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Preliminary Report of Avian Influenza A (H9N2) Virus Infection in a Child in Hong Kong

On December 9, 2003, CDC received information from the Hong Kong Department of Health indicating preliminary laboratory evidence of influenza A (H9N2) virus infection in a child in Hong Kong last month. The boy had been admitted to a local hospital on November 27 and was discharged 2 days later. The Hong Kong Department of Health is conducting follow-up studies.

At this time, CDC does not recommend any changes in current U.S. influenza surveillance protocols. There is no information to indicate that there is an outbreak of H9N2 infections in Hong Kong or spread of these infections elsewhere. However, if laboratories identify an influenza A virus that cannot be subtyped, the CDC Influenza Branch should be notified immediately at 404-639-3591 to arrange for further testing.

The statement from the Hong Kong Department of Health is as follows.

Influenza A (H9N2) Infection in a 5-Year-Old Boy

Late afternoon today (Dec 9), the Hong Kong Department of Health (DH) Public Health Laboratory Center (PHLC) reported a preliminary test result on a nasopharyngeal aspirate specimen that was positive for influenza A (H9N2). Further tests are being conducted to sequence the virus to confirm its identity.

The patient is a 5-year-old boy with good past health living in Kwun Tong district. On Nov 27, he was admitted to United Christian Hospital (UCH) with a 2-day history of fever, cough, and runny nose (onset on 25 Nov). He made a complete recovery and was discharged on Nov 29. He did not travel recently outside Hong Kong.

This evening, DH contacted 4 family members of the patient. Three of them were suffering from upper respiratory tract symptoms (cough, runny nose, afebrile) with onset dates on 26 November, 6 December, and 8 December 03 respectively. DH is giving them health advice and have taken clinical specimens (three serum and three throat swabs) from them. DH will also investigate the kindergarten that the child is studying at.

Genetic sequencing is being performed to confirm the identity of the virus, and determine whether it is completely of avian origin.

DH operates a sentinel surveillance system on influenza-like-illness covering more than 100 doctors in Hong Kong. Every week DH reports the trend of influenza-like-illness on its website. During recent weeks, there has been no abnormal rise in influenza-like-illness detected in the community. There is no other influenza strain now in DH's PHLC that is suggestive of H9N2.

We have a comprehensive avian influenza surveillance programme that cover local chicken farms, imported poultry, the wholesale market, retail outlets, wild birds, waterfowls in recreational parks and pet birds in the market. Since March 2003, we have been implementing two rest days per month on a regular basis in all retail outlets.

We will inform you of the laboratory results and further epidemiological investigation findings in due course.

Cases in 1999

In March 1999, there were two cases of H9N2 in two girls, aged four years and 13 months respectively, who suffered from influenza-like illnesses. Both girls recovered uneventfully. Since then, no further human case of H9N2 infections was discovered in the local population.

During that investigation, antibody to H9N2 virus was only found one (0.4%) out of the 233 persons tested. This seropositive person was a health care worker who had no history of exposure to the two H9N2 patients nor poultry. None of the contacts at home and school and the hospital staff who had taken care of the patients had tested positive.

In a prevalence study, one out of the 200 blood donors, two out of the 100 poultry workers and none of the 200 hospital staff and patients had tested positive.

Serology tests conducted by the then Agriculture and Fisheries Department (AFD) indicated that over 70% of the batches of poultry tested had evidence of exposure to H9 virus. It was noted that the virus usually causes mild symptoms, if any, among birds and poultry.

The evidence suggested that poultry was the source of infection and the main mode of H9N2 transmission was from bird-to-human. However, the possibility of person-to-person transmission remained open. The overall low prevalence of antibody among the various groups tested indicated that the transmission of the isolated H9N2 virus among the local population was relatively rare and inefficient.

The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national and international organizations.

DEPARTMENT OF HEALTH AND HUMAN SERVICES