

Health Plan of Michigan Clinical Practice Guideline Management of Persistent Asthma in Infants and Children 5 Years of Age and Younger

The following guideline applies to infants and children 5 years of age and younger with persistent asthma and recommends routine use of anti-inflammatory medications, a written action plan and education to guide family/parents in self-management.

Eligible Population	Key Components	Recommendation and Level of Evidence	Frequency
Infants and children 5 years of age and younger with persistent asthma – (symptoms > 2/week but < 1x/day and/or 2 nights/month)	Regular use of controller medications	<ul style="list-style-type: none"> • Prescribe daily use of inhaled corticosteroids [A] (with nebulizer or metered-dose inhaler with holding chamber with or without face mask or dry powder inhaler). • Add intermediate or long acting inhaled beta₂agonist (LABA)^{1,2} if symptoms persist despite maximum inhaled steroid dose [A]. LABA should not be used as the first medication to treat asthma or as mono-therapy [D]. (LABA therapy has been associated with increased risk of severe asthma exacerbations and asthma-related deaths.) • Avoid the regular scheduled use of short acting beta₂agonists for long-term control of asthma. • Prescribe spacer for all metered-dose inhalers [A]. 	Reassess at least every 6 months, or at each periodic visit.
	Management of acute exacerbations	<ul style="list-style-type: none"> • Prescribe short-acting, inhaled beta₂agonist^{3,4} [A] by nebulizer or face mask and spacer or holding chamber • Prescribe oral steroids for acute exacerbations that fail to respond adequately⁴[A] • Routine use of antibiotics for exacerbations is not recommended 	During acute episode
	Medical follow-up after discharge	<ul style="list-style-type: none"> • Recommend and schedule if possible, follow-up outpatient visit at discharge from hospital or emergency department [D] 	Visit within 3-5 days of discharge
	Periodic Assessment-Monitoring, management and education	<ul style="list-style-type: none"> • Patients receiving LABA should have close surveillance to assess benefit and safety of medications • Provide and review written action plan for self-management (e.g., http://www.getastmahelp.org/simple%20child%20control%20plan.pdf). • Assess adherence to written action plan, family psychosocial status, asthma control, triggers, medication use and side effects. • Recommend influenza immunization and ensure age appropriate immunization status (e.g., pneumococcal vaccine). • Educate family and patient regarding: <ul style="list-style-type: none"> ○ Use of asthma action plan, inhaler, spacer nebulizer and medications. ○ Importance of using long-term control medication (i.e., inhaled corticosteroids) [D] ○ Recognition and treatment of symptoms and when to seek medical attention. ○ Identification and avoidance of specific triggers. ○ Smoking cessation and secondhand smoke avoidance [C]. 	At each periodic visit
Referral	Consultation with an asthma specialist is recommended when patient is not responding optimally to asthma therapy, has signs, symptoms or conditions that make it difficult to obtain asthma control, or following a life-threatening asthma exacerbation.		

¹Inhaled corticosteroids with long-acting beta₂agonists are preferred therapy for moderate persistent asthma. Alternative treