What CDC Is Doing to Respond to Bird Flu Outbreaks in Dairy Cows and Other Animals in the United States

Key Points

- CDC is working closely with USDA to monitor the current H5N1 bird flu situation in wild birds and poultry, dairy cows, and sporadic infections in other mammals, and will provide updates as information is available.
- CDC is the lead agency for human health.
- The U.S. Department of Interior and USDA are the lead federal departments for outbreak investigation and control in wild birds and agriculture.
- USDA APHIS is the lead agency for such activities in domestic birds and agricultural livestock.
- The risk to the general public from H5N1 bird flu is currently low.

Updates

CDC A(H5N1) Bird Flu Response Update

May 3, 2024

Everything you need to know about the flu illness, including symptoms, treatment and prevention.

Monitoring of Exposed Workers

CDC is working with USDA and state partners to monitor for infections in exposed persons in the states where detections in poultry, backyard flocks, or other animals have occurred.

- People who have been exposed to infected birds, poultry, or other animals are actively monitored for 10 days after exposure.
- Public health departments are working to monitor people who were exposed to birds/poultry or other animals infected with A(H5N1) virus.
- People monitored who show symptoms are subsequently tested for novel influenza A and seasonal flu viruses along with other respiratory viruses.
  - Testing of these people is being done by state or local officials, and CDC is conducting confirmatory testing when needed.
- CDC is engaging public health partner organizations to share information and ensure preparedness for any potential

Learn more about the Bird Flu Current Situation in Cows in the United States.

human infections.

CDC continues to support surveillance, contact tracing, and other steps to monitor for and reduce spread in jurisdictions where human infections with A(H5N1) virus are identified.

Guidance and Recommendations

CDC has developed guidance for various groups:

- Highly Pathogenic Avian Influenza A(H5N1) Virus in Animals: Interim Recommendations for Prevention, Monitoring, and Public Health Investigations
- Considerations for Veterinarians: Evaluating and Handling of Cats Potentially Exposed to Highly Pathogenic Avian Influenza A(H5N1) Virus
- Updated Interim Recommendations for Worker Protection and Use of Personal Protective Equipment (PPE) to Reduce Exposure to Novel Influenza A Viruses Associated with Disease in Humans

Ongoing Laboratory Activities

Genetic Sequencing and Virus Characterization

CDC will continue its ongoing assessment of the risk posed by these viruses, including conducting additional laboratory work to further characterize current A(H5N1) viruses.

Because flu viruses are constantly changing, CDC continually analyzes viruses to identify genetic changes that suggest these viruses might spread more easily to and between people, and cause serious illness in people, or for changes that suggest reduced susceptibility to antivirals, as well as changes in the virus that might mean a new vaccine virus should be developed.

Diagnostics

CDC's diagnostic tools that are used to detect seasonal influenza viruses also can detect novel influenza A viruses including A(H5N1) viruses. These diagnostic tools are used at more than 100 public health laboratories in all 50 U.S. states and have been shared internationally as well.

Vaccines

As part of pandemic preparedness activities and as a WHO Collaborating Center, CDC regularly develops candidate vaccine viruses (CVVs)—viruses made for production of vaccine—for novel bird flu viruses with pandemic potential. Two existing HPAI A(H5N1) candidate vaccine viruses are already available to manufacturers, and which could be used to make vaccine if needed.

CDC is also testing human sera (blood) from people previously vaccinated with pre-pandemic A(H5) vaccines to see how it reacts to the virus from the human case in Texas. Data to date – including genetic analysis and testing of ferret antisera from multiple clade 2.3.4.4b candidate vaccine viruses – suggest vaccination will offer good cross-protection against cattle outbreak viruses (The human case in Texas was a 2.3.4.4b virus).

Antivirals

There are four commercially available FDA-approved prescription antiviral treatment drugs recommended for influenza. CDC has conducted testing for susceptibility testing to the commercially available and recommended flu antiviral medications. The medications can be used for flu treatment and are recommended for prevention in people with exposures. Testing confirmed that the A(H5N1) virus from the human case in Texas is susceptible to baloxavir marboxil, in addition to neuraminidase inhibitors. With these findings, the virus from the human case in Texas is confirmed to be susceptible to commercially available FDA-approved and recommended flu neuraminidase and polymerase acidic protein (PA) endonuclease inhibitor antiviral medications.

CDC is also looking at antiviral resistance properties of more than 200 publicly posted H5N1 virus sequences from cattle, CDC found one virus from a cow with a marker known to be associated with reduced susceptibility to the neuraminidase inhibitors (a change at NA-T438I). This change has been seen rarely in the past in H5N1 viruses isolated from wild birds and poultry. The detection of this marker in one of more than 200 specimens is not surprising or particularly concerning at this time in terms of the clinical usefulness of these drugs, but it does underscore why this kind of constant monitoring is important.

Assessing Potential Disease Severity and Transmission

CDC is also working to grow H5N1 virus stock from the one human case in Texas to use for additional laboratory experiments to learn how the virus reproduces in both human and cow respiratory tract epithelial cells and cow mammary epithelial cells and to assess the severity of illness and transmissibility of the virus under different scenarios by infecting ferrets and assessing the outcome. Ferrets are used as a model for people because they get sick and spread influenza viruses similar to humans.

Monitoring Flu Surveillance Data

CDC continues to monitor flu surveillance data, especially in areas where A(H5N1) viruses have been detected in dairy cattle or other animals, for any unusual trends in flu-like illness, flu, or conjunctivitis. CDC flu surveillance systems show no indicators of unusual flu activity in people, including avian influenza A(H5N1). More information can be found on: How CDC is monitoring influenza data among people to better understand the current avian influenza A (H5N1) situation.

Outreach and Education

In addition to conducting laboratory studies and active surveillance, CDC also is engaging public health partner organizations, including One Health organizations from public health, agriculture, wildlife, milk regulatory officials to share information and ensure preparedness for any potential human infections.

CDC is conducting broad outreach to the public to raise awareness about the current situation and that the current risk to the general public's health is low, but that there are certain groups of people who are at a greater risk of infection who should take precautions. CDC continues to develop and maintain multilingual and multidisciplinary epidemiological field teams ready to deploy for on-site studies and use to better understand the current outbreak, particularly the public health and One Health implications of the emergence of this virus in cattle.

CDC will provide updates on this situation as needed on the Avian Influenza Current Situation Summary or Avian News & Spotlights pages.

Additional Information

- Technical Report: Highly Pathogenic Avian Influenza A(H5N1) Viruses
- Current H5N1 Bird Flu Situation in Dairy Cows
- H5N1 Bird Flu: Current Situation Summary
- How CDC is monitoring influenza data among people to better understand the current avian influenza A (H5N1) situation

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