Highly Pathogenic Avian Influenza

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HPAI H5N1 Webinar

West Virginia Department of HEALTH

What is Highly Pathogenic Avian Influenza?

- Avian influenza viruses are caused by type A influenza viruses that typically spread in wild birds (endemic in wild birds).
- Avian influenza viruses are different than the seasonal influenza viruses that circulate in human populations.
- The designation of “highly pathogenic” refers to the degree of morbidity and mortality caused when domestic poultry are infected with the virus.
- “Highly pathogenic” does not refer to how severe the illness may be if a person were to be infected.

The Importance of Seasonal Influenza Surveillance to H5N1 Detection and Response

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- Seasonal influenza activity is monitored year-round to promote rapid detection and reporting of novel cases of influenza A infection in people, facilitating prompt and effective public health response.

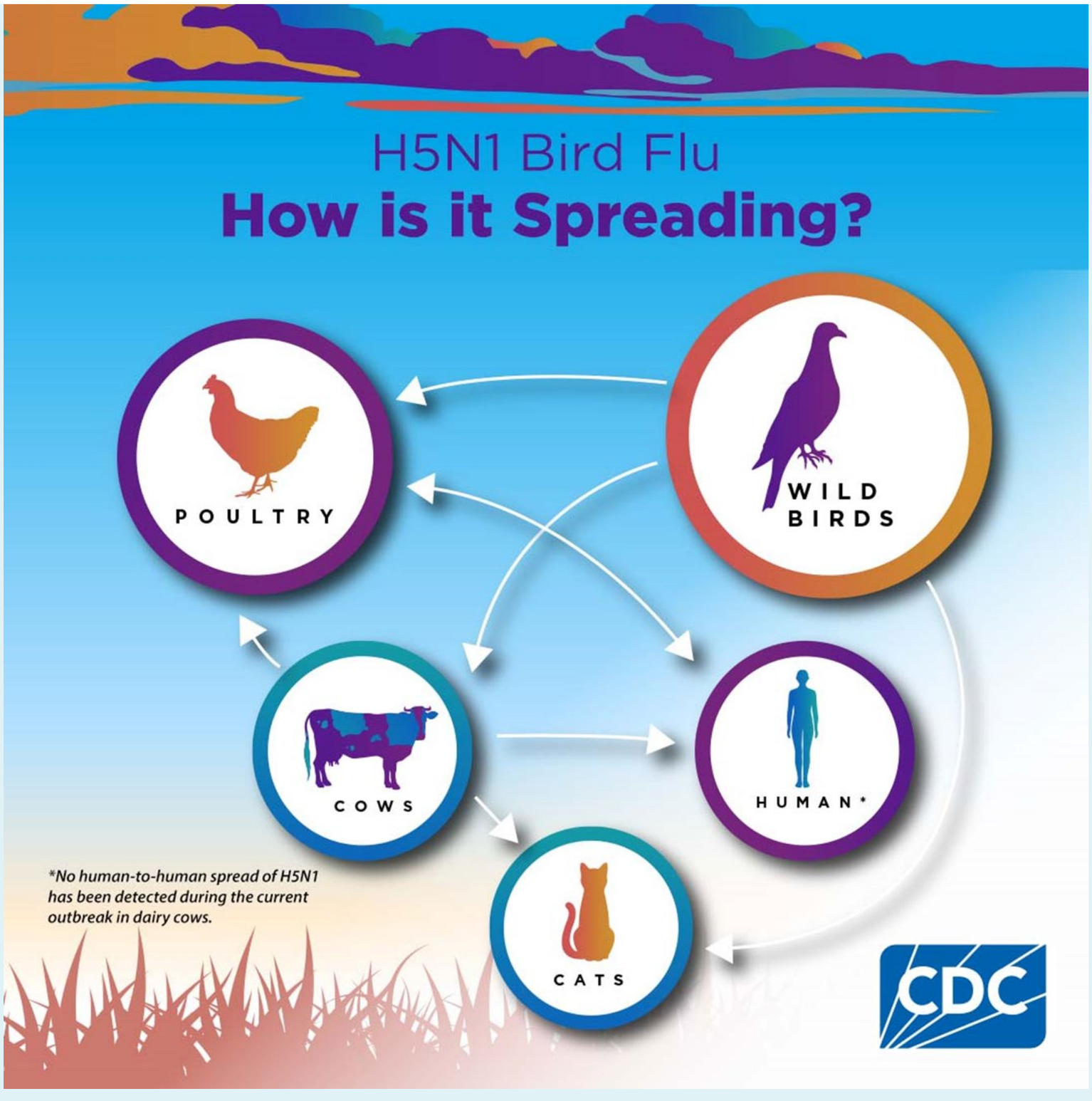
- Unusual flu activity would prompt further public health review and action as needed.

