

Bree Pediatric Asthma 05.17.22
Clinical Control Draft Recommendations

1. Diagnosis

a. Establishing Asthma Diagnosis (NHLB Guidelines)

- i. Determine that symptoms of recurrent airway obstruction are present based on history and exam. Use patient history of cough, recurrent wheezing, recurrent difficulty breathing, and recurrent chest tightness. Determine whether symptoms occur or worsen at night or with exercise, viral infection, exposure to allergens and irritants, changes in weather, hard laughing or crying, stress, or other factors. Consider other causes of obstruction.
 1. In absence of other diagnostic tests (spirometry), determine if symptoms respond to albuterol
- ii. For children over 5 years old: In addition to patient history, use spirometry to determine lung function. Rule out other potential conditions that can cause asthma-like symptoms such as respiratory tract infections.
- iii. For children under 5 years old: rely on information from the patient and caregiver. Diagnostic tests are not accurate for children under 5.
- iv. If the asthma appears to be triggered by environmental allergies, recommend allergy skin testing or blood testing for allergies (Ige)
- v. Consider referral to a specialist if diagnosis or testing is unclear (pediatric pulmonologist, allergist, asthma specialist)

2. Assessing Asthma Severity/High-Risk Asthma

- i. Assess for severity at the initial evaluation to initiate therapy using domains of impairment and risk. (NHLB EPR Table)
 1. Assess for comorbid conditions and/or environmental exposures at initial asthma diagnosis
- ii. Assess for asthma control at all subsequent visits to monitor and adjust treatment.
 1. Assess for asthma control, proper medication technique, written asthma action plan, patient adherence, and patient concerns.
 2. Assess for patient education and knowledge related to asthma control
- iii. Use the National Asthma Education and Prevention Program criteria for severity based on current impairment and risk of future exacerbation and categorize patients into intermittent, persistent-mild, persistent-moderate, and persistent-severe.
- iv. Use one of several measures for determining high-risk asthma:
 1. HEDIS definition for high-risk asthma as meeting any of the following criteria: ≥ 1 emergency department visits, or ≥ 1 hospitalizations for asthma, or ≥ 4 asthma medication

prescriptions, or ≥ 4 ambulatory visits for asthma with ≥ 2 prescriptions for asthma medication in one year.

2. Consider additional data sources when characterizing high-risk asthma including symptom frequency, frequency of albuterol use, asthma quality of life (Juniper scale), and/or the NHLB Scale (tables for severity and control)
3. HEDIS Measure for Asthma Medication Ratio (for population health)

3. Asthma Management Plan:

a. Environmental Exposure Mitigation

- i. Determine if asthma symptoms are related to indoor allergens (such as pets or dust mites), outdoor allergens, or irritants (such as smoke, chemicals, or fragrances).
- ii. For individuals with symptoms related to indoor allergens, pets, or dust mites, implement multicomponent allergen-specific mitigation interventions.
- iii. For individuals with symptoms related to outdoor allergens (such as pollen)
- iv. For individuals with symptoms related to irritants, implement mitigation interventions
- v. Implement smoking cessation interventions and reduce exposure to second-hand smoke.

b. Medication Therapy

- i. Provide an asthma management action plan
- ii. Initiate corticosteroid and rescue treatment as appropriate
- iii. When medication is prescribed educate patients on proper use including inhaler training
- iv. Implement medication plan for exercise-induced asthma
- v. Follow NIH Asthma Guideline Updates treatment from 2020 for ICS and SABA treatment of asthma symptoms (see NIH Guidelines page 19 – 20)
- vi. Follow the 2020 Updates to the NIH Asthma Guidelines for stepwise approaches to the management of asthma in individuals Ages 0 – 4 years, Ages 5 – 11, and Ages 12 Years and Older

c. Immunotherapy (requires referral to specialist)

- i. In individuals ages 5 years and older with mild to moderate allergic asthma, recommend the use of subcutaneous immunotherapy as an adjunct treatment to standard pharmacotherapy
- ii. In individuals with persistent allergic asthma, recommend against the use of sublingual immunotherapy

- d. When choosing treatment, consider domain of relevance to the patient (risk, impairment, or both), patient's history of response to the medication, and willingness and ability to use the medication.

- e. Coordinate asthma management plan with external partners and the broader care team – schools, community health workers, pharmacists

4. **Planned Preventive Visits** and Asthma Control

- a. Develop an asthma control plan to reduce impairment (prevent chronic symptoms, require infrequent use of SABA, and maintain near normal lung function and activity levels) and reduce risk (prevent exacerbations, minimize need for emergency care and hospitalization, and prevent loss of lung function).
- b. Schedule follow-up visits specific to asthma control at least annually. Normalize routine asthma control visits.
- c. Implement the Asthma Control Test to determine patient's level of asthma control at every follow-up visit
- d. Routine asthma control visits should include multifaceted approaches to patient education and to the control of environmental factors or comorbid conditions that affect asthma

5. **Metrics:**

- a. Track and measure asthma incidence, including the incidence of medically high-risk asthma
- b. Track and measure the number of asthma patients whose asthma is controlled using validated questionnaires from the National Asthma Education and Prevention Program which categorizes control as "well controlled," "not well controlled," and "very poorly controlled"
- c. Notification of Diagnosis from ED Visits
 - i. Implement automated system of notification when a patient is diagnosed with asthma when admitted to the emergency room.