UCSFMC & UCSFBCH Guidelines for Treatment of Influenza

These guidelines apply during the influenza season at UCSF Medical Center and UCSF Benioff Children's Hospital - San Francisco.

Onset of the influenza season varies but is usually in late December/early January in Northern California. The end of the season varies. Click here [1] to view a graph monitoring influenza and other respiratory virus activity weekly based on diagnostic testing at the UCSF Clinical Virology Laboratory.

INFLUENZA DIAGNOSTICS
<table>
<thead>
<tr>
<th>APEX Name</th>
<th>Assay Type</th>
<th>Viruses</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>Sample</th>
<th>Turnaround Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>POCT Influenza Virus*</td>
<td>Antigen test</td>
<td>Influenza</td>
<td>50-70%</td>
<td>90-95%</td>
<td>Nasal swab</td>
<td>Rapid</td>
</tr>
<tr>
<td>Rapid influenza A/B/RSV PCR</td>
<td>PCR</td>
<td>Influenza, RSV</td>
<td>&gt;95%</td>
<td>&gt;95%</td>
<td>NP swab only</td>
<td>2-4 h</td>
</tr>
<tr>
<td>Respiratory Viral Panel PCR</td>
<td>PCR</td>
<td>Influenza, RSV, PIV, hMPV, rhinovirus, adenovirus</td>
<td>&gt;95%</td>
<td>&gt;95%</td>
<td>NP swab or lower tract sample (BAL, mini-BAL, ET aspirate)</td>
<td>1-3 d</td>
</tr>
</tbody>
</table>

* To be discontinued at UCSF Dec 2017, may be performed at referring facilities.

**Key points about diagnostics:**

1. **A negative POCT test does not exclude influenza given low sensitivity** (but can rule it in)

2. How to order the PCR tests:
   a. Type ?influenza? or ?rapid? to see the order for ?Respiratory Viral testing ? with Isolation.? This gives you the option to order one or both PCR tests.
(3) Which test should I order?

a. **Always order the rapid influenza A/B/RSV PCR given rapid turnaround time.**

b. Consider respiratory viral panel PCR in immunocompromised or critically ill patients.

c. In critically ill patients, consider sending upper and lower respiratory tract samples to improve sensitivity for diagnosis of respiratory viral infection.

**Which patients should be tested during influenza season?**

(1) **Inpatients:** All inpatients with an influenza-like illness or pneumonia. Note that not all patients with influenza will have fever (e.g., infants, elderly, immunocompromised).

(2) **Outpatients:** Patients with high-risk conditions who will be considered for antiviral therapy (see section on Antivirals).

**INFECTION CONTROL FOR HOSPITALIZED PATIENTS**

(1) Droplet precautions should be ordered for all patients in whom respiratory viral testing is ordered.

(2) When can you stop droplet precautions in a patient with documented influenza?

a. BMT/heme malignancy patients: At least 7 days from symptom onset AND symptoms resolve AND retest is negative

b. All other patients: At least 7 days from symptom-onset AND until symptoms resolve

**ANTIVIRALS**

**Which patients with influenza should be treated with antivirals?**

(1) **Inpatients:**
a. **All inpatients with influenza irrespective of time of symptom onset** as treatment is associated with lower mortality in inpatients even if > 48h from symptom onset.

b. Treat as early as possible and do not delay therapy while awaiting lab confirmation.

(2) **Outpatients:**

a. **All patients at high risk of influenza complications.** Treat irrespective of time of symptom onset, as early as possible, and do not delay therapy while awaiting lab confirmation.

b. High risk patients are:

i. <2 years* or ≥ 65 years (*note: For < 2 year old children, routine empiric influenza therapy in this age group is somewhat controversial. It is recommended to offer therapy to this group of patients, but individual treatment decisions may be considered via shared decision-making and incorporation of other clinical factors.)

ii. Have chronic pulmonary, cardiovascular, renal, hepatic, hematological, neuro/neurodevelopmental, and metabolic disorders (including diabetes)

iii. Immunocompromised

iv. Pregnant or postpartum (within 2 weeks after delivery)

v. Persons < 19 years receiving long term aspirin therapy

vi. American Indians/Alaska Natives

vii. Morbidly obese (BMI ≥40)

viii. Residents of chronic care facilities

c. In healthy outpatients treatment can be considered if within 48 hours of symptom onset. Treatment can shorten symptom duration by ~1 day and may decrease complications.

**Drug options (Neuraminidase inhibitors)**
Only neuraminidase inhibitors are currently recommended for treatment of influenza given widespread resistance of circulating viruses to amantadine and rimantadine.

Drug Options (click on drug for full dosing and monitoring information):

a. **Oseltamivir** [2]: Drug of choice for most patients. Adverse effects: nausea/vomiting, rare neuropsychiatric effects.

b. **Zanamivir** [2]: Inhaled drug. Cannot use in intubated patients or those with underlying respiratory disease (asthma/COPD) as it can cause cough, bronchospasm.

c. **Peramivir** [2]: IV option. Requires ID approval. Consider use in hospitalized patients with influenza in whom there is a concern for GI absorption that would limit the use of oral oseltamivir. Consider inhaled zanamivir as an alternative in stable floor patients.

Source URL: https://idmp.ucsf.edu/ucsfmc-ucsfbc-treatment-influenza?mag_q=printpdf/676

Links: