Philadelphia Department of Public Health
Division of Disease Control

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Health Advisory

Influenza Season Reporting Requirements and Testing and Treatment Guidance

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Surveillance Summary

Rhinovirus continues to circulate in Philadelphia. Other respiratory viruses are circulating at low levels. Thus far, only 4 laboratory confirmed cases of influenza have been identified in Philadelphia this season. The Philadelphia Department of Public Health (PDPH) will provide updates on influenza activity in the form of a weekly surveillance report posted on the Health Information Portal (hip.phila.gov/xv) each Friday beginning this week.

PDPH also continues to monitor international events surrounding novel avian influenza A (H7N9) human cases. At present, no cases of avian influenza A (H7N9) have been identified in the Unites States. Public health officials have confirmed 139 cases (45 deaths) of human infection with avian influenza (H7N9) in China since April 2013. The most recent case was reported on October 15.

Reporting Requirements for Influenza

PDPH requests that healthcare providers and infection prevention practitioners report the following influenza cases to the health department using the attached form for the 2013-2014 season:

- *Hospitalized persons* with laboratory-confirmed influenza (including positive rapid antigen tests)
- *Fatal cases* of laboratory-confirmed (including positive rapid tests) or suspected influenza
- *Suspect novel influenza A cases* including those who:
  - Are influenza A positive but unsubtypable
  - Have influenza-like illness (ILI: temperature ≥ 100º F (37.8º C) AND at least one respiratory symptom (e.g. cough, sore throat) without other known etiology) and report travel to an area with ongoing transmission of avian influenza within the week prior to symptom onset
  - Have ILI and report direct or indirect exposure to swine or live poultry in the week prior to symptom onset

Cases can be reported via fax to 215-238-6947. A fillable PDF version of the case report form can be found at hip.phila.gov/xv.

Outbreaks of influenza in a long-term care facility, school, childcare center, or shelter are also reportable. Outbreaks are defined as one laboratory-confirmed case of influenza or three or more cases of ILI in a facility. Outbreaks can be reported to PDPH by calling 215-685-6740.

Additional Resources

- Guidelines for testing, treatment and infection prevention, fact sheets, posters, nasopharyngeal swab collection instructions, and vaccine information: https://hip.phila.gov/xv/DiseaseInformation/Influenza.aspx
- CDC Influenza Mobile Application (includes treatment, testing, and vaccine information): http://www.cdc.gov/flu/apps/cdc-influenza-hcp.html
- CDC Influenza Information for Health Professionals: http://www.cdc.gov/flu/professionals/index.htm

SUMMARY POINTS

Reporting Requirements

- Hospitalized cases with laboratory confirmed influenza
- Fatal cases of laboratory confirmed influenza
- Suspect novel influenza A cases (e.g. travel to Asia or exposure to swine or poultry in week preceding illness
- Outbreaks of influenza
- Report case to DDC by calling 215-685-6740 or faxing attached form to 215-238-6947.

Influenza Testing

- Generally not required for uncomplicated cases of influenza-like-illness
- rRT-PCR, viral culture, DFA or IFA recommended for:
  - Hospitalized or fatal cases
  - Patients with severe disease, suspected antiviral resistance, or suspected novel flu A infection
- Appropriate specimens include nasopharyngeal/oropharyngeal swabs, nasal aspirate or wash, or endotracheal aspirate or bronchoalveolar lavage fluid
- Keep specimens refrigerated and test within 72 hours

Influenza Treatment

- Initiate antiviral treatment with oseltamivir or zanamivir as early as possible in persons who have severe illness or are at higher risk for influenza complications

Influenza Vaccine

- Widely available in inactivated, live attenuated, and recombinant forms. Can be administered intramuscular, intradermal, and intranasal.

Influenza Diagnostic Testing Recommendations

- Most patients with ILI *do not require* diagnostic testing for clinical management. Antiviral treatment with oseltamivir or zanamivir should not wait for laboratory confirmation of influenza since delayed treatment can affect efficacy and a negative rapid test result does not rule out influenza.
- Influenza diagnostic testing should be reserved for the following groups:
  - *Hospitalized patients* with suspected influenza or unexplained respiratory failure
  - Patients who *died* of suspected influenza or unexplained respiratory failure
  - Patients with *symptoms that may indicate severe disease* such as: respiratory distress, hypoxia, pneumonia, acute respiratory distress syndrome, neurologic symptoms, or atypical symptoms in a severely immunocompromised patient without known etiology
  - Cases of *suspected antiviral resistance* such as individuals on antiviral prophylaxis for 48 hours who develop ILI or individuals on appropriate antiviral therapy but with repeated positive rapid antigen tests
  - Patients with ILI and *travel to countries with ongoing avian influenza transmission* in the week before symptom onset
  - Patients with ILI and *exposure to swine or live poultry* in the week before symptom onset
- Several commercial and hospital laboratories offer influenza diagnostic testing. Recommended diagnostic tests include:
  - Viral culture ○ rRT-PCR ○ Direct and indirect immunofluorescence assays (DFA and IFA)

