May 16, 2022

Health Notice for District of Columbia Health Care Providers
Highly Pathogenic Avian Influenza A(H5N1) Virus: Recommendations for Human Health Investigations and Response

SUMMARY
The Centers for Disease Control and Prevention (CDC) has confirmed that a person has tested positive for highly pathogenic avian influenza HPAI A(H5N1) virus in the United States. The A(H5N1) positive individual is a person who had direct exposure to poultry as part of a poultry culling (depopulation) operation in Colorado. The current outbreak strain of avian influenza has been affecting wild birds and poultry in the U.S, since January 2022. This is the second human case of infection with HPAI A(H5N1) identified worldwide and the first case reported in the U.S. The CDC still considers the HPAI A(H5N1) threat level to humans to be low. People with work or recreational exposures to birds are at greater risk of infection and should follow recommended precautions.

As of May 10, 2022, there have been no human cases of HPAI A(H5N1) reported in the District of Columbia. The purpose of this Health Alert Notice is to provide situational updates and to notify healthcare providers of CDC's recommendations for patient investigation, testing, and infection control. Healthcare providers should continue to monitor DC Health Alert Notice webpage for updates: dchealth.dc.gov/page/health-notices.

BACKGROUND
On April 28, 2022, CDC confirmed that a person in the United States has tested positive for avian influenza A (H5) virus in Colorado. On May 5, the CDC confirmed the virus neuraminidase subtype as N1. This individual had direct exposure to poultry presumptively infected with HPAI A(H5N1) after participating in a poultry culling (depopulation) operation which took place April 18-April 22, 2022. Reverse transcription-polymerase chain reaction (RT-PCR) was performed on an upper respiratory tract (nasal) specimen collected from the individual on April 20, 2022. It is possible that the positive test represented nasal surface contamination with the virus. However, this individual met the case definition for a human H5 case, and public health authorities are taking steps to contain and treat the virus. The person reported wearing appropriate personal protective equipment (PPE), but whether they wore recommended eye protection is unclear. This individual did not have any chronic medical conditions. They reported fatigue as their only symptom and have since recovered. They completed a treatment course with oseltamivir. Other people involved in the same culling operation as well as close contacts of this individual have tested negative for avian influenza A (H5), and are being monitored and retested. There are no subsequent additional reports of human cases at the time of this notice.

Avian influenza first emerged in southern China and resulted in large poultry outbreaks in 1997. The virus re-emerged in 2003 and spread throughout many parts of the world. There were large outbreaks among poultry and wild birds in the United States and Canada during 2014-2016. Since 2003, 864 human infections and 456 human deaths have been recorded from earlier strains of the virus. The current outbreak strain of avian influenza emerged in late 2021 and was detected in wild birds and poultry in the United States in January 2022. It has been found in backyard birds in in 29 states, and in wild birds in 34 states. CDC has monitored more than 2500 exposed people for development of avian influenza since this strain emerged, and this is the only human case they have found to date. This is the second human case worldwide associated with the current strain of the avian influenza virus. The first human case was documented in an asymptomatic person in the United Kingdom in December 2021 who kept ducks.

Avian influenza A viruses infect the respiratory and gastrointestinal tracts of birds. Birds shed the virus in their saliva, mucous, and feces. Human infections with avian influenza A viruses are uncommon but can occur when enough virus gets into a person's eyes, nose, or mouth or is inhaled. People with close or prolonged unprotected contact (without PPE) with infected birds or contaminated environments are at greater risk of infection. The clinical spectrum of illness in humans infected with avian influenza virus A

has ranged from asymptomatic infection, to mild illness (e.g., eye infection, upper respiratory symptoms), to severe illness (e.g., pneumonia) and death. The spread of avian influenza A viruses from one infected person to another has been reported in other countries, but is very rare, and has not led to sustained person-to-person spread. The threat level for humans from avian influenza is still classified as low by the CDC.

CDC will continue monitoring for signs that the risk to humans has changed (e.g., multiple reports of human cases, evidence of person-to-person spread, evidence of viral genetic changes that could indicate the virus is adapting to spread more easily from birds to humans) and will issue new updates as needed.

CLINICAL RECOMMENDATIONS

Clinicians should consider the possibility of HPAI A(H5N1) virus infection in persons showing signs or symptoms of respiratory illness who have relevant exposure history.

