

Detection, Diagnosis, Prevention, and Control of Highly Pathogenic Avian Influenza (HPAI) (H5N1) in Domestic Cats

A ONE HEALTH RESOURCE FOR VETERINARIANS



What is HPAI (H5N1) and why do veterinarians need this information?

Highly pathogenic avian influenza (HPAI) (H5N1) is a subtype of influenza A virus that primarily infects wild birds with spillover into commercial and backyard poultry, but has also infected dairy cattle, domestic cats, numerous wild mammal species, and occasionally humans. In cats, HPAI (H5N1) can cause serious, even life-threatening illness, with case fatality as high as 70%.

In 2020, a highly transmissible strain of HPAI (H5N1 clade 2.3.4.4b) emerged and began circulating worldwide. In the United States (U.S.) it was first detected in wild birds in 2021. Since then, it has affected millions of birds in commercial and backyard poultry flocks. It has also infected hundreds of wild bird species and over 70 species of mammals including dairy cattle, wild and domestic cats, farmed mink, peridomestic farm rodents, and marine mammals. The virus has also infected dozens of people in the U.S., usually workers who had close contact with farm animals. Illness in humans is usually mild (e.g., conjunctivitis, fever, cough) and can, although rarely, progress to severe disease and death.

The possibility for transmission of this zoonotic virus from domestic cats to humans raises occupational health and other public health concerns for veterinary medical personnel, their staff, and other people who interact with infected domestic cats.

Veterinarians and their staff may be the first professionals to encounter cats infected with HPAI (H5N1). Veterinarians play a key role in early detection, infection control, and coordination with animal health and public health professionals to limit animal-to-animal and animal-to-human transmission.

How do cats become infected?

Domestic cats can be exposed to HPAI (H5N1) through multiple pathways, including ingestion of infected animals or animal products such as raw pet food and unpasteurized milk, direct contact with infected animals, or indirectly from contaminated fomites including bedding, footwear, and equipment. Cats may develop signs of infection and shed virus as soon as 1-3 days after exposure and continue to shed virus for two weeks or longer.

See **Appendix C** for more on the Epidemiology of HPAI (H5N1).

What are the possible signs of infection in cats?

- Respiratory signs: rapid or difficult breathing, oculonasal discharge, coughing, sneezing, and thoracic radiograph and exam findings consistent with pneumonia
- Gastrointestinal signs: anorexia, vomiting, and diarrhea
- Systemic: fever, dehydration, lethargy, jaundice, “dullness”



- Neurologic signs (can mimic rabies encephalitis): paresis/paralysis, ataxia, circling, tremors, seizures, and ocular signs, including: blindness, nystagmus, and uveitis
- Severe/rapid progression patterns, possible sudden death



Important Note: Veterinarians should consider rabies as a differential diagnosis for cats with neurologic signs.

While rapid onset of clinical signs and death are more typical, cats with subclinical infections or mild illness have been reported. When the history is strongly compatible with H5N1 sources of exposure, veterinarians should have a high index of suspicion for infection even for mild cases.

What exposure history should I collect?

Exposure history is one of the most important components of evaluating a cat suspected of HPAI (H5N1) infection. Use the following checklist during history and intake.

☐ Dietary risk factors

- Consumption of raw or undercooked meat or poultry; raw or unpasteurized milk or dairy products; raw pet food or treats, including commercial (freeze-dried, raw kibble, raw fresh), or homemade
 - If fed raw commercial products, record brand, flavor, size, and purchase location. Save remaining products and take photos of labels including lot numbers.

☐ Animal exposures

- Exposure to wild birds, other wildlife, peridomestic rodents, or animal carcasses through predation, ingestion, scavenging, or other contact
- Contact with poultry, dairy cattle, other livestock, or clinically ill animals or their environment
- Contact with stray or feral cats; contact with other household or shelter cats if one or more cats have other risk factors in this checklist

☐ Environmental and fomite exposures

- Residence on or visits to farms, poultry facilities, livestock operations, dairy operations, or other environments where livestock, poultry, or raw animal products are handled
- Contact with any household members who work in the dairy/poultry industry
- Exposure to potentially contaminated clothing, footwear, equipment, bedding, feed, or other materials

☐ Exposure to ill people

- Contact with individuals experiencing influenza-like illness

☐ Timeline of illness relative to exposure

- Onset and progression of clinical signs that correspond to relevant possible exposures
- Incubation may be 1-7 days
- Severe disease and death may occur within ~1 week of onset

How can I protect my practice and staff?

