Highly Pathogenic Avian Influenza A(H5N1)

Frequently Asked Questions

Human Testing/CLIA: Specimen Types, Collection, and Verification

Q: What specimen types should be collected for testing and in what transport media?
A: Collection recommendations depend on symptoms, but ideally two or three specimens are requested:

- Individuals with **respiratory symptoms**:
    1. Nasopharyngeal swab (NP)
    2. Combined nasal swab (NS) oropharyngeal swab (OS)
- Individuals with **conjunctivitis** (with or without respiratory symptoms):
    1. Conjunctival swab
    2. NP swab or a combined nasal swab and oropharyngeal (throat) swab (NS/OP)
- Individuals with **severe respiratory disease** (collect lower respiratory tract specimens):
    1. Endotracheal aspirate
    2. Bronchoalveolar lavage fluid

Each specimen should be placed into a separate tube of viral transport media (VTM) or universal transport media (UTM); either is acceptable. The IFU Package Inserts associated with the CDC Human Influenza Virus Real-Time RT-PCR Diagnostic Panels have been updated to include UTM. Relevant IFUs include:

- Influenza A/B Typing Kit
- Influenza A Subtyping Kit
- Influenza A/H5 Subtyping Kit
- Flu SC2 Kit

Q: Are conjunctival swabs an approved specimen type?
A: Yes, conjunctival swabs are an approved specimen type for the CDC Influenza A/H5 Subtyping Kit (conjunctival swabs are not an approved specimen type for other CDC Influenza tests). CDC received a 510(k) substantial equivalence determination from FDA clearing the addition of conjunctival swabs as an acceptable specimen type for the assay (Decision date 3/14/25: K243931). This removes the need for FDA enforcement discretion, but labs will still need to follow guidance from their CLIA or CAP programs on how to verify this specimen type for use in their diagnostic programs. (Prior to the 510(k) determination, FDA enforcement discretion was granted for testing of conjunctival specimens. That discretion was previously extended to May 1, 2025, but is no longer applicable.)

Centers for Disease Control and Prevention (CDC) has released updated instructions for use (IFU) for the Influenza A/H5 Subtyping Kit (VER 4) reflecting conjunctival clearance. Users can find updated language relating to conjunctival swabs in the intended use section, principles of the procedure, warnings and precautions, specimen collection, handling, and storage, limitations, and performance characteristics sections.

Q: What are the considerations for proper collection of conjunctival swabs?
A: CDC has developed instructions for Conjunctival Swab Specimen Collection for Detection of Avian Influenza A(H5) Viruses. Specimens should be obtained from the everted eyelid by using a Dacron (DuPont)-tipped swab or the swab specified by the manufacturer's test kit (not cotton). Specimens must contain conjunctival cells, not exudate alone.

Q: How should conjunctival swabs be verified as a specimen type?
A: Labs can use conjunctival matrix that is negative for influenza to serve as either negative controls or to create spiked positive controls. There are a number of resources available for positive controls:

- Twist Bioscience: Partial H5 synthetic genome is available to order at FR-1901. This synthetic material contains the HA and NA gene segments from a 2.3.4.4b Influenza A/H5 genome. It will create a positive signal for the H5a and H5b analytes from the CDC Influenza A/H5 subtyping kit. Please visit the IRR website for contact information and questions.
- NIST: NIST Store research grade test material (RGTM) for PCR-based assays contains 3 vials with RNA fragments for H5_HA,N1_NA, and MP. For technical questions please contact Megan Cleveland at NIST.
- BEI Resources: Inactivated bovine control A(H5N1) virus materials (gamma irradiated whole virus and genomic viral RNA) were derived from virus isolated from an infected dairy cow in Ohio in April 2024. Materials are representative of the B3.13 viruses that have been detected in humans in the US. Please contact BEI Resources for more information.
- ATCC: ATCC has launched a Quantitative Synthetic Avian Influenza Virus (H5N1) RNA which includes two constructs. One construct includes the full genes for the HA and NP regions. The other construct includes the full genes for the NA, M1/M2, and NEP/NS1 regions. Please contact ATCC with questions.

Q: Will CDC provide verification panels for conjunctival swabs?
A: No, CDC will not provide verification panels for conjunctival swabs. Conjunctival swabs are not a common specimen type and matrix is difficult to obtain in sufficient quantities to provide panels. Several PHLs have developed specimen collection guidance that requests collection of two conjunctival swabs so one can be retained at the PHL to assist with verification. If you need assistance in finding conjunctival matrix, contact APHL at flu.questions@aphl.org.

Human Testing/CLIA: Influenza Subtyping, Confirmation, and Characterization of Positive Specimens

Q: Does CDC have reagents available for Influenza A/H5 testing?
A: Yes, CDC has influenza IVD kits available for PHLs through International Reagent Resource (IRR) at no cost. These kits are for use with **human specimens only.**

CDC manufactures a limited number of influenza seasonal subtyping kits annually based on Influenza Virologic Surveillance Right Size Roadmap 2nd Edition surveillance numbers. IRR does not have enough subtyping kits in reserve to fulfill large requests. **PHLs should order one additional kit at a time and provide justification to avoid having orders rejected.** Kits include:

- Influenza A/B typing kit: 1st line influenza virus diagnosis
- Flu SC2 Multiplex: 1st line influenza virus or SARS-CoV-2 diagnosis
- Influenza A-Subtyping kit: Determines if typical human epidemic/endemic ("seasonal") influenza virus
- Influenza A/H5 Subtyping kit: Determines if it is H5 avian influenza virus
  - Should not be performed unless the patient meets clinical and epidemiological criteria for testing suspect specimens or patient has a high risk exposure to H5N1. (see Highly Pathogenic Avian Influenza A(H5N1) Virus: Interim Recommendations for Prevention, Monitoring, and Public Health Investigations)
  - Test results with both H5a and H5b markers* are positive.
  - Test results with either H5a or H5b markers positive should be sent to CDC for additional testing.

  *Lot **220307**. H5b primers should not be used.

Q: Is the CDC Influenza A/H5 Subtyping Kit being made available to local PHLs not already performing influenza surveillance?
A: The A/H5 subtyping assay is available to all laboratories approved to run the CDC influenza diagnostic panels and actively ordering from IRR. There are not plans to add additional local laboratories at this time.

Q: When is Influenza A/H5 testing by PHLs considered "confirmatory" versus "presumptive"?
A: In a January 28 memo, CDC outlined recommendations for laboratories intended to reduce confusion and delays from the "presumptive" classification of cases. CDC has the following updated recommendations for state or local PHLs performing influenza A/H5 testing with CDC's 510(k) Influenza A/H5 IVD assay:

- After a PHL's first three influenza A(H5N1) cases are confirmed by CDC, subsequent detections by that PHL can be considered confirmatory.
- Positive results identified by the PHL must still be immediately reported by email to flusupport@cdc.gov.
- All positive specimens should be sent to CDC for further characterization within 24 hours of detection (or as soon as possible following weekend or holiday detection).

Q: Are local PHLs that are conducting their own testing able to ship their first three positive specimens (considered "presumptive positive") to their state laboratory for confirmation, or is CDC the only approved lab to confirm these specimens?
A: The first three specimens from any PHL conducting their own testing are required to be sent to CDC for confirmation. After confirmation of their first three positive specimens by CDC, a lab's continued testing can be considered confirmatory. Local PHLs should not send their first three positive specimens to their state lab

for confirmation, even if the state lab has already completed confirmation of its first three positives with CDC and is conducting confirmatory testing.