  Serology is not a recommended test for the purposes of clinical management. Facilities without access to a commercial or clinical laboratory performing influenza diagnostic testing should contact PDPH to determine if the sample can be tested at a public health laboratory.
- Specimens should be labeled appropriately and be refrigerated (4°C) or placed on ice or cold packs prior to and during transport. Specimens *should not be frozen* and should ideally be tested within 72 hours of collection. Preferred respiratory specimens for diagnostic testing should be collected within the first three to four days of illness and include:
  - Nasopharnygeal (NP)/Oropharyngeal (OP) swabs collected with a synthetic tip (e.g., nylon, Dacron, plastic, aluminum) and placed immediately into a sterile vial with viral transport media
  - Nasal aspirate or wash specimens transferred into a sterile container
  - Endotracheal aspirate or bronchoalveolar lavage fluid transferred into a sterile vial
  - Tissue samples from post-mortem proximal and distal trachea, right and left bronchi and right and left central lung

  Instructions for the collection of a NP swab are available online (see additional resources section)
- Rapid influenza diagnostic tests (RIDT) can be used to identify influenza but have sub-optimal sensitivity. A negative rapid test cannot rule out influenza. Negative tests may require further testing for influenza by PCR or viral culture. Regardless of RIDT test results, clinical judgment should be used to decide if antiviral treatment is appropriate. Furthermore, in situations where the supply of rapid test kits is in shortage, the use of such kits should be reserved for the groups detailed above.

Influenza Treatment Recommendations

- Clinicians are encouraged to initiate early treatment of influenza with antiviral medications, oseltamivir (Tamiflu®) or zanamivir (Relenza®), in patients who:
  - have severe or complicated illness, including hospitalization, as a result of suspected or confirmed influenza
  - are at higher risk for influenza complications (e.g. persons with chronic or immunosuppressive medical conditions, those <2 or >65 years of age, pregnant and postpartum women, persons with a BMI $\geq$40, and persons <19 years receiving long-term aspirin therapy)
  - are suspected of having novel influenza A infection
- Antiviral treatment is most effective within *48 hours* of illness onset and *should not be delayed* if influenza is suspected. It is not necessary to test for influenza in order to initiate treatment. The duration of treatment is 5 days. In the event that oseltamivir for oral suspension is not available for pediatric doses, a pharmacist may compound a suspension (6 mg/mL) from oseltamivir capsules 75 mg using simple syrup.
- Use of antiviral agents for the purpose of chemoprophylaxis is generally not recommended except in: the prevention and control of institutional outbreaks of influenza, persons with severe immune suppression, persons who are at high risk for influenza complications and are unable to receive the flu vaccine or received the flu vaccine <2 weeks from their exposure.

Algorithm for Testing and Treating Patients with Suspected Influenza

2013-2014 Influenza Season

Last updated 11/7/2013

Patient presents with **influenza-like illness (ILI)**:
- Temperature ≥ 100° F (37.8° C) **AND**:
- Cough and/or sore throat
- Without other confirmed etiology

NO →
- Testing for influenza is *not recommended*.
- Workup and follow-up as clinically indicated.

YES ↓

Illness Presentation & Risk Factors

Patient presents with **MILD** ILI symptoms:
Appropriate infection control measures should be instituted

Patient has **underlying conditions** that increase risk for complications:
- < 2 or ≥ 65 years of age
- Pregnant or 2 weeks postpartum
- Underlying conditions associated with a higher risk of medical complications from influenza:
  - Pulmonary disease (including asthma or COPD)
  - Cardiovascular disease (excluding hypertension)
  - Renal, hepatic, hematological, neurologic, neuromuscular disease
  - Metabolic disorders (including diabetes) or morbid obesity
  - Immunosuppression, including that caused by HIV, cancer, or medications
- <19 years of age on long-term aspirin therapy

Patient presents with **SEVERE** symptoms including: respiratory distress, hypoxia, pneumonia, acute respiratory distress syndrome, neurologic symptoms or atypical symptoms in severely immunocompromised patient.

Patient reports within 7-10 days preceding symptom onset:
- History of travel to area where avian influenza is circulating
- Direct or indirect contact to swine or poultry
- Close contact to a known confirmed case of avian or swine influenza

Clinical Management

NO

Treatment is generally not indicated, but use clinical judgment. If there is evidence of lower respiratory tract involvement, treat empirically.

YES

Initiate antiviral treatment with oseltamivir (Tamiflu®) or zanamivir (Relenza®) as soon as possible and ideally within 48 hours; do not wait for laboratory test results.

- Initiate antiviral treatment (oseltamivir, zanamivir) within 48 hours of symptom onset; do not wait for laboratory test results. Use clinical judgment to decide whether additional therapy is needed.
- If severe, consider referring the case to a local ED or hospital for admission. Notify EMS or hospital of suspected influenza and need for appropriate infection control.

Testing

Not necessary, particularly in periods of high influenza incidence.

Testing is generally not necessary and should not influence treatment decisions.

