



TEAMSTERS **Safety & Health FACTS**

Safety and Health Department, International Brotherhood of Teamsters
25 Louisiana Avenue, NW, Washington, DC 20001 ♦ 202/624-6960 ♦ ibtsafety@teamster.org

Avian Influenza (Bird Flu):

Protecting Workers from Exposure

Avian Influenza (AI), or ‘bird flu,’ is an infectious viral disease that can cause serious illness and death in domestic poultry. Avian flu is primarily spread by direct contact between healthy and infected birds through saliva, nasal secretions, and feces or through contaminated equipment or materials. There are many different varieties of AI that frequently occur around the world. The vast majority of these AI viruses are naturally-occurring, low pathogenic (do not kill most infected birds), and do not impact human health. Recently a number of different subtypes of influenza A viruses have emerged as agents of avian influenza in humans and these include H5N1, H7N2, H7N3, H7N7 and H9N2.

Influenza A virus subtype H5N1 is a particular cause for concern because it has been associated with severe illness and death in both birds and humans. The current outbreaks of highly pathogenic avian influenza (HPAI) H5N1 in poultry, which began in South-East Asia in mid-2003, are the largest and most severe on record. Never before in the history of this disease have so many countries been simultaneously affected, resulting in the loss of so many birds. While a relatively small but growing number of people in Asia, Europe, and parts of Africa have been infected with H5N1 virus (over 250 as of late November 2006), more than half of them have died as a result. Although the virus is not human-adapted and therefore does not easily spread between people, information from a small number of cases suggests the virus may have spread from person-to-person transmission. The concern is that the avian flu virus eventually will develop the ability to spread easily from person to person similar to season influenza and cause a pandemic (global outbreak of influenza).

Currently, there is no pandemic of influenza. An influenza pandemic would occur if a new influenza A virus emerges for which there is little or no immunity in the human

population, begins to cause serious illness, and then spreads easily person-to-person worldwide. Because it is a new virus, we do not have immunity, and existing seasonal vaccines are not effective in preventing disease. The current H5N1 avian influenza may or may not result in a pandemic influenza. We have had three pandemics in the past century; the 1918 pandemic was the worst.

The H5N1 avian influenza is not present in the United States but this situation could change at any time, through wild bird migration, illegal smuggling of birds or poultry products, travel by infected people or people traveling with virus-contaminated articles from regions where H5N1 already exists. Since 2004, different strains of avian flu have been detected among several flocks of birds in the U.S. and state officials have ordered the destruction of hundreds of thousands of birds.

WHO IS AT RISK?

Because these viruses do not commonly infect humans, there is little or no immunity against them in the human population. In the current outbreaks in Asia and Europe more than half of those infected with the virus have died.

AI viruses can spread by manure, equipment, vehicles, egg flats, crates, and people whose clothing or shoes have come in contact with the virus. Evidence to date indicates that close contact with infected poultry, or surfaces and objects contaminated with their feces, is the main source of human infection with the H5N1 virus. The virus is believed to transmit to humans through contact of the virus with the mouth, nose, eyes, and lungs. It can also spread through hand or face contact or through coming in contact with something that an infected person has already touched. Influenza viruses can survive for days to a few weeks in fecal material.

Examples of workers at risk of exposure to the avian flu virus include the following:

- ◆ Poultry processing workers, especially involved in slaughtering, defeathering, butchering, preparation, and eradication of infected birds
- ◆ Animal handlers/animal control officers
- ◆ Transporters (truckers) of live birds
- ◆ Health care professionals or medical workers (including emergency responders) who transport or treat avian flu patients
- ◆ Food laboratory workers
- ◆ Food handlers
- ◆ Airline flight crews workers who must interact with persons with suspected avian influenza
- ◆ Bus and ground transportation workers
- ◆ Workers involved in disease control and eradication (including Federal, contract, and company workers)
- ◆ Veterinarian
- ◆ U.S. Department of Agriculture (USDA) inspectors
- ◆ Workers who handle and package eggs

- ◆ Bird breeders

WHAT LAWS ARE THERE TO PROTECT WORKERS?