- CDC requests influenza subtyping for all influenza A positive patients that are hospitalized.

- Un-subtypeable influenza A positive specimens should be reported and submitted to OLS for further testing.

- Novel influenza A cases are nationally notifiable.

HPAI H5N1 Transmission



Current Situation

Wild birds: Widespread

Poultry Flocks: Sporadic outbreaks

Dairy Cattle: Ongoing multi-state outbreak

Mammals: Sporadic infections

Human Cases: 71 United States Cases

Person-to-Person Transmission: None

Public Health Risk: Low

HPAI H5N1: West Virginia Current Situation

County	State	Outbreak Date	Flock Type	Flock Size
Kanawha	West Virginia	2/16/2024	WOAH Non-Poultry	250
Pocahontas	West Virginia	1/3/2025	WOAH Poultry	9

- There have been no human cases of H5N1 in West Virginia

Confirmed Human Cases by State and Exposure Source, 2025

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State	Dairy Herds	Poultry Farms and Culling Operations	Other Animal Exposure	Exposure Source Unknown	State Total
California	36	0	0	2	38
Colorado	1	9	0	0	10
Iowa	0	1	0	0	1
Louisiana	0	0	1	0	1
Michigan	2	0	0	0	2
Missouri	0	0	0	1	1
Nevada	1	0	0	0	1
Ohio	0	1	0	0	1
Oregon	0	1	0	0	1
Texas	1	0	0	0	1
Washington	0	11	1	0	12
Wisconsin	0	1	0	0	1
Wyoming	0	0	1	0	1
Totals	41	24	3	3	71

†Exposure was related to other animals such as backyard flocks, wild birds, or other mammals.
‡Exposure source was not able to be identified.

NOTE: One additional case was previously detected in a poultry worker in Colorado in 2022.

Epidemiology of HPAI H5N1

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Incubation Period

- The time from when a person is exposed to and infected with avian influenza viruses to when respiratory symptoms begin is about three days but can range from about 2 to 7 days.
- Eye symptoms can start one to two days after exposure and infection

Contagious Period

- Not well understood, thought to be like seasonal flu
- Most contagious during first few days of illness
- People with severe disease, such as pneumonia, may have high levels of virus in the lower respiratory tract and may be contagious for several weeks.

How long does HPAI H5N1 last?

- A few days to less than two weeks
- Varies from person to person

Risk to Humans

- Non-fatal in poultry but can be mild to fatal in humans (case by case).
- The CDC considers the risk to the general public to be low.
- No evidence of human-to-human transmission.
- Risk is based on exposure, and some people with certain recreational or job-related exposures are at greater risk of infection.
- 1 human death on January 6, 2025 in Louisiana. (First H5N1-Related Human Death in the U.S) (>65, exposure to a backyard flock).
- 1 other critical human case in British Columbia, Canada requiring critical care support but survived (November 2024) (clade 2.3.4.4b, genotype D1.1) (source of exposure is unknown even after investigation).
- Louisiana death and B.C Canada case had the same genotype D1.1.

