Influenza—Novel or Unsubtypeable Strain

Signs and Symptoms	Signs and symptoms of infection with novel influenza or unsubtypeable influenza may resemble seasonal flu (typical symptoms: fever, cough, sore throat, myalgias) or may be more or less severe.
Incubation	The incubation period for **seasonal** influenza is typically 1–4 days but can range from 1–7 days. The incubation period for **novel** influenza viruses is estimated as 2-10 days.
Source of Infection	Influenza virus, which could be spread person-to-person, from infected animals or their droppings/environment, or from contact with influenza virus-contaminated surfaces.
Case classification	Classifications differ based on combinations of laboratory, clinical, and epidemiologic evidence and are summarized in the full guideline. See Section 3 below.
Differential diagnosis	Seasonal flu; other viral, bacterial and fungal etiologies. Note: sometimes a commercial flu test will yield an unsubtypeable result due to low viral titer or other issues even though the patient is infected with seasonal strain; testing at Washington State Public Health Laboratories [PHL] can determine whether an unsubtypeable result commercially is due to seasonal flu or due to novel virus.
Treatment	Antiviral treatment, which is most effective if started within 48 hours of onset. Antiviral prophylaxis may also be considered for exposed contacts.
Laboratory Testing	Contact Office of Communicable Disease Epidemiology (CDE) to arrange for testing. PHL has CDC reagents (not available at commercial labs) that can identify novel influenza. For specimens that are unsubtypeable commercially, testing at PHL is needed to determine whether the infection is due to seasonal influenza vs. novel influenza. **Clinicians should collect a nasopharyngeal swab for testing at PHL if no specimen associated with a positive test is available. Clinicians should additionally collect a conjunctival swab for testing at PHL if the patient presents with conjunctivitis.** Personnel using personal protective equipment should obtain nasopharyngeal, nasal, and throat specimens using synthetic swabs and viral transport medium. Also consider collecting specimens outdoors. Facilitate the transport of specimens to PHL for testing. Store and submit specimens according to PHL requirements: https://doh.wa.gov/public-health-provider-resources/public-health-laboratories/lab-test-menu.
Public Health investigation	Contact CDE **immediately** (206-418-5500) regarding suspected novel influenza infections and specimens that are unsubtypeable commercially with epidemiologic risk factors. Provide exposure history, symptoms, and risks for considering novel influenza as etiology (for example, recent exposure to influenza-infected animals such as during an avian flu event, recent travel to area with active avian flu transmission with exposure to a bird market, contact with known novel influenza case, recent exposure to raw poultry, eggs, or milk from infected flocks or herds, etc.) If there is high suspicion of novel influenza, ensure appropriate infection control practices (including airborne precautions) are implemented while testing is pending. See https://www.cdc.gov/bird-flu/hcp/novel-flu-infection-control/ Consider placing patient on antiviral treatment while awaiting testing results, and consider beginning antiviral prophylaxis for contacts if suspicion of novel influenza is high. For confirmed cases, do an investigation to assess case's source and transmission from the case.

Influenza—Novel or Unsubtypeable Strain

1. DISEASE REPORTING

A. Purpose of Reporting and Surveillance

1. To detect emerging threats such as avian and other novel influenza strains.
2. To determine the clinical severity, epidemiology, and communicability of novel influenza viruses.

B. Legal Reporting Requirements

1. Health care providers: **immediately notifiable to local health jurisdiction**
2. Health care facilities: **immediately notifiable to local health jurisdiction**
3. Laboratories: **immediately notifiable to local health jurisdiction**; specimen submission required – isolate or if not available clinical specimen associated with positive result (2 business days)
4. Veterinarians: animal cases notifiable to Washington State Department of Agriculture. https://app.leg.wa.gov/WAC/default.aspx?cite=16-70
5. Local health jurisdictions: **immediately notifiable to Washington State Department of Health (DOH) Office of Communicable Disease Epidemiology (CDE)** for cases of suspect novel influenza or cases with an unsubtypeable influenza lab result and epidemiologic risk factors.

C. Local Health Jurisdiction Investigation Responsibilities

1. Contact CDE **immediately** regarding suspected novel influenza infections. Determine exposures for the case.
2. Facilitate the transport of specimens to the Washington State Public Health Laboratories (PHL) for testing.
3. Ensure appropriate infection control practices are implemented while testing is pending.
4. For confirmed cases, perform an investigation to assess the source for the case and transmission from the case.
5. Complete the CDC Human Infection with Novel Influenza A Virus Case Report Form https://doh.wa.gov/sites/default/files/2024-10/CDC-NovelA-CaseReportForm.docx and enter the data into WDRS as "Influenza, novel or unsubtypeable".
6. If unsubtypeable influenza lab results are reported, investigate for epidemiological risk factors (see cover sheet). If found, **immediately** notify CDE.

2. THE DISEASE AND ITS EPIDEMIOLOGY

A. Etiologic Agent

There are two main types of influenza, influenza A and influenza B. Influenza A viruses are divided into subtypes based on the hemagglutinin (H) and neuraminidase (N) proteins on their surfaces. Influenza A viruses infecting humans have been primarily subtypes H1, H2, and H3 while influenza A subtypes H1 through H17 can infect birds and other

animals such as pigs. There are in addition ten different neuraminidase surface proteins.

Seasonal influenza causes annual winter outbreaks affecting 5-20% of the population. The specific strains of influenza [e.g., specific group and subgroup of A(H1N1)] change frequently, necessitating parallel changes in the seasonal influenza vaccine. Since 1977, three types of influenza viruses had been in circulation in humans: influenza A(H3N2), influenza A(H1N1), and influenza B.

Novel influenza virus infections are human infections due to an influenza A virus that is different from currently circulating human influenza viruses virus. If a novel influenza strain begins to infect humans and is easily transmitted person to person, there is potential for an influenza pandemic. Avian influenza viruses are one possible source of novel influenza strains, while swine influenza viruses are another. In April 2009, a novel influenza A(H1N1) virus was identified in several states and Mexico and caused the first influenza pandemic of the 21st century. This virus is no longer considered "novel" and is circulating as a seasonal strain, replacing the previous influenza A(H1N1) virus.

While wild waterfowl shedding the virus are often unaffected by influenza A, domestic poultry infected by the wild birds may be severely affected. In birds, influenza infects both the respiratory and gastrointestinal tracts. As a result, both respiratory and fecal secretions of infected birds carry the virus, which can survive in the environment for weeks to months. Human cases of avian influenza infection, considered novel influenza infections, have been associated with a variety of avian influenza strains.

Avian influenza A viruses are designated as highly pathogenic avian influenza (HPAI) or low pathogenicity avian influenza (LPAI) based on the virus's molecular characteristics and ability to cause disease and mortality in chickens in a laboratory setting. HPAI and LPAI designations do not refer to the severity of illness in cases of human infection with these viruses; both LPAI and HPAI viruses have caused severe illness in humans.

In 1997, human infections due to avian influenza A(H5N1) virus were identified in Asia. Human infection with A(H5N1) virus infections have continued to be reported, often resulting in severe pneumonia and greater than 50% mortality. In 2013, human illness due to a novel avian influenza A(H7N9) virus was reported in China. Avian influenza A(H5N1) and A(H7N9) virus infections are primarily transmitted to humans from birds although limited person-to-person transmission has also likely occurred. Since December 2021, human infections due to avian influenza A(H5N1) viruses were reported globally associated with increased circulation of A(H5N1) viruses in birds and other animals. Illness in humans has ranged in severity from no symptoms or mild illness to severe disease that resulted in death. A small number of other human infections have been reported worldwide including A(H7N2), A(H7N3), A(H7N7), and A(H9N2) novel influenza infections. Situations can change rapidly, and worldwide surveillance information on avian influenza is available at: https://www.who.int/health-topics/influenza-avian-and-other-zoonotic.

Sporadic human infections with influenza viruses that normally circulate in swine have been reported in the United States (called variant viruses and denoted by adding the letter v to the virus subtype designation). See https://www.cdc.gov/swine-flu/variant-flu-in-humans/index.html. Most variant virus infections detected were linked to exposures to swine at agricultural fairs, but limited person-to-person transmission of this virus has

been described.

In late 2014 and 2015, influenza A H5 infections were identified in birds in Washington as well as elsewhere in the nation. Although 48 million birds were depopulated due to influenza infection and although CDC, USDA and state and local public health collaborated to monitor exposed persons for illness, no human infections with avian influenza were identified. Animal infections with A(H7N8) viruses (from turkeys) have also been reported in recent years in the United States. One human infection with cat-associated A(H7N2) virus has been reported in the United States. See |https://www.cdc.gov/bird-flu/avian-timeline/2010-2019.html

Since late 2021, influenza A(H5N1) infections [different from previously identified A(H5N1) avian influenza viruses] have circulated in wild birds in the United States and internationally, with spread to commercial poultry, backyard bird flocks, and wild terrestrial and marine mammals, as well as domesticated animals. Since December 2021, human cases of A(H5N1) have been reported globally; most had to exposures in birds or mammals. Although the risk to the general public from these viruses remains low, CDC still considers it possible that these avian flu viruses could cause human infections resulting in severe disease and recommends that people limit exposure to these viruses, and if exposure must occur, use personal protective equipment including N95 respirators, gowns, goggles, and gloves and also be monitored for symptoms of illness during and for 10 days after exposure (Section 5). Raw poultry, eggs, or milk from infected flocks or herds could present a risk. See https://www.cdc.gov/bird-flu/situation-summary/

B. Description of Illness

Patients with uncomplicated **seasonal** influenza may have minimal illness or symptoms that include fever, chills, cough, headache, sore throat, and other upper respiratory tract symptoms (rhinorrhea), myalgias, arthralgias, fatigue, vomiting, and diarrhea.

Persons infected with variant influenza A(H3N2v) viruses have had symptoms similar to those of seasonal influenza. Compared to seasonal influenza, a high proportion of persons with novel influenza A(H5N1) and A(H7N9) virus infections progress to severe disease including severe pneumonia, acute respiratory distress syndrome (ARDS), septic shock and multi-organ failure leading to death, though it is possible that milder cases may occur but not come to medical attention. Other cases of novel influenza infection have tended to result in relatively mild illnesses or apparent asymptomatic infection. Reported symptoms, when present, typically include: cough, sore throat, fever (measured or subjective), shortness of breath or difficulty breathing, conjunctivitis (red eye, discharge from eye), headache, myalgia, arthralgia, fatigue, rhinorrhea or nasal congestion, diarrhea, and/or vomiting.

C. Reservoirs

Reservoirs for influenza A viruses include humans, swine, poultry, waterfowl, and other birds and mammals. Humans are the primary reservoir for influenza B.

D. Modes of Transmission

Seasonal influenza viruses spread person-to-person primarily through large-particle respiratory droplet transmission (e.g., when an infected person coughs or sneezes near a susceptible person). Transmission via large-particle droplets requires close proximity

between source and recipient persons because droplets do not remain suspended in the air and generally travel only a short distance (<6 feet). Other possible routes of influenza transmission are airborne transmission and mucosal inoculation from hands touching contaminated surfaces. The relative contribution of each type of transmission has not been defined but for airborne transmission is thought to be small.

Avian and swine influenza viruses are generally less transmissible from person-to-person than seasonal influenza viruses. These viruses are primarily transmitted from animals to humans directly or through environmental contamination. However, limited person-to-person transmission has been described with these viruses.

E. Incubation Period

The incubation period for **seasonal** influenza is typically 1–4 days but can range from 1–7 days. The incubation period for novel influenza viruses is estimated as 2-10 days.

F. Period of Communicability

Most healthy adults with **seasonal** influenza are infectious to others beginning from one day before to up to 7 days following illness onset although communicability decreases rapidly 24 hours after fever resolves (without use of fever reducing medication). Persons who continue to be ill longer than 7 days after illness onset should be considered potentially contagious until symptoms have resolved. Children, especially younger children, can shed virus for 10 or more days. Immunocompromised persons can shed virus for weeks or months. The period of communicability for novel influenza viruses is not well described.