- Relevant exposure history includes persons who have had contact with potentially infected birds (e.g., handling, slaughtering, defeathering, butchering, culling, preparation for consumption) OR
- Direct contact with water or surfaces contaminated with feces or parts (carcasses, internal organs, etc.) of potentially infected birds OR
- Persons who have had prolonged exposure to potentially infected birds in a confined space.

Criteria for testing

Patients who meet Epidemiologic criteria **AND** either Clinical **OR** Public Health Response criteria below should be tested for HPAI A(H5N1) virus infection at the DC Public Health Laboratory (PHL) in consultation with CDC.[1]

1. **Epidemiological Criteria:** Persons with recent exposure (within 10 days) to HPAI A(H5N1) virus through one of the following:
   - Exposure to HPAI A(H5N1) virus infected birds defined as follows:
     - Close exposure (within six feet) to birds, with confirmed avian influenza A virus infection by A(H5N1) virus. Bird exposures can include, but are not limited to handling, slaughtering, defeathering, butchering, culling, or preparing birds for consumption, OR
     - Direct contact with surfaces contaminated with feces or bird parts (e.g., carcasses, internal organs) from infected birds, OR
     - Visiting a live poultry market with confirmed bird infections or associated with a case of human infection with HPAI A(H5N1).
   - Exposure to an infected person - close (within six feet) unprotected (without use of respiratory and eye protection) exposure to a person who is a confirmed, probable, or symptomatic suspected case of human infection with HPAI A(H5N1) (e.g., in a household or healthcare facility)
   - Laboratory exposure (unprotected exposure to HPAI A(H5N1) virus in a laboratory)

2. **Clinical Criteria:** Persons with signs and symptoms consistent with acute or lower respiratory tract infection, or with conjunctivitis, or complications of acute respiratory illness without an identified cause. Examples include but are not limited to:
   - Mild illness (e.g., cough, sore throat, fever [objective or subjective], rhinorrhea, fatigue, myalgia, arthralgia, headache) or conjunctivitis (red eye, discharge from eye)
   - Moderate to severe illness: (e.g., shortness of breath or difficulty breathing, altered mental status, seizures)

[1] **Testing for other potential causes of acute respiratory illness should also be considered depending upon the local epidemiology of circulating respiratory viruses, including SARS-CoV-2.**

- Complications: pneumonia, respiratory failure, acute respiratory distress syndrome, multi-organ failure, meningoencephalitis

3. **Public Health Response Criteria:** Asymptomatic persons whom public health authorities, in consultation with CDC, determine need to be tested to assess the clinical spectrum of infection with HPAI A(H5N1) virus as part of public health investigations.

Specimen collection

- People with suspected HPAI A(H5N1) virus infection should have respiratory specimens collected for testing as soon after illness onset as possible.
- Preferred respiratory specimens:
  - A nasopharyngeal swab and a nasal aspirate or wash, OR
  - Two swabs combined into one viral transport media vial (e.g., a nasal or nasopharyngeal swab combined with an oropharyngeal swab)
  - If these specimens cannot be collected, a single nasal or oropharyngeal swab is acceptable.
  - Patients with severe respiratory disease also should have lower respiratory tract specimens (e.g., an endotracheal aspirate or bronchoalveolar lavage fluid) collected, if possible.
  - For severely ill persons, multiple respiratory tract specimens from different sites should be obtained to increase the potential for HPAI A(H5N1) virus detection.
- For more information, see cdc.gov/flu/avianflu/severe-potential.htm.

Infection control recommendations

- Standard, contact, and airborne precautions are recommended for patients presenting for medical care or evaluation of illness consistent with influenza and recent exposure to potentially infected birds.
- Encourage the patient to isolate at home away from their household members and not go to work or school until it is determined they do not have avian influenza A virus infection.

Monitoring of exposed persons

- People exposed to HPAI A(H5N1)-infected birds (including people wearing recommended PPE) should be monitored for signs and symptoms of influenza beginning after their first exposure and for 10 days after their last exposure.

Reporting to DC Health

Please notify DC Health by phone immediately about cases that meet the criteria for testing at 844-493-2652 AND Submit a Notifiable Disease and Condition Case Report Form online using DCRC: dchealth.dc.gov/infectiousdisease. DC Health will provide assistance and work with the DC PHL to coordinate collection of respiratory samples and testing, and will consult with CDC as needed.

