

## Avian Influenza Quick Facts

Current as of November 14, 2022

This document provides healthcare providers and emergency planners with resource links to improve their readiness for potential human infections with avian influenza A viruses. Users should refer to the websites of the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), the Centers for Disease Control and Prevention (CDC), the Food and Agriculture Organization of the United Nations (FAO), and the World Health Organization (WHO) for the most up-to-date information.

### ***What is avian influenza?***

Avian influenza refers to the disease caused by infection with avian influenza Type A viruses. These viruses naturally spread among wild aquatic birds worldwide and can infect domestic poultry and other bird and animal species.

### ***Where is avian influenza found?***

Avian influenza A viruses are found throughout the world. FAO's Emergency Prevention System for Animal Health publishes periodic situation updates tracking avian influenza outbreaks in animals that include global distribution maps and details about the type of virus, date and location found, the affected species, and number of events. These situation updates also track human infections. APHIS' avian influenza surveillance program reports on detections in the U.S. of avian influenza in both wild birds and in commercial/backyard flocks.

### ***Why is avian influenza of interest to healthcare and public health professionals?***

Avian influenza A viruses do not normally infect humans. However, sporadic human infections with avian influenza A viruses have occurred. Healthcare providers, public health professionals, and emergency managers monitor avian influenza A activity to better detect rare human cases in areas where animal outbreaks are occurring and to prepare for a potential pandemic that may occur if these viruses gain the ability to spread easily from person-to-person.

### ***How are avian influenza A virus risks assessed?***

CDC's Influenza Risk Assessment Tool assesses and classifies 23 novel influenza A viruses according to low, moderate, and high risk. WHO developed the Tool for Influenza Pandemic Risk Assessment to similarly assess the risk of influenza viruses with pandemic potential. These tools are intended to assess the pandemic potential of each virus; they cannot predict an influenza pandemic.

### ***Which avian influenza A viruses are of greatest interest?***

Several avian influenza A viruses are of particular concern due to their known ability to infect humans. While there has been limited, non-sustained human-to-human transmission of some avian influenza A viruses reported, none of the viruses currently circulating among birds appear to have acquired the ability to do so easily or in a sustained manner. Most human infections result from direct human contact with infected animals or contaminated environments. WHO publishes weekly avian influenza situation reports to describe newly reported cases. Viruses of concern as of November 14, 2022 include:

- H5N1: 865 human cases and 456 deaths in 21 countries since 2003, including the first case reported in the U.S. in April 2022.
- H7N9: 1,568 human infections confirmed (in China plus one imported case in Malaysia and two imported cases in Canada) since 2013, with 616 deaths. No human cases have been reported since March 2019.
- H5N6: 82 human cases and 33 deaths in China and Laos
- H9N2: 78 human cases and 2 deaths in China and Cambodia
- Limited cases of avian influenza H3N8, H5N8, H6N1, H7N2, H7N3, H7N4, H7N7, H10N3, H10N7, and H10N8 have also been reported in humans.

APHIS: [Avian Influenza](#)  
CDC: [Information on Bird Flu](#)  
WHO: [Influenza \(Avian and Other Zoonotic\)](#)

FAO: [Global Avian Influenza Viruses with Zoonotic Potential Situation Update](#)  
FAO: [Avian Influenza A\(H7N9\) Virus Situation Update](#)

CDC: [Viruses of Special Concern](#)  
WHO: [Influenza at the Human-Animal Interface Summary and Assessment](#)

CDC: [Influenza Risk Assessment Tool \(IRAT\)](#)  
WHO: [Tool for Influenza Pandemic Risk Assessment \(TIPRA\)](#)

WHO: [Surveillance-Avian Influenza](#)  
CDC: [U.S. Case of Human Avian Influenza A \(H5\) Virus Reported](#)