Q: What steps should be taken when Influenza A(H5N1) is detected in a clinical specimen?
A: The laboratory should immediately notify CDC of the positive or presumptive positive result by email to flusupport@cdc.gov and phone call to Influenza Division POC(s) and/or CDC's Emergency Operations Center. Due to the need for further virologic characterization, all Influenza A/H5 positive samples (minimum of 500µl or total amount available if less) should be sent to CDC within 24 hours of detection (or Monday following a Friday, Saturday, Sunday or holiday detection) or as soon as possible.

Q: What kind of shipping should be used for sending specimens to CDC?
A: Overnight Category B shipping should be sufficient, with delivery as early in the day as possible. Positive results generated at PHLs may be shipped Category B as a diagnostic specimen. On June 6, 2024 USDA announced a three year exemption on H5 viruses from select agent requirements of the regulations listed in 9 C.F.R. Part 121.

Q: What is the turnaround time (TAT) on specimens sent to CDC?
A: The current TAT on specimens received for testing is within one day of receipt. Depending on specimen testing requests, TAT could be up to 7 days.

Q: Is CDC uploading sequence data from their characterization of human cases to accessible databases?
A: CDC has described sequence data from recent human cases in several Spotlight articles, which cite GenBank and Global Initiative on Sharing All Influenza Data (GISAID) accession information.

Q: Can PHLs obtain CDC's primer/probe sequences if they are interested in developing their own assays for influenza subtyping?
A: Yes, PHLs can access CDC's influenza subtyping kits' primer and probe sequences through the CDC Laboratory Support for Influenza Surveillance Site (CLSIS). State and local PHLs are eligible to register to gain access to all subtyping primer/probe sequences and testing protocols. Because these sequences are included in current US patents, registration requires the end-user to read a disclaimer that prohibits use of the primers/probes for commercial purposes and refers users to CDC's Technology Transfer Office if they wish to consider a licensing agreement for commercial use of the sequences.

Initial access to CLSIS can be requested here. CLSIS registration is a two-step process. Once you submit the request, there will be an email that follows (after review of the initial request by CDC's SharePoint administrator) with the subject "U.S. Centers for Disease Control: SAMS Partner Portal – Invitation to Register" and sent from sams-no-reply@cdc.gov. Registrants will need to monitor their email inbox as this may end up in a spam folder. A link included in this email will allow registration to the SAMS Partner Portal and once that registration is complete you will get a second email from the CDC Influenza Division team granting access to the CLSIS website.

The lab would then be able to order their own primer/probes (based on CDC's sequences) for use in their own internally developed assays. Tests being used and reported as a diagnostic test would need to be validated as a laboratory developed test (LDT) in compliance with CLIA regulations. It is important to emphasize that the primers/probes manufactured outside of CDC cannot be used as a replacement in the 510(k) IVD assays distributed by IRR**.**

Q: Is the CLSIS registration different from SAMS registration?
A: SAMS registration is required first and then the CLSIS registration will follow. Even if you already have SAMS access, the process above should be followed.

Q: Do commercially available influenza tests detect Influenza A(H5N1)?
A: Most tests listed for the detection of seasonal influenza will be capable of detecting influenza A/H5. However, only tests specifically designed for subtyping will be able to differentiate if the person has seasonal flu, or influenza A/H5. FDA has provided a list of IVD tests that have FDA 510(k) clearance, or granted de novo request, or are authorized for emergency use (EUA), for the detection of influenza in certain specimens from humans: Influenza Diagnostic Tests | FDA.

Q: Are there alternatives to CDC kits or their primer/probes for subtyping influenza A viruses?
A: Laboratories may consider alternative subtyping platforms besides CDC's seasonal subtyping kits if IRR restrictions limit testing capacity.

There are a limited number of commercially available diagnostic assays that determine seasonal influenza A virus subtypes. FDA maintains a list of those tests: Influenza Diagnostic Tests | FDA.

Thermo Fisher offers seasonal influenza A subtyping primers as research use only (RUO) reagents.