Recommendations for influenza antiviral treatment and chemoprophylaxis

Treating symptomatic persons with bird exposure

- Patients with suspected HPAI A(H5N1) virus infection, should be initiated empirically on antiviral treatment with a neuraminidase inhibitor, oseltamivir or zanamivir, or the cap-dependent endonuclease inhibitor, baloxavir, as soon as possible. Clinical benefit is greatest when antiviral treatment is administered early, especially within 48 hours of illness onset. Antiviral treatment should not be delayed while waiting for laboratory testing results.
- For detailed guidance on dosing and treatment duration, please see cdc.gov/flu/avianflu/novel-av-treatment-guidance.htm.

Chemoprophylaxis of persons with bird exposure:

- Chemoprophylaxis with influenza antiviral medications (oseltamivir or zanamivir) can be considered for any person meeting exposure criteria (see above).
- If antiviral chemoprophylaxis is initiated, treatment dosing for the neuraminidase inhibitors oseltamivir or zanamivir (one dose twice daily) is recommended instead of the conventional once daily influenza chemoprophylaxis regimen.
- Chemoprophylaxis is not routinely recommended for personnel who used proper PPE while handling sick or potentially infected birds or decontaminating infected environments (including animal disposal).
- For detailed post-exposure prophylaxis treatment recommendations, see cdc.gov/flu/avianflu/guidance-exposed-persons.htm.

Monitoring and chemoprophylaxis of close contacts of persons with HPAI A(H5N1) virus infection:
Postexposure prophylaxis of close contacts of a person with HPAI A(H5N1) virus infection is recommended with oseltamivir twice daily (treatment dosing) instead of the conventional once daily influenza chemoprophylaxis regimen. For detailed guidance, please see cdc.gov/flu/avianflu/novel-av-chemoprophylaxis-guidance.htm.

Vaccination
No human vaccines for HPAI A(H5N1) are currently available in the United States. Seasonal influenza vaccines do not provide any protection against human infection with HPAI A(H5N1) viruses.

Key educational messages to provide to the public

- People should avoid contact with all wild birds, and with poultry that appear ill or are dead. They should avoid contact with surfaces that appear to be contaminated with feces from wild or domestic birds. If a person must handle wild birds, or sick or dead poultry, they should wear gloves and respiratory protection (such as a medical facemask), and ideally eye protection (such as goggles) as well. They should wash their hands with soap and water after touching birds.
- It remains safe to eat properly handled and cooked poultry in the U.S. Poultry cooked to an internal temperature of 165° F effectively kills bacteria and viruses, including H5N1 viruses.

Additional resources for clinicians:

- ***Human Infection with Avian Influenza A Virus: Information for Health Professionals and Laboratorians***, at cdc.gov/flu/avianflu/healthprofessionals.htm
- ***Bird Flu Infections in Humans***: cdc.gov/flu/avianflu/avian-in-humans.htm

References

- Centers for Disease Control and Prevention Health Alert Network, *Highly Pathogenic Avian Influenza (H5N1) Virus: Recommendations for Human Health Investigations and Response***,** April 28,2022, at emergency.cdc.gov/han/2022/han00464.asp
- Centers for Disease Control and Prevention, *Update: U.S. Case of Human Avian Influenza A (H5N1) Virus Reported*, May 5, 2022, at cdc.gov/flu/avianflu/spotlights/2021-2022/update-human-avian-influenza.htm
- Centers for Disease Control and Prevention, *Definitions for Investigations of Human Infection with Avian Influenza A Viruses in the United States*, March 23, 2022, at cdc.gov/flu/avianflu/case-definitions.html
- Centers for Disease Control and Prevention Media Statement, *U.S. Case of Human Avian Influenza A (H5) Virus Reported*, April 28, 2022, at cdc.gov/media/releases/2022/s0428-avian-flu.html
- Centers for Disease Control and Prevention, *Avian Influenza in Birds*, March 9, 2022, at cdc.gov/flu/avianflu/avian-in-birds.htm

For more information, or to report avian influenza cases please contact the Division of Epidemiology–Disease Surveillance and Investigation:
Phone: (202) 442-8141 (8:15am-4:45pm) | 1-844-493-2652 (after-hours calls)|Fax: (202) 442-8060
Email: doh.epi@dc.gov