Best Practice Summary of the College of Urgent Care Medicine

Diagnosis and Treatment of Influenza

Date Reviewed	April 2021
Subject	Influenza Testing and Treatment
Patient Population	Adults and Children
Rationale	Though the 2020/21 season was extremely mild likely due to protections used to reduce the impact of COVID-19 disease, influenza historically results in significant morbidity and mortality annually. Many patients are evaluated in the Urgent Care setting. Timely and accurate diagnosis and treatment have been shown to improve outcomes. Avoiding inappropriate prescription of anti-viral medication is also important.
Introduction	Influenza is a contagious respiratory illness caused by the many different strains of the influenza virus. Influenza infects approximately 3 to 11% of the U.S. population annually. The CDC estimates that influenza results in 140,000 – 810,000 hospitalizations and between 12,000 – 61,000 deaths annually since 2010. The exact timing and duration of flu season varies each year, but typically activity increases in October, peaking between December and February, and waning in May. Prompt diagnosis and management may reduce the risk of hospitalization or severe disease for those who are at high risk for complications. (see Table 1)
Evidence based guideline with strength of evidence	○ Influenza testing is **not** required to make a clinical diagnosis of influenza in outpatients with suspected influenza based on symptoms (see Table 2) when seasonal influenza A and

	B viruses are circulating in the local community ○ Antiviral medications should be started promptly in high-risk patients (see Table 1) with suspected influenza with or without a positive influenza test. Antiviral treatment is optional for those who are not at high risk of influenza complications or household contacts of those at high risk. ○ Patients with influenza should be isolated at home until afebrile for 24 hours off anti-pyretic medications.
Discussion	Diagnosis of influenza: Rapid influenza tests in the ambulatory setting include RIDT (Rapid Influenza Diagnostic Testing) which detect viral proteins and molecular testing which detect genetic material. RIDTs are relatively inexpensive and produce results in approximately 10-15 minutes but are not as accurate as molecular testing. While molecular testing offers the highest sensitivity, these tests may not be readily available in the ambulatory setting. During an influenza outbreak, a negative RIDT is NOT sufficient to rule out influenza in a symptomatic patient. Because of the risk of morbidity and mortality in high-risk patients, treatment should be initiated as soon as possible when influenza is suspected on clinical grounds. Antiviral therapy: - baloxavir marboxil (October 24, 2018) - peramivir (December 19, 2014) - oseltamivir (December 14,2000) - zanamivir (July 26,1999) Both baloxavir marboxil and oseltamivir are most commonly recommended for treatment of influenza. Peramivir is given intravenously,

	making it of limited use in the ambulatory setting. Zanamivir is an inhalation powder and may trigger respiratory effects in sensitive groups with pre-existing lung disease. Oseltamivir is a neuraminidase inhibitor while baloxavir marboxil is an endonuclease inhibitor. The dose of oseltamivir for treatment of influenza A and B in patients > age 12: 75 mg PO BID for 5 days. In children dosing is weight based. Under age 1, the dose is 3 mg/kg/dose PO BID for 5 days. Ages 1-12, < 15 kg, 30 mg PO BID for 5 days Ages 1-12 15-23 kg, 45 mg PO BID for 5 days Ages 1-12 23.1-40 kg, 60 mg PO BID for 5 days Ages 1-12 >40 kg, 75 mg PO BID for 5 days Baloxavir marboxil is weight based in patients ≥ age 12: < 80 kg, 40 mg PO x 1 dose > 80 kg, 80 mg PO x 1 dose Baloxavir marboxil is not approved for use in children under the age of 12 Treatment should be started within 48 hours of symptom onset in low-risk patients as there is no meaningful benefit after that time. In high-risk patients, treatment should be initiated even if past 48 hours from the onset of symptoms. Early and widespread use of antivirals may reduce hospitalization and severe disease in at-risk patients. Antiviral treatment is recommended, regardless of symptom duration, for any patient also diagnosed with concurrent community-acquired pneumonia.
Summary	Influenza is a seasonal illness seen commonly in urgent care centers. Testing is not required to make a diagnosis of influenza when there is activity within the community. A negative rapid influenza test does not rule out disease. Patients who fit a clinical diagnosis of

	influenza should be started on anti-influenza medications if they are at high risk for complications even after 48 hours of symptom onset. Patients diagnosed with influenza who are not at high risk for complications may be started on anti-viral therapy within 48 hours of symptom onset. There is no benefit in these patients after 48 hours. Patients diagnosed with influenza should be isolated at home until they are fever-free for 24 hours off antipyretics.
References	https://doi.org/10.1093/cid/ciy866 https://doi.org/10.1164/rccm.201908-1581ST
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Attachments (flow charts, graphics, tables, etc.)	Table 1 (High-risk flu) Table 2 (Flu symptoms) Flowchart for diagnosis/management

Table 1: Health and age factors that are known to increase a person's risk of getting serious complications from flu:

- Adults 65 years and older
- Children younger than 2 years old[1]
- Asthma
- Neurologic and neurodevelopment conditions
- Blood disorders (such as sickle cell disease)
- Chronic lung disease (such as chronic obstructive pulmonary disease [COPD] and cystic fibrosis)
- Endocrine disorders (such as diabetes mellitus)
- Heart disease (such as congenital heart disease, congestive heart failure and coronary artery disease)
- Kidney diseases
- Liver disorders
- Metabolic disorders (such as inherited metabolic disorders and mitochondrial disorders)
- People who are obese with a body mass index [BMI] of 40 or higher

- People younger than 19 years old on long-term aspirin- or salicylate-containing medications.
- People with a weakened immune system due to disease (such as people with HIV or AIDS, or some cancers such as leukemia) or medications (such as those receiving chemotherapy or radiation treatment for cancer, or persons with chronic conditions requiring chronic corticosteroids or other drugs that suppress the immune system)
- People who have had a stroke

Other people at high risk from the flu:

- Pregnant women and women up to 2 weeks after the end of pregnancy
- People who live in nursing homes and other long-term care facilities
- People from certain racial and ethnic minority groups are at increased risk for hospitalization with flu, including non-Hispanic Black persons, Hispanic or Latino persons, and American Indian or Alaska Native persons
- [1] Although all children younger than 5 years old are considered at high risk for serious flu complications, the highest risk is for those younger than 2 years old, with the highest hospitalization and death rates among infants younger than 6 months old.

From: https://www.cdc.gov/flu/highrisk/index.htm

Table 2: People who have flu often feel some or all of these symptoms:

- fever* or feeling feverish/chills
- cough
- sore throat
- runny or stuffy nose
- muscle or body aches
- headaches
- fatigue (tiredness)
- some people may have vomiting and diarrhea, though this is more common in children than adults.

*It's important to note that not everyone with flu will have a fever.

From: https://www.cdc.gov/flu/about/keyfacts.htm#diagnosing