G. Treatment

CDC recommends appropriate antiviral medications for treatment of human infections with avian and swine influenza A viruses based on known or likely resistance patterns. Guidance for specific novel viruses is available at: https://www.cdc.gov/bird-flu/hcp/clinicians-evaluating-patients/

For specific recommendations around treatment and chemoprophylaxis related to influenza A(H5N1) see: https://www.cdc.gov/bird-flu/hcp/novel-av-treatment-guidance/

3. CASE DEFINITIONS

A. Case Definition for Novel Influenza Infections (2024)

See Table 1 below for additional case classification interpretation guidance.

A1. Clinical Criteria

In the absence of a more likely alternative diagnosis or cause, an acute illness characterized by either:

- One or more of the following: Cough, sore throat, fever (measured or subjective), shortness of breath or difficulty breathing, conjunctivitis (red eye, discharge from eye), OR
- Two or more of the following: Headache, myalgia, arthralgia, fatigue, rhinorrhea or nasal congestion, diarrhea, vomiting.

A2. Laboratory Criteria*

Confirmatory Laboratory Evidence:

Category 1 (novel virus detection)

- Positive confirmatory molecular test result (e.g., reverse transcriptase polymerase chain reaction [rT-PCR]) for novel influenza subtype,

OR

- Genetic sequence indicative of novel influenza A strain.

Category 2 (viable virus)

- Isolation of a novel influenza virus from a clinical specimen.**

Category 3 (evidence of infection)

- Significant IgG antibody rise to novel influenza A (i.e., at least a 4-fold rise in a quantitative titer or seroconversion) in paired acute and convalescent serum IgG in the absence of another explanation (such as vaccination).

Presumptive Laboratory Evidence:

Category 1

- Presumptive positive for novel influenza on tests specifically designed to detect novel influenza, such as H5 or H7.

Category 2

- Virus testing results indicative of variant influenza, such as H1v or H3v, as determined in consultation with subject matter experts at CDC.

Supportive Laboratory Evidence:

N/A

** Note: The categorical labels used here to stratify laboratory evidence are intended to support the standardization of case classifications for public health surveillance. The categorical labels should not be used to interpret the utility or validity of any laboratory test methodology.*

***Isolation of a novel virus should not be performed outside of CDC.*

A3. Epidemiologic Linkage Criteria

- Close contact with a confirmed human case of novel influenza A virus infection,

  OR

- Shared a common exposure (such as an agricultural fair or live animal market) with a confirmed novel influenza A case,

  OR

- Direct or indirect contact (such as touching an animal, their environment, or their raw or unprocessed animal products) with animals with confirmed influenza A,

  OR

- Inadequate use or breach of PPE and exposed to novel influenza A virus in a laboratory.

A4. Case Classifications

Confirmed:

- Meets clinical criteria AND confirmatory laboratory evidence category 1,

OR

- Meets confirmatory laboratory evidence category 2,
  OR
- Meets confirmatory laboratory evidence category 3.

Probable:

- Meets confirmatory laboratory evidence category 1,*
  OR
- Meets clinical criteria AND presumptive laboratory evidence category 1,
  OR
- Meets clinical criteria AND epidemiologic linkage criteria AND presumptive laboratory evidence category 2.

Suspect:

- Meets clinical criteria AND epidemiologic linkage criteria AND laboratory testing results are positive for influenza A but no laboratory evidence is available that would rule out novel influenza A.

**This case classification should not undermine the diagnosis of novel influenza A under CLIA guidelines, and the patient should be provided the same care and investigation as a confirmed case.*

B. Criteria to Distinguish a New Case of Novel Influenza A Virus Infection from Reports or Notifications which Should Not be Enumerated as a New Case for Surveillance

A person should be enumerated as a new case of a novel influenza A virus infection if:

- The virus is distinguishable from the individual's previous novel influenza A virus infection, OR
- The virus is indistinguishable from the individual's previous novel influenza A virus infection, AND
    - The person has recovered fully or returned to baseline health,
      OR
    - It has been >30 days since symptom onset date (if available) or first positive specimen collection date.

