PENNSYLVANIA DEPARTMENT OF HEALTH
HEALTH ADVISORY # 1

AVIAN INFLUENZA A (H5N1) IN HUMANS AND POULTRY IN VIETNAM

Statewide Distribution

DEPARTMENT OF HEALTH

Edward G. Rendell, Governor
Calvin B. Johnson, M.D., M.P.H., Secretary of Health

DATE: January 19, 2004
TO: Health Alert Network
FROM: Calvin B. Johnson, MD, MPH
Secretary of Health
SUBJECT: **Avian influenza A(H5N1) in humans and poultry in Vietnam**
COUNTIES AFFECTED: Statewide Distribution

This transmission is a "Health Advisory", provides important information for a specific incident or situation; may not require immediate action.

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The Pennsylvania Department of Health is releasing the following information regarding the avian influenza A (H5N1) outbreak in Vietnam.

The World Health Organization (WHO) has received laboratory confirmation of five cases of H5N1 avian influenza, also known as "bird flu," in humans in the Hanoi region of Vietnam. The samples came from three children and two adults who have since died.

Since October, a total of 14 cases of severe respiratory disease have been identified in Hanoi and surrounding provinces. Thirteen of these cases are in children and one in an adult. To date, 11 of these children and the adult have died. However, there is so far no evidence that all these cases are caused by avian influenza.

Following are the press released provided by WHO (http://www.who.int/csr/don/en/):

"AVIAN INFLUENZA A(H5N1) IN HUMANS IN VIETNAM - UPDATE 3

19 January 2004

Laboratory tests have confirmed a fifth case of H5N1 avian influenza in humans in Vietnam. The case occurred in an 8-year-old girl who died on 17 January in Hanoi, where she had been hospitalized since 15 January.
All five confirmed cases have been fatal. The first death occurred on 30 December 2003.

AVIAN INFLUENZA A(H5N1) IN HUMANS IN VIETNAM AND IN POULTRY IN ASIAN COUNTRIES - UPDATE 2

16 January 2004

As detailed in a fact sheet issued yesterday, epidemics of highly pathogenic avian influenza, recently reported in some Asian countries, need to be watched very closely because of their potential significance for human health. All reported bird epidemics, in the Republic of Korea, Vietnam, and Japan, are now known to have been caused by an H5N1 strain of avian influenza viruses.
Earlier this week, laboratory tests confirmed the presence of the H5N1 variant in samples taken from three patients hospitalized with severe respiratory disease in Hanoi, Vietnam.

Today, laboratory tests have confirmed the presence of H5N1 in an additional Vietnamese patient. All four confirmed cases have been fatal.

Several other patients with respiratory illness are under investigation in Hanoi. A case definition of avian influenza in humans is being introduced to facilitate the detection of further cases in Viet Nam, and surveillance is improving as a result.

Apart from its severe impact on bird populations, this H5N1 variant has properties that make it a potential risk to human health of considerable significance. H5N1 virus recently isolated from Asian birds has been shown to mutate rapidly and has a known tendency to acquire genes from influenza viruses affecting other species.

Moreover, the simultaneous occurrence of large and highly fatal outbreaks of H5N1 in birds is considered unprecedented. WHO is concerned that these events may indicate that H5N1 is becoming established in birds in this part of the world. Because comprehensive surveillance to detect all cases in bird species is difficult, the true geographical occurrence of the avian epidemic may not be fully appreciated at present.

The outbreak in Vietnamis of particular concern as it suggests the presence of many conditions that are known to have favoured the start of influenza pandemics in the past. Foremost among these is the co-circulation of human influenza viruses with an avian strain that is prone to mutate and has high pathogenicity. H5N1 has, on two occasions in the recent past, caused severe disease with high fatality in humans, and has done so again during the past three weeks.

Widespread epidemics in birds increase opportunities for human exposure. Increases in the number of infections in humans increase opportunities for the avian and human strains to exchange genetic material. If a new virus subtype emerges as a result, and if that virus proves capable of spreading easily and sustainably from person to person, then the conditions for the start of an influenza pandemic will have been met.