Employers have a common law and statutory duty to provide a safe and healthy workplace for their employees. Thus, employers must take all reasonable steps to prevent employees from being exposed to the virus. To accomplish this, employers should develop appropriate policies and procedures.

The Occupational Safety and Health Administration (OSHA) has developed guidance documents for workers and employers. The *OSHA Guidance Update for Protecting Workers against Avian Flu Viruses* (Nov. 14, 2006) “is for current implementation and provides guidance to employees who are likely to become exposed to avian influenza if it reaches the U.S. or if they travel or work abroad. The guidance focuses on poultry workers, animal handlers, laboratory workers, health care workers, food handlers, airport personnel, and travelers and employees on work assignment abroad, but does not exclude others who may become exposed to avian flu viruses. Recommendations include the following procedures: basic infection control, personal protective equipment (PPE), antiviral drug use and seasonal flu vaccination, medical monitoring of employees and disinfection of contaminated areas.

While OSHA does not have a specific regulation for avian flu, there are existing OSHA standards (e.g. *Personal Protective Equipment* and *Respiratory Protection*) that may help protect workers in the event of avian flu episodes. Under Section 5 of the Occupational Safety and Health Act, commonly referred to as the *General Duty Clause*, an employer must protect its employees against “recognized hazards” which may cause serious injury or death. Enforcement actions against a non-compliant employer would rely on the regulatory guidance provided by OSHA and on recommendations issued by the Centers for Disease Control (CDC), the National Institute for Occupational Safety and Health (NIOSH), and other similar resources.

OSHA has also been petitioned by labor unions for an emergency temporary standard to protect health care workers, emergency responders and other essential personnel at risk of exposure in the workplace.

In the event that an employee contracts avian flu as a result of occupational or non-occupational exposure, other laws that may apply are Worker’s Compensation-disability Benefits; Family and Medical Leave Act; and Americans with Disabilities Act (ADA).

WHAT CAN BE DONE TO PROTECT WORKERS?

Symptoms of avian influenza in humans have ranged from typical human influenza-like symptoms such as fever, extreme fatigue, cough, sore throat, muscle and joint aches to eye infections, pneumonia, severe respiratory diseases, and other potentially life-threatening complications. Symptoms usually being within 2 to 3 days of exposure depending upon which virus caused the infection. The current H5N1 avian influenza in

humans is, however, a very serious illness because the case fatality rate is greater than 50% if infected.

Currently there is no vaccine to protect against avian flu in humans. Some antiviral medications commonly used for influenza may be useful in treating influenza caused by H5N1 virus. Influenza viruses can, however, become resistant to these drugs, so these medications may not always work.

Although at present, there is minimal evidence that there is a risk of person-to-person transmission, in order to prevent workers from becoming infected, it is essential that infection control/worker protection measures are in place for workers who are likely to have prolonged direct or indirect exposure to any avian influenza virus. Depending on particular tasks and circumstances of exposure, these measures would include some or all of the following procedures: basic infection control, personal protective equipment (PPE), antiviral drug use and seasonal flu vaccination, medical monitoring of employees and disinfection of contaminated areas:

- ◆ **A written exposure control plan** before there is an outbreak to determine which workers are at risk, what will be done to prevent exposure at an affected worksite, and outbreak response tasks (e.g., culling/ depopulating, cleaning and disinfection, disposal contaminated materials).
- ◆ **Training and communication of hazards;**
 - on the signs of infection with the avian flu among domestic poultry;
 - on symptoms of avian flu in humans.
- ◆ **Proper hygiene practices, including hand washing, prevention of cross-contamination, when handling raw poultry meat;**
 - All persons who have been in close contact with potentially infected animals, contaminated surfaces, or after removing gloves, should wash their hands frequently. Hand hygiene should consist of washing with soap and water for at least 15-20 seconds or the use of other standard or specified hand-disinfection procedures.
 - Where possible, workers should be advised to avoid contact with bird or bird-related materials, and if exposure is unavoidable, to use gloves, and avoid aerosolizing (turning into fine particles suspended in air) bird-related materials and wash hands following removal of gloves.
- ◆ **Adequate personal protective clothing, as needed, capable of being disinfected or disposed** (see IBT Fact Sheet on *Protect yourself with Personal Protective Equipment and Respiratory Protection*);
 - Conduct a risk assessment of potential worker exposure to determine the type and level of personal protective equipment needed.
 - For most eradication and other high exposure risk activities, the following is recommended: Coveralls or surgical gowns plus an impermeable apron with long cuffed sleeves; Goggles; Boots or protective foot covers that can be disinfected or disposed; Eye Protection; and Respirators. Note that effective eye protection is a critical component of preventing transmission to workers.

