

# Health Benchmarks® Program

## Clinical Quality Indicator Specification 2011

<b>Measure Title</b>	USE OF LONG-TERM CONTROL DRUGS FOR PERSISTENT ASTHMA		
<b>Disease State</b>	Asthma	<b>Indicator Classification<sup>1</sup></b>	Disease Management
<b>Strength of Recommendation<sup>2</sup></b>	<p>A (inhaled corticosteroid or inhaled corticosteroid combos)</p> <p>B (other classes of medication [i.e., mast cell stabilizers, leukotriene modifiers, methylxanthines])</p>		
<b>Organizations Providing Recommendation</b>	<p>Joint Council of Allergy, Asthma and Immunology</p> <p>National Asthma Education and Prevention Program</p> <p>National Heart, Lung and Blood Institute</p>		
<b>Clinical Intent</b>	To ensure that members with persistent asthma receive medication appropriate for long-term control of asthma.		
<b>Background</b>	<p><b>Disease Burden</b></p> <ul style="list-style-type: none"> <li>• In 2007, an estimated 34 million people in the United States were diagnosed with asthma in their lifetimes. [1]</li> <li>• In 2008, approximately one in three asthma patients 12 and older were hospitalized, visited emergency rooms or had other unscheduled healthcare visits due to their asthma. [2]</li> </ul> <p><b>Reason for Indicated Intervention or Treatment</b></p> <ul style="list-style-type: none"> <li>• Regular use of inhaled corticosteroids improves asthma control, decreases hospital admissions, and decreases mortality from asthma in adults and children with persistent asthma.[3-6]</li> <li>• For patients with moderate persistent asthma, adding a long-acting beta-2-agonist to a low or medium dose inhaled corticosteroid improves lung function and symptoms, decreases asthma exacerbations, and reduces the use of additional short-acting beta-2-agonists.[5, 6]</li> <li>• Many patients with persistent asthma are still being undertreated with long-term control medications.[7-9]</li> </ul> <p><b>Evidence Supporting Intervention or Treatment</b></p> <ul style="list-style-type: none"> <li>• Randomized controlled trials have shown that inhaled corticosteroid use in patients with persistent asthma, when compared to placebo or beta-2-agonists, results in improved pre-bronchodilator FEV1, reduces oral steroid and supplemental short-acting beta-2-agonist use, decreases airway responsiveness, decreases asthma symptom scores, and decreases hospitalizations.[10-25]</li> <li>• Results from randomized controlled trials on using leukotriene modifiers alone for those with persistent asthma are mixed. Some randomized controlled trials show no difference between leukotriene modifier and inhaled corticosteroid use [26-30], but others found increased asthma</li> </ul>		

exacerbations and poorer symptom control in those using the leukotriene modifiers.[31-33]

- For asthma that is poorly controlled with inhaled corticosteroid use alone, randomized controlled trials have shown that patients have better symptom control when long-acting beta-2-agonists are added, instead of leukotriene modifiers.[6, 34-36]
- Most randomized controlled trials demonstrate that adding a long-acting beta-2-agonist to an inhaled corticosteroid decreases asthma exacerbations more than increasing the inhaled corticosteroid dose.[6, 37-40] However, one randomized controlled trial found that increasing the inhaled corticosteroid dose led to better symptom control than adding a long-acting beta-2-agonist.[41]
- An expert panel convened by the National Heart, Lung and Blood Institute and the National Asthma Education and Prevention Program (NAEPP) developed Expert Panel Report 3 (EPR3) Guidelines for the Diagnosis and Management of Asthma, which was published in 2007. EPR3 states that the following medications are appropriate for the long-term control of persistent asthma:[42]
  - Corticosteroids – the most potent and effective medication currently available.
  - Cromolyn sodium and nedocromil – used as alternatives to corticosteroids but are not preferred for treatment of persistent asthma.
  - Immunomodulators – Omalizumab (anti-IgE) as adjunctive therapy for severe persistent asthma.[5]
  - Leukotriene modifiers – an alternative, but not preferred therapy for the treatment of mild asthma.[6]
  - Long-acting beta-agonists – should not be used as monotherapy but can be used in combination with inhaled corticosteroids for long-term control and prevention of symptoms in moderate or severe persistent asthma.
  - Methylxanthines – used as alternative, but not preferred, adjunctive therapy to inhaled corticosteroids.

**Clinical  
Recommendations**

**Source** Healthcare Effectiveness Data and Information Set (HEDIS®) 2011 Technical Specification for Physician Measurement

**Denominator**

**Denominator  
Definition** Continuously enrolled members ages 5-50 years with evidence of persistent asthma (mild to severe) who meet at least 1 of the following criteria in *both* the measurement year and the year prior to the measurement year (criteria need not be the same across both years):

- At least 4 medication dispensing events.
  - Members whose 4 asthma medication dispensing events solely consist of leukotriene modifiers must have a diagnosis of

asthma during the same year as the leukotriene modifier medication dispensing event (i.e., the measurement year or the year prior) or additionally meet any of the other persistent asthmatic criteria to be considered a part of the denominator.

- At least 1 ED visit with a primary diagnosis of asthma.
- At least 1 acute inpatient discharge with asthma as the primary diagnosis.
- At least 4 outpatient visits with asthma as one the listed diagnoses and at least two medication dispensing events.

**Denominator Index Date** N/A

**Denominator Encounters/Claims Criteria** CPT-4 code(s): 99201-99205, 99211-99215, 99217-99220, 99221-99223, 99231-99233, 99238, 99239, 99241-99245, 99251-99255, 99281-99285, 99291, 99341-99345, 99347-99350, 99382-99386, 99392-99396, 99401-99404, 99411, 99412, 99420, 99429

ICD-9 diagnosis code(s): 493.xx

UB revenue code(s): 010x, 016x, 020x, 021x, 045x, 051x, 057x-059x, 072x, 0110-0114, 0119, 0120-0124, 0129, 0130-0134, 0139, 0140-0144, 0149, 0150-0154, 0159, 0520-0523, 0526-0529, 0981, 0982, 0983, 0987 Drug list: antiasthmatic combinations (dyphylline-guaifenesin, guaifenesin-theophylline, potassium iodine-theophylline), inhaled steroid combinations (budesonide-formoterol, fluticasone-salmeterol), inhaled corticosteroids (beclomethasone, budesonide, ciclesonide, flunisolide, fluticasone CFC free, mometasone, triamcinolone), leukotriene modifiers (montelukast, zafirlukast, zileuton), long-acting inhaled beta-2-agonists (aformoterol, formoterol, salmeterol), mast cell stabilizers (cromolyn, nedocromil), methylxanthines (aminophylline, dyphylline, oxtriphylline, theophylline), short-acting inhaled beta-2-agonists (albuterol, levalbuterol, metaproterenol, pirbuterol)

**Denominator Exclusion**

**Denominator Exclusion Definition** Members who were diagnosed with emphysema, COPD, cystic fibrosis, or acute respiratory failure any time prior to the end of the measurement year.

**Denominator Exclusion Claims Criteria** ICD-9 diagnosis code(s): 277.0x, 491.2x, 492.x, 493.2x, 496, 506.4, 518.1, 518.2, 518.81

**Numerator**

**Numerator Definition** Members who received a prescription for a medication appropriate for long-term control of asthma during the measurement year.

**Numerator Claims Criteria** Drug list: antiasthmatic combinations (dyphylline-guaifenesin, guaifenesin-theophylline, potassium iodine-theophylline), inhaled steroid combinations

(budesonide-formoterol, fluticasone-salmeterol), inhaled corticosteroids (beclomethasone, budesonide, ciclesonide, flunisolide, fluticasone CFC free, mometasone, triamcinolone), leukotriene modifiers (montelukast, zafirlukast, zileuton), mast cell stabilizers (cromolyn, nedocromil), methylxanthines (aminophylline, dyphylline, oxtriphylline, theophylline)

## Physician Attribution

**Physician Attribution Description** Score all physicians who saw the member during the measurement year.

## References

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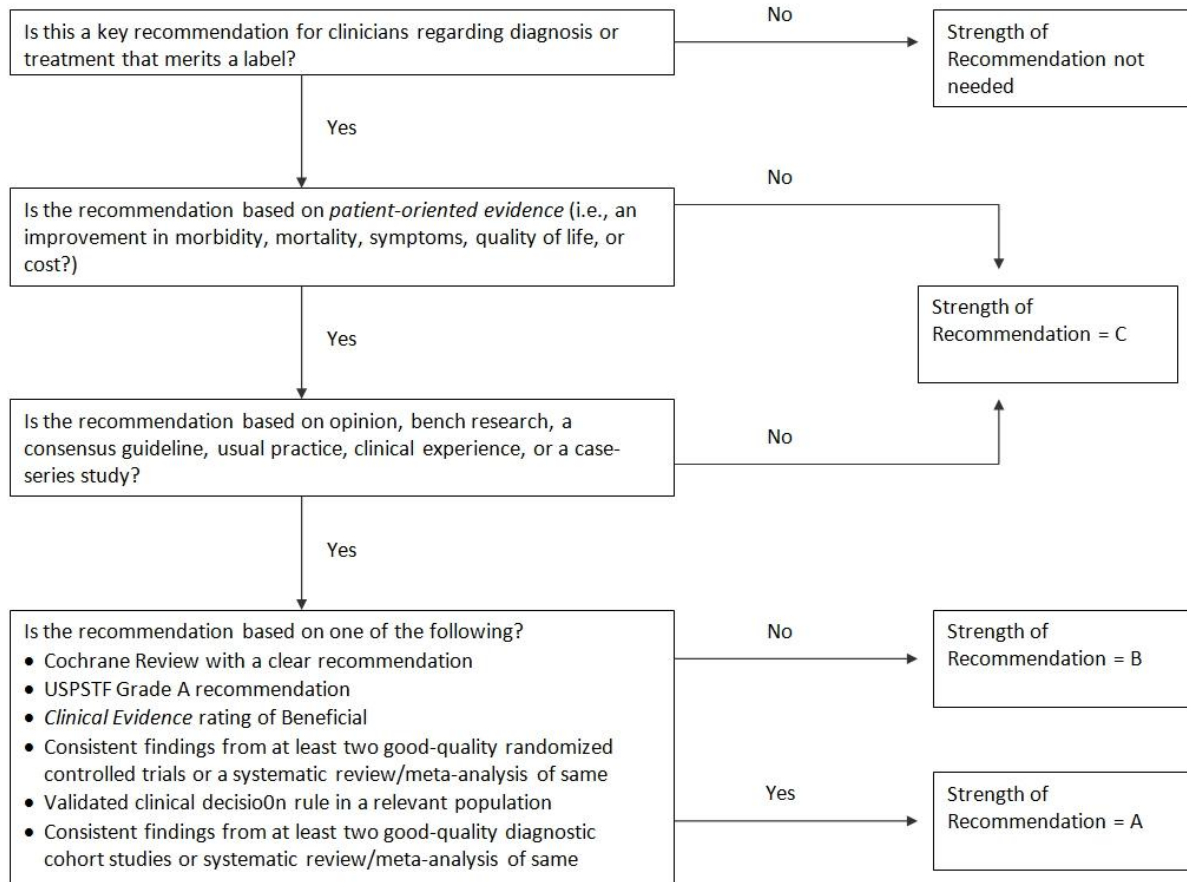
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<sup>1</sup> **Indicator Classification** (Adapted from HEDIS® technical specifications)

<b>Diagnosis</b>	Measures applicable to patients receiving diagnostic workups for a symptom or condition that delineate appropriate laboratory or radiological testing to be performed (e.g., evaluation of thyroid nodule; pregnancy test in patients with vaginal bleeding or abdominal pain)
<b>Effectiveness of Care</b>	
<b>Prevention</b>	Measures applicable to asymptomatic individuals that are designed to prevent the onset of the targeted condition (e.g., immunizations).
<b>Screening</b>	Measures applicable to asymptomatic patients who have risk factors or pre-clinical disease, but in whom the condition has not become clinically apparent (e.g. pap smears; screening for elevated blood pressure).
<b>Disease Management</b>	Measures applicable to individuals diagnosed with a condition that are part of the treatment or management of the condition (e.g., cholesterol reduction in patients with diabetes; radiation therapy following breast conserving surgery; appropriate follow-up after acute event).
<b>Medication Monitoring</b>	Measures applicable to patients taking medications with narrow therapeutic windows and / or potential preventable significant side effects or adverse reactions (e.g., thyroid stimulating hormone (TSH) testing after levothyroxine dose change; hepatic enzyme monitoring for patients using antimycotic pharmacotherapy).
<b>Medication Adherence</b>	Measures applicable to patients taking medications for chronic conditions that are designed to assess patient adherence to medication (e.g., adherence to lipid lowering medication).
<b>Utilization</b>	Measures applicable to patients receiving treatment for a symptom or condition that advocate appropriate utilization of laboratory and pharmaceutical resources (e.g., conservative use of imaging for low back pain; inappropriate use of antibiotics for viral upper respiratory infection).

## <sup>2</sup> Strength of Recommendation

### Strength of Recommendation Based on a Body of Evidence



**FIGURE 2.** Algorithm for determining the strength of a recommendation based on a body of evidence (applies to clinical recommendations regarding diagnosis, treatment, prevention, or screening). While this algorithm provides a general guideline, authors and editors may adjust the strength of recommendation based on the benefits, harms, and costs of the intervention being recommended. (USPSTF = U.S. Preventive Services Task Force)