***For severely immunocompromised individuals, judgment should be used to determine if a repeat positive test is likely to result from long-term shedding and, therefore, not be enumerated as a new case. CDC defines severe immunocompromise as certain conditions, such as being on chemotherapy for cancer, untreated human immunodeficiency virus (HIV) infection with CD4 T lymphocyte count <200, combined primary immunodeficiency disorder, and receipt of prednisone >20mg/day for more than 14 days.*

Table 1. Classification Table: Criteria for defining a case of novel influenza A infection.

Criterion	Confirmed		Probable			Suspect
Clinical Criteria						
Acute illness	N			N	N	N
Absence of a more likely alternative diagnosis	N			N	N	N
One or more of the following: • Cough • Sore throat • Fever (measured or subjective) • Shortness of breath or difficulty breathing • Conjunctivitis (red eye, discharge from eye)	O			O	O	O
Two or more of the following: • Headache • Myalgia • Arthralgia • Fatigue • Rhinorrhea or nasal congestion • Diarrhea • Vomiting	O			O	O	O
Laboratory Criteria						
Positive confirmatory molecular test result (e.g., reverse transcriptase polymerase chain reaction [rT-PCR]) for novel influenza subtype	O		S			
Genetic sequence indicative of novel influenza A strain	O		S			
Isolation of a novel influenza virus from a clinical specimen*		S				
Significant IgG antibody rise to novel influenza A (i.e., at least a 4-fold rise in a quantitative titer or seroconversion) in paired acute and convalescent serum IgG in the absence of another explanation (such as vaccination)		S				
Presumptive positive for novel influenza on tests specifically designed to detect novel influenza, such *as* H5 or H7				N		
Virus testing results indicative of variant influenza, such as H1v or H3v, as determined in consultation with subject matter experts at CDC					N	
Testing results positive for influenza A and no evidence ruling out novel influenza A						N
Epidemiological Link Criteria						
Close contact with a confirmed human case of novel influenza A virus infection					O	O
Shared a common exposure (such as agricultural fair or live animal market) with a confirmed novel influenza A case					O	O
Direct or indirect contact (such as touching an animal, their environment, or their raw or unprocessed animal products) with animals with confirmed influenza A					O	O
Inadequate use or breach of PPE and exposed to novel influenza A virus in a laboratory					O	O

Notes:

S = This criterion alone is SUFFICIENT to classify a case.

N = All "N" criteria in the same column are NECESSARY to classify a case.

O = At least one of these "O" (ONE OR MORE) criteria in each category (categories=clinical evidence, laboratory evidence, and epidemiologic evidence) in the same column—in conjunction with all "N" criteria in the same column—is required to classify a case.

***** *Isolation of a novel virus should not be performed outside of CDC.*

4. DIAGNOSIS AND LABORATORY SERVICES

A. Diagnosis

Healthcare providers who clinically suspect a novel influenza virus infection and laboratories that identify an unsubtypeable influenza virus specimen using a PCR assay should immediately contact their local health jurisdiction and submit a specimen to the Washington State Public Health Laboratories. Rapid influenza tests should not be used to rule in or rule out avian flu.

B. Tests Available at Washington State Public Health Laboratories (PHL)

PHL uses the RT-PCR assays developed by Centers for Disease Control and Prevention (CDC) to distinguish seasonal influenza viruses from novel influenza viruses. Confirmatory testing for novel influenza viruses and serologic testing for both symptomatic and asymptomatic infections are performed at CDC.

C. Specimen Collection

Airborne precautions are preferred and include placement of patient in a negative air pressure room and appropriate PPE with a respirator (fitted N95 or Powered Air Purifying Respirator), eye protection, gown, and gloves. If airborne precautions are not possible, institute droplet precautions by placing patient in a private room and instructing staff to wear a surgical mask, eye protection, gown, and gloves. For more information on infection control: https://www.cdc.gov/bird-flu/hcp/novel-flu-infection-control/

Information regarding testing is available from Centers for Disease Control and Prevention: https://www.cdc.gov/bird-flu/php/severe-potential/

Obtain specimens as soon as possible, ideally within 7 days of illness onset. Preferred specimen is nasopharyngeal swab. See: https://www.doh.wa.gov/Portals/1/Documents/pubs/301-018-InfluenzaTestingPHL.pdf

Using appropriate personal protective equipment, collect the following using swabs with a synthetic tip, such as Dacron or nylon, and a plastic or wire shaft:

1. Nasopharyngeal swab and nasal swab combined with an oropharyngeal swab (e.g., two swabs combined into one viral transport media vial). If these specimens cannot be collecting, a single nasal or oropharyngeal swab is acceptable.
2. Conjunctival swab and nasopharyngeal swab (if the person has conjunctivitis, with or without respiratory symptoms), both types should be collected.

