

CDC Reports Second Human Case of H5 Bird Flu Tied to Dairy Cow Outbreak

Available information does not change CDC's current H5N1 bird flu risk assessment for the general public, which the agency says is low.

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A human case of [highly pathogenic avian influenza](#) (HPAI) A(H5) ("H5 bird flu") virus infection in the United States has been identified in the state of Michigan. This is the second case associated with an ongoing multistate outbreak of A(H5N1) in dairy cows.[1]

As with the case in Texas, the individual is a worker on a dairy farm where H5N1 virus has been identified in cows. While a nasal swab from the person tested negative for influenza in Michigan, an eye swab from the patient was shipped to CDC and tested positive for influenza A(H5) virus, indicating an eye infection.

Similar to the Texas case, the patient only reported eye symptoms. CDC has been watching [influenza surveillance systems](#) closely, particularly in affected states, and there has been no sign of unusual influenza activity in people, including in syndromic surveillance.

Based on the information available, this infection does not change CDC's current H5N1 bird flu human health risk assessment for the U.S. general public, which the agency considers to be low. However, this development underscores the importance of [recommended precautions](#) in people with exposure to infected or potentially infected animals. People with close or prolonged, unprotected exposures to infected birds or other animals (including livestock), or to environments contaminated by infected birds or other animals, are at greater risk of infection.

Case Background

A dairy worker who was being monitored because of their work exposure to H5N1-infected cattle reported symptoms to local health officials. Two specimens were collected from the patient. An upper respiratory tract specimen collected from the worker's nose was negative for influenza virus at the state health department laboratory. The eye specimen was sent to CDC for testing because it is one of a few labs where those specimens can be used with the CDC A(H5) test.

The specimen was received by CDC and testing results confirmed A(H5) virus infection. The nasal specimen was retested at CDC and confirmed to be negative for influenza. The state was then

notified of the results.

The designation of the influenza virus neuraminidase (the N in the subtype) is pending genetic sequencing at CDC. Attempts to sequence the virus in the clinical specimen are underway and will be made available within 1-2 days if successful. Additional genetic analysis will look for any changes to the virus that could alter the agency's risk assessment.

Conjunctivitis (eye infection) has been associated with previous human infections with avian influenza A viruses and is part of the current CDC case definition for A(H5N1) surveillance. While it's not known exactly how eye infections result from avian influenza exposures, it may be from contamination of the eye(s), potentially with a splash of contaminated fluid, or touching the eye(s) with something contaminated with A(H5N1) virus, such as a hand. High levels of A(H5N1) virus have been found in unpasteurized milk from H5N1-infected cows.

CDC Activities

This case was detected through the state's implementation of CDC's recommended monitoring and testing strategies in exposed persons. In addition to enhanced and targeted surveillance, CDC also has:

- Held numerous weekly engagements with state and local HDs around increasing their preparedness posture
- Updated interim recommendations for worker protection to include those who work with dairy cows
- Issued a Health Alert Notice (HAN) on identification of human infection and recommendations for investigations/response
- Held a call with states asking them to move from preparedness to readiness
- Updated interim recommendations for worker protection to include those who work in slaughterhouses
- Conducted numerous calls with groups representing farmworkers
- Asked states to furnish PPE for farmworkers
- Announced incentives for workers who participate in public health research efforts into the outbreak
- Asked states to work with clinical labs to increase submissions of positive influenza virus samples to public health labs for subtyping

Given the high levels of A(H5N1) virus in raw milk from infected cows, and the extent of the spread

of this virus in dairy cows, similar additional human cases could be identified. Sporadic human infections with no ongoing spread will not change the CDC risk assessment for the U.S. general public, which CDC considers to be low.

CDC Recommendations

- People should avoid close, long, or unprotected exposures to sick or dead animals, including wild birds, poultry, other domesticated birds, and other wild or domesticated animals (including cows).
- People should also avoid unprotected exposures to animal poop, bedding (litter), unpasteurized (“raw”) milk, or materials that have been touched by, or close to, birds or other animals with suspected or confirmed A(H5N1) virus.
- CDC has [interim recommendations](#) for prevention, monitoring, and public health investigations of A(H5N1) virus infections in people. CDC also has updated recommendations for [worker protection and use of personal protective equipment \(PPE\)](#).
- Following these recommendations is central to reducing a person’s risk and containing the overall public health risk.

More information is available on the CDC website at <https://www.cdc.gov/flu/avianflu/avian-flu-summary.htm>.

[1] The first human case of A(H5N1) bird flu in the United States linked to an outbreak in dairy cows was also the first likely case of human infection with A(H5N1) from a cow globally. This was reported on April 1, 2024. The person reported eye redness as their only symptom, consistent with conjunctivitis, and recovered. Learn more about this case in a letter published in the New England Journal of Medicine titled [Highly Pathogenic Avian Influenza A\(H5N1\) Virus Infection in a Dairy Farm Worker](#).

The April 1 case was actually the second human case of A(H5N1) reported in the United States. The first human case of A(H5N1) bird flu in the United States was reported in 2022 in a person in Colorado who had direct exposure to poultry and who was involved in depopulating poultry with presumptive A(H5N1) bird flu. The 2022 human case was not related to dairy cattle. The person only reported fatigue without any other symptoms and recovered. Learn more at [U.S. Case of Human Avian Influenza A\(H5\) Virus Reported](#).

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