



American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

2009-2010 Influenza Season Triage Algorithm for Children (≤18 years) With Influenza-Like Illness

This algorithm was developed for use only by physicians and those under their direct supervision, not for use by general public, to help in discussions and providing advice to parents or other caregivers of ill children regarding seeking medical care for an influenza-like illness. The algorithm can be used regardless of whether or not the child has been vaccinated for influenza. Caregivers of children who may have potentially life threatening signs and symptoms, such as unresponsiveness, or respiratory distress and/or cyanosis (blue-colored skin), should be instructed to dial 911.

If child < 2 years old are **all** of the following present?

1. Fever or feels feverish (if no thermometer available)*
2. Irritability or cough or vomiting/unable to keep fluids down

If child ≥ 2 years old are **all** of the following present?

1. Fever or feverishness*
2. Cough or sore throat

*If antipyretics are taken this may inhibit a patient's ability to mount a fever. If antipyretics have been taken, the patient can be reassessed 4 to 6 hours after acetaminophen or 6 to 8 hours after ibuprofen.

NO

Although some children with influenza may not exhibit the usual influenza symptoms including fever, this child's symptoms suggest that influenza is less likely. They do not meet criteria for this algorithm. The child should be assessed for alternative diagnoses.

YES

Is the child younger than 12 weeks old?

YES

Recommend immediate medical evaluation for child, preferably with child's medical home/primary care provider, or refer for emergency medical care or 911 if any signs or symptoms of life threatening illness.

NO

Are **any** of the following signs or symptoms present?†

Age 12 weeks to <5 years

- Fast breathing‡ or difficulty breathing or retractions present
- Dehydration (no urine output in 8 hours, decreased tears or no tears when child is crying, or not drinking enough fluids)
- Severe or persistent vomiting/unable to keep fluids down
- Lethargy (excessive sleepiness, significant decrease in activity level, and/or diminished mental status)
- Irritability (cranky, restless, does not want to be held or wants to be held all the time)
- Flu-like symptoms improved but then returned or worsened within one to a few days
- Pain in chest or abdomen (for children who can reliably report)

Age ≥5 years

- Fast breathing‡ or difficulty breathing
- Dizziness or lightheadedness
- Severe or persistent vomiting/unable to keep fluids down
- Flu-like symptoms improved but then returned or worsened within one to a few days
- Pain in the chest or abdomen

YES

Recommend immediate medical evaluation for child, preferably with child's medical home/primary care provider.

NO

Is the child at least 12 weeks old but less than 2 years old?

YES

This child falls into a group that may be at elevated risk for complications from influenza. Recommend that they be evaluated for possible treatment. Recommend that the child's caregiver contact the child's medical home/primary care provider that day.

NO

Does the ill child have **any** of the following conditions?

1. Neurological disorders such as:
 - Epilepsy
 - Cerebral palsy, especially when accompanied by neurodevelopmental disabilities (e.g., moderate to profound intellectual disability [mental retardation] or developmental delay)
 - Brain or spinal cord injuries
 - Neuromuscular disorders (e.g., muscular dystrophy), especially when associated with impairment in respiratory functioning.
2. Chronic respiratory diseases such as:
 - Conditions associated with impaired pulmonary function and/or difficulty handling secretions
 - Technology dependent children (e.g., those requiring oxygen, tracheostomy, or a ventilator)
 - Asthma
3. Moderate to profound intellectual disability (mental retardation) or developmental delay, especially when associated with specific conditions (see #1, #2 above)
4. Deficiencies in immune function or conditions that require medications or treatments (e.g., certain cancer treatments, HIV infection) that result in significant immune deficiencies
5. Cardiovascular disease including congenital heart disease
6. Significant metabolic (e.g., mitochondrial) or endocrine disorders
7. Renal, hepatic, hematological (including sickle cell disease) disorders
8. Receiving chronic aspirin therapy
9. Pregnancy

YES

This child falls into a group that may be at elevated risk for complications from influenza. Recommend that they be evaluated for possible treatment. Recommend that the child's caregiver contact the child's medical home/primary care provider that day.

NO

Is the child at least 2 years old but less than 5 years old?

YES

This child falls into a group that may be at elevated risk for complications from influenza. Recommend that the child's caregiver contact the child's medical home/primary care provider that day to discuss the need for further evaluation and treatment.

NO

Child falls into a group that appears to be at lower risk for complications from influenza and may not require testing or treatment if their symptoms are mild. Should symptoms worsen (e.g., shortness of breath, unresolving fever) or should the child's caregiver have further questions or concerns about the child's health, recommend the caregiver contact the child's healthcare provider.

In order to help prevent spread of influenza to others, these patients should be advised to:

- Keep away from others to the extent possible, particularly those at higher risk for complications from influenza (see box below). This may include staying in a separate room with the door closed.
- Cover their coughs and sneezes
- Avoid sharing utensils
- Wash their hands frequently with soap and water or alcohol-based hand rubs
- Stay home (e.g., no school, child care, group activities) until 24 hours after their fever resolves without the use of antipyretics (i.e., acetaminophen, ibuprofen)

More information available at: http://www.cdc.gov/h1n1flu/guidance_homecare.htm

In addition, remember that vaccination for seasonal influenza and pandemic (H1N1) influenza is recommended for all children 6 months through 18 years old and household contacts and out of home caregivers of children less than 6 months old.

For all patients triaged using this algorithm the following should also be assessed:

Does patient live with a person at higher risk for complications of influenza including someone who is:

- Age <2 or age 65 or older, or
- Pregnant

Or someone with **any** of the following comorbid conditions:

- Chronic pulmonary disease (including asthma), cardiovascular (except isolated hypertension), renal, hepatic, hematological (including sickle cell disease), or metabolic disorders (including diabetes mellitus)
- Disorders that can compromise respiratory function or the handling of respiratory secretions or that can increase the risk for aspiration (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders)
- Immunosuppression, including that caused by medications or by HIV
- Child (≤18) on chronic aspirin therapy

YES

The higher risk contacts of these patients should be advised to contact their medical home/primary care provider that day for advice on steps they might need to take to prevent infection.

In addition, vaccination for seasonal influenza and pandemic (H1N1) influenza should be recommended for all children 6 months through 18 years old and household contacts and out of home caregivers of children less than 6 months old.

Appendix

Box 1: Definition of "Fast Breathing"

Age	Respiratory rate
Birth up to 3 months	> 60/min
3 months up to 1 year	> 50/min
1 to < 3 years	> 40/min
3 to < 6 years	> 35/min
6 to <12 years	> 30/min
12 to 18 years	> 20/min

†These symptoms are purposely broad to minimize the possibility of misclassifying people who truly have severe symptoms. The person attempting to triage the patient should take into account the severity and duration of the symptoms when deciding whether or not patients should be advised to seek evaluation immediately

‡Suggested respiratory rates indicative of "fast breathing" included in Box 1 in Appendix

Disclaimer

This tool is designed only to assist physicians and those under their supervision in identifying indicators of and responses to flu-like symptoms in children. It does not provide guidance for other medical conditions nor is it intended to substitute for professional medical advice. Like any printed material it may become out of date over time. This guidance is not intended for use by the general public. Individuals should always seek the advice of their health care professional with any questions they have regarding a medical condition in themselves or a child in their care. If you think you or your child is severely ill or may have a medical emergency, call your doctor or 911 immediately. The U.S. Government does not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of this tool