Highly Pathogenic Avian Influenza H5 in U.S. Domestic and Wild Birds; Human Health Implications and Background Information

- In December 2014 and January 2015, the United States Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) reported the presence of highly pathogenic avian influenza (HPAI) H5 in both domestic and wild birds.
- These findings are a result of increased outreach, reporting and surveillance activities following the detection of HPAI H5N2 among commercial flocks in Canada reported in early December 2014.
- HPAI H5N8 virus has been identified in California, Idaho, Oregon, Utah and Washington.
- HPAI H5N2 virus has been identified in Washington, Idaho, Oregon and California.
- On January 20, 2015, USDA reported finding an HPAI H5N1 virus from a wild duck in Washington. (The sample was collected in December.)
- This HPAI H5N1 virus is a reassortant virus that has a new combination of genes from HPAI H5N1 viruses that spread in Asia and low-pathogenic avian influenza viruses that spread in North America.
- HPAI H5N8, HPAI H5N2 and HPAI H5N1 viruses with this combination of genes had not been detected previously in the United States.
- On January 24, 2015, USDA announced that HPAI H5N8 was detected in commercial poultry in California.
- While no human infections with HPAI H5N8, HPAI H5N2, or this reassortant HPAI H5N1 have previously been reported worldwide, some genetically similar HPAI viruses (like Eurasian H5N1, for example) have infected people in the past.
- Though rare, human infections with HPAI viruses have most often occurred after contact with infected birds or their secretions or excretions.
- Illnesses in humans from avian influenza virus infections have ranged in severity from mild to severe.
- The U.S. Department of Interior (DOI) and the United States Department of Agriculture (USDA) are the lead federal agencies for outbreak investigation and control in wild birds and the USDA is the lead agency for such activities in domestic birds.
- The Department of Health and Human Services (HHS) and The Centers of Disease Control and Prevention (CDC) would lead any federal response for protecting human health.
- At this time, CDC is communicating and coordinating with state health departments on appropriate human health measures and is working with animal health colleagues to minimize public health risk.
- For more information about avian influenza visit the USDA ARS and APHIS websites. For more information on avian influenza and wild birds, please visit the USGS National Wildlife Health Center.

Risk to People in the United States

- CDC considers the risk to people from these HPAI H5 infections in wild birds, backyard flocks, and commercial poultry, to be low.
- No human infections with these viruses have been detected at this time however, similar viruses have infected people. It's possible that human infections with these viruses may occur.
- While human infections are possible, infection with avian influenza viruses in general are rare and – when they occur – these viruses have not spread easily to other people.
- These reports of H5-infected wild birds and poultry in the United States do not signal the start of a pandemic.
- This report does mean that **people in contact with known infected or possibly infected birds should take precautions to protect against infection**.

CDC Recommendations for HPAI H5 Exposures

- People who have had direct contact with infected bird(s) should be watched to see if they become ill. They may be given influenza antiviral drugs preventatively.
- While antiviral drugs are most often used to treat flu, they also can be used to prevent infection in someone who has been exposed to influenza viruses. When used preventively, antiviral drugs are 70% to 90% effective.
- Close contacts (family members, etc.) of people who have been exposed to HPAI H5 viruses are being asked to monitor their health and report any flu-like symptoms.
- Health care providers evaluating patients with suspected HPAI H5 infection should call CDC. The agency is providing case-by-case guidance at this time.
- CDC will monitor this situation and continue to work with public and animal health partners to minimize the risk to human health.
- CDC will update the public as new information becomes available.

