

For Clinicians: Evaluating and Managing Patients Exposed to Birds Infected with Highly Pathogenic Avian Influenza (HPAI) A (H5) Viruses

This document summarizes important clinical information related to HPAI H5 and CDC’s recommendations for patient evaluation, treatment, and testing.

Background

Avian influenza viruses occur naturally among wild aquatic birds worldwide and can infect domestic poultry and other bird and animal species. Outbreaks of avian influenza happen in birds (including domesticated poultry) from time to time. Some of these avian influenza viruses are more lethal to poultry (highly pathogenic), while others cause no illness or only mild illness in poultry. There are standard containment and control practices for HPAI H5 outbreaks in poultry when they occur.

During 2014-2015, outbreaks of highly pathogenic avian influenza A H5 (HPAI H5) occurred in wild birds and poultry in the United States.* While no human infections with these HPAI outbreaks have been detected, rare human infections with other avian influenza viruses have occurred and it is possible that people may be infected by these viruses. In particular, people involved in HPAI H5 poultry outbreak response activities and others with exposures to infected birds or surfaces contaminated by feces from infected birds may be at risk of HPAI H5 virus infection. All HPAI H5 outbreak responders, including those who used personal protective equipment (PPE), are being asked to self-observe for signs and symptoms consistent with influenza on a daily basis and to call their health department if they develop compatible illness. Health departments may ask responders to seek care and/or testing for influenza A virus infection, including testing for H5 virus.

Summary Recommendations

	HPAI H5-compatible signs/symptoms present (recommended actions)	NO HPAI H5-compatible signs/symptoms (recommended actions)
Patients recently exposed to infected birds or contaminated surfaces	<ol style="list-style-type: none"> 1. Isolate patient and follow infection control recommendations below. 2. Initiate antiviral treatment. 3. Notify state/local health department. 	<ol style="list-style-type: none"> 1. Follow standard health care facility infection control practices/protocols. 2. Investigate other potential causes of the patient’s signs and symptoms. 3. Contact state/local health department with any questions or concerns.

Signs/Symptoms of HPAI H5 virus infection in humans: Persons with HPAI H5 virus infection may present with influenza-like illness (ILI) [fever $\geq 100^{\circ}\text{F}$ plus cough or sore throat] or with other signs and symptoms frequently associated with seasonal influenza, such as rhinorrhea, fatigue, myalgia, arthralgia, headache, and difficulty breathing. Atypical presentations of HPAI H5 virus infection may include nausea, vomiting, or diarrhea. Encephalopathy and encephalitis also have been reported with HPAI H5 virus infections. While a rare sign of seasonal influenza, conjunctivitis has been reported as a sign of infection with some avian influenza A viruses. Rapid progression to pneumonia and multi-organ failure can occur with HPAI H5 virus infection.

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It is important to remember that influenza may not cause fever in all patients, especially in patients younger than 5 years of age, 65 years of age and older, or people with immunosuppression. The absence of fever should not supersede clinical judgment when evaluating a patient for illness compatible with HPAI H5 virus infection. For more information on signs and symptoms, please visit <http://www.cdc.gov/flu/avianflu/hpai/hpai-background-clinical-illness.htm>. For HPAI H5 case definitions, visit <http://www.cdc.gov/flu/avianflu/hpai/case-definitions.htm>.

Infection prevention and control recommendations: Standard Precautions, plus Contact and Airborne Precautions are recommended when evaluating patients for HPAI H5 virus infections. If an airborne infection isolation room (AIIR) is not available, isolate the patient in a private room. Health care personnel should wear recommended personal protective equipment (PPE) when providing patient care. These recommendations are consistent with existing infection control guidance for care of patients who may be infected with a novel influenza A virus associated with severe disease. For more information on recommended infection prevention and control measures, please visit <http://www.cdc.gov/flu/avianflu/novel-flu-infection-control.htm>.

Laboratory testing recommendations: If signs or symptoms consistent with HPAI H5 virus infection are present in a patient with recent exposure to infected birds or contaminated environments, respiratory specimens should be collected for molecular testing (RT-PCR) for influenza viruses, including H5. For outpatients, upper respiratory tract specimens should be collected. Patients who are severely ill should have both upper and lower respiratory tract specimens collected. For information on specimen collection, infection control when collecting specimens and diagnostic testing, please visit <http://www.cdc.gov/flu/avianflu/severe-potential.htm>. Rapid influenza diagnostic tests are not a reliable indicator of HPAI H5 virus infection and the results should not be used to guide isolation or antiviral treatment decisions.

Treatment recommendations: Initiation of antiviral treatment with a neuraminidase inhibitor is recommended as early as possible for any patient with suspected or confirmed HPAI H5 virus infection. This includes patients who are [confirmed cases, probable cases, or cases under investigation](#), even if more than 48 hours has elapsed since illness onset and regardless of illness severity. Treatment with oral or enterically administered oseltamivir is recommended. **Antiviral treatment should not be delayed while waiting for laboratory test results.** If molecular testing is negative for HPAI H5 virus and other influenza viruses, and HPAI H5 virus infection is still suspected in a patient who is severely ill, antiviral treatment should be continued and additional respiratory specimens should be collected for repeat testing. For patients who are not hospitalized, if molecular testing is negative for HPAI H5 virus and other influenza viruses, neuraminidase inhibitor treatment can be discontinued. For more information on treatment recommendations, please visit <http://www.cdc.gov/flu/avianflu/novel-av-treatment-guidance.htm>.

More information on CDC's web site:

Avian Influenza Guidance <http://www.cdc.gov/flu/avianflu/healthprofessionals.htm>

* Overview of H5 Viruses in the United States <http://www.cdc.gov/flu/avianflu/h5/index.htm>