If HPAI (H5N1) is suspected, isolate the cat immediately and limit handling to essential personnel. Staff interacting with the cat at any stage—including intake, examination, treatment, sample collection, cleaning, and necropsy—should use appropriate personal protective equipment (PPE).

PPE for suspect or confirmed cases:

- N95 respirator/mask (preferably fit-tested)
- Eye protection (goggles or face shield; not eyeglasses)
- Latex or nitrile disposable gloves
- Fluid-resistant gown or coveralls
- Boot covers or dedicated footwear
- Head cover (e.g., surgical cap)

Additional precautions:

- Use dedicated equipment whenever possible.
- Exercise extra caution during procedures involving the oral cavity, respiratory tract, body fluids, contaminated materials, cleaning/disinfection, or necropsy.

- Avoid bites, scratches, and contact with saliva, respiratory secretions, and other body fluids. Promptly scrub with soap and water any exposed skin that has contact with these fluids.
- Clean and disinfect surfaces and equipment using EPA-registered disinfectants effective against avian influenza and follow label instructions.
- Handle waste and contaminated materials according to applicable local, and/or state regulations.
- Do not eat or drink in patient care areas.
- Encourage annual seasonal influenza vaccination for veterinary personnel.
- Clinic staff who are immunocompromised, pregnant, or otherwise at increased risk of severe illness should avoid contact with cats suspected of H5N1 infection.

See **Appendix D** for more on Infection Control & Prevention.

What should I do after a possible exposure?

1. Remove PPE safely and perform hand hygiene.
2. Contact public health as early as possible. Suspected or confirmed HPAI (H5N1) in a cat may require public health follow-up of exposed individuals. You may be asked to:
 - o Identify and document exposed individuals, including owners, household members, and veterinary personnel who handled the cat or had contact with possibly contaminated materials.
 - o Collect names and contact information for exposed individuals and provide them to public health when requested.
3. Exposed persons should monitor for fever, respiratory symptoms, or conjunctivitis and seek medical evaluation if symptoms develop and inform healthcare providers of their exposure to a cat with suspected or confirmed HPAI (H5N1) infection.
4. Employees should not report to work while potentially infectious.

See **Appendix E** for more on Public Health Coordination.

What samples should I collect?

No single optimal antemortem sample has been established for HPAI (H5N1) testing in cats. Use appropriate sedation or anti-anxiety medications as needed prior to sampling and use Cat Friendly® handling when collecting samples.

- **Priority sample to maximize viral detection:** Oropharyngeal (OP) or nasal swab from both nares in a plain sterile container such as a red top tube or white top tube or viral transport media (VTM), also called universal transport media (UTM).
- **Additional samples (when safely obtainable):**
 - o Whole blood in an EDTA purple top tube
 - o Urine in a sterile container
 - o Fecal swab in plain container (optional)

When to suspect HPAI (H5N1)

Key Exposures

- Reported cases of avian flu in the area
- Exposure to dead or infected wild birds, poultry, or rodents
- Exposure to other infected mammals (e.g., dairy cattle, other cats)
- Consumption of raw or unpasteurized products
- Owner/household member occupation
- Contact with contaminated fomites (e.g., feed, bedding, footwear, milking equipment)
- Multiple cats in the same household, shelter, colony, or feeding group becoming ill within a short period

Clinical Signs

- Difficulty breathing, coughing, sneezing
- Ataxia, circling, tremors, seizures
- Fever, lethargy, anorexia

Course of Illness

- Acute or peracute onset
- Rapid clinical deterioration (often 24-72 hours)
- Poor or no response to antibiotic or other supportive therapy

- **Additional diagnostics:** Consider requesting a full feline respiratory PCR panel from your usual veterinary diagnostic laboratory to rule out other common upper respiratory viruses. Most panels include an Influenza A matrix PCR, which would detect all influenza A's including H5N1.
- **Deceased animals:** You may need to submit the entire carcass for HPAI (H5N1) testing and/or to rule out rabies. Reach out to your nearest [National Animal Health Laboratory Network \(NAHLN\) veterinary diagnostic laboratory](#) for more information on appropriate specimens for antemortem and postmortem testing.

Laboratory submission and reporting

- Keep all samples refrigerated until the time of shipment.
- Ship all samples with ice packs for overnight delivery to a [NAHLN \(National Animal Health Laboratory Network\) veterinary diagnostic laboratory](#) approved by the USDA to perform HPAI (H5N1) testing. Document in the submission form that samples are from a cat suspected with HPAI (H5N1) and include as much history as possible regarding the case, including owner name, address and phone number.
- Contact your diagnostic laboratory, [State Animal Health Official \(SAHO\)](#), and/or [State Public Health Veterinarian](#) when HPAI (H5N1) is suspected.
- Sample testing reimbursement may be available in your state; the state regulatory officials will be able to assist with this funding. Remember: if samples are tested for Influenza A at a private laboratory and determined to be non-negative, these results should also be reported to state regulatory staff.
- If testing is declined despite strong suspicion, consult your SAHO or State Public Health Veterinarian.
- You may be contacted by animal or public health officials for additional information, guidance, or follow-up.



See **Appendix F** for more on Testing Considerations.

How should I interpret lab results?

- Interpret all laboratory results in the context of the cat's clinical signs and exposure history. Influenza A (FluA) detected on a feline respiratory panel is an *unusual* finding and, in the absence of other FluA viruses circulating locally, may be interpreted as presumptive for HPAI (H5N1).
- A negative OP swab—or other individual sample type—*does not* rule out HPAI (H5N1). If clinical suspicion remains high, consult with the diagnostic laboratory and consider additional antemortem or postmortem samples.

How should a suspected or confirmed feline case be managed?

- Currently, there is no approved or well-established antiviral treatment for influenza in cats; provision of supportive care is the cornerstone of treatment. While oseltamivir (“Tamiflu®”) is used in humans, its use in cats is not recommended.
- For protection of practice staff and other animals, physically isolate suspected or confirmed HPAI (H5N1)-infected cats while in veterinary care and limit their movement or transport. Hospitalization should be based on medical need; cats that are clinically stable and can be safely managed at home may be discharged with appropriate isolation instructions.
- At home, suspect or confirmed HPAI (H5N1)-infected cats should be confined to a separate room and cared for by a limited number of household members.
- Cats should remain isolated at home until 5 days after clinical signs resolve. Consult your diagnostic laboratory and SAHO regarding any follow-up testing recommendations.
- Litter trays, bowls, baskets, and other objects with which the cat had contact should be disinfected.
- Perform hand hygiene after handling a cat suspected or confirmed to have HPAI (H5N1). Use either soap and water or an alcohol-based hand sanitizer; wash with soap and water if hands are visibly soiled. Remove contaminated clothing and shoes after handling the cat.

What should I tell the owner/caretaker of a cat ill with HPAI (H5N1)?

- Do not feed raw meat, poultry, or unpasteurized dairy products.
- Isolate the sick cat from other pets and any other animals including birds.
 - a. Keep your cat in a separate room with its own food/water bowls, litter boxes, bed, etc.
 - b. Keep your cat away from children, adults over 65 years old, pregnant people, immunocompromised people.
 - c. Anyone handling or feeding the cat or clearing litterboxes should wear PPE and wash hands afterwards.
- Monitor yourself and household members for flu-like symptoms or conjunctivitis; if symptoms develop, consult with your doctor about HPAI (H5N1) contact.
- Monitor other household cats, pet birds, and backyard poultry for signs of illness; contact your vet if you suspect illness.
- Follow public health guidance if contacted.

DETECTION, DIAGNOSIS, PREVENTION, AND CONTROL OF HIGHLY PATHOGENIC AVIAN INFLUENZA (HPAI) (H5N1) IN DOMESTIC CATS

Appendices

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Appendix A. Acknowledgments

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Appendix B. Key Resources

Federal Guidance

- [Animal and Plant Health Inspection Service - H5N1 Influenza Detection, Outbreak Response and Support, and Latest News](#)
- [Approved Labs in the National Animal Health Laboratory Network \(NAHLN\)](#)
- [Diagnostic Testing at National Veterinary Services Laboratories \(NVSL\), 2026](#)
- [Highly Pathogenic Avian Influenza A\(H5N1\) Virus: Interim Recommendations for Prevention, Monitoring, and Public Health Investigations \(CDC\), 2024](#)

State Resources

- [National Association of State Public Health Veterinarians \(NASPHV\) Directory](#)
- [Current \(2025-2027\) National Assembly of State Animal Health Officials](#)

Veterinary Resources

- [American Association of Feline Practitioners - A Guide to Creating a Cat Friendly Practice®](#)

Infection Control

- [Antimicrobial Products Registered for Disinfection Use against Avian Influenza on Poultry Farms and Other Facilities](#)



Appendix C. Epidemiology of HPAI (H5N1)

Global Emergence

In 2020, a zoonotic highly pathogenic avian influenza A (HPAI) (H5N1) virus of potential pandemic threat concern emerged in Asia and has since spread globally. Exhibiting a wide host range, it has infected and caused significant morbidity and mortality in millions of commercial and backyard poultry, hundreds of wild bird species, and over 70 species of non-human mammals that include dairy cows, wild and domestic cats, farmed mink, peridomestic farm rodents, and marine mammals (Butt SL et al., 2024; USDA-APHIS). The HPAI (H5N1) virus has also infected people, causing mild to more severe illness and death (WHO, CDC). Since first detected in people in 1997, over 1,000 laboratory confirmed human cases have been reported to the World Health Organization (WHO), from 25 countries, with an overall case mortality rate of 47%. Illness in cases reported since 2020 has been milder (WHO).

Influenza A viruses are the causative pathogens of influenza in humans, wild and domestic birds, and non-human mammals. They are single segmented RNA viruses composed of eight proteins and predisposed to genetic mutations and “reassortment” of their genetic material so that when two different subtypes of influenza viruses infect a host at the same time, they can swap genetic information and form a genetically novel virus. Influenza A viruses are classified into subtypes based on two surface antigens: hemagglutinin (H) and neuraminidase (N), of which 19 and 11 have been identified, respectively (CDC). Their reservoir hosts are wild waterfowl. Transmission of influenza viruses from their reservoir hosts to other species occurs through direct or indirect contact with infected animals, fomites (e.g., milking apparatus on dairy farms), and the consumption of contaminated raw food and milk. Severity of illness varies by species, and other factors, and ranges from mild to severe illness and death (USDA-APHIS). HPAI subtypes that infect poultry cause sudden and extremely high mortality; and have been a major animal health concern for decades. In people, genetically reassorted human and avian influenza A viruses were the cause of influenza pandemics with significant morbidity and mortality, in 1918, 1957, 1968, and with swine genetic components, in 2009 (Harrington et al., 2021). Given the predisposition of avian, swine, and human influenza A viruses to mutate and or reassort and spread to multiple species and people, HPAI (H5N1) has become a pathogen of potential pandemic threat.

HPAI (H5N1) in the United States

In the United States (U.S.), HPAI (H5N1) was first detected in wild birds in 2021, as subtype Clade 2.3.4.4.b (Harvey JM et al., 2023). Since then, over 200 million commercial poultry in the U.S. have either died from infection with HPAI (H5N1) or from control efforts. Moreover, the virus has also infected backyard flocks, dairy herds, wild bird species and mammals, including wild and domestic cats (USDA-APHIS), which have been found to be quite susceptible to high morbidity and mortality. Although the severity of illness in non-poultry species has ranged from mild to severe to death; infection with HPAI (H5N1) has led to massive wild bird die offs and extremely high mortality in several populations of sea mammal species (USDA, APHIS).

HPAI (H5N1) in Cats

Between 2021 and May 2026, 154 domestic indoor, barn and feral cats, were reported from 25 states, with high morbidity and mortality (USDA-APHIS, Schlachter et al, 2025). Among these are nine domestic cats testing positive for HPAI (H5N1), among 19 cats reported ill in Los Angeles County, California, during November 2024-January 2025, following consumption of commercially purchased raw milk, meat, and pet food. During an outbreak investigation, among 139 persons exposed to the 19 infected cats, serologic evidence for infection with HPAI (H5N1) clade 2.3.4.4.b, was found in one veterinary professional (MMWR).

Human Health Implications

As of March 2026, 71 human infections from HPAI (H5N1) have been reported with two deaths. Of these, 41 and 24 had a history of exposure from a dairy farm, or poultry and culling operation, respectively, three were reported with other animal exposure, and for three, the source of exposure is unknown. The majority of illnesses have been mild (CDC).

Because of the well-known human-animal bond between people and companion animals (AVMA), the potential for transmission of this zoonotic virus from domestic cats to humans, raises occupational health and other health concerns in settings where interactions between veterinary medical personnel, their staff, and other people and infected domestic cats can occur (MMWR). Each occurrence of avian and or swine Influenza A virus reassortment and or transmission to other non-human mammals and humans, is considered a potential step closer to one that can spread person to person more easily, and therefore, possibly leading to a new virus having pandemic potential (CDC, Coleman KK and Bemis G, 2025).

Appendix C References

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Appendix D. Infection Control & Prevention

Preventing Transmission of HPAI (H5N1) in Veterinary Settings and Multi-Cat and Animal Households

Scheduling Cats for Medical or Grooming Appointments

The following screening questions should be asked to identify suspect influenza A(H5N1) patients *before* entry into the veterinary care setting:

- Has the cat been exposed to other animals who are ill including poultry, dairy cattle, wild birds, rodents, or other wild or domesticated animals in the last 7 days?
- Has the cat experienced any clinical respiratory symptoms (sneezing, coughing, trouble breathing, snotty nose or eyes), or any neurologic symptoms (stumbling, circling, tremors)?
- Has the cat recently consumed raw food or unpasteurized milk from known or possibly infected dairy cattle?

If the answer to one or more of the above questions is yes, have clients and patients wait outside; if possible, use an alternate entrance.

Handling Potentially Infected Cat(s) in Veterinary Care Settings

When in the veterinary care setting, potentially infected cat(s) should be handled with standard and aerosol precautions including:

- When suspect cats are dropped off for procedures or workups, or hospitalized, they should be housed in an isolation area, if possible, with negative airflow, and away from other patients.
- Use patient dedicated equipment, and clean and disinfect all items removed from the isolation area.
- Bring into isolation only the items that are needed. Any single-use items that cannot be cleaned and disinfected properly need to be thrown away after patient discharge.
- Limit the number of staff handling the patient and entering the isolation area.

Biosecurity Practices

In addition to controlling the admission and hospitalization of potentially infected cats and their contact with wild birds or poultry brought to veterinary care facilities as pets, it is essential for the facility to prevent infestation with peridomestic pests such as mice and rats.

Preventing Transmission of HPAI (H5N1) via Fomites, Equipment, Surfaces, and Animals

Clothing

- If veterinarians or their staff have ill pets or farm animals at home or have worked with any suspect HPAI (H5N1) animals at a different facility, they need to change clothes and shoes at arrival to and when leaving the hospital/clinic.
- Potentially contaminated clothing should be placed in a tightly closed plastic bag until they can be laundered or disinfected.

Equipment and surfaces

- Influenza viruses can survive on hard surfaces for 24 to 48 hours and on porous materials for 12 hours.
- Thoroughly clean and disinfect all areas and equipment that the patient may have contacted during examination, admission, or hospital stay, including equipment, exam tables, cages, floors, walls that may have been contaminated with respiratory secretions, urine, feces, or vomitus.

- After cleaning, disinfect with an **EPA-registered disinfectant that is effective against HPAI (H5N1)** and appropriate for use in companion animal settings (disinfection will not be effective if materials are soiled with organic matter (e.g., fecal material, bodily fluids, heavy dirt). All label instructions must be followed, including contact time before wiping or rinsing off. The most common and effective classes of disinfectants include:
 - Accelerated Hydrogen Peroxide (AHP)
 - Phenolics
 - Potassium Peroxymonosulfate
 - Quaternary Ammonium Compounds (QACs)
 - Sodium Hypochlorite (Bleach)
 - Veterinarians must protect themselves and staff when handling chemical disinfectants (i.e., use of PPE) and mixing concentrated solutions.

Safe Disposition of Materials Contaminated (or Potentially Contaminated) with HPAI (H5N1)

- Influenza-contaminated materials in veterinary hospitals (like PPE, bedding, and bandages) are typically treated as infectious medical waste. They must be contained, disinfected where applicable, and disposed of in accordance with local, state, and federal biosafety regulations.
- For severe pathogens such as HPAI (H5N1), state and federal agencies may dictate stricter disposal rules or mandate specific incineration requirements.
- General categories of contaminated materials requiring safe disposition are as follows:
 - General waste
 - Laundry and Bedding
 - Liquid waste:
 - Fluid waste (e.g., wash water from heavily soiled animal housing or nasal lavages).
 - Sharps (e.g., needles, syringes, and clipper blades used on infected patients).