- Influenza A/H1 assay ID Vi99990009_po. Subtype H1N1. SKU A41332. RUO. (250 rxn. List Price $340)
- Influenza A/H3 assay ID Vi99990010_po. Subtype H3N2. SKU A39420. RUO. (250 rxn. List Price $340)

Q: Do commercial laboratories offer Influenza A(H5) subtyping?
A: The available commercial laboratories with available Influenza A(H5) subtyping include the following:

- ARUP Specimen Type, Media and Transport: Influenza A (H5) Virus | ARUP Laboratories
- Quest Specimen Type, Media and Transport: Influenza A (H5) Virus RNA, Qualitative Real-Time PCR, Respiratory and Conjunctiva | Quest Diagnostics
- Labcorp Specimen Type, Media and Transport: 140046: Influenza A and Influenza B With Reflex to H5 Subtyping, NAA | Labcorp

Q: What guidance does CDC provide for clinical or commercial laboratories considering implementation of Influenza A(H5) testing?
A: CDC Laboratory Outreach Communication System (LOCS) shared a message highlighting considerations for use of influenza A(H5) subtyping tests by clinical laboratories on December 27, 2024. This memo provides important context you may wish to share when collaborating with program partners and working with commercial laboratories. The careful consideration of whether a patient meets epidemiological, clinical and public health response criteria is highlighted as critical before ordering and performing testing. CDC also emphasizes the importance of contacting public health authorities if a positive result for A(H5N1) is obtained using an LDT.

Q: Can CDC Influenza Panels be used to screen specimens from asymptomatic individuals? When can asymptomatic individuals be tested?
A: Testing of asymptomatic persons for Influenza A(H5) virus infection is not routinely recommended but may be allowed in certain circumstances under the public health response criteria. For purposes of public health investigation, in consultation with state and local health departments, when feasible, offer a nasal/ oropharyngeal (OP) (+/- conjunctival) swab specimen test for influenza A(H5) virus using the CDC Influenza A/H5 subtyping kit to asymptomatic workers with high risk of exposure to A(H5N1) virus [e.g., exposed to animals infected with HPAI A(H5N1) virus who reported not wearing recommended PPE or who experienced a breach in recommended PPE], or asymptomatic close contacts of a confirmed case of HPAI A(H5N1) virus infection. In this event, the laboratory may consider proceeding directly to one-time testing with the Influenza A/H5 Subtyping kit. Refer to CDC's Highly Pathogenic Avian Influenza A(H5N1) Virus: Interim Recommendations for Prevention, Monitoring, and Public Health Investigations.

Q: If laboratories receive specimens from a suspect case should they run the Influenza A/H7 subtyping kit as well?
A: No, not at this time.

Q: Are other high throughput platforms (such as Thermo Fisher King Fisher Flex) being considered for the CDC Human Influenza Virus Real-Time RT-PCR Diagnostic Panel?
A: CDC is currently working with FDA to add additional platforms. The Thermo Fisher King Fisher Flex is not an IVD instrument, so it is not being considered. The Thermo Fisher King Fisher APEX is being considered as it is IVD labeled.

Q: Are any PHLs conducting influenza serology testing for potential exposure to avian influenza?
A: No public health laboratories are currently conducting serology testing for this purpose. Michigan and Colorado have worked with CDC to conduct serology studies following H5 cases. A report was release in MMWR in November 2024 on Serologic Evidence of Recent Infection with Highly Pathogenic Avian Influenza A(H5) Virus Among Dairy Workers - Michigan and Colorado, June - August 2024. Missouri also performed a retrospective investigation, aided by CDC, using serology testing to help identify signs of previous infection or exposure to influenza (H5N1) in individuals who had been in close contact with an infected patient and had symptoms warranting further investigation. A CDC Report on Missouri H5N1 Serology Testing was published October 24, 2024.