Obtain any of the following: nasopharyngeal/oropharyngeal swab (in viral transport media), nasal aspirate, nasal swab plus throat swab, or nasal wash
- Store specimens in refrigerator while awaiting transport. If testing will *not* occur within 72 hours, place in -70° C
- Testing using rRT-PCR, DFA, IFA, or viral culture can be performed at a hospital or commercial laboratory. For suspect novel influenza (unsubtypable A), antiviral resistance, or fatal cases, isolates should be forwarded to PA Bureau of Laboratories.

Additional Comments:

- Rapid influenza diagnostic tests (RIDT) can be used to identify influenza. However, because of sub-optimal sensitivity for most commercial RIDTs, a negative result does not rule out influenza. Specimens should be sent for viral culture or rt-PCR testing to confirm results of RIDTs.
- Further information regarding infection control, antiviral medication use, clinical guidance for specific groups, and testing can be found at https://hip.phila.gov/xv/DiseaseInformation/Influenza.aspx or www.cdc.gov/flu/professionals.

2013-2014 INFLUENZA REPORT FORM
HOSPITALIZED OR FATAL CASES

Philadelphia Department of Public Health
Division of Disease Control
Acute Communicable Disease Program
500 South Broad St, Philadelphia, 19146
Telephone (215) 685-6740 Fax (215) 238-6947
Form Available at hip.phila.gov

Use this form to report suspected and confirmed cases of influenza that are either hospitalized (24 hours or more) or fatal. All other cases do not need to be reported by name, unless indicative of a new outbreak in a facility or institution requiring special containment measures.

PATIENT INFORMATION

Report Date	Last Name	First Name	D.O.B.	Age (yrs)	Sex	Race/ Ethnicity
___/___/_____			___/___/_____		☐M ☐F	

Street Address	City	Zip Code

Phone #	☐ Lives in congregate setting	☐ Attends school/ daycare
Home: Work or Mobile:	Specify Location:	Specify Location:

HOSPITALIZATION AND LABORATORY INFORMATION

HOSPITALIZATION

Y=Yes; N=No; DK=Don't Know

Admission Date: ___/___/_____ Discharge Date: ___/___/_____

Hospital Name: _____

Diagnosing Physician: _____

Medical Record #: _____

Physician Phone #: _____

*Admitted to ICU? ☐ Y ☐ N ☐ DK

*Fatal? ☐ Y ☐ N ☐ DK

Date of Death: ___/___/_____

*If yes to either question, complete clinical information below.

LABORATORY *(Check all POSITIVE tests)*

Laboratory Name: _____

Specimen Collection Date: ___/___/_____

Source (if not nasopharynx): _____

☐ Rapid Antigen Test,
Specify flu type: ☐ A ☐ B ☐ A/B

☐ Influenza A, Culture

☐ Influenza A, DFA/IFA

☐ Influenza A, PCR

☐ Influenza B, Culture

☐ Influenza B, DFA/IFA

☐ Influenza B, PCR

☐ Other Respiratory Virus,
Specify: _____

FOR ICU OR FATAL CASES ONLY – PLEASE COMPLETE ADDITIONAL CLINICAL INFORMATION

SYMPTOMS

Onset Date: ___/___/_____

☐ Fever, Highest temp (F): _____ ☐ Nasal Congestion ☐ Headaches ☐ Fatigue ☐ Vomiting

☐ Cough ☐ Conjunctivitis ☐ Muscle Aches ☐ Nausea ☐ Diarrhea

☐ Sore Throat ☐ Shortness of Breath ☐ Chills ☐ Other, Specify: _____

UNDERLYING CONDITIONS

☐ None

☐ Unknown

☐ Asthma

☐ Cardiovascular Disease

☐ Chronic Obstructive Pulmonary Disease (COPD)

☐ Diabetes

☐ Immunosuppression, Specify: _____

☐ Kidney Disease

☐ Morbidly Obese (BMI >40)

☐ Neurological, Specify: _____

☐ Pregnant

☐ Postpartum

☐ Smokes Tobacco

☐ Other, Specify: _____

MEDICAL COMPLICATIONS

☐ None ☐ Acute Respiratory Distress Syndrome (ARDS) ☐ Bacteremia ☐ Pneumonia (X-ray confirmed) ☐ Other, Specify: _____

CLINICAL MANAGEMENT

Was antiviral treatment prescribed? ☐ Y ☐ N ☐ DK

Start Date: ___/___/_____ End Date: ___/___/_____

Antiviral Drug: ☐ Oseltamivir (Tamiflu) ☐ Zanamivir (Relenza)

☐ Other, Specify: _____

Was antibiotic treatment prescribed? ☐ Y ☐ N ☐ DK

Indication: _____

Was mechanical ventilation used? ☐ Y ☐ N ☐ DK

VACCINATION HISTORY

Received current seasonal flu vaccine? ☐ Y ☐ N ☐ DK Date Dose Received: ___/___/_____

REPORTER INFORMATION

Facility Name	Reporter Name	Reporter Phone #	Title: ☐ ICP ☐ DO/MD ☐ PA ☐ RN ☐ Other, Specify: _____

Please fax report to (215) 238-6947 upon completion. If case is associated with a suspect outbreak, please indicate on form.