

# Influenza (Flu)

## FAST FACTS

**6,000–  
26,000**

children younger than 5 years old have been hospitalized from flu each year in the U.S. since 2010

## REFERENCES

[idsociety.org/practice-guideline/influenza/](https://idsociety.org/practice-guideline/influenza/)

[publications.aap.org/pediatrics/article/150/4/e2022059274/189385/Recommendations-for-Prevention-and-Control-of-autolog-incheck=redirected](https://publications.aap.org/pediatrics/article/150/4/e2022059274/189385/Recommendations-for-Prevention-and-Control-of-autolog-incheck=redirected)

[cdc.gov/flu/professionals/antivirals/summary-clinicians.htm#summary](https://cdc.gov/flu/professionals/antivirals/summary-clinicians.htm#summary)

## WHEN TO REFER TO THE ED

- Moderate to severe dehydration
- Severe respiratory distress (grunting, nasal flaring, marked retractions or a respiratory rate (RR) >60 breaths/minute)
- Oxygen saturation  $\leq$ 90%
- Ill appearance or concern for sepsis

**For urgent issues or to speak with an emergency medicine specialist on call 24/7, call the Physician Priority Link<sup>®</sup> at 1-888-987-7997.**

**Pediatric influenza (flu) is a highly contagious respiratory illness that affects the airways of the lungs.**

## ASSESSMENT

Perform a history and physical exam (HPE). Assess for symptoms of flu, including:

- Fever
- Chills
- Headache
- Runny nose
- Nausea
- Fatigue
- Loss of appetite
- Sore throat

The signs and symptoms of mild flu overlap with mild COVID-19 and other viral respiratory infections. It is possible for these infections to occur separately or as co-infections. Certain children are at higher risk for complications.

## HPE (HISTORY AND PHYSICAL EXAM) RED FLAGS

Children considered at high risk of flu complications include:

- Children <2 years
- Racial and ethnic minorities including people who are non-Hispanic Black, Hispanic/Latino, American Indian and Alaskan native
- Patients with chronic disease or immunosuppression attributable to any cause (including medication related)
- Children and adolescents <19 years receiving long-term acetylsalicylic acid (ASA) medication

## DIAGNOSTIC TESTING

Consider testing for flu in high-risk outpatients and those with suspected complications of flu if the results will affect clinical management. A presumptive diagnosis may be made without diagnostic testing in patients when there is strong clinical suspicion and community prevalence of disease.

Consider testing in non-high-risk patients with flu-like illness, pneumonia or respiratory illness if results might:

- Influence antiviral treatment decisions
- Reduce use of unnecessary antibiotics, further diagnostic testing or time in emergency department
- Influence antiviral treatment or chemoprophylaxis for high-risk household contacts

Consider, investigate and treat bacterial co-infection of the upper or lower respiratory tract in patients who:

- Present with severe disease initially
- Deteriorate after initial improvement
- Fail to improve after 3–5 days of antiviral treatment

Streptococcus pneumoniae is the most common bacterial coinfection associated with flu and pneumonia, but S. aureus, including MRSA, and S. pyogenes coinfections have also been reported in patients with pneumonia and flu.

**See next page for management of flu symptoms.**

If you would like additional copies of this tool, or would like more information, please contact the Physician Outreach and Engagement team at Cincinnati Children's.

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## MANAGEMENT OF INFLUENZA

Antivirals recommended for:

- Outpatients of any age with severe or progressive illness, regardless of illness duration
- Outpatients at elevated risk for seasonal flu complications
- Patients <2 years

Antivirals may be considered for:

- Outpatients with symptom onset less than 2 days
- Symptomatic outpatient household contact of high-risk patients

Initiate therapy as soon as possible after onset of symptoms, preferably within 48 hours. Note that antiviral treatment of flu is the same in all patients with or without SARS-CoV-2 co-infections. Antivirals are not routinely recommended for healthy children with no underlying illnesses/risk factors >2 years old and well-appearing children more than 2 days from symptom onset.

## DOSING OF ANTIVIRALS FOR ILLNESS CAUSED BY FLU

MEDICATION	TREATMENT (5 Days)	CHEMOPROPHYLAXIS (7 Days)
<b>Osetamivir (Tamiflu®)—Antiviral of choice 30, 45, 75 mg caps, 6mg/mL suspension</b>		
Adult	75 mg BID	75 mg QD
Children >12 months		
<15 kg (<33 lbs.)	30 mg BID	30 mg QD
15–23 kg (33–51 lbs.)	45 mg BID	45 mg QD
23–40 kg (51–88 lbs.)	60 mg bid	60 mg QD
Over 40 kg (88 lbs.+)	75 mg BID	75 mg QD
Infants 9–11 months	3.5 mg/kg/dose BID (AAP) 3.0 mg/kg/dose BID (CDC option)	3.5 mg/kg/dose QD (AAP) 3.0 mg/kg/dose QD (CDC option)
Term >40 wk infants 0–8 mo	3 mg/kg/dose BID	3–8 months old 3 mg/kg/dose QD; not recommended under 3 months
Preterm infants	1.0 mg/kg/dose BID if less than 38 weeks postmenstrual age (PMA), 1.5 mg/kg/dose if 38–40 PMA	3–8 months 3 mg/kg/dose
<b>Peramivir (Rapivab®)— Approved down to 6 months of age as a treatment of acute uncomplicated flu in non-hospitalized children who have been symptomatic for no more than 2 days. IV single dose requires adjustment in patients with renal insufficiency.</b>		
Children 6 months–12 years	12 mg/kg IV once, max 600 mg	Not recommended
13 years–Adult	600 mg IV once	Not recommended
<b>Inhaled Zanamivir (Relenza®)—Acceptable alternative for patients who do not have chronic respiratory disease</b>		
Adults	10 mg (two 5 mg inhalations) BID	10 mg (two 5 mg inhalations) QD for 7 days
Children (same dose)	>7 years for treatment	>5y for prophylaxis
<b>Baloxavir marboxil PO (Xofluza®)— Licensed down to 5 years of age for treatment of uncomplicated flu in patients who have been ill no more than 2 days. Single oral dose, not recommended for monotherapy in severely immunocompromised patients</b>		
<20 kg	One 2 mg/kg dose (2 mg/mL suspension)	One 2 mg/kg dose
20–80 kg	One 40 mg dose, orally (two 20 mg tabs)	One 40 mg dose
At least 80 kg	One 80 mg dose, orally (two 40 mg tabs)	One 80 mg dose

Consider post-exposure chemoprophylaxis for the following unvaccinated patients:

- Asymptomatic patients over 3 months who are at high risk of complications after household contact
- Children and household contacts of a person at very high risk of complications after exposure to flu

Alternative is early empiric initiation of treatment if symptoms develop. Do not initiate post-exposure prophylaxis >48 hours after exposure.

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