Subtyping of Influenza A Recommended for Hospitalized Patients

General Overview

Q: What exactly is Public Health requesting of healthcare providers in this Health Advisory?

A: Public Health is asking that all patients with suspected influenza are tested within 24 hours of hospital admission and that laboratories expedite seasonal influenza subtyping for all influenza A positive patients, especially ICU patients and patients with epidemiologic risk factors.

Health Advisory: Subtyping of Influenza A Recommended for Hospitalized Patients | Washington State Department of Health

Q: Why is public health asking providers to expedite influenza A subtyping in hospitalized patients? Has the risk of highly pathogenic avian influenza (HPAI) H5 or "bird flu" to the general population changed?

A: This request builds on our existing surveillance system and enhances our ability to rapidly detect influenza A (H5) infections and ensure timely treatment, case investigation, and implementation of infection control measures. The overall risk to the general public remains low.

Influenza Testing and Subtyping

Q. What is influenza subtyping?

A. Influenza A viruses can be divided into subtypes based on two proteins on the surface of the virus: hemagglutinin (H) and neuraminidase (N). Influenza A subtyping identifies which version of hemagglutinin is present in a specimen. Many commercially available assays can identify two or three Influenza A subtypes: H1, H1pdm09, and H3.

Q: Is influenza subtyping the same as testing for influenza A (H5)?

A. No. While influenza A (H5) is a subtype of influenza A, only public health laboratories (PHL) and certain commercial laboratories currently can specifically test for HPAI (H5).

Q. What does it mean if my patient's influenza A result is "nontypable" or "unsubtypeable"?

A. If a test result is positive for influenza A virus but negative for seasonal influenza A virus subtypes [i.e., A(H1) and A(H3)], the virus detected might be a novel influenza A virus, such as influenza A (H5). Often, a result may be "nontypable" or "unsubtypeable" because a patient has too little virus to perform subtyping on that specimen or poor specimen collection.

Q. Which patients should have influenza A subtyping performed?

A: All patients with symptoms consistent with influenza (e.g., fever, cough, sore throat, conjunctivitis, difficulty breathing) should be tested for influenza A. All hospitalized patients with influenza A should be subtyped, especially those in intensive care or with epidemiologic risk factors (concerning exposure history). Many HPAI (H5) confirmed cases have reported conjunctivitis as their first or only symptom.

Epidemiologic risk factors include 1. Exposure to ill/deceased wild and domestic animals, such as agricultural and farm workers, backyard flocks, 2. Exposure to raw animal products such as raw cow milk and raw pet food, 3. Close contact with a symptomatic person with diagnosed with influenza A(H5).

All patients with a nontypable or unsubtypable influenza A specimen should also be tested for influenza A (H5).

Q. My facility only has access to rapid influenza testing; how can I get subtyping?

A: Many commercial laboratories can provide influenza A subtyping. You can send specimens for subtyping to PHL on hospitalized patients diagnosed with influenza A.

Q: My influenza A positive patient was tested in the emergency room with a rapid test that does not provide subtyping results and was subsequently admitted to the hospital. Do I need to collect another specimen?

A: Most likely, yes. Subtyping can only be performed on certain specimen types (see below) and tested using molecular methods. If the original specimen is still available, your laboratory may be able to retest using a method that identifies influenza A subtypes. If the specimen is no longer available, providers should order testing using a method that can identify seasonal influenza A subtypes. However, if the patient has already been started on Tamiflu, this will reduce the sensitivity of the testing, and should be reserved for patients that have epi risk factors or are doing poorly clinically.

Specimens and Laboratories

Q: I am unsure if my laboratory can perform influenza A subtyping. Is there a list of tests that can identify seasonal influenza A subtypes?

A: The FDA has posted a list of commercially available influenza diagnostic tests that can identify influenza A subtypes. https://www.fda.gov/medical-devices/in-vitro-

diagnostics/influenza-diagnostictests Check with your lab to find out what's available at your facility.