Protective Actions that You Can Take

- As a general precaution, people should avoid wild birds and observe them only from a distance; avoid contact with domestic birds (poultry) that appear ill or have died; and avoid contact with surfaces that appear to be contaminated with feces from wild or domestic birds.
- More information is available at the following links:
    - USDA Biosecurity Overview page: http://www.aphis.usda.gov/animal_health/birdbiosecurity/biosecurity/
    - Biosecurity for Poultry http://www.aphis.usda.gov/animal_health/birdbiosecurity/biosecurity/basicspoultry.htm

- Biosecurity for Wild Birds
  http://www.aphis.usda.gov/animal_health/birdbiosecurity/biosecurity/wildbirds.htm
- Hunter Wallet Card
  http://www.aphis.usda.gov/animal_health/birdbiosecurity/downloads/USDA_HntrCd_Hi.pdf

U.S. Poultry

- Based on the World Organization for Animal Health (OIE) reporting criteria for avian influenza in commercial poultry, between 1997 and 2014, the United States experienced one incident of highly pathogenic avian influenza (HPAI).
- This occurred in 2004, when there was a HPAI H5N2 outbreak on one poultry farm in Texas, caused by a North American lineage HPAI H5N2 virus.
- No human cases of HPAI H5 associated with wild bird or backyard poultry infections with HPAI have ever been reported in the U.S.
- The U.S. poultry industry maintains rigorous health and safety standards, including routine monitoring for avian influenza.
- It is safe to eat properly handled and cooked poultry in the United States.
- However, consumers are reminded to handle raw poultry hygienically and cook all poultry and poultry products (including eggs) thoroughly before eating.
- Raw poultry can be associated with many infections, including salmonella.
- While there is no evidence that any human cases of bird flu have ever been acquired by eating properly cooked poultry products, uncooked poultry and poultry products (like blood) have been linked to human infections with organisms other than influenza. However, proper cooking kills influenza viruses. Visit the USDA food safety website at http://www.fsis.usda.gov/Food_Safety_Education/Food_Safety_Education_Programs/index.asp for instructions on handling poultry safely.

Background on Recently Detected HPAI H5N8, H5N2 and H5N1 Viruses

- The HPAI H5N8 viruses detected in the United States are similar to viruses that were first reported on duck farms in China in 2009-2010. During 2014, similar HPAI H5N8 viruses were found in wild birds and poultry in Korea and Japan. In November 2014, HPAI H5N8 in poultry and wild birds was reported in England, the Netherlands, Germany and Italy. No human cases have been associated with these HPAI H5N8 viruses.
- The HPAI H5N2 viruses detected in the United States are similar to HPAI H5N2 viruses first detected in early December 2014 at poultry farms in British Columbia province, Canada. This is a reassortant virus that combines genes from Eurasian H5 viruses and North American N2 viruses. No human cases have been associated with either of the lineages of HPAI H5N2 viruses.

- The HPAI H5N1 virus detected in the United States is a reassortant virus with genes from HPAI H5 Asian viruses and low pathogenic North American viruses.

Background on Avian Influenza

- Avian influenza (Bird flu) is a viral disease of birds. Migratory birds may carry avian influenza viruses that do not usually make them sick. Avian influenza viruses can be classified as either "low pathogenic" avian influenza viruses or "highly pathogenic" avian influenza viruses (HPAI). HPAI viruses can cause severe illness and death in birds, particularly in domestic poultry. Avian influenza viruses do not normally infect humans, but human cases have occurred.

Question & Answer

What should I do if I find a dead bird?

State and local agencies have different policies for collecting and testing birds, so check with your state health department, state veterinary diagnostic laboratory, or state wildlife agency for information about reporting dead birds in your area. Wildlife agencies routinely investigate sick or dead bird events if large numbers are impacted. This type of reporting could help with the early detection of illnesses like West Nile virus or avian influenza. If local authorities tell you to simply dispose of the bird's carcass (body), don't handle it with your bare hands. Use gloves or an inverted plastic bag to place the carcass in a garbage bag, which can then be disposed of in your regular trash.

Call or contact the United States Department of Agriculture's (USDA) Wildlife Services office at 1-866-4-USDA-WS (1-866-487-3297), or via: http://www.aphis.usda.gov/wildlife_damage/us_states_maps3.shtml.