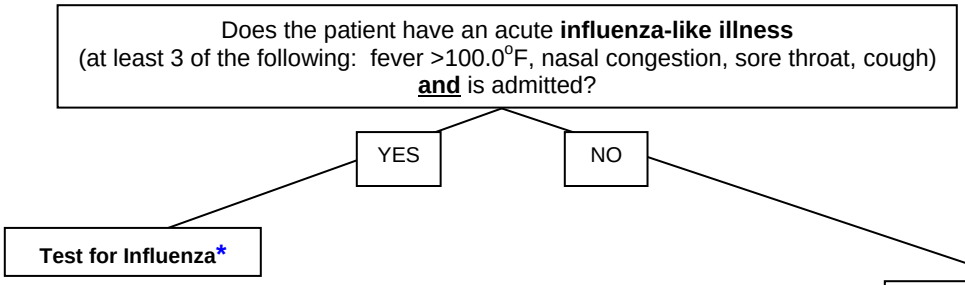
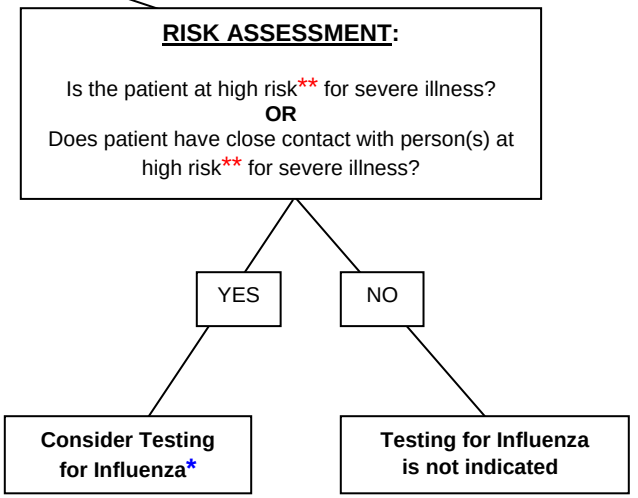
October 5, 2009 - HOSPITAL AND CLINICS:

ASM's INTERIM ALGORITHM for GUIDANCE in TESTING of PATIENTS with RESPIRATORY ILLNESS for INFLUENZA A (including NOVEL H1N1)

This algorithm may change. Please review frequently.





* INFLUENZA TESTING

Specimen:

- Specimens of choice are nasopharyngeal (np) flocked swabs^. In addition, np aspirates, np washes, or nasal aspirates may be tested. If these specimens cannot be collected, a combination of nasal & oropharyngeal swabs is acceptable, however these specimen types are considered suboptimal for influenza detection. For patients who are intubated, an endotracheal aspirate should be collected; bronchial lavage fluid and sputum specimens are also acceptable for inpatients.
- Patients should be tested as soon as possible after onset of symptoms keeping in mind that children will shed virus for several more days than adults. Collection for up to 5 days post onset of symptoms is optimum; specimens collected after 5 days may be of value in children <5 and immunocompromised patients.

Tests:

1. Only use specimen types that are approved for use in your assay system; list specimen source accurately.
2. Viral cell culture or PCR based assays are the preferred methods for testing. PCR assays may be more rapid than shell vial cell culture which may take up to 36-48 hours.
3. DFA tests are acceptable, but all negative specimens should be followed up with culture or PCR.
4. Rapid flu tests: Because of unacceptably low sensitivity and suboptimal positive predictive value, rapid influenza antigen EIA tests can not be recommended as a primary screening test for influenza. However, if no alternative testing modality is available in a clinically relevant timeframe, antigen EIA can be used as long as the appropriate interpretative comments are appended to the test results. For example, *'negative results do not rule out influenza especially when clinical signs and symptoms are consistent with influenza-like illness'*, and *'positive results may need confirmation especially when prevalence of influenza in the population is low'*. Refer to the following references for additional information on influenza testing:
    a. http://www.cdc.gov/h1n1flu/guidance/diagnostic_tests.htm
    b. http://www.cdc.gov/flu/professionals/diagnosis/rapidlab.htm
    c. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5837a1.htm?s_cid=mm5837a1_e
    d. Ginocchio CC, Zhang F. Manji R. *et al*. Evaluation of multiple test methods for the detection of the novel 2009 influenza A (H1N1) during the New York City outbreak. *J Clin Virol* 2009 Jul :45(3) :191-195.
    e. Vasoo S, Stevens J, Singh K. Rapid antigen tests for diagnosis of pandemic (Swine) influenza A/H1N1. *Clin Infect Dis*. 2009 Oct 1;49(7):1090-1093.
5. All specimens positive for influenza A from an inpatient or expired patient should be tested for subtype or submitted to your State Public Health Laboratory or other reference laboratory for this testing.

^NP flocked swabs collect better samples than routine np swabs. Reference: Daley, P., Castriciano S., Chernesky M., *et al.* Comparison of flocked and rayon swabs for collection of respiratory epithelial cells from uninfected volunteers and symptomatic patients. *J Clin Microbiol.* 2006 Jun;44(6):2265-2267.

** HIGH RISK FOR SEVERE INFLUENZA INCLUDE:

-Child <5 yrs
-Adult >65 yrs
-Pregnant women
-Immunocompromised host
-Long term care facility resident
-Chronic underlying disease
-Persons <19 yrs of age and on chronic aspirin therapy