Philadelphia Department of Public Health



Division of Disease Control

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Health Advisory Influenza Testing Recommendations November 2, 2009

The Philadelphia Department of Public Health provides the following interim recommendations for diagnostic testing and treatment of patients with suspected influenza. Additional information is available on the website for the Centers for Disease Control and Prevention (www.cdc.gov/flu/professionals); the website for the Pennsylvania Department of Health (www.hlnlinpa.com); or the PDPH website for healthcare professionals (https://hip.phila.gov).

Recommendations for Influenza Diagnostic Testing

- Influenza is circulating at high levels in Philadelphia. Most patients with influenza-like illness (temperature > 100°F (37.8°C) AND cough and/or sore throat without other confirmed etiology) *do not require* diagnostic testing for clinical management. Antiviral treatment should not wait for laboratory confirmation of influenza since laboratory testing can delay treatment and its efficacy.
- Influenza diagnostic testing should be reserved for the following groups:
 - o Hospitalized patients with suspected influenza or unexplained respiratory failure
 - o 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 influenza-like illness or individuals on appropriate antiviral therapy but with repeated positive
 rapid antigen tests
- Several commercial and hospital laboratories offer influenza diagnostic testing, including testing for H1N1 influenza. Recommended diagnostic tests include:
 - Viral culture
 - o Direct and indirect immunofluorscence assays (DFA and IFA)
 - o rRT-PCR

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 the state Bureau of Laboratories. Currently, the state Bureau of Laboratories is only accepting samples from cases admitted to the intensive care unit, fatal cases, or cases where antiviral resistance is suspected.

- 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 and ideally within 24 hours of collection. Preferred respiratory specimens for diagnostic testing include:
 - o 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
 - o 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
- 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.



DECISIONAL ALGORITHM FOR SCREENING, TESTING AND TREATING PATIENTS WITH SUSPECTED INFLUENZA (INCLUDING H1N1)

Updated 11/2/2009

Testing for influenza is not recommended. Workup and follow-up as clinically indicated.

NO

Patient presents with influenza-like illness:

- <u>Temperature ≥ 100° F (37.8° C)</u> **AND**:
- Cough and/or sore throat
- Without other confirmed etiology

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

Patient has underlying conditions that increase risk for complications:

- Persons < 2 or ≥ 65 years of age (consider treatment for child 2-4 yrs)
- Pregnant women
- Persons of any age with underlying conditions associated with a higher risk of medical complications from influenza
 - o Pulmonary disease (including asthma or COPD)
 - o Cardiovascular disease (excluding hypertension)
 - o Renal, hepatic, hematological, neurologic, neuromuscular disease
 - Metabolic disorders (including diabetes)
- o Immunosuppression, including that caused by HIV or medications
- Persons <19 years of age on long-term aspirin therapy

MANAGEMENT & TREATMENT:

NO

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

TESTING:

Not necessary, particularly in periods of high influenza incidence.

MANAGEMENT & TREATMENT:

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

YES

TESTING:

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

YES

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

MANAGEMENT & TREATMENT:

- 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.
- Initiate antiviral treatment (oseltamivir, zanamivir, peramivir) within 48 hours of symptom onset; do not wait for laboratory test results. Use clinical judgment to decide whether additional therapy is needed.

TESTING:

- Obtain any of the following: nasopharyngeal swab, nasal aspirate, nasal swab plus throat swab, or nasal wash
 - o Store in refrigerator while awaiting transport (do not freeze)
- Send to commercial laboratory with FDA-authorized influenza H1N1 test; if unavailable, consult PDPH to determine if submitting a specimen to the state Bureau of Laboratories is warranted.
- o Isolates from fatal, ICU, or suspected antiviral resistance cases should be forwarded to the state Bureau of Laboratories.

HOME CARE and DISCHARGE GUIDANCE

Patient should be instructed to self-monitor for symptoms and call/return if they worsen, stay home for at least 24 hours until symptoms (including fever) resolve, and practice appropriate hand and respiratory hygiene. Post-exposure prophylaxis may be considered for close contacts with high-risk conditions.

Additional Comments:

- Rapid influenza diagnostic tests (RIDT) can be used to identify influenza, including H1N1. 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 to confirm results of RIDTs, especially when community prevalence of influenza is low and the rapid diagnostic test result is positive or when the rapid diagnostic test result is negative but disease prevalence is high.
- Additional information regarding infection control, antiviral medication use, clinical guidance for specific groups, and testing can be found at www.cdc.gov/flu/professionals