Specimens collected with cotton or calcium alginate swabs with wooden shafts will not be tested. Immediately after collection, place the swab or aspirate material into a sterile vial with 2–3 ml of viral transport media; for swab specimens, aseptically break or cut off the end of the swab shaft. The shaft is most easily broken where it is scored. **Close vial tightly** to avoid leakage during transport. Do not let a swab come into contact with reagents used for other tests. If a swab contacts reagents for other tests, a new swab must be submitted. Label vial with patient's name AND a second identifier, specimen source, and date obtained. Note: patients with severe respiratory disease also should have lower respiratory tract specimens collected, if possible.

Consider collecting specimens in an outside, open air location using appropriate PPE to alleviate burden on healthcare resources and avoid potential healthcare exposures if a person were to test positive. After collection outdoors, ensure appropriate handling, storage, and transportation as outlined. Incorrectly handled or stored specimens will not be tested.

Specimen Storage: Optimal testing performance is obtained with freshly-collected specimens stored and shipped refrigerated (2–8°C) that arrive to the WAPHL for processing within 72 hours of collection. If you are unable to ship the specimen for testing within 72 hours of collection, any specimen except serum should be frozen at ≤ -70°C and shipped on dry ice. Serum should be refrigerated. All viral isolates should be frozen at ≤ -70°C prior to shipment.

For detailed information on Influenza Virus Testing at WAPHL: https://doh.wa.gov/sites/default/files/legacy/Documents/Pubs/301-018-InfluenzaTestingPHL.pdf

Note that PHL require all clinical specimens have two patient identifiers, a name and a second identifier (e.g., date of birth) on both the specimen label and on the submission form. Due to laboratory accreditation standards, specimens will be rejected for testing if not properly identified. Also include specimen source and collection date.

5. ROUTINE CASE INVESTIGATION

A. Evaluate the Diagnosis

1. Use the full novel influenza case report form to itemize clinical symptoms, illness severity, and potential exposures to novel viruses, such as travel or animal contact.
2. Facilitate the transport of specimens to PHL for novel influenza testing and for testing of specimens that are unsubtypeable commercially.

Interim guidance for novel influenza A viruses with the potential to cause severe disease in humans [examples include A(H5N2), A(H5N8), and North American A(H5N1)] is available at: https://www.cdc.gov/bird-flu/php/severe-potential/

B. Manage the Case

1. Hospitalized persons with confirmed or suspected seasonal influenza should be placed on droplet precautions for 7 days after illness onset or until 24 hours after the resolution of fever and respiratory symptoms, whichever is longer. In some cases, facilities may choose to apply droplet precautions for longer periods based on clinical judgment, such as in the case of young children or severely immunocompromised patients who may shed influenza virus for longer periods of time. Complete infection control recommendations for seasonal influenza are available at: https://www.cdc.gov/flu/hcp/infection-control/healthcare-settings.html

   CDC advises that the infection control principles and actions relevant for seasonal influenza are appropriate for the control of influenza A(H3N2v) as well.

   More stringent infection control practices are recommended for patients suspected of having other novel influenza viruses such as influenza A(H5N1) or A(H7N9). When these infections are suspected, healthcare facilities should immediately implement

airborne, contact, and standard precautions. Patients should be placed in an airborne isolation room and healthcare personnel caring for these patients should wear gloves, gowns, eye protection and an N95 or higher respirator for all patient care activities. Prolonged influenza viral shedding in the lower respiratory tract has been documented for critically ill patients with A(H5N1) and A(H7N9) infections.

