

ASTHMA RISK FACTORS & RECOMMENDED INTERVENTIONS

The following are common risk factors for asthma-related complications. According to the 2007 National Asthma Education and Prevention Program's Expert Panel Report 3 (EPR-3), some risk factors place the member at high risk for asthma-related death. Certain comorbid conditions are also listed that the EPR-3 has determined affect the member's ability to achieve control of his or her asthma symptoms. Also included are recommended interventions based on national standards. The care management nurse reviews and emphasizes the provider's recommendations for asthma treatment and utilizes the member's assessment responses to suggest additional topics of discussion with the provider, if clarification may be needed.

The following are factors associated with a high risk for Asthma-related death:

- Two or more hospitalizations in the past year
- More than three emergency department visits in the past year
- Previous severe exacerbation requiring admission for asthma into an intensive care unit or intubation
- Difficulty perceiving airway obstruction or the severity of worsening asthma
- Low socioeconomic status or inner-city residence
- Illicit drug use
- Major psychosocial problems or psychiatric disease
- Comorbidities such as cardiovascular disease or other chronic lung disease

The following are common risk factors associated with Asthma-related complications:

- Current smoker
- Current use of oral steroids or recent withdrawal from oral steroids
- Self-reported non-adherence or poor adherence to asthma action plan
- Self-reported non-adherence or poor adherence to medications
- Inadequate peak flow meter use
- Increased symptoms: not well-controlled or very poorly controlled Asthma

Comorbid conditions that impede Asthma management:

- Chronic gastroesophageal reflux disease (GERD)
- Allergic Bronchopulmonary Aspergillosis (ABPA)
- Obese or overweight members
- Obstructive sleep apnea (OSA)
- Rhinitis or sinusitis
- Chronic stress and/or depression

RECOMMENDED INTERVENTIONS*

- **The recommended intervention is:** Assessment of asthma severity before treatment begins; treatment recommendations based upon age groups: 0 – 4 yrs, 5 – 11 yrs, and 12 yrs or older; assessment of asthma control after treatment is initiated, with stepwise adjustments in therapy as needed.
- **The recommended intervention is:** Provision of a written Asthma Action Plan that includes instructions for daily self-management (medications and environmental control) and actions to manage worsening asthma, including medication adjustment, and is updated at each visit or when treatment/symptoms change.
- **The recommended intervention is:** (Ages 12 and older) Daily low-dose inhaled corticosteroids plus long acting inhaled beta2-agonists (LABA) or medium-dose ICS for Not Well-Controlled or Moderate Persistent Asthma.
- **The recommended intervention is:** (Ages 12 and older) Medium to high-dose daily ICS plus LABA for Very Poorly Controlled or Severe Persistent Asthma. Add (if needed) corticosteroid tablets or syrup long term (2 mg/kg/day, generally not to exceed 60 mg per day).
- **The recommended intervention is:** (Ages 12 and older) Daily low to medium-dose inhaled corticosteroids, and either leukotriene receptor antagonists or theophylline or Zileuton (each daily) as an alternative intervention for Not Well-Controlled or Moderate Persistent Asthma.
- **The recommended intervention is:** (Ages 12 and older) Consider adding Omalizumab to recommended treatment for members with allergies and Severe Persistent Asthma.
- **The recommended intervention is:** (All ages) Low-dose inhaled corticosteroids for Not Well-Controlled or Mild Persistent Asthma.
- **The recommended intervention is:** (All ages) Short-acting inhaled beta2-agonist PRN for symptom control and prior to exercise for quick-relief medication.
- **The recommended intervention is:** (Age 5 or older) Consider daily peak flow monitoring for members with moderate or severe persistent asthma, those with a history of severe exacerbations and members who have difficulty perceiving airway obstruction or worsening asthma.
- **The recommended intervention is:** Utilization of evidence-based predictive modeling to identify those ages 0 – 3 with a high risk for future persistent asthma and concentrate efforts to establish control as early as possible.

- **The recommended intervention is:** Accurate diagnosis of Obstructive Sleep Apnea (OSA) and treatment with nasal CPAP in members with Not Well-Controlled asthma.
- **The recommended intervention is:** Antacids, proton pump inhibitors, or H2 receptor inhibitors as needed for symptomatic or silent gastric reflux.
- **The recommended intervention is:** Diagnosis and treatment of (or referral to the appropriate specialist) other comorbidities shown to impede asthma control: Depression, chronic stress, rhinitis or sinusitis, or Allergic Bronchopulmonary Aspergillosis (ABPA).
- **The recommended intervention is:** Smoking cessation and weight management - medication and/or behavior modification program.

**Adapted from the 2007 (with minor updates in August 2008) NAEPP Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma National Institute of Health and the Global initiative for Asthma (GINA) – Global Strategy for Asthma Management and Prevention 2006, updated In December 2009.*