

# Summary of the NAEPP's EPR-3: Guidelines for the Diagnosis and Management of Asthma

## Consider the Diagnosis of ASTHMA if:

- Patient has RECURRENT episodes of cough, wheeze, shortness of breath, or chest tightness.
- Symptoms occur or worsen at night, awakening the patient.
- Symptoms occur or worsen in the presence of factors known to precipitate asthma.
- Alternative diagnoses have been considered such as GERD (a common co-morbidity), airway anomaly, foreign body, cystic fibrosis, vocal cord dysfunction, TB, or COPD. If diagnosis is in doubt, consider consulting an asthma specialist.

## Confirm the Diagnosis of ASTHMA if:

- Spirometry demonstrates **obstruction** and **reversibility** by an increase in FEV<sub>1</sub> of  $\geq 12\%$  after bronchodilator (in all adults and children 5 years of age or older).

## Assess Asthma Severity: Any of the following indicate PERSISTENT ASTHMA

- Daytime symptoms  $>2$  days per week **OR**
- Awakens at night from asthma  $\geq 2X$  per month (age 0-4 years:  $\geq 1X$  per month) **OR**
- Limitation of activities, despite pretreatment for EIB **OR**
- Short-acting beta<sub>2</sub>-agonist (SABA) use for symptom control  $>2$  days per week (not prevention of EIB) **OR**
- Two or more bursts oral corticosteroids in 1 year (age 0-4 years:  $\geq 2$  bursts oral corticosteroids in 6 months\*) **OR**
- Age  $\geq 5$  years: FEV<sub>1</sub>  $<80\%$  predicted **OR** FEV<sub>1</sub>/FVC ratio  $<$  predicted normal range for age (see below)

\*NOTE: For children age 0-4 years who had 4 or more episodes of wheezing during the previous year lasting  $>1$  day, check risk factors for persistent asthma. Risk factors include either (1) one of the following: parental history of asthma, a physician diagnosis of atopic dermatitis, or evidence of sensitization to aeroallergens, or (2) two of the following: evidence of sensitization to foods,  $\geq 4\%$  peripheral blood eosinophilia, or wheezing apart from colds.

**Treatment for Persistent Asthma:**  
Daily Inhaled Corticosteroids (Step 2 or higher)  
Follow the Stepwise Approach

Assess response within 2-6 weeks

### Is Asthma Well Controlled?

1. Daytime symptoms  $\leq 2$  days per week **AND**
2. Awakens at night from asthma  $\leq 1X$  per month (age  $\geq 12$  years:  $\leq 2X$  per month) **AND**
3. No limitation of activities **AND**
4. SABA use for symptom control (not prevention of EIB)  $\leq 2$  days per week **AND**
5.  $\leq 1$  burst oral corticosteroids per year
6. FEV<sub>1</sub>  $\geq 80\%$  predicted
7. FEV<sub>1</sub>/FVC  $\rightarrow$

**FEV<sub>1</sub>/FVC:**  
5-19 yrs  $\geq 85\%$   
20-39 yrs  $\geq 80\%$   
40-59 yrs  $\geq 75\%$   
60-80 yrs  $\geq 70\%$

YES

NO

Consider **step down** if **well controlled** for 3 consecutive months. Reassess every 3 to 6 months.

**Step up** therapy. Reassess in 2-6 weeks. Continue to **step up** until **well controlled**.

## Quick Tips for All Patients with Asthma

- Planned Asthma Visits:** Every 1-6 months
- Environmental Control:** Identify and avoid exposures such as tobacco smoke, pollens, molds, animal dander, cockroaches, and dust mites (Allergy testing recommended for anyone with persistent asthma who is exposed to perennial indoor allergens)
- Flu Vaccine:** Recommend annually
- Spirometry (Not During Exacerbation):** At diagnosis and at least every 1-2 years starting at age 5 years
- Asthma Control:** Use tools such as ACQ<sup>®</sup>, ACT<sup>™</sup> or ATAQ<sup>®</sup> to assess asthma control
- Asthma Education:** Review correct inhaled medication device technique at every visit
- Asthma Action Plan:** At diagnosis; review and update at each visit
- SABA** (e.g., inhaled albuterol): 1) for quick relief every 4-6 hours as needed (see step 1), 2) pretreat with 2 puffs for exercise-induced bronchospasm (EIB) 5 minutes before exercise
- Inhaled Corticosteroids (ICS):** Preferred therapy for all patients with persistent asthma
- Oral Corticosteroids:** Consider burst for acute exacerbation
- Valved Holding Chamber (VHC) or Spacer:** Recommend for use with all metered dose inhalers (MDI)
- Mask:** Recommend for use with VHCs or spacers and/or nebulizer for age  $<5$  years and anyone unable to use correct mouthpiece technique

Indications for **asthma specialist consultation** include: Asthma is unresponsive to therapy; asthma is not well controlled within 3-6 months of treatment; life-threatening asthma exacerbation; hospitalization for asthma; required  $>2$  bursts oral corticosteroids in 1 year; requires higher level step care (see Stepwise Approach, next page); immunotherapy is being considered.

# Summary of the NAEPP's EPR-3: Stepwise Approach for Managing Asthma in Children and Adults

