



Department of Health and Social Services
Joel Gilbertson, Commissioner

Division of Public Health
Richard Mandsager, MD, Director

Section of Epidemiology
Beth Funk, MD, MPH, Editor

3601 C Street, Suite 540, PO Box 240249, Anchorage, Alaska 99524-0249 (907) 269-8000
24-Hour Emergency Number 1-800-478-0084

<http://www.epi.alaska.gov>

Bulletin No. 21 September 1, 2005

H5N1 Avian Influenza: What Alaskans Need to Know

Summary

Currently there are no cases of H5N1 virus among humans or birds in North America. Surveillance is being conducted for influenza among humans and birds in Alaska. As in the past, persons who have contact with wildlife should practice good hygiene to avoid acquiring infectious diseases from animals.

Influenza A Background

Subtypes of influenza A viruses differ because of certain proteins on the surface of the virus: hemagglutinin (HA) and neuraminidase (NA). Many combinations of HA and NA proteins are possible. All subtypes of influenza A viruses can be found in birds, whereas only three subtypes (H1N1, H1N2, and H3N2) generally occur in humans. Because influenza A viruses are constantly changing, novel subtypes may be generated over time that may have severe consequences for humans.

H5N1 influenza A is one such subtype. Wild birds are the natural hosts of influenza viruses and of H5N1, which can be readily transmitted among birds. Some species may be infected without symptoms, while H5N1 can be deadly in other species, such as chickens. Viruses are present in the saliva, nasal secretions, and feces of infected birds. H5N1 viruses do not typically infect humans. However, in 1997, direct bird-to-human transmission of a H5N1 virus was documented in Hong Kong. Since then, H5N1 infections have occurred infrequently in humans. Thus far, efficient, sustained human-to-human transmission of H5N1 virus has not been documented; most H5N1 cases have resulted from contact with infected poultry. No human cases have occurred as a result of contact to wild birds.

H5N1 Outbreaks among Birds

Since 2004, there have been reports of H5N1 virus among birds in Southeast Asian nations, Russia, Mongolia and Tibet. Maps of current activity can be found on-line: see the United Nation's Food and Agriculture Organization website www.fao.org/ag/againfo/programmes/en/empres/maps.html. The spread of H5N1 in Asia is largely attributed to human actions – migration of wild birds has not yet been documented as the mechanism of transmission between regions.

Cases of H5N1 Influenza in Humans

From December 2003–August 5, 2005, 112 cases of H5N1 infection and 57 deaths have been reported among persons living in several Southeast Asian nations (World Health Organization's website www.who.int/csr/disease/avian_influenza/country/en/.)

Influenza Surveillance in Alaska

The Section of Epidemiology belongs to an interagency working group formed to understand the risk of H5N1 spread to Alaska and to strategize appropriate responses. Specific surveillance projects underway are listed below.

Humans

Since 2003, the Section of Epidemiology has conducted year round surveillance for influenza using several methods, including collection of viral cultures from sentinel healthcare providers and tabulating reports of influenza-like illness at certain healthcare facilities. Surveillance findings are updated weekly and posted on-line: www.epi.alaska.gov/id/influenza/fluinfor.htm. Healthcare providers interested in participating in Epidemiology's influenza surveillance program should call 907-269-8000 and speak with the Influenza Coordinator.

Birds

From 1998-2004, over 12,000 samples from wild birds in Alaska were evaluated for influenza viruses; H5N1 was **not** detected. In 2005, the University of Alaska–Fairbanks and the U.S. Geological Survey's National Wildlife Health Center (NWHC)

are working with state and federal wildlife agencies to continue collecting samples from migratory birds to test for the presence of any influenza viruses.

Guidelines for Contact with Wild Animals

In consultation with other agencies, the NWHC produced a Bulletin with guidelines for handling birds with reference to H5N1 (www.nwhc.usgs.gov/research/WHB/WHB_05_03.html). However, it is important to realize that humans can acquire several diseases from wildlife and should always take care to practice good hygiene when handling animals. General information about wildlife diseases can be found on the Alaska Department of Fish and Game's (ADFG) website: www.wildlife.alaska.gov/index.cfm?adfg=disease.main.

The following guidelines are adapted from those of the NWHC. Future guidelines will reflect the status of H5N1 in the world. Currently there is **no** evidence of H5N1 in North America.

General Public

- Avoid direct contact with wildlife. If you find a **group** of dead wild birds – do not pick them up. Instead, call a local wildlife authority, such as ADFG in Anchorage 907-267-2257, in Fairbanks 907-459-7206, or in Juneau 907-465-4148; or the U.S. Fish and Wildlife Service in Anchorage 907-786-3309.

Certain dead birds (crows, ravens, jays, magpies, or raptors) may be tested for West Nile virus. In addition to the phone numbers above, call 907-269-8000 for more information (see Epidemiology *Bulletin* No. 17, April 27, 2005 – www.epi.alaska.gov/bulletins/docs/b2005_17.pdf).

- If you do inadvertently have contact with wildlife, thoroughly wash your hands with soap and water, taking care to avoid rubbing your eyes, eating, drinking or smoking before washing. If hands are not visibly soiled, alcohol-based hand products may be used.

Hunters

- Wear rubber or disposable gloves while handling and cleaning game.
- After handling game, wash hands thoroughly with soap and water, taking care to avoid rubbing your eyes, eating, drinking or smoking before washing. If hands are not visibly soiled, alcohol-based hand products may be used. Clean all equipment and surfaces that come into contact with game.
- Do not handle or eat game that is found dead. Game meat should be cooked to 155°F and poultry to 165°F (Department of Environmental Conservation's Safe Food Temps website www.dec.state.ak.us/eh/fss/consumers/safe_food_temperatures.htm).

Wildlife Professionals Working with Live Wild Birds

- Work in well-ventilated areas when indoors. When outdoors, work upwind of animals if possible to decrease inhalation of dust, feathers or dander.
- Wear rubber or disposable gloves and protective eyewear or a face shield while handling wild birds.
- Wash hands with soap and water thoroughly and frequently, taking care to avoid rubbing your eyes, eating, drinking or smoking before washing. If hands are not visibly soiled, alcohol-based hand products may be used. Clean all equipment and work surfaces between sites.

Avian Influenza Internet Resources

U.S. Centers for Disease Control and Prevention (CDC)

www.cdc.gov/flu/avian/index.htm

National Wildlife Health Center (NWHC)

www.nwhc.usgs.gov/research/avian_influenza/avian_influenza.html