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Reference: n/a

Accelerated Subtyping of Influenza A in Hospitalized Patients

Summary

The Oklahoma State Department of Health (OSDH) is issuing this Health Alert Network (HAN) Health Advisory to clinicians and laboratories due to sporadic human infections with highly pathogenic avian influenza (HPAI) A(H5N1) viruses amid high levels of seasonal influenza activity.

In an abundance of caution, OSDH is recommending that clinicians remain alert for hospitalized patients with possible novel influenza A infections. Hospitalized patients with influenza-like illness, reporting exposure to wild or domestic animals, should be tested for influenza A with subtyping analysis. All patients with influenza A specimens identified as non-seasonal subtypes (i.e., subtype result other than H3, H1, H1 2009) should be treated as possible novel flu infections, and those specimens referred for H5 subtype testing, at the OSDH Public Health Laboratory (PHL) or a capable commercial laboratory. This approach can help prevent delays in identifying severe human infections with HPAI A(H5N1) viruses, supporting timely infection control and case/contact investigation.

Background

A panzootic of highly pathogenic avian influenza (HPAI) A(H5N1) viruses is currently affecting wild birds. In the United States, there have been outbreaks with these viruses among poultry and dairy cows, as well as infections among other animals. During 2024, 66 human cases of HPAI A(H5N1) virus infection were identified in the United States. Most infections in humans have been clinically mild but one fatality has been reported. Many individuals infected with HPAI A(H5N1) viruses have reported unprotected occupational exposures, such as handling infected or sick dairy cows or poultry without using recommended personal protective equipment. However, one case involved exposure to backyard poultry or wild birds. The source of the exposure in two confirmed cases in the United States could not be determined (i.e., no epidemiological risk factors identified). Based on the information available at this time, the CDC still holds that the general public is at low risk for acquiring HPAI A(H5N1) infection.

OSDH will utilize a two-pronged approach for surveillance of novel influenza, such as HPAI A(H5N1).

1) OSDH will increase Oklahoma's sentinel surveillance network to improve surveillance among outpatients with influenza-like illness. If you would like to become a sentinel provider or know more about the sentinel surveillance program, please email Respiratory@health.ok.gov.

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2) OSDH requests assistance from the state's acute care hospitals to remain alert to the possibility of severe novel influenza infections by conducting timely influenza subtype testing and immediate reporting of non-seasonal influenza results to the OSDH Epidemiologist-on-Call at 405-426-8710. The risk for delays in identifying human infections with HPAI A(H5N1) viruses is higher while seasonal influenza activity is high, due to high patient volumes and general burden on healthcare facilities. Reducing these delays ensures timely infection control within the healthcare setting and public health case investigations.

- Most influenza tests ordered in clinical settings, especially during the peak of influenza season, do not distinguish HPAI A(H5N1) viruses from more commonly circulating seasonal influenza A viruses - a positive result simply confirms non-specific influenza A virus infection.
- When subtyping is performed, a positive influenza A test result that is negative for seasonal influenza A virus subtypes (i.e., H3, H1, H1 2009), might indicate a novel influenza A virus, such as HPAI A(H5N1). These specimens should be prioritized for shipment to the OSDH PHL for additional testing.
    - Alternatively, there are now five commercial laboratories offering influenza A(H5) subtyping to supplement nationwide testing capacity: ARUP, LabCorp, Quest, Aegis, Ginkgo Bioworks.
- Services like diagnostic and subtype testing that are reasonable and necessary to diagnose illness are covered in most cases by both public and private health insurers.

Recommendations for Clinicians

Inquire about HPAI A(H5N1) exposure:

- For patients hospitalized with influenza A, ask about potential exposure to any wild and domestic animals, including pets (e.g., cats); animal products (e.g., eggs, poultry, dairy cows, raw (unpasteurized) cow milk and cow milk products, raw meat-based pet food); or recent close contact with a symptomatic person with a probable or confirmed case of A(H5). Patients reporting these exposures should be prioritized for influenza A subtyping.

When to order influenza A subtyping:

- It is recommended that all influenza A positive hospitalized patients, reporting exposure to wild or domestic animals, receive influenza A subtyping analysis on their respiratory specimen. In these situations, subtyping should occur as soon as possible following admission—ideally within 24 hours—to support proper infection prevention and control measures within the healthcare setting and rapid public health investigation and action.

- There have been a limited number of human HPAI A(H5N1) infections with no known exposure to wild or domestic animals or animal products. Remain alert for unusual influenza clinical presentations or lack of response to antivirals that may be suspicious for a novel influenza infection. In these situations, it is recommended to obtain influenza A subtyping as soon as possible and immediately notify the OSDH Epidemiologist-on-Call of the suspected novel infection.
- No human-to-human transmission of HPAI A(H5N1) has been identified at this time. Public health is monitoring the situation closely, and rapid identification of novel cases reduces the risk of person-to-person transmission.

Implement appropriate infection control and notification processes:

- Use information from the exposure risk assessment questions and/or influenza subtyping results to determine if the hospitalized patient has a suspected HPAI A (H5N1) or other novel influenza infection.
    - **Novel influenza, including HPAI A(H5N1) suspected or confirmed**:
        - Place the patient in an airborne isolation room with negative pressure. Implement standard, contact, and airborne precautions with eye protection (goggles or face shield) for all caregivers.
            - Novel influenza is an immediately notifiable condition. Contact the OSDH Epidemiologist-on-Call immediately by telephone 405-426-8710; available 24/7/365.
        - **Seasonal influenza suspected or confirmed:**
            - Follow normal healthcare facility guidelines for influenza infection control and prevention.
            - Influenza hospitalizations are reportable within one business day. Follow normal healthcare facility processes for reporting to OSDH.

