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Human Cases of Avian Influenza A (H7N7) Infection, The Netherlands Enhanced Influenza Surveillance in the United States

The Netherlands has been reporting outbreaks of highly pathogenic avian influenza A (H7N7) among poultry on several farms since the end of February 2003. More recently cases of H7N7 infection have been reported among pigs and humans in the Netherlands, and among birds in Belgium.

As of April 25, 2003, the National Influenza Center in the Netherlands reported that 83 confirmed cases of human H7N7 influenza virus infection had occurred among poultry workers and their families since late February 2003. Most of the infected persons had clinical signs of conjunctivitis, and some had mild influenza-like illness. However, one individual, a 57-year-old veterinarian who visited one of the affected farms in early April, died on April 17 of acute respiratory distress syndrome (ARDS) and related complications from H7N7 infection. Dutch authorities also have reported evidence of possible transmission of H7N7 influenza from 2 poultry workers to 3 family members who developed mild illness. Additional information is available on the Centers for Disease Control and Prevention website at <http://www.cdc.gov/ncidod/diseases/flu/H7N7fac.htm>.

This is the second reported occurrence of human infection with avian influenza viruses since early February 2003, when 2 human cases of influenza A (H5N1) infection were confirmed in a single family of Hong Kong residents who had recently traveled to Fujian Province on mainland China. Both patients were hospitalized and one died. A third family member died while in China, but testing was not done to determine the cause of her death. There is currently insufficient information to determine whether this family was infected from a common source or whether illness spread within the family from person to person.

Both influenza A (H5N1) and influenza A (H7N7) are influenza viruses that have not circulated widely among people in the past; therefore, the general population has little or no immunity to the viruses. When a novel influenza virus infects a person, the situation is monitored closely because of the potential for an influenza pandemic in the event that the virus causes illness and is able to spread efficiently from person to person. Three influenza pandemics occurred in the 20th century, the most devastating of which was the pandemic of 1918-19, during which more than 550,000 people in the United States died of influenza-related complications.

In response to the 2 human cases of H5N1 in February 2003, CDC issued recommendations for enhanced influenza surveillance for state health departments (<http://www.cdc.gov/ncidod/diseases/flu/hanH5N1.htm>). The purpose of these recommendations is to enhance the capacity to rapidly identify an importation of a novel strain of influenza A virus into the United States, while minimizing the disruption of existing public health response capacity. The surveillance enhancements are structured to occur in a stepwise fashion based on the evolution of the influenza activity associated with the novel virus.

The current situation regarding human cases of influenza H7N7 in Europe further points to the importance of conducting enhanced influenza surveillance as was outlined in the CDC recommendations issued earlier this year. Based on current knowledge of the H5N1 and H7N7 situations, CDC recommends:

- All US World Health Organization/National Respiratory and Enteric Virus Surveillance System collaborating laboratories should subtype *all* influenza A viruses identified in clinical specimens, if possible, and should report any unsubtypable influenza A virus to the CDC Influenza Branch immediately.
- States at less than 75% of their sentinel provider goal of 1 regularly reporting site per 250,000 population (or a minimum of 10 sites in smaller, less populous states) should consider recruiting and enrolling additional providers to allow for tracking the occurrence and intensity of any potential pandemic influenza A activity in their state.
- States should continue both laboratory and sentinel provider surveillance activities year round, uninterrupted.

There is considerable overlap between the clinical presentation and travel history of persons who may have severe acute respiratory syndrome (SARS) and those who should be evaluated for infection with influenza A (H5N1). Influenza A infection should be considered in the differential diagnosis when evaluating a SARS patient. Priority should be given to subtyping influenza A viruses isolated from potential SARS cases. If any such viruses cannot be subtyped, the CDC Influenza Branch should be notified immediately.

By early April, influenza A (H5N1) reagents were distributed to all US WHO Collaborating Laboratories, including the state public health laboratories. Influenza A (H7) reagents are being produced and will be distributed as soon as possible.

If you have questions, please contact the Influenza Branch, Centers for Disease Control and Prevention, at 404-639-3747 or dvd1flu2@cdc.gov.

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