

Sent: Friday, October 23, 2009 2:04 PM

Subject: FROM THE ASSOC. CMO -- Hospital Guidelines for H1N1

Hospital Guidelines for Respiratory Illness and Suspected H1N1

* Please note that these are UCSF-specific guidelines and local guidance may vary at San Francisco General Hospital and the Veteran's Affairs Medical Center. Guidelines are subject to change based on new information.

Who should be isolated?

Patients with signs or symptoms of a respiratory viral illness (T > 37.8°C, cough, sore throat, nasal congestion and runny nose, myalgias) should be isolated.

What precautions should be used?

UCSF recommends **Droplet Precautions**, which requires wearing a surgical mask and appropriate eye protection. A N95 mask should be used for aerosol-generating procedures (e.g. bronchoscopy, intubation, open suctioning, nebulizer administration). San Francisco General Hospital (SFGH) uses "low-level respiratory isolation" and N95 masks; the Veteran's Administration Medical Center (VAMC) uses N95 masks. Contact Infection Control at each site with questions.

Who should be tested? How is testing for influenza and H1N1 done at UCSF?

Testing should be ordered on hospitalized patients with symptoms of a respiratory viral illness by writing "**Flocked swab for Respiratory Viral DFA**". Currently, UCSF tests for influenza by a direct fluorescent antibody test (DFA). This test confirms if your patient has influenza A, influenza B, or another respiratory virus but cannot specify swine H1N1.

Currently, as the majority of circulating influenza viruses is H1N1, subtyping is not routinely recommended. Testing for H1N1 can only be done by PCR as a send-out test for hospitalized immunocompromised, pregnant, or critically ill patients with a negative DFA through approval by the Adult or Pediatric Infectious Diseases service. The turnaround time for the PCR is 3-5 days. Please be aware that testing recommendations may change during the upcoming season. Testing practices at SFGH and VAMC vary. Please consult infectious diseases at these sites with questions regarding testing.

How good is the DFA test in determining if a patient has influenza?

The DFA has a sensitivity of about 60-80% for seasonal influenza and 50% for H1N1[1]; hence, the test is only helpful if it is positive. A negative test result **should not** be used to rule out disease, stop empiric therapy or discontinue Droplet Precautions, particularly if clinical suspicion for influenza remains high.

Who should be treated?

Any hospitalized patient with documented influenza should be treated even if > 48 hours after symptom onset [2]. As potential benefits likely outweigh small risks, empiric therapy is recommended in hospitalized patients with suspected influenza who are at high risk for complications (critically ill, pregnant women, age > 65 or < 2 years old, immunocompromised, significant chronic co-morbidities) at the time of presentation.

What therapy should be used to treat a patient with suspected or documented influenza?

As the majority of current circulating influenza virus is swine H1N1 virus, oseltamivir or inhaled zanamivir for 5 days is recommended. Zanamivir cannot be administered as a nebulizer or to ventilated patients.

For adult and pediatric dosing recommendations, please refer to: <http://www.cdc.gov/h1n1flu/recommendations.htm> Use of doubled-dose oseltamivir is recommended by some experts for critically ill, obese patients although there is no efficacy data [3, 4]. For questions on the management of critically ill patients, please consult the Adult or Pediatric Infectious Diseases service.

NOTE: Recommendations may change depending on circulating viral subtype and antiviral resistance patterns.

When can precautions be discontinued?

For patients with documented or suspected influenza, precautions should be continued until symptoms resolve **and** for at least 7 days from symptom-onset, regardless of test result. Precautions may be continued for longer in patients who are immunocompromised with evidence of prolonged viral shedding or discontinued earlier if the patient is discharged.

If you have questions regarding patient testing and management, please contact the Adult or Pediatric Infectious Diseases services. If you have questions regarding precautions, please contact Infection Control at 353-4343 .

1. 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):191-5.
2. Harper SA, Bradley JS, Englund JA, et al. Seasonal influenza in adults and children--diagnosis, treatment, chemoprophylaxis, and institutional outbreak management: clinical practice guidelines of the Infectious Diseases Society of America. *Clin Infect Dis* 2009 Apr 15;48(8):1003-32.
3. <http://www.sfcddcp.org/H1N1healthalert.html>. H1N1 Swine Flu Health Advisory 7/06/2009. 2009.
4. CDC. <http://www.cdc.gov/H1N1flu/recommendations.htm> 2009.