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Appendix E. Public Health Coordination

Protocol for follow up for exposed individuals

Communication between human health and veterinary counterparts is critical to identifying individuals who may have been exposed to a cat suspected or confirmed of being infected with HPAI (H5N1). Veterinary public health staff will likely be the first to be notified of a potential case and can notify human public health staff of individuals who were exposed to the cat.

- Prior to illnesses and exposures occurring, it is ideal for human and veterinary public health colleagues to come together to establish a process for following up on human exposures.
- These same colleagues should also regularly meet, at least when there are cases and ongoing follow-up, to ensure regular reporting and discussion of cases, exposures, etc.
- A tracking system for exposed individuals needs to be part of the process. This could be as simple as a spreadsheet, or a system like REDCap where continued follow-up surveillance can be automated. An automated system can streamline communication especially for cases in which many people were exposed to HPAI (H5N1).

Who needs follow-up from public health?

If there is a reason to suspect that a cat might have HPAI (H5N1) (i.e. it has compatible clinical signs, risk factors, or an epidemiological link), then anyone exposed to that cat may need to be monitored for HPAI (H5N1) and their names and contact information should be collected. Once a cat tests positive for influenza A, public health personnel will try to contact any individuals that were exposed to that cat for symptom monitoring.

What does symptom monitoring consist of?

Different levels of exposure necessitate different levels of monitoring. Exposure risk is based on whether the exposure was protected or unprotected.

- **Unprotected exposure:** If the exposed individual was not wearing PPE or had breaches in their PPE during exposure, then this is unprotected exposure. In this case, active monitoring is appropriate, with follow-up from public health personnel if the individual is not completing their symptom monitoring log or otherwise responding to public health personnel.
- **Protected exposure:** If the exposed individual was wearing full PPE during the entire time of their exposure, then this is protected exposure. In this case, passive monitoring is appropriate with follow-up from public health personnel only at the end of the monitoring period if the individual did not complete their symptom monitoring log.

The monitoring period for individuals exposed to a cat infected with HPAI (H5N1) is 10 days from their last day of exposure. All activities should be tracked, including attempted contact with individuals (via phone, email, or text) and symptoms. If public health personnel did not receive the exposed individual's contact information until after the 10-day monitoring period, then they will reach out to the exposed individual to determine if they were symptomatic during their monitoring period.

What happens if an exposed individual has symptoms?

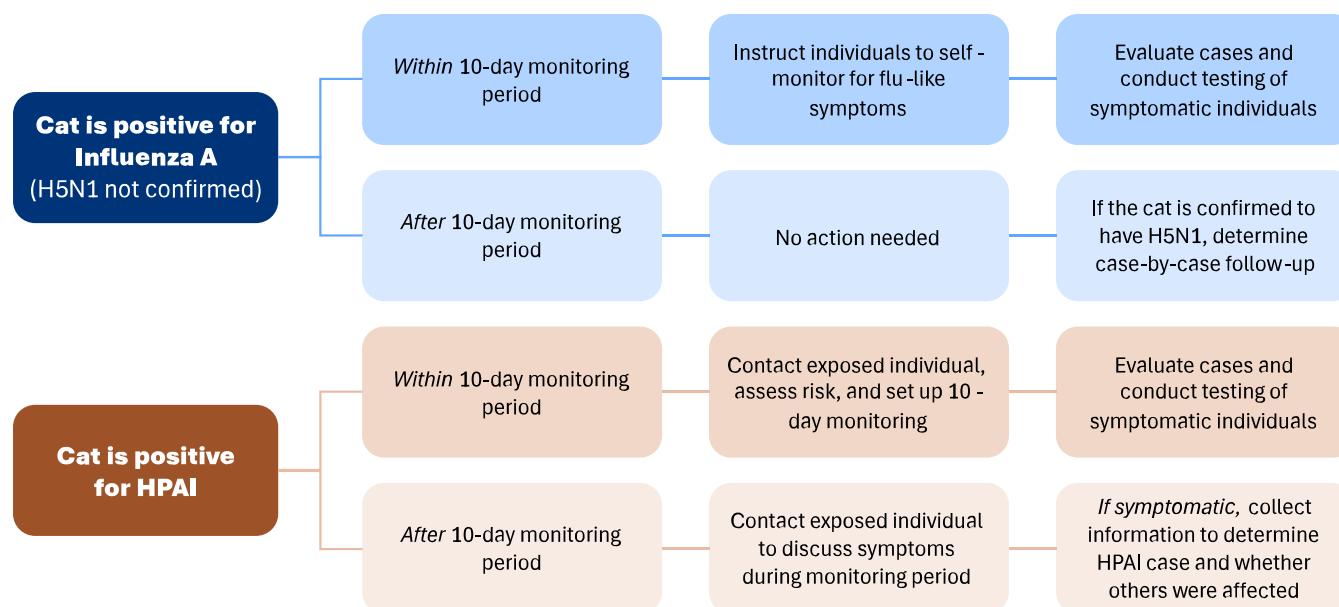
If the exposed individual has or develops symptoms, public health personnel will assess their symptoms and ask additional questions to determine if this is a potential case of HPAI (H5N1) or can likely be attributed to something else. These questions may include:

