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Human Infections with Novel Influenza A (H7N9) Viruses- Public Health Advisory

April 19, 2013

SITUATION UPDATE

As of April 18, 2013, Chinese public health officials have reported 87 cases of human infection with a novel avian influenza A (H7N9) virus from four Provinces: Anhui, Henan, Jiangsu and Zhejiang and two Municipalities Beijing and Shanghai in China. The majority of patients were hospitalized with severe respiratory illness, and 17 persons have died. These are the first human infections identified with an H7N9 virus infection. The source of infection is still under investigation. So far, there is no evidence of ongoing person to person transmission. Preliminary data suggests that the viruses are likely susceptible to neuraminidase inhibitors (e.g., oseltamivir [Tamiflu] or zanamivir [Relenza]).

At this time, no cases of human infection with H7N9 viruses have been detected in the United States.

INTERIM RECOMMENDATIONS FOR CLINICIANS

Clinicians should consider the possibility of H7N9 virus infection in persons with respiratory illness and the following travel or exposure history:

- Recent travel to countries where human cases of H7N9 virus infection have recently been detected, especially if there was recent direct or close contact with animals (such as wild birds, poultry, or pigs) or where H7N9 viruses are known to be circulating in animals. Currently, China is the only country that has recently reported H7N9 human cases; OR
- Recent contact with confirmed human cases of infection with H7N9 virus in the last 10 days.

Suspect cases should be reported immediately to County of Riverside Department of Public Health by phone at (951) 358-5107; after hours: (951) 782-2974. All human cases of novel influenza are reportable by law in California under the California Code of Regulations, Title 17, Section 2500.

LABORATORY TESTING

Testing will be facilitated by Disease Control on a case-by-case basis once reported. Specimens will be forwarded to appropriate CDPH and CDC partners for confirmation.

- Clinicians should obtain a nasopharyngeal swab or aspirate from suspect cases, place the swab or aspirate in viral transport medium, and refrigerate the specimen until transport to the County of Riverside Public Health Laboratory (PHL) is arranged.
- Clinicians should follow appropriate infection control precautions while obtaining specimens.
- Viral culture should NOT be attempted on suspect cases.
- If reverse-transcriptase polymerase chain reaction (RT-PCR) testing has already been conducted, patients with H7N9 virus infections should have a positive test result for influenza A virus but be unsubtypeable. Laboratories conducting RT-PCR should submit ALL unsubtypeable influenza A specimens to County of Riverside PHL for submission to CDPH-VRDL for further testing.
- Commercially available rapid influenza diagnostic tests (RIDTs) may not detect avian or variant influenza A viruses in respiratory specimens. A negative RIDT does not exclude infection and a positive test result for influenza A does not confirm variant or avian influenza because these tests cannot distinguish between human, avian or variant influenza A viruses. Therefore, respiratory specimens should be collected and sent for RT-PCR testing through the County of Riverside PHL.

INFECTION CONTROL

- Healthcare personnel caring for patients under investigation for H7N9 virus infection should adhere to standard precautions plus droplet, contact, and airborne precautions including N-95 respirators, eye protection, until more is known about the transmission characteristics of the H7N9 virus. The virus has been shown to cause severe respiratory illness in cases identified so far.
- CDC interim guidance for infection control:
<http://www.cdc.gov/flu/avianflu/h7n9-infection-control.htm>

TREATMENT

- For persons hospitalized with suspected influenza, including suspected H7N9 virus infection it is recommended that clinicians and others at high risk (e.g., <5 years or >65; underlying medical conditions) start empiric treatment with influenza antiviral medications (oral oseltamivir, inhaled zanamivir) as soon as possible, without waiting for laboratory confirmation.
- Antiviral treatment is most effective when started as soon as possible after influenza illness onset. Early initiation of treatment provides a more optimal clinical response, although treatment of moderate, severe, or progressive disease begun after 48 hours of symptoms may still provide benefit.
- Clinical treatment decisions should not be made on the basis of a negative rapid influenza diagnostic test result since the test has only moderate sensitivity.

For More Information:

World Health Organization (WHO) update:http://www.who.int/csr/don/2013_04_18/en/index.html#.UXF8eohDJrM.email
CDC avian influenza A (H7N9) information page: <http://www.cdc.gov/flu/avianflu/h7n9-virus.htm>