Q: My patient's test came back positive with "novel influenza pdm09," or "influenza A(pdm09)", or "Influenza H1N1 2009 strain (novel influenza)" after being tested by our laboratory. Is this bird flu (HPAI)?

A: No. Influenza A H1(pdm09) is the name of the seasonal influenza A H1N1 virus that emerged during the 2009 influenza pandemic. Some systems may still be calling this pandemic or novel influenza. When in doubt, check with your laboratory or call the local health jurisdiction (LHJ). As of January 16th, 2025, only laboratories using the CDC novel influenza PCR assay can detect influenza A H5.

Q: My laboratory has several options for diagnosing influenza; where can I find more information about influenza testing?

A: Additional information about influenza and testing methods can be found on the CDC's website. This resource provides an overview of the different types of influenza tests available and guidance for their appropriate use. https://www.cdc.gov/flu/hcp/testing-methods/index.html

Q: Do I need request subtyping at the Public Health Laboratory before sending the specimen?

A: No, DOH is encouraging all hospitalized influenza specimens to be subytpe. If hospitals can not subype in-house, sent to a commericial laboratory for subytping, or challenged with capacity/cost, specimens can be sent directly to PHL. Unlike the typical submission process to PHL, all subtyping specimens can be sent to PHL WITHOUT notification to LHJ unless, 1. Specimen is unsubtypeable or 2. Specimen has epi-risk factors or suspect for HPAI.

Q: Does PHL have capacity for testing influenza subtyping?

A. Currently, PHL has capacity to accept all influenza subtyping. We are attempting to increase capacity quickly. If PHL reaches capacity for daily subtyping, a prioritization scheme may be initiated.

Q: Should a patient suspect of HPAI or with epidemiologic risk factors be subtyped for H5 at a Commerical lab or PHL?

A. While some commercial labs have recently began to offer H5 subtyping, DOH **highly recommends** at all suspect H5 specimens be sent to PHL.

Q: What specimens are needed for subtyping?

A: Please visit: Influenza Virus Testing at the Washington Public Health Laboratories (WAPHL)

Q. How do I submit samples to PHL?

A: Please use Lab Web Portal (LWP) View File - MediaLab. Approval is not needed for general subtyping requests per the HAN or an unsubtypeable result WAC 246-101-101:. Document in LWP as “unsubtypeable” for submissions from a tab that can not subtype or a result of “unsubtypeable”.

Notification to the LHJ should be made only if the specimen is a suspected HPAI (H5) or Novel Influenza with epidemiologic risk factors; document in LWP as “Suspect Novel Virus”.

Q: This HAN requests that specimens be submitted for subtyping within 24 hours. Does the Public Health Laboratory accept specimens for subtyping over the weekend?

A: Specimens from influenza A positive patients without known risk factors for HPAI (H5) may be frozen over the weekend and sent to PHL the next working day. For patients with risk factors for HPAI (H5), testing may be expedited over the weekend.

Q: When will I receive the results of the specimens sent to PHL for testing?

A: Test results may take 1-3 days. You will be notified immediately if the patient tests positive for HPAI (H5). Results indicating seasonal influenza A (H1, H1pdm09, H3) infection may not be reported to you but are available upon request.

Isolation Precautions and Public Health Reporting

Q: What precautions should be implemented for these patients?

A: If your patient has known exposures to HPAI (H5), such as exposure to cows, poultry, raw milk or meat, or another person with HPAI (H5), the patient should be placed on airborne contact precautions. Otherwise, follow droplet precautions for seasonal influenza.

Best practice is airborne contact precautions for a persons under investigation or suspect novel influenza, each hospital/system should develop a risk assessment for isolation strategies given AIIR capacity.