- Are the individual's symptoms consistent with HPAI (H5N1) (i.e. flu-like symptoms including eye irritation or conjunctivitis)?
- Are the symptoms something the individual regularly experiences (e.g., allergies)?
- Has the individual been tested for anything, including an at-home COVID test? If so, what were the results?
- Has the individual had contact with anyone else who has had a flu-like illness in the seven days before they felt sick?
- Has the individual had close contact with anyone who developed a flu-like illness or eye irritation after exposure to the individual?

If the exposed individual has flu-like symptoms and/or conjunctivitis and there is no obvious explanation for their illness (e.g., a positive COVID-19 test), then public health personnel will likely recommend testing. Sample collection should be coordinated by the public health agency. While awaiting testing, the exposed individual should isolate at home away from other household members until HPAI (H5N1) can be ruled out, or they are otherwise determined to no longer be potentially infectious. If they must go outside or enter a common space with housemates, then they should wear a mask. See the flow chart below for more information regarding follow-up for exposed individuals.

Flow chart for public health monitoring of individuals exposed to HPAI (H5N1)

If a cat is suspected to have or tested for HPAI (H5N1) infection, and the veterinarian has collected the names and contact information of individuals exposed to the cat, then public health agencies will follow these protocols.



Testing and treatment for exposed individuals

Typically, the following specimens are collected and tested for someone suspected of having influenza A(H5N1):

- A nasopharyngeal swab AND a conjunctival swab if the individual has conjunctivitis OR a combined nasa/oral swab (i.e. two swabs combined in one viral transport media (VTM) tube)
- Individuals with severe respiratory illness should also have a lower respiratory tract specimen collected (e.g., an endotracheal aspirate or bronchoalveolar lavage fluid). The local public health agency would coordinate with a hospital for these specimens.

In some cases, public health agencies may be able to test on site at veterinary clinics and provide antiviral medication (i.e. Tamiflu) when indicated. Potential cases and their symptomatic contacts should receive influenza antiviral treatment as soon as possible.

How can veterinarians assist in these procedures?

Veterinarians should recognize the clinical signs and risk factors that make HPAI (H5N1) a possible diagnosis in cats. This awareness enables clinic staff to use appropriate PPE and limit contact with suspected cases, reducing the risk of staff exposure. Clinics should also establish protocols for documenting detailed exposure information and ensure staff understand why it must be readily accessible. Promptly collecting and organizing the names and contact information of exposed staff will support both clinic and public health follow-up, including symptom monitoring.

Awareness of serology/monitoring

While serology for influenza A(H5N1) does not commonly play a role in case monitoring, several serological studies provide support for the importance of monitoring individuals who have been exposed to a cat with HPAI (H5N1).

Vaughan et al. (2025) provides serologic evidence of influenza A(H5N1) infection in a veterinary professional following close, unprotected occupational exposure to an infected domestic cat. Before this report, domestic cat-to-human H5N1 transmission had not been documented. The findings of this report raise the possibility that infected domestic cats can be a source of zoonotic H5N1 exposure in close contact settings, however there was no evidence of sustained cat-to-human transmission. This report does not change the CDC assessment that the risk to the general public remains low, but it reinforces that persons with occupational exposure to potentially infected animals may be at higher risk of exposure and should follow recommended infection prevention practices. More broadly, the report highlights the value of serology in understanding the extent of infection following exposure and illustrates the importance of a One Health approach for zoonotic disease surveillance and response.