Biosafety and Biosecurity

Q: If laboratories identify a sample as positive with the CDC Influenza A/H5 subtyping kit, will this be considered a positive confirmation of a select agent?
A: On June 6, 2024 USDA announced a three year exemption on H5 viruses from select agent regulations. **During this time, influenza A/H5 is temporarily exempt from regulation as a select agent.** Positive results generated at PHLs may be shipped Category B as a diagnostic specimen.

Q: Should suspected Influenza A (H5N1) specimens be processed in biosafety level (BSL)-3 facilities until extracted or inactivated?
A: Technically diagnostics can be run at BSL-2, but PHLs may choose to use BSL-3 until inactivated. This is at the discretion of your biosafety officer. PHLs are encouraged to conduct their own risk assessments. APHL Risk Assessment Guide - Testing Raw Milk Samples that May Contain Highly Pathogenic Avian Influenza

Q: Does CDC have Influenza A(H5N1) inactivation data on various extraction buffers?
A: Yes, CDC has validated the following buffers for inactivation of Influenza A(H5N1):

- TRIzol LS
  - 10% buffered formalin
  - Beta-Propiolactone (BPL)
  - Guanidinium-based Roche buffers
    - MagNA Pure 96 kit / MagNA Pure 96 External lysis buffer
    - MagNA Pure Compact / RNA isolation kit lysis buffer
    - MagNA Pure 96 Cellular RNA Large Volume Kit / MPLC RNA Isolation Tissue Lysis Buffer
    - Guanidinium-based Qiagen buffers
    - QIAamp Viral RNA mini kit / AVL buffer
    - QIAamp DSP Viral RNA mini kit / AVL buffer
    - Qiagen RNeasy RNA extraction kit / RLT buffer

Testing was done following the manufacturer's standard protocols then inactivated materials were inoculated into embryonated chicken eggs and examined for growth in eggs. For buffers that result in embryo lethality, CDC first determined the buffer's toxicity concentration in eggs using a non-lethal buffer dilution for inactivation. Guanidinium concentrations did not kill the embryo, but still completely inactivated the virus.

Peer reviewed journal articles on inactivation of Influenza A(H5N1):

- Avelin V, Sissonen S, Julkunen I, Österlund P. Inactivation efficacy of H5N1 avian influenza virus by commonly used sample preparation reagents for safe laboratory practices. *Journal of Virological Methods*. 2022;304:114527. Doi:10.1016/j.jviromet.2022.114527
- Elveborg S, Monteil VM, Mirazimi A. Methods of Inactivation of Highly Pathogenic Viruses for Molecular, Serology or Vaccine Development Purposes. *Pathogens*. 2022;11(2):271. Doi:10.3390/pathogens11020271

Q: What level of biosafety and PPE is used in rabies labs also testing for influenza A(H5N1)?
A: PHLs should conduct their own risk assessments. BSL-2 has been used with additional enhancements: working in a biosafety cabinet and using full respiratory protection (powered air purifying respirators [PAPRs] or medically fitted N-95 masks) until inactivation.

Q: Has CDC provided biosafety guidelines for H5 testing?
A: CDC has published Guidelines for Laboratory Biosafety: Handling and Processing Specimens Associated with Novel Influenza A Viruses, Including Potential A(H5N1) Virus. The guidance is directed at laboratory and support staff who handle, or process, specimens potentially containing A(H5N1) viruses.

Influenza A (H5N1) Virus Genetic Characterization

Q: Is the current influenza A(H5N1) virus expected to be responsive to Tamiflu?
A: Yes.

Q: In severe human cases associated with clade 2,3,4,4b are there specific hallmark mutations to monitor and are there reliable references to review those details?
A: Yes, there are typical mutations, primarily in the polymerase genes, that are commonly associated with mammalian adaptations. These mutations may contribute to increased severity and enhanced replication in the lower respiratory tract. For more details, refer to published articles describing these mutations and the CDC H5N1 Genetic Changes Inventory.

Q: Have any mutations of concern been identified up to this point?
A: In two recent cases (Nevada and Wyoming, winter 2025) there were polymerase gene mutations that can enable the virus to replicate more efficiently. No other changes associated with mammalian adaption that would be concerning for humans were identified.

