensuring the safety of our nation's food supply. Sharing the agency's recommendations on raw milk and raw milk products with our regulatory partners is part of that responsibility. We intend to share new research and data on both HPAI H5N1 virus in raw milk and raw milk products. We appreciate your attention and continued support and welcome the opportunity to work with you on any of these recommendations.

Sincerely,

Donald A. Prater, DVM
Agency Incident Coordinator
Acting Director, Center for Food Safety and Applied Nutrition

[2] Pasteurization of Non-Saleable Milk (psu.edu)
[3] https://www.cdc.gov/flu/avianflu/unpasteurized-raw-milk.htm; https://www.cdc.gov/food-safety/foods/raw-milk.html
[4] https://www.usda.gov/media/press-releases/2024/05/30/usda-announces-824-million-new-funding-protect-livestock-health