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 | Bird Flu | CDC

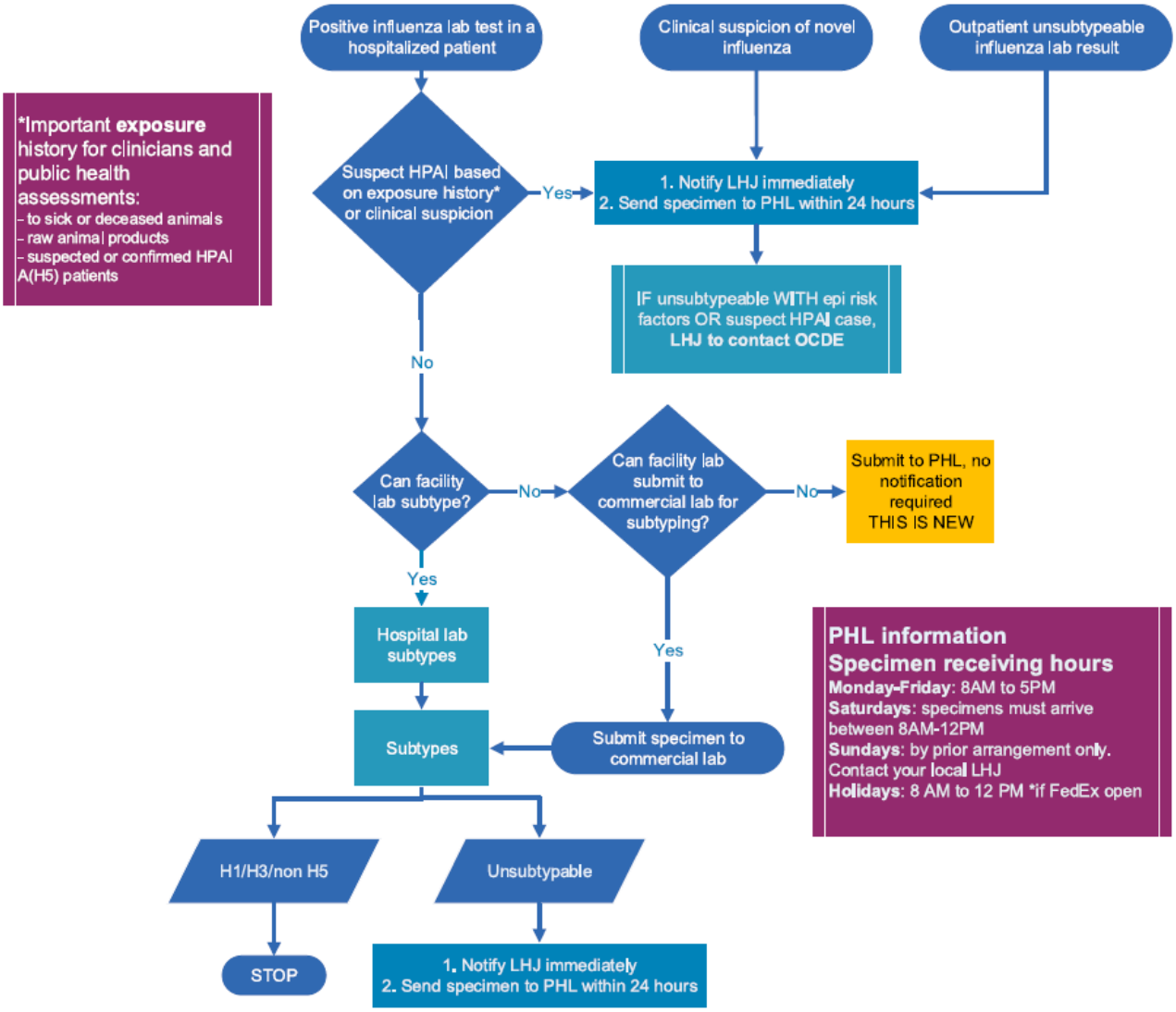
Q: Do I need to submit a case report form or confidential morbidity report for patients who test positive for influenza A?

A: No, individual cases of influenza A infection are not reportable to Public Health. Test results indicating infection with HPAI (H5) or another novel influenza are immediately reportable to LHJs by telephone.

Q: I have additional questions regarding the subtyping recommendation?

A: Please contact flu@doh.wa.gov

Recommended Influenza A Reporting and Subtyping Process in Washington State



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