Q: Are there other resources that cover molecular markers of illness severity in humans?
A: Yes, there are a number of review articles and publications examining influenza A(H5N1) specifically. The GISAID FluSurver can be used to search for molecular markers that are associated with phenotypic changes.

Q: Where can I find Influenza A(H5N1) sequence data from recent positive cases?
A: CDC has described sequence data from recent human cases in several Spotlight articles, which cite GenBank and Global Initiative on Sharing All Influenza Data (GISAID) accession information. As of March 2, 2025, GISAID has published updated phylogenetic trees focused on recent US influenza A(H5N1) sequences from these human cases, as well as sequences from a range of animal and environmental sources.

Q: What is the current assessment of risk to people in the US?
A: CDC has conducted an Influenza Risk Assessment Tool (IRAT) analysis of avian influenza A(H5N1) in the current outbreak. The latest IRAT indicates that the overall future potential pandemic risk of H5N1 virus remains moderate and supports the ongoing, coordinated US government response. The current risk to individual and population health remains low.

On February 28, CDC's Center for Forecasting and Outbreak Analytics also released a current assessment of risk to people in the US from influenza A(H5N1). The risk posed to the general US population continued to be assessed as low, while the risk to populations in contact with potentially infected animals or contaminated surfaces or fluid is deemed moderate to high. CDC stressed the risk could change, based on a number of factors being monitored: spread and case distribution, human-animal interface, genetic changes and disease severity.

Food Safety: Infection in Dairy Cows and Milk Testing

Q: Can laboratories use the CDC Influenza assay for milk testing?
A: No, CDC Influenza A/H5 subtyping kits should not be used for milk testing and should only be used for human specimen testing. FDA's Bacteriological Analytical Manual has a standard operating procedure for Extraction and Detection of Influenza A virus in Milk and Milk Products that may be used with Standard Operating Procedure for Subtyping of HPAI H5 in Milk and Milk Products Using RT-qPCR.

Q: What information is available relevant to risk assessments for those handling and processing raw milk for testing at PHLs?
A: Laboratories receiving raw or pre-processed milk samples for testing should re-examine safety considerations of working with these and other cattle-derived samples. In August 2024, APHL developed a risk assessment guide that provides a framework for laboratories to assess their risk of exposure to HPAI when testing raw milk samples. In June 2024, FDA shared with APHL their Interim HPAI Virus Biosafety Recommendations and Resources for Industry Laboratories and State Dairy & Dairy Product Laboratories.

Q: While many states have dairy testing programs in place, what influenza surveillance activities should be conducted through milk testing?
A: US Department of Agriculture (USDA) announced the start of a National Milk Testing Strategy (NMTS) and issued a Federal Order requiring that raw (unpasteurized) milk samples be collected and shared for testing with USDA. In December, 2024, USDA began to receive initial samples from the first states sampling under the guidance of the NMTS. Into 2025, USDA has continued to enroll additional states in the NMTS program (current status by state). Results from this testing are included in the routine testing reports shared by the USDA's Animal and Plant Health Inspection Service (APHIS). Any newly affected herds identified through the NMTS will be added to USDA's livestock detections map.

Q: Is it required that samples from cattle or milk must be analyzed in a lab separate from human specimens?
A: Under the Pasteurized Milk Ordinance (PMO), the 2400 form for Cultural Procedures states, within a work area, only compatible laboratory functions should be performed (item 1.e). The PMO also references Good Laboratory Practices. In routine practice, separating human and food testing is prudent if a potential regulatory action could be taken on the results, but some laboratories manage contamination risks using separated spaces, biosafety hoods and dedicated personnel.

