

## Assess Early Wheeze

- History of Current Illness:** frequency of episodes of wheeze, response to albuterol, triggers for wheeze (viral illness, exercise, exposures), severity of episodes (hospitalizations, emergency department visits, oral corticosteroids), allergies and eczema
- Family History:** asthma in parents
- Environment:** tobacco smoke exposure and indoor exposures (e.g., pets, cockroaches, rodents)
- Physical Exam:** evaluate for signs of more severe disease (e.g., failure to thrive, clubbing, persistent hypoxemia)

## Responds to albuterol?

No

Refer to page 2.

Yes

## Categories of Wheeze

- Episodic Wheeze:** frequent episodes of wheeze with respiratory tract illnesses only
  - Transient Wheeze** (*more likely to stop wheezing by age 6*): at least 4 episodes of wheeze lasting >24 hours (at least 1 provider diagnosed) or 2 episodes of wheeze requiring oral corticosteroids (OCS) in a child who does not meet the criteria below<sup>§</sup>
  - Emerging Asthma** (*at risk to continue wheezing or progress*): minimum of 3 episodes of wheeze lasting >24 hours (at least 1 provider diagnosed) and/or at least 1 episode of wheeze requiring OCS in a child who meets criteria listed below
- Multiple Trigger Wheeze/Persistent Asthma:** wheeze with respiratory tract illnesses **and** between illnesses due to other triggers **and/or** not meeting monitoring goals for a minimum of 2-4 weeks

### Risk Factors for Continued Wheezing or Progression to Persistent Asthma

(Required: 1 major criterion or 2 minor per the modified asthma predictive index)<sup>‡</sup>:

- Major:** presence of atopic dermatitis OR positive allergy testing to at least 1 aeroallergen OR parental history of asthma
- Minor:** food allergy, wheeze between illnesses, eosinophilia >4%

<sup>§</sup>For fewer episodes of wheeze than those listed above: continue short acting beta agonist as needed.

## Episodic Wheeze Treatment (Transient Wheeze or Emerging Asthma)

High-dose inhaled corticosteroids (ICS) (see HealthTeamWorks medication chart) OR montelukast 4 mg by mouth starting at the onset of a respiratory illness and continuing for 7 days\*<sup>†</sup> and short-acting beta-agonist as needed.

## Episodic Wheeze Monitoring

- Re-evaluate every 1-6 months for daytime symptoms, exercise limitation, albuterol use and wheezing episodes.
- If the child has not met goals, assess compliance and device technique, consider alternate diagnosis and/or specialist referral and treat as persistent asthma per page 2.
- If the child has met the goals, re-evaluate in 1-6 months and consider a trial off of intermittent controller medications.

## Monitoring Goals

- Short-acting beta-agonist use less than twice a week **AND**
- Nighttime symptoms less than twice a month **AND**
- No exercise limitation **AND**
- Fewer than 2 episodes of wheeze in 12 months requiring a course of OCS

## Multiple Trigger Wheeze/ Persistent Asthma Treatment

Daily, low-dose inhaled corticosteroids (ICS) or alternatives per the NHLBI EPR-3 guideline for children 0-4 years of age per page 2 and short-acting beta-agonist as needed.

## Multiple Trigger Wheeze/ Persistent Asthma Monitoring

- Re-evaluate any child started on a daily medication in 2-6 weeks.
- If the child has not met the goals, assess compliance and device technique, consider alternate diagnosis and/or specialist referral and then step up per page 2.
- If the child has met goals for a minimum of 3 months, re-evaluate in 1-6 months and consider discontinuation of daily therapy and treat as episodic wheeze, taking into consideration allergies and cold and viral season.

## Consider Oral Corticosteroids

**Consider a short course of oral corticosteroids for severe exacerbations requiring urgent care, ED visit or hospitalization.**

\*Bacharier LB, et al. Episodic use of an inhaled corticosteroid or leukotriene receptor antagonist in preschool children with moderate-to-severe intermittent wheezing. J Allergy Clin Immunol. 2008 Dec;122(6).

<sup>†</sup>Zeiger RS, et al. Daily or Intermittent Budesonide in Preschool Children with Recurrent Wheezing. N Engl J Med 2011;365:1990-2001.

<sup>‡</sup>Guilbert TW et al. Long-term inhaled corticosteroids in preschool children at high risk for asthma. N Eng J Med. 2006; 354: 1985-1997.

## Wheeze Not Responsive to Albuterol (continued from page 1)