Treatment considerations:

- Any hospitalized patients, especially those in an ICU, with suspected seasonal influenza or avian influenza A(H5) should be started on antiviral treatment with oseltamivir as soon as possible without waiting for the results of influenza testing.
    - Consider combination antiviral treatment for hospitalized patients with HPAI A(H5N1) virus infection.

Recommendations for Clinical Laboratories

Support for influenza A subtyping

- It is recommended to perform subtyping on specimens from hospitalized individuals positive for influenza A with reported exposure to wild or domestic animals. It is also recommended for clinicians to remain alert of severely ill patients with suspected novel influenza infection and request influenza A subtyping on those individuals. Options below are listed in the order of most timely results.
    - Subtyping tests can be performed in the hospital clinical laboratory, if available.
    - Alternatively, specimens can be sent to a commercial clinical laboratory. The following commercial laboratories also have the capacity to test for influenza A H5 subtype if the influenza A positive specimen they initially test is negative for seasonal influenza: ARUP, LabCorp, Quest, Aegis, Ginkgo Bioworks.
    - If influenza A virus subtyping is not available through one of the above routes, arrangements can be made for influenza A virus-positive specimens to be subtyped at the Oklahoma Public Health Laboratory (see **Appendix A: Submitting Specimens to the Oklahoma Public Health Laboratory for Subtyping**).

Submission and reporting of suspect Novel Influenza specimens

- Submit respiratory specimens that are positive for influenza A but negative for seasonal influenza A virus subtypes (i.e., negative H1, H1 2009, or H3) to the Oklahoma Public Health Laboratory as soon as possible and within 24 hours of obtaining the results. Do not batch specimens for consolidated or bulk shipment to the public health laboratory if that would result in shipping delays for any such specimen. These specimens are considered suspect novel influenza and are immediately reportable to the OSDH Epidemiologist-on-Call.
    - Alternatively, there are now five commercial laboratories offering influenza A(H5) subtyping to supplement nationwide testing capacity: ARUP, LabCorp, Quest, Aegis, Ginkgo Bioworks.
- Immediately contact the OSDH Epidemiologist-on-Call by telephone at 405-426-8710, available 24/7/365. They will assist in identifying the best option for rapid testing for influenza A H5 to ensure timely identification or rule out of that infection.
- Continue to submit reportable laboratory results to the OSDH via electronic lab reports or other established methods.

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Influenza-Associated Hospitalization Reporting

- Influenza-associated hospitalizations (i.e., hospitalizations with a positive influenza test) are a reportable condition in Oklahoma under OAC 310:515 and should be reported within 1 business day in Public Health Investigation & Disease Detection of Oklahoma (PHIDDO). (See "**Appendix B: Entering Influenza-Associated Hospitalizations into PHIDDO**").
- Novel influenza A virus, such as HPAI A(H5N1), is immediately reportable upon suspicion, diagnosis, or positive test result. Suspicion would include patients with a positive influenza test and epidemiological risk factors for novel influenza such as exposure to wild or domestic animals. Novel influenza A is immediately reportable for all spectrums of clinical presentation including mild to severe. Reports should be called to the OSDH **Epidemiologist-on-Call immediately by telephone 405-426-8710; available 24/7/365.**

Appendices:

Appendix A: Submitting Specimens to the Oklahoma Public Health Laboratory for Subtyping

Appendix B: Entering Influenza-Associated Hospitalizations into PHIDDO

For More Information

- H5 Bird Flu: Current Situation | CDC
- 2024-2025 Influenza Season: Surveillance for Novel Influenza A and Seasonal Influenza Viruses | 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 | CDC
- Interim Guidance on Specimen Collection and Testing for Patients with Suspected Infection with Novel Influenza A Viruses Associated with Severe Disease or with the Potential to Cause Severe Disease in Humans | CDC
- Case Definitions for Investigations of Human Infection with Avian Influenza A Viruses in the United States | CDC
- Interim Guidance on the Use of Antiviral Medications for Treatment of Human Infections with Novel Influenza A Viruses Associated with Severe Human Disease | CDC

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This message has been distributed to Primary Care and Infectious Disease Physicians, Family Medicine Physicians, Obstetricians, Pediatricians, Pulmonologists, Infection Preventionists, Laboratorians, Urgent Care Centers, Emergency Departments, and State and Local Health Officials

The Oklahoma State Department of Health (OSDH) Acute Disease Service (ADS) is now using 4 types of documents to provide important information to medical and public health professionals, and to other interested persons:

Categories of Health Alert messages:

Health Alert
Provides vital, time-sensitive information for a specific incident or situation; warrants immediate action or attention by health officials, laboratorians, clinicians, and members of the public and conveys the highest level of importance.

Health Advisory
Provides important information for a specific incident or situation; contains recommendations or actionable items to be performed by public health officials, laboratorians, and/or clinicians; may not require immediate action.

Health Update
Provides updated information regarding an incident or situation; unlikely to require immediate attention.

Health Info/Event
Provides general public health information; unlikely to require immediate action.

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