For infection control guidance novel influenza virus infection see: https://www.cdc.gov/bird-flu/hcp/novel-flu-infection-control/

2. Antiviral treatment should be administered according to current CDC guidance. https://www.cdc.gov/bird-flu/hcp/novel-av-treatment-guidance/
3. Persons with suspected or confirmed novel influenza virus infections who do not require hospitalization should be counseled to stay home and away from other persons in the household and follow respiratory hygiene recommendations (Section 6).

C. Identify Potential Sources of Infection

Inquire about recent travel or exposure to ill persons or persons who have recently traveled; animals such as wild birds, poultry, swine or other livestock such as cows; or raw/unpasteurized dairy products.

D. Identify and Manage Contacts

Contact investigations should be performed for all confirmed cases of novel influenza. Consult with CDE for managing contacts of known or suspect novel influenza cases.

For exposure to A(H5N2), A(H5N8), and A(H5N1) and other novel influenza A viruses identified in North America, interview all persons with potential exposure to avian influenza **during the past 10 days**.

Exposure to HPAI A(H5N1) is defined as:

- Exposure to HPAI A(H5N1) virus infected birds or other animals defined as:
  - Close exposure (within six feet) to birds or other animals with confirmed avian influenza A(H5N1) virus infection. Bird or other animal exposures can include, but are not limited to handling, slaughtering, defeathering, butchering, culling, or preparing birds or other animals for consumption, or 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 bird infections or associated with a case of human infection with HPAI A(H5N1) virus.
- Exposure to an infected person:
  - Close (within six feet) unprotected (without use of respiratory and eye protection) exposure to a person who is a confirmed, probable, or symptomatic suspected case of human infection with HPAI A(H5N1) virus (e.g., in a household or healthcare facility).

- Laboratory exposure (unprotected exposure to HPAI A(H5N1) virus in a laboratory)
  See https://www.cdc.gov/bird-flu/prevention/hpai-interim-recommendations.html for more details

Exposure to avian influenza of undefined subtype is defined as:

- Persons having direct contact with infected birds, contact with surfaces contaminated with the body fluids of infected birds (including fecally contaminated surfaces) or being in an enclosed location (for example, hen house) with infected birds or other animals.

OR

- Persons who have had contact with a suspect or confirmed human case of novel influenza.

As the incubation of avian influenza is estimated to be 2-10 days, contact with avian influenza-infected birds, other animals, or their environment within the previous 10 days warrants recommendations for symptom monitoring, as below, as well as consideration of antiviral prophylaxis. If the contact with avian-influenza infected birds, animals, or swine occurred in Washington, coordination with the Washington State Department of Agriculture is essential; contact CDE for consultation. CDE can provide form letters and other supportive materials for contacting potentially avian-flu exposed persons and their healthcare providers.

1. If any avian-flu exposed persons are identified in the initial interview as symptomatic with influenza-like illness (check with CDE for CDC guidance on symptoms of concern), arrange for collection of a specimen for testing at PHL (see Section 4 for precautions and specimens). Do not send specimens commercially or rely on rapid influenza tests.
2. If the last exposure to avian influenza (contact with infected birds, animals, or surfaces contaminated by infected birds, being in an enclosed environment with infected birds or animals, or contact with a human case) occurred within the previous 10 days, consider prophylaxis (treatment dose). See https://www.cdc.gov/bird-flu/hcp/guidance-exposed-persons/
   a. Adults: Oseltamivir 75mg twice daily for 5 days
   b. Pediatric dosing (use treatment dose): https://www.cdc.gov/flu/hcp/antivirals/summary-clinicians.html
3. Persons who have had contact with influenza-infected birds or other animals in the context of a zoonotic influenza event should be monitored for illness during exposure and for 10 days after exposure in accordance with CDC and USDA procedures. Contact CDE for latest CDC/USDA protocols and for form letters and materials that can be used in communication with the exposed person and healthcare providers. Coordination with Washington State Department of Agriculture is essential and will be arranged through CDE. In general:
   a. Active surveillance is strongly advised, such that the LHJ makes contact with the exposed person daily to confirm illness status. Final contact

should be made at day 10 to confirm illness status. In the event of elevated temperature or other symptoms of concern, exposed person should immediately contact LHJ via phone or, if LHJ is unavailable after hours, exposed person should immediately call CDE 24/7 on-call number 206-418-5500. In the event of development of symptoms of concern in an exposed person under monitoring, LHJ should immediately contact CDE.

b. LHJ should develop a plan for where the patient should go for testing/evaluation in the event of symptoms, and how the patient should be transported to the facility (do not use public or commercial transport such as buses or taxis).