### **What makes avian influenza A virus infections different from seasonal influenza A and B viruses?**

Human seasonal influenza Type A (subtypes H1 and H3) and B viruses circulate year-round among people worldwide and cause epidemics every year, often peaking between December and February in the U.S. With ongoing virus circulation, most individuals have some immunity from exposures to seasonal influenza A and B viruses from previous years or from seasonal influenza vaccination. However, some populations – including those 65 and older, those 5 and younger, pregnant people, and individuals with certain chronic health conditions – are at increased risk for serious illness from seasonal influenza, possibly leading to hospitalization or death. In contrast, avian influenza A virus infection in humans is rare and is mostly limited to those who have close contact with infected birds or environments contaminated by them. Even healthy individuals infected with avian influenza A could be at risk for serious illness or death. Seasonal influenza vaccines protect against select human seasonal influenza A and B viruses and do not protect humans from avian influenza A viruses.

### **How are human cases of avian influenza identified and treated?**

Most patients with influenza-like illness are likely to be infected with a seasonal influenza virus or other common respiratory virus. Clinicians should consider avian influenza A virus infection in patients with signs and symptoms of acute or lower respiratory tract infection or conjunctivitis or complications of acute respiratory illness without an identified cause and who have been exposed to birds infected with avian influenza A(H5), A(H7) or A(H9) viruses or environments contaminated by them, had close contact with someone known or suspected to be infected with avian influenza A virus, or had unprotected exposure to live avian influenza A virus in a laboratory. If a clinician suspects an avian influenza A virus infection, they should notify state/local health departments, collect respiratory specimens from the patient to test at the state health department, and isolate the patient and follow infection control recommendations. Patients with a suspected infection should begin antiviral treatment as soon as possible.

### **How can human cases be prevented?**

The best way for humans to prevent becoming infected with avian influenza A virus is to avoid contact with birds or environments contaminated by them, particularly in locations where avian influenza outbreaks have been detected. Guidance is available on protective measures to be taken by individuals with occupational or recreational exposures to birds, including those responding to avian influenza outbreaks. Healthcare workers treating patients suspected or known to be infected with an avian influenza A virus should adhere to current infection prevention and control guidance.

### **Are there vaccines available for avian influenza?**

Vaccines are available to protect birds from avian influenza, but their use is discouraged or prohibited in many countries due to practical challenges (e.g., vaccinating each individual bird, international trade restrictions, potential exposure risks to vaccinators) and scientific concerns (e.g., inability to conduct surveillance of infected versus vaccinated birds, fears of mutation, vaccine effectiveness in multiple bird species). Countries where avian influenza is endemic have had some success vaccinating commercial poultry stocks.

Additionally, for human protection, candidate vaccine viruses have been created that may be used by pharmaceutical manufacturers to produce pre-pandemic vaccines that are an essential component of pandemic preparedness. The U.S. government has stockpiled pre-pandemic vaccines for some avian influenza A viruses that could be distributed quickly should the virus develop the ability to easily infect humans and be transmitted easily from person-to-person.

CDC: [About Flu](#)

CDC: [Bird Flu Virus Infections in Humans](#)

CDC: [Case Definitions for Investigations of Human Infection with Avian Influenza A Viruses in the United States](#)

CDC: [Brief Summary for Clinicians: Evaluating and Managing Patients Exposed to Birds Infected with Avian Influenza A Viruses of Public Health Concern](#)

APHIS: [Defend the Flock Program](#)

CDC: [Information for Specific Groups](#)

CDC: [Interim Guidance for Infection Control Within Healthcare Settings When Caring for Confirmed Cases, Probable Cases, and Cases Under Investigation for Infection with Novel Influenza A Viruses Associated with Severe Disease](#)

FAO: [Rational Use of Vaccination for Prevention and Control of H5 Highly Pathogenic Avian Influenza](#)

CDC: [Making a Candidate Vaccine Virus \(CVV\) for a HPAI \(Bird Flu\) Virus](#)

WHO: [Zoonotic Influenza Candidate Vaccine Viruses and Potency Testing Reagents](#)

ASPR: [Pandemic Influenza Vaccine Stockpile Program](#)