Q: What is known about the stability of influenza A(H5N1) in raw milk?
A: A March 12, 2025, publication in CDC's Emerging Infectious Diseases on the environmental persistence of infectious influenza A(H5N1) in irradiated milk, on contaminated surfaces, and in irradiated wastewater highlighted the relatively high stability of the virus and the potential for transmission by contaminated milk or fomites. The results emphasize the need for cautions handling and disposing of milk from infected cattle.

Q: Can infectious influenza A(H5N1) persist in aged raw milk cheese?
A: Yes, recent research suggests that infectious virus in raw milk can persist following the cheese making process through 60 days of aging, dependent on pH. This research was commissioned by New York state and FDA, and conducted by Cornell University. The New York State Department of Agriculture and Markets is working with federal partners to develop a surveillance strategy for the milk supply used in raw milk cheese processing. FDA is also conducting an assignment sampling 60-day aged raw milk cheese; as of March 10, 2025 110 of 299 planned samples had been collected, with no influenza A(H5N1) detected.

Q: What are the Ct values for milk vs. NP swab?
A: APHIS has reported that milk from infected cows contains high levels of influenza A(H5N1) virus. Ct values in milk have been reported to be low. To date, APHIS has not found significant concentration of virus in

respiratory related samples from cattle, which could indicate that respiratory transmission is not a primary means of transmission in cattle.

Q: Has HPAI been detected only in dairy cows or also in beef cattle?
A: To date, APHIS has received no reports of signs in beef herds. To verify the safety of the meat supply in the context of influenza A (H5N1), USDA's Food Safety and Inspection Service (FSIS), APHIS and Agricultural Research Service (ARS) have completed three separate beef safety studies related to avian influenza in meat from dairy cattle.

Q: Has milk testing identified infection in mammals other than cows?
A: Yes. A single infected sheep was identified in Yorkshire, UK, through a UK surveillance strategy of routine milk testing of milk-producing mammals in premises affected by avian outbreaks of influenza A(H5N1). This is the first time the virus has been reported in a sheep. Further testing of the flock at the premises by the Animal and Plant Health Agency Weybridge laboratory detected no additional infections.

Food Safety and Veterinary Medicine: Impacts on Pets

Q: Are pets susceptible to the current outbreak of influenza A(H5N1)?
A: In an update from the FDA's Center for Veterinary Medicine on December 13, 2024, FDA highlighted the susceptibility of felines, including domestic cats, to HPAI A(H5N1) infection. The update stated that cats should not be fed any products from affected farms if they have not been thoroughly cooked or pasteurized.

Investigations in California, Oregon and Washington have identified and infections and led to advisories against feeding pets raw foods and unpasteurized milk:

- Public Health Warns Against Feeding Pets Raw Food Following H5 Bird Flu Virus Detection
- Animal Health Alert: H5 bird flu confirmed in four domestic cats that consumed recalled raw milk, and in one cat that consumed commercially produced raw pet food. 12.20.2024
- Northwest Naturals of Portland Voluntary Recall of Northwest Naturals Brand 2lb Feline Turkey Recipe Raw & Frozen Pet Food Due to HPAI Contamination
- Detections of HPAI in Domestic Cats
- Voluntary Recall of Wild Coast Raw Boneless Free Range Chicken Formula Raw Pet Food Because of Possible Bird Flu Health Risk
- Savage Pet Recalls Savage Cat Food Chicken – Large and Small Boxes Because of Possible Bird Flu Health Risk

FDA announced in January, 2025 that food safety plans for manufacturers of cat and dog foods must consider influenza A(H5N1).

Q: Is there evidence of transmission from humans to pets?
A: The February 20, 2025 CDC Morbidity and Mortality Weekly Report (MMWR) included an investigation of influenza A(H5N1) infection of indoor cats in dairy worker households. Two indoor cats in separate Michigan households died following infections in May 2024. The source is unknown, but the cats' owners worked on dairy farms with potential occupational exposure. Both dairy workers declined testing. The findings highlight the importance of appropriate PPE use by farmworkers and veterinary practitioners in areas where influenza A(H5N1) is circulating.