4. Provide instructions for the contact if fever or other symptoms develop:
    a. Call the local health jurisdiction to report the symptoms, or CDE on-call if LHJ is unavailable. (LHJ should immediately notify CDE so that testing at PHL can be arranged.)
    b. Call the healthcare facility identified by the local health jurisdiction and ask to be evaluated for possible avian influenza. Provide the facility with the HCP letter.
    c. Travel to the healthcare facility without using public (e.g., bus) or commercial (e.g., taxi) vehicles.
    d. Besides travel to the healthcare facility, stay home and away from others.
5. Notify the receiving facility that persons being monitored for avian influenza exposure may seek care at that facility.
    a. Confirm that the facility has private room (closed door, private bathroom) where a person could be evaluated, like is done for measles.
    b. Confirm that the facility has personnel trained in use of standard, contact, and airborne precautions who could evaluate a patient.
    c. Provide hospital with the infection control guidelines: https://www.cdc.gov/bird-flu/hcp/novel-flu-infection-control/

E. Evaluate the Environment

Environmental investigations may be necessary for the exposure source of persons with novel influenza virus infection. An affected area may need to be disinfected and left without flocks for months. Consult with CDE and the Zoonotic Disease Program regarding the need for an environmental evaluation. Consultation with Washington State Department of Agriculture may occur. Personal protective equipment is necessary for removing birds or other animals and cleaning a farm.

6. ROUTINE PREVENTION

A. Vaccine Recommendations:

Routine annual vaccination is recommended for all persons 6 months and older. Annual vaccination is particularly important for persons at increased risk of complications and for persons in contact with those at high risk for complications:

https://www.cdc.gov/flu/vaccines/keyfacts.html. Seasonal influenza vaccines are not likely to provide significant protection against novel influenza viruses, but will prevent dual infection with the risk of viral reassortment.

B. Routine Prevention Recommendations

General respiratory hygiene measures are recommended at all times, and particularly during periods when respiratory viruses are circulating:

- Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after you use it and then clean your hands,
- Wash your hands with soap and water frequently, especially after you cough or sneeze. Alcohol-based hand cleaners are also effective,
- Try to avoid close contact with people ill with respiratory symptoms,
- If you get sick with respiratory symptoms, stay home the recommended period and limit contact with others to keep from infecting them,
- Avoid touching your eyes, nose or mouth, and
- Don a mask when entering a healthcare facility if you are coughing or sneezing

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UPDATES

June 2012: The document was reviewed for accuracy. No significant changes were made.

December 2013: The existing guideline for influenza was divided into a guideline for novel influenza and a guideline for influenza-associated death.

June 2015: Updated to include recommendations for evaluating and monitoring human contacts of avian influenza infected birds.

April 2018: Added a cover page, updated to reflect use of Washington Disease Reporting System (WDRS) instead of the Public Health Issues Management System (PHIMS) and web links for management of novel influenza updated given changes to locations of CDC materials.

December 2022: Updated to clarify laboratory reporting requirements given 2023 changes to WAC 246-101-201

November 2023: Updated to reflect influenza A(H5N1) activity in birds and humans.

April 2024: Updated to clarify language around unsubtypeable influenza specimens, recommend collection of specimens outdoors, and reflect influenza A(H5N1) activity in livestock and other animals.

October 2024: Updates made to clinical, laboratory, and epidemiology criteria for case ascertainment and classification. Updates made to the confirmed, probable, and suspect case definitions to reflect current knowledge and situation. All updates reflected in the CSTE 2024 Novel Influenza Position Statement. Updates made to specimen collection instructions and details on exposure risk assessment. CDC links were updated.