Thanawongnuwech et al. (2005) describes horizontal transmission among tigers in a tiger zoo during an outbreak of influenza A(H5N1) in Thailand with transmission was confirmed by sequencing and phylogenetic analysis. As part of the study, all humans who had contact with the animals or their tissue or fluid had serologic testing done. Two people (out of 58) seroconverted despite having no signs of illness. This report that infected tigers may be a source of zoonotic H5N1 exposure as well and again highlights the value of serology in detecting infection following exposure to HPAI (H5N1).

Future studies could address several important knowledge gaps, including:

- The frequency of mild or asymptomatic HPAI (H5N1) infection among persons exposed to infected animals;
- Exposures that pose the highest risk for infection;
- How efficiently HPAI (H5N1) viruses transmit from cats to humans;
- And quarantine periods for cats who are suspected cases or are possibly infectious.

Surveillance

The overarching objectives of public health surveillance are to estimate the burden of disease in humans, identify contributing factors, and monitor the effectiveness of control measures. Surveillance for H5N1 at the local, state, and federal levels is critical to understanding exposure risks, pathogen dynamics, and feline prognosis. Veterinarians are encouraged to supplement national surveillance efforts by:

- **Testing for and reporting cases of H5N1 in cats.** The United States Department of Agriculture (USDA) relies upon veterinarians to report cases detected in their clinics to the State Animal Health Official for their state, to inform epidemiologic data on H5N1 in animals.
- **Monitoring and reporting staff who become symptomatic after contact with a feline case of H5N1.** The Centers for Disease Control and Prevention (CDC) conducts national surveillance of human H5N1 cases, including those among veterinary staff following interaction with an infected cat, to enhance understanding of transmission dynamics for zoonotic viruses.
- **Reporting food products consumed by or linked to cases of H5N1 in cats.** The United States Food and Drug Administration (FDA) maintains the safety of human and animal food products. Veterinarians supplement national surveillance efforts by reporting via the [FDA Safety Reporting Portal](#) food products implicated as the vehicle of exposure for feline cases.

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Appendix F. Testing Considerations

Determining the onset of clinical signs and any potential HPAI (H5N1) exposure is important. The following sections provide considerations for specimen collection and testing and necropsies.

Antemortem Specimen Collection and Testing

- Serum can be collected for H5N1 antibody detection to indicate previous exposure. The Cornell Animal Health Diagnostic Center offers a H5N1 serum neutralization assay which provides a quantified antibody result. An acute sample collected at the time of illness, and a convalescent sample collected 2 to 4 weeks later can be used to determine seroconversion. A fourfold or greater rise in titer indicates recent exposure.
- There is currently no consensus veterinary recommendation for initiating repeat HPAI (H5N1) PCR testing at 5 days post-symptom resolution or for a specific retesting interval until negative. Available guidance from AVMA, CDC, and veterinary diagnostic laboratories focuses on clinical management, isolation, and appropriate laboratory consultation rather than a standardized feline test-of-cure protocol. Follow-up testing should be determined in consultation with the submitting NAHLN laboratory and relevant animal health officials.

Postmortem Specimen Collection & Necropsy Considerations

- If submitting whole carcasses for HPAI (H5N1) testing and the animal tests positive, then the remains cannot be returned to the owner or processed through private cremation. Please ensure that the owners are aware of this prior to pursuing diagnostic testing.
- Necropsies for H5N1 suspect cats must be performed in biosecurity level 2 (BSL 2) containment; therefore, veterinarians must submit the entire carcass to a veterinary diagnostic lab with a board certified veterinary anatomic pathologist for a necropsy and H5N1 PCR testing.
- Even if a live cat tested negative for H5N1 by PCR, if it is a suspect case, it should be submitted for a necropsy as antemortem testing could be negative due to timing of sample collection in course of disease or sample type.
- Fresh brain and lung are the preferred samples for H5N1 PCR, as documented cases have encephalitis and interstitial pneumonia histologically, and those tissues have consistently had high amounts of H5N1 virus.
- Other fresh tissue samples for H5N1 include liver (histologic lesions of hepatocellular necrosis have been documented), pancreas, kidney, adrenal gland, and intestines.
- Rabies testing is also recommended in neurologic cats.

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