- The minimum Centers for Disease Control and Prevention (CDC) recommendation for respirators is a disposable particulate respirator (e.g. N95, N99 or N100) used as part of a comprehensive respiratory protection program. The elements of such a program are described in OSHA's Respiratory Protection standard, 29 CFR 1910.134. These include training, fit-testing, and fit-checking to ensure appropriate respirator selection and use. To be effective, respirators must provide a proper sealing surface on the wearer's face. In certain potentially high exposure circumstances, increased levels of respiratory protection, for instance, a powered air-purifying respirator, may need to be considered.
- ◆ **Medical monitoring of workers for illness;**
 - The employer should monitor the health of potentially exposed workers for the development of fever, respiratory symptoms, and/or conjunctivitis (i.e., eye infections) for 10 days (CDC) after last exposure to avian influenza-infected or exposed birds or to potentially avian influenza-contaminated environmental surfaces.
- ◆ **Post-exposure prophylaxis (PEP) with an appropriate influenza antiviral drug daily,** per CDC instructions, for the duration of time during which direct contact with infected poultry or contaminated surfaces occurs, as well as for one week following last exposure. Antiviral medications are an important supplement to vaccination; they are not a substitute for vaccination.
- ◆ **Vaccinating workers with the seasonal influenza vaccine;**
 - The avian and human influenza viruses can exchange genes when a person is simultaneously infected with viruses from both the common human influenza virus and the avian type. Unvaccinated workers, such as poultry workers and those involved in avian influenza disease control and eradication activities, should receive the current season's influenza vaccine to reduce the possibility of dual infection with avian and human influenza viruses.
 - Note that vaccination with the seasonal influenza vaccine will not provide protection against avian influenza.
- ◆ **Continuing workers' regular rate of pay** with no loss of benefits (medical removal protection) while they are sick and/or contagious with flu.
- ◆ **Housekeeping and environmental hygiene to reduce sources of infection;**
 - Depending on temperature and moisture conditions, avian influenza A viruses can survive in the environment for weeks. However, they are generally sensitive to most detergents and disinfectants and are inactivated by heating and drying. U.S. Environmental Protection Agency (EPA)-registered products that have a claim of being effective against influenza viruses should provide some protection activity against avian influenza A viruses.
 - Note that during eradication activities, certain disinfectants and other cleaning chemicals (i.e., bleach) will be used to remove residual influenza virus. Consideration of worker protection against exposure to these chemicals may be needed.
- ◆ **Raw poultry always should be handled hygienically** because it can be associated with many infections, including *Salmonella*. Therefore, all utensils and surfaces (including hands) that come in contact with raw poultry should be

cleaned carefully with water and soap immediately afterwards. It does not appear that the disease can be transmitted to humans through properly cooked food (even if contaminated with the virus prior to cooking). The following WHO guidance provides information on food safety issues, <http://www.who.int/foodsafety/micro/avian/en/>.

- ◆ In health care settings, isolation rooms, other engineering controls, work practices, and personal protective equipment (including gloves, gowns, and respirators) should be used for patients with documented or suspected avian influenza, to reduce exposure to infectious aerosols and droplets emitted from the infected person's respiratory tract as well as surfaces that may be contaminated with the virus.
 - For additional information regarding protection of health-care workers, see the CDC's Interim Recommendations for *Infection Control in Health-Care Facilities Caring for Patients with Known or Suspected Avian Influenza*, <http://www.cdc.gov/flu/avian/professional/infect-control.htm>
 - Other practical approaches to reducing workers' exposures to the virus may be considered. For example, combining tasks to limit the number of workers entering a room or area with known or suspected infectious patients may be an effective strategy to reduce exposure risk to workers.

