

Background Information

Influenza (flu) is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness. People who are at high risk for serious complications from flu include children younger than 5 years, people with certain long-term health conditions including asthma and diabetes, as well as pregnant women and people 65 years and older. Influenza viruses fall into three types: influenza A, B, and C. Influenza A viruses are found in both humans and many different animals, including ducks, chickens, pigs, whales, horses and seals. Avian and swine strains of influenza A can occasionally be transmitted from animals to humans. Human cases of avian or swine flu can result in severe illness or death, as humans lack immunity to these viruses, and limited vaccine coverage may encourage disease spread. Therefore, prevention of influenza transmission between birds, pigs, and humans is of critical importance.

Avian Flu

Avian influenza A occurs naturally among wild aquatic birds worldwide and can infect domestic poultry and other bird and animal species. Avian influenza viruses are very contagious among birds and some of these viruses can sicken and even kill certain domesticated bird species including chickens, ducks, and turkeys. The virus can be spread through bird saliva, nasal secretions, and feces. Although avian influenza A viruses usually do not infect humans, rare cases of human infection have been reported. Most human infections have occurred following direct or close contact with infected poultry. Avian influenza may be transmitted from animals to humans directly from birds or their immediate environments, or through an intermediate host, such as a pig. Illness in humans can range from mild to severe.

Swine Flu

Swine Influenza (swine flu) is a respiratory disease of pigs caused by a type A influenza virus. Swine flu viruses can cause high levels of illness in pig herds, but cause few deaths in pigs. Influenza strains that infect pigs rarely lead to infection in humans. However, certain influenza viruses can cause mild to severe illness in humans. Most reported human cases have been linked to contact with pigs in public settings, such as fairs or petting zoos, or direct work with infected animals.

The Philadelphia Department of Public Health, Division of Disease Control is providing this guidance to assist those working with animals or organizing animal exhibitions in understanding methods to prevent and control influenza (flu) during the 2013-2014 influenza season. This guidance includes recommendations specific to swine and avian influenza and includes information regarding the management of animals, protection of animal workers, organization of animal exhibitions, guidelines for animal exhibition visitors, and recommendations for ill individuals. It is compatible with guidance from the Centers for Disease Control and Prevention (CDC) and the Pennsylvania Department of Health (PA DOH). Animal caretakers and exhibitors are advised to be vigilant in the identification of influenza in animals and in the implementation of prevention and control measures.

Information for Managing Animals

Infection Prevention

- In caring for animals, perform the following infection control measures on a routine basis:
 - Provide adequate ventilation both for animals and humans.
 - Store animal feeders, watering equipment, and tools used to maintain and clean the animal environment (e.g. shovels and pitchforks) in designated areas that are restricted from public access.
 - Avoid transporting soiled bedding through non-animal areas or transition areas.
 - Where feasible, disinfect animal areas (e.g., flooring and railings) at least once daily.

- Provide clean clothing and disinfection facilities for employees caring directly for animals.
- Thoroughly clean and disinfect equipment and vehicles entering and exiting the animal area.
 - Commonly used disinfectants, such as quaternary ammonium compounds and 10% bleach solutions, will kill flu viruses.
 - Equipment and surfaces can be cleaned and disinfected with other products registered for use against flu viruses.
- Exclude individuals ill with influenza from directly caring for animals until their illness resolves

Swine-Specific Recommendations

- Vaccinating pig herds for influenza can aid in reducing the spread of influenza. However, vaccination is not 100% effective.
- As human flu viruses can also infect pigs, contact between pigs and sick humans should be minimized.

Avian-Specific Recommendations

- Protect poultry flocks from coming into contact with wild or migratory birds, or with water that could have been contaminated by wild birds.
- In managing poultry flocks, process each lot of birds separately, and clean and disinfect poultry houses between flocks.

Response to Infection

Swine-Specific Recommendations

- If you are responsible for the care of pigs, monitor them daily for symptoms of illness. Call a veterinarian if you suspect illness.
 - Symptoms can include discharge from the nose and/or eyes, lethargy (sleepiness), lack of appetite, fever, sneezing, breathing difficulties, or coughing.
 - Ill pigs, animals suspected or known to be infected with influenza viruses, and animals from herds with a recent history of respiratory disease should not be exhibited. They should be immediately isolated or sent home.

Avian-Specific Recommendations

- Those caring for poultry should watch animals for symptoms of infection, including ruffled feathers, a drop in egg production, decreased food consumption, or respiratory signs such as coughing or sneezing. The PA Department of Agriculture can assist with laboratory testing and evaluation of flocks.
 - Certain highly pathogenic avian influenza (HPAI) strains can lead to additional symptoms such as sudden death, lack of energy and appetite, soft-shelled or misshapen eggs, swelling, purple discoloration, lack of coordination, nasal discharge, and diarrhea.
 - Some ducks can be infected without any signs of illness, but can transmit illness to other animals.
- Following detection of an avian influenza outbreak, depopulation (or culling, also called “stamping out”) of infected flocks is usually carried out.
 - Nearby or linked flocks should be monitored for signs of illness.
 - Exposed flocks should be quarantined or culled if disease is detected.

