Council of State and Territorial Epidemiologists
Interim Position Statement

The following is an interim position statement adopted by the CSTE Executive Committee on 9 January 2007. (At the June 2003 annual meeting, CSTE modified its process for approval of resolutions. An interim position statement is required to be ratified at the subsequent annual meeting. See http://www.cste.org/pdffiles/Positionstatementprocess2003table.pdf.)

Submission Date: January 5, 2007

Committee: Executive

Title: National reporting for novel influenza A virus infections

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 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 infections 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 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

Methods for Surveillance:
Case finding is conducted through standard clinician reporting and laboratory reporting methods. Innovative methods for case ascertainment through automated utilization of hospitalization or ambulatory/out-patient electronic data should be explored.

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 subtyped as non-human or are unsubtypable 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. Additional clinical, laboratory, and case investigation data will

be collected and linked to the core NNDSS data in a manner consistent with the NEDSS and PHIN architecture. 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 human case of infection with an influenza A virus subtype that is different from currently circulating human influenza H1 and H3 viruses. Novel subtypes include, but are not limited to, H2, H5, H7, and H9 subtypes. Influenza H1 and H3 subtypes originating from a non-human species or from genetic reassortment between animal and human viruses are also novel subtypes. Novel subtypes will be detected with methods available for detection of currently circulating human influenza viruses at state public health laboratories (e.g., real-time RT-PCR). Non-human influenza viruses include avian subtypes (e.g., H5, H7, or H9 viruses), swine and other mammalian subtypes. Confirmation that an influenza A virus represents a novel virus will be performed by CDC's influenza laboratory.

Criteria for epidemiologic linkage: a) the patient has had contact with one or more persons who either have/had the disease and b) transmission of the agent by the usual modes of transmission is plausible. A case may be considered epidemiologically linked to a laboratory-confirmed case if at least one case in the chain of transmission is laboratory confirmed (http://www.cdc.gov/epo/dphsi/casedef/definition_of_terms.htm).

Case Definition tables:

Suggested codes for case ascertainment

To be developed (*These codes could include LOINC codes for finding suspected cases through automated review of laboratory electronic data, ICD-9-CM codes for finding suspected cases through automated review of hospital or out-patient electronic data*)

Detailed definitions for case classification

Confirmed case: A case of human infection with a novel influenza A virus confirmed by CDC's influenza laboratory.

Probable case: A case meeting the clinical criteria and epidemiologically linked to a confirmed case, but for which no laboratory testing for influenza virus infection has been performed.

Suspected case: A case meeting the clinical criteria, pending laboratory confirmation. Any case of human infection with an influenza A virus that is different from currently circulating human influenza H1 and H3 viruses is classified as a suspected case until the confirmation process is complete.

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). The IHR (2005) are an international legal instrument that 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 a 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 unsubtypable with standard methods (e.g., real-time RT-PCR assays for human influenza A(H3) or (H1) viruses), or a non-human influenza virus (e.g., H5) from a human specimen, could be the initial identification of a virus with pandemic potential. 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. In addition, it will aid prompt viral characterization, and the development of virus-specific diagnostic tests.

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