

Council of State and Territorial Epidemiologists Position Statement

07-ID-01

Committee: Infectious

Title: National reporting for initial detections of novel influenza A viruses

Statement of the Problem:

Human infections with novel influenza A viruses that can be transmitted from person to person may signal the beginning of an influenza pandemic. Rapid detection and reporting of human infections with novel influenza A viruses – viruses against which there is little to no pre-existing immunity – will facilitate prompt detection and characterization of influenza A viruses with pandemic potential and accelerate the implementation of effective public health responses.

Statement of the desired action(s) to be taken:

Add detection of infections and illnesses with novel influenza A viruses to the list of nationally notifiable infectious diseases reportable to the National Notifiable Diseases Surveillance System (NNDSS).

Goals of Surveillance:

1) Rapidly identify and report infections and illnesses among humans with novel influenza A viruses to the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO); 2) ensure prompt confirmation of human novel influenza A virus infections; and 3) facilitate early initiation of appropriate public health responses

This position statement does not address the goals and methods of surveillance that will be needed during an influenza pandemic. When a state or territory determines that the transmission of a novel strain of influenza in the general population has become efficient and sustained, this new pandemic influenza strain will no longer be considered novel for the purposes of surveillance. Based on experience with seasonal influenza surveillance, notification of individual influenza cases is unlikely to be either practical or the best use of surveillance resources during this phase of a pandemic (e.g., during World Health Organization Phase 6)). Once widespread community transmission has been established, it is anticipated that other approaches will be used to track the pandemic and guide the public health response (e.g. reporting of aggregate numbers of influenza-related hospitalizations, tracking of rates of influenza-like illness, and tracking of pneumonia and influenza mortality).

Methods for Surveillance:

Case finding is conducted through standard clinician reporting and laboratory testing and reporting methods in use at public health laboratories.

State and territorial epidemiologists in conjunction with public health laboratories will report to CDC all human infections with influenza A viruses that are different from currently circulating human influenza H1 and H3 viruses. These viruses include those that are subtyped as non-human in origin and those that are unsubtypeable with standard methods and reagents. Core surveillance data will be reported to NNDSS through the National Electronic Telecommunications

System for Surveillance (NETSS) or the National Electronic Disease Surveillance System (NEDSS), as per state protocol. Submission of specimens from health department laboratories to CDC's influenza laboratory for confirmation and full characterization is a parallel component.

Case Definition narrative:

Clinical presentation: Illness compatible with influenza virus infection.

Laboratory evidence: A specimen from a human that is reverse transcriptase polymerase chain reaction (RT-PCR)- or culture-positive for influenza A and tests negative for currently circulating human H1 and H3 subtypes. (For example, any specimen that is RT-PCR-positive for influenza A and H5 in testing performed by a public health laboratory would meet these criteria).

Case Definition tables:

Suggested codes for case ascertainment

To be developed for this condition, which depends upon laboratory diagnosis by a public health laboratory

Detailed definitions for case classification

Confirmed case: A case of human infection with a novel influenza A virus detected by a public health laboratory that has been laboratory confirmed by CDC.

Probable case: A case of human infection with a novel influenza A virus detected by a public health laboratory or a case that meets the clinical criteria and is epidemiologically linked to a confirmed case, and for which laboratory confirmation by CDC's influenza laboratory was either not done or was inconclusive.

Suspected case: (1) A case of human infection with a novel influenza A virus detected by a public health laboratory, and for which laboratory confirmation by CDC is pending; or (2) A case that meets the clinical criteria and is epidemiologically linked to a confirmed case, and for which laboratory testing for influenza is pending.

Period of Surveillance:

Ongoing, beginning in January 2007

Background and Justification:

On December 13, 2006, the United States formally accepted the revision of the International Health Regulations, referred to as IHR (2005) (<http://www.hhs.gov/news/press/2006pres/20061213.html>). This international legal instrument governs the roles of the WHO and its member countries in identifying and responding to and sharing information about public health emergencies of international concern (http://www.who.int/csr/ihr/IHRWHA58_3-en.pdf). The updated rules are designed to prevent and protect against the international spread of diseases, while minimizing interference with world travel and trade. The revised regulations add human infections with new influenza strains to the list of conditions that Member States must immediately report to WHO. An outbreak of infections with a new influenza A virus that demonstrates human-to-human transmission could signal the beginning of the next pandemic. Robust epidemiologic and laboratory surveillance systems are required for a coordinated public health response to infections with a novel influenza virus subtype. Early detection of an influenza virus with

pandemic potential will permit identification of viral characteristics (e.g., genetic sequence, antiviral susceptibility, and virulence) that will affect clinical management and public health response measures. It should also facilitate development of virus-specific vaccine and testing strategies.

All state public health laboratories have the capacity to test respiratory specimens for influenza viruses with sensitive and specific assays that can detect human and non-human influenza A viruses. They also have the capacity to subtype currently circulating human influenza A H1, H3, and avian H5 (Asian lineage) viruses. The detection or confirmation by a state public health laboratory of an influenza A virus that is unsubtypeable with standard methods (e.g., real-time RT-PCR assays for human influenza A(H3) or (H1) viruses), or a nonhuman influenza virus (e.g., H5) from a human specimen, could be the initial identification of a virus with pandemic potential. Novel strains detected by tests performed by non-public health laboratories using assays not validated by CDC should be immediately reported to the state health department and the state public health laboratory for confirmatory testing.

Prompt notification of CDC by a state epidemiologist in conjunction with the public health laboratory will permit rapid confirmation of results and reporting to WHO, and aid prompt viral characterization and the development of virus-specific diagnostic tests. Based on experience with seasonal influenza surveillance, notification of individual influenza cases is unlikely to be practical, useful, or the best use of surveillance resources during the pandemic phase. Once widespread community transmission has been established, it is anticipated that other approaches will be used to track the pandemic and guide the public health response (e.g. reporting of aggregate numbers of influenza-related hospitalizations, tracking of rates of influenza-like illness, and tracking of pneumonia and influenza mortality).

References:

CSTE. National reporting for novel influenza A virus infections -- 2007 Interim Position Statement dated January 5, 2007.

CDC response letter dated March 22, 2007.

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