Information for Protection of Animal Workers

- Those who work directly with animals should avoid close contact with pigs that look or act ill, as well as dead or sick birds.
- Animal workers should take protective measures if they must come in contact with pigs or birds that are known or suspected to be sick. This includes wearing protective clothing, gloves, and masks that cover both the mouth and nose.
- People who work with poultry or pigs or who respond to avian or swine influenza outbreaks are advised to use appropriate personal protective equipment and pay careful attention to hand hygiene.

- Animal workers should receive the seasonal influenza vaccination. While the seasonal influenza vaccine will not prevent infection with avian or swine influenza A viruses, it will reduce the risk of co-infection with human and avian or swine influenza A viruses.
- Anyone at high risk of serious flu complications planning to attend a fair where pigs will be present should avoid pigs and swine barns at the fair.
 - This includes pig exhibitors and family members with high risk factors.
 - This may mean that exhibitors with high-risk factors do not show their pigs.

Information for Exhibition Organizers

- Whenever possible, facilities should minimize human-animal contact.
- Visitors to fairs and exhibitions, particularly to the animal barns, should receive information about disease risks and recommendations to protect visitors and animals from illness.
 - Persons at high risk of serious flu complications should be instructed not to have contact with pigs or birds, or to enter areas with pigs or birds.
- Post signs or otherwise notify visitors that, for health reasons, they should never eat, drink, smoke, place their hands in their mouth, or use bottles or pacifiers in animal areas. They should also wash their hands after leaving such an area.
- Instruct visitors not to carry toys, pacifiers, spill-proof cups, baby bottles, strollers or similar items into areas with animals. (If possible, establish storage or holding areas for strollers and related items).
- Instruct visitors to supervise children closely to discourage hand-to-mouth activities (e.g. nail-biting and thumb-sucking) and contact with soiled bedding. Children should not be allowed to sit or play on the ground in animal areas.
- Parents and children should be instructed to wash their hands before and after touching animals or material contaminated by animals. Instruct visitors that if children's hands become soiled, supervised hand washing should occur immediately.
- Control visitor traffic to prevent overcrowding.
- Provide accessible handwashing stations for all visits, including children and persons with disabilities.

Information for Visitors to Animal Exhibitions

- Visitors at high risk of serious flu complications should avoid pigs and swine barns.
- Visitors should not eat, drink, or put anything in their mouths in the animal areas.
- Visitors should not take toys, pacifiers, cups, bottles, strollers, or similar items into the animal areas.
- Visitors should wash their hands often with soap and running water before and after exposure to pigs. If soap and water are not available, they may use an alcohol-based hand rub.
- Visitors who are sick with flu-like illness should stay home and avoid contact with pigs to prevent further spread of illness. Visitors should wait 7 days after their illness started or until they have been without fever for 24 hours without the use of fever-reducing medications, whichever is longer.

What To Do If You Get Sick

- Flu symptoms include fever, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches, fatigue, and sometimes vomiting or diarrhea.
- Visitors at high-risk who get flu symptoms should call a health care provider. They should tell the provider about their risk factors for severe illness and their symptoms.
 - They should mention any recent exposure to pigs or dead or sick birds to their provider.
 - If visitors are not at high-risk and get flu symptoms after exposure, they should seek medical care as they normally would.
- A health care provider can decide whether influenza testing or treatment is needed.
- Visitors should seek medical treatment promptly if they get symptoms and are at high risk, as influenza antiviral drugs work better the sooner they are started.

Additional Resources

- Philadelphia Department of Public Health, Division of Disease Control
<http://www.phila.gov/health> or <https://hip.phila.gov>
- Pennsylvania Department of Health (PADOH) Avian Flu
<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=558008&mode=2>
- Centers for Disease Control and Prevention (CDC) Seasonal Influenza (Flu) : Swine Flu
<http://www.cdc.gov/flu/swineflu/h3n2v-fairs-factsheet.htm>
- Centers for Disease Control and Prevention (CDC) Seasonal Influenza (Flu) : Avian Flu
<http://www.cdc.gov/flu/avianflu/prevention.htm>
- Centers for Disease Control and Prevention (CDC) Seasonal Influenza (Flu) : People at High Risk of Developing Flu–Related Complications
http://www.cdc.gov/flu/about/disease/high_risk.htm
- CDC Interim Guidance for People who have Close Contact with Pigs in Non-commercial Settings: Preventing the Spread of Influenza A Viruses, Including the Novel Influenza A (H1N1) Virus
http://www.cdc.gov/h1n1flu/guidelines_noncommercial_settings_with_pigs.htm

For further information or examples of appropriate signage, please contact the Philadelphia Department of Public Health, Division of Disease Control at (215) 685-6740.