Influenza A(H5N1) and Our Food Supply

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- Pasteurization is effective at inactivating the influenza A(H5N1) virus.
- Analysis of retail beef samples found no viral particles.
- Beef studies show cooking ground beef to FSIS recommended cooking temperatures are effective in inactivating influenza A(H5N1).
- FDA continues to recommend against the consumption of raw unpasteurized milk.

Potentially Exposed Groups

- Poultry, dairy, and livestock farm workers
- Veterinarians and veterinary staff
- Animal health responders
- Public health responders
- Dairy laboratory workers
- Food processing workers handling raw milk and other confirmed or potentially contaminated materials
- Slaughterhouse workers performing certain tasks on lactating dairy cattle including:
    - Unloading or handling live lactating dairy cattle for slaughter, including working in holding pens and tasks involved with ante-mortem inspection.
    - Post-mortem processes including the post-mortem inspection, handling, and transporting of viscera.
    - Removing and transporting udders from dairy cattle for further processing or rendering.
- Backyard flock owners
- Public health responders
- Wild animal facility or farm workers

Exposures

Persons with recent exposure (within 10 days) to HPAI A(H5N1) virus through one of the following:

1. Exposure to HPAI A(H5N1) virus infected birds or other animals, defined as:
   - Being within six feet of birds/animals with confirmed avian influenza A(H5N1) virus infection. Including: handling, slaughtering, defeathering, butchering, culling, or preparing birds/animals for consumption, consuming uncooked or undercooked food or related uncooked food products, including unpasteurized (raw) milk, OR
   - Direct contact with surfaces contaminated with feces, unpasteurized (raw) milk or other unpasteurized dairy products, or bird or animal parts (e.g., carcasses, internal organs) from infected birds or other animals, OR
   - Visiting a live bird market with confirmed HPAI A(H5N1) virus infections in birds or associated with a case of human infection with HPAI A(H5N1) virus.

2. Exposure to an infected person, defined as:
   - Close (being within six feet) unprotected exposure to a person who is confirmed, probable, or symptomatic suspected case of human infection.

3. Unprotected laboratory exposure to HPAI A(H5N1).

Symptoms

- Eye redness (conjunctivitis)
- Mild flu-like upper respiratory symptoms
- Pneumonia requiring hospitalization
- Fever (temperature of 100oF [37.8oC] or greater) or feeling feverish*
- Cough
- Sore throat
- Runny or stuffy nose
- Muscle or body aches
- Headaches
- Fatigue
- Shortness of breath or difficulty breathing

Less common signs and symptoms include:

- Diarrhea
- Nausea
- Vomiting
- Seizures

*Fever may not always be present.

Prevention

- Avoid direct contact with sick or dead wild birds, poultry, and other animals and observe them only from a distance.
- Avoid contact between pets (e.g., pet birds, dogs and cats) and wild birds.
- Don't touch sick or dead birds, their feces or litter, or any surface or water source (e.g., ponds, waterers, buckets, pans, troughs) that might be contaminated with their saliva, feces, or any other bodily fluids without wearing personal protective equipment (PPE).
- Do not touch or consume raw milk or raw milk products, especially from animals with confirmed or suspected avian influenza A virus infection.
- Backyard flock owners should practice biosecurity to keep their flocks healthy.
- Backyard flock owners should wear PPE around sick or dead birds and avoid stirring up dust during cleaning and depopulation activities.

Public Health Action: Monitoring

- People exposed to HPAI A(H5N1)-infected birds or other animals (including people wearing recommended PPE) should be monitored for signs and symptoms of acute respiratory illness beginning after their first exposure and for 10 days after their last exposure.

- Monitoring includes a phone call by the LHD on day 0, 5, and 10 after exposure.

- Day 0, establish contact and provide education on:
  - signs and symptoms,
  - what to do if symptoms develop,
  - contacting the LHD point of contact if symptoms develop,
  - when to go to the hospital and calling ahead if possible.

- Day 5, confirm the exposed person under monitoring has remained symptom free.

- Day 10, confirm the exposed person under monitoring has remained symptom free and release them from monitoring.

Contact Information

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