The H5N1 variant isolated from fatal human cases in Vietnamwas partially sequenced earlier this week. All genes are of avian origin, indicating that the virus had not yet acquired genes from the human influenza virus. The acquisition of such genes increases the likelihood that a virus of avian origin can be readily transmitted from person to person.
In response to these concerns, WHO and its partners have intensified activities needed to reach three main objectives: to reduce death and disease among humans due to H5N1, to reduce opportunities for a new influenza pandemic to emerge, and to initiate urgently needed international and national research.

Specific lines of research will allow a better scientific assessment of the significance of ongoing epidemics in birds for human health in affected countries, and possibly elsewhere.

Laboratories in the WHO global influenza network are now conducting studies, at the molecular level, of viruses isolated from infected birds in the different countries, and from the human cases. Such molecular "detective work" can help identify the origins of currently circulating viruses, determine how they might be related, and thus shed considerable light on how the viruses are evolving.

Despite the seriousness of the current outbreak in humans, WHO believes that it can be controlled, provided decisive measures are taken to eliminate the animal reservoir for human infections. Surveillance for human respiratory disease in this part of the world has been intensified. WHO has alerted countries regarding the need to intensify surveillance for animal infections. Culling of infected or potentially exposed poultry flocks is a standard control measure that has proved effective in halting past epidemics of avian influenza in several countries.

H5N1 is the only one of the 15 subtypes of avian influenza that has, to date, caused severe outbreaks in humans. In Hong Kong in 1997, H5N1 caused disease in 18 persons, of whom 6 died. In February, 2003, H5N1 infected two persons, causing the death of one.
Three incidents of human infection with other avian subtypes, namely H7N7 and H9N2, were documented in 1999 and 2003, but caused only mild illness and altogether only 1 death.

During the 1997 outbreak of H5N1 influenza in humans, the culling – within three days – of Hong Kong's entire poultry population is thought, by many experts, to have averted an influenza pandemic."

Enhanced U.S. Influenza Surveillance

In response to the reports of these cases, PADOH is following CDC's recommendations for enhanced influenza surveillance by local health jurisdictions, hospitals and clinicians to identify patients who have been hospitalized with unexplained pneumonia, ARDS, or severe respiratory illness **AND** who have traveled to Vietnam, South Korea, and Japan within 10 days from onset of symptoms.

The purpose of these recommendations is to rapidly identify an importation of influenza A (H5N1) into the United States from Asia while maintaining effective public health response capacity. There have been no cases of **AVIAN H5N1 influenza** identified in the United States at this time.

WHAT SHOULD CLINICIANS DO?

Perform viral cultures on all patients with:

1. Unexplained pneumonia, acute respiratory distress syndrome (ARDS), or severe respiratory illness

   -- and --

2. History of travel to Vietnam, South Korea, and Japan within 10 days from onset of symptoms.

All such patients should be tested for influenza virus infection by viral culture of nasopharyngeal and throat swabs. Isolates of all influenza viruses detected from such patients should be sent to the **State Public Health Laboratory,** where they will be typed and subtyped.

Questions may be referred to Stanley Reynolds, Supervisor, Virology and Immunology Section, Division of Clinical Microbiology at: 610-280-3464; or by e-mail at sreynolds@state.pa.us

If you currently participate in the influenza sentinel surveillance system, please continue to submit reports promptly.

SARS and Influenza A (H5N1)

Given the considerable potential for the overlapping of clinical presentation and travel history of persons with either SARS or influenza A (H5N1) infection, CDC is recommending that Influenza A infection should be considered in the differential diagnosis when evaluating a SARS patient.

All providers in Pennsylvania are reminded to check the CDC website on a regular basis for updates and new information on Avian Influenza (http://www.cdc.gov/flu/about/fluviruses.htm). If clinicians have any questions or patients of concern they would like to discuss, please call the Department of Health at **1-877-PA-HEALTH**.

Categories of Health Alert messages:

Health Alert: conveys the highest level of importance; warrants immediate action or attention.
Health Advisory: provides important information for a specific incident or situation; may not require immediate action.
Health Update: provides updated information regarding an incident or situation; no immediate action necessary.

This information is current as of January 19, 2004, but may be modified in the future. We will continue to post updated information regarding the most common questions about this subject.