For More Information:

Contact the IBT Safety and Health Department at (202) 624-6960, or ibtsafety@teamster.org or go to IBT's website at <http://www.teamster.org>;

The following information on avian flu is available through several federal agencies, private-public collaboration, and international organizations:

- The official U.S. government website for information on pandemic and avian influenza includes information for *Workers and Business & Industry*,
- The Occupational Safety and Health Administration (OSHA) has a website on *Avian Flu*, including publications, fact sheets, and quick cards for various occupations, both in *English* and *Spanish*;
The section includes the following publications:
OSHA Guidance Update for Protecting Workers against Avian Flu Viruses (Nov. 14, 2006):
Avian Influenza: Protecting Poultry Workers at Risk (Dec. 13, 2004),
- The National Institute for Occupational Safety and Health (NIOSH) provides information on *Avian Influenza: Protecting Workers from Exposure*,
- The United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) Directive 6800.1, 5/10/06, *Ensuring the Protection of Employees Involved in Highly Pathogenic Influenza Control and Eradication Activities*, specifies APHIS policy to ensure the safety of employees engaged in highly pathogenic avian influenza (HPAI) control and eradication activities. The

- policy is based on the degree of risk known to be associated with various levels and types of exposures to HPAI viruses and should be considered complementary to avian disease control and eradication strategies as determined by State government, industry, or the United States Department of Agriculture (USDA),.
- The Delmarva (Delaware, Maryland, Virginia) Avian Influenza Joint Task Force, a joint effort of the public sector and private poultry companies, has developed a document, *Interim Guidance for Implementation of CDC and OSHA Avian Influenza Recommendations* (Oct. 17, 2005). This document provides practical guidance related to human AI infection prevention and control, including related to training of workers, basic infection control, use of personal protective equipment, decontamination measures, vaccine and antiviral use, surveillance for illness, and appropriate evaluation of persons who become ill.
 - The U.S. Centers for Disease Control and Prevention (CDC) has online resources for various occupational groups at <http://www.cdc.gov/flu/avian/index.htm>,
 - For protection of health-care workers involved in the care of patients in the United States with known or suspected avian influenza A (H5N1), see *Avian Influenza: Resources for Health Professionals*,
 - CDC provides guidance for protection of persons involved in activities to control and eradicate outbreaks of avian influenza among poultry in the United States. Activities that could result in exposure to avian influenza-infected poultry include euthanasia, carcass disposal, and cleaning and disinfection of premises affected by avian influenza. See CDC's *Interim Guidance for Protection of Persons Involved in U.S. Avian Influenza Outbreak Disease Control and Eradication Activities*,
 - For airline flight crews and personnel who must interact with persons suspected of having H5N1 avian influenza, see the CDC's *Interim Guidance for Airline Flight Crews and Persons Meeting Passengers Arriving from Areas with Avian Influenza*,
 - For personnel who clean, maintain, or remove baggage/packages from commercial and cargo airlines about appropriate precautions related to avian influenza A (H5N1), see *Guidelines and Recommendations: Interim Guidance for Airline Cleaning Crew, Maintenance Crew, and Baggage/Package and Cargo Handlers for Airlines Returning from Areas Affected by Avian Influenza A (H5N1)*,
 - The United States Department of Agriculture (USDA)'s website on *Avian Influenza* provides information on biosecurity, safe food handling, contact information for State Departments of Agriculture, Wildlife, and Public Health, etc.
 - For additional biosecurity guidelines, consult the State biosecurity websites.
 - The *World Health Organization (WHO)* is coordinating the global response to human cases of H5N1 avian influenza and monitoring the corresponding threat of an influenza pandemic. Information on this page tracks the evolving situation and provides access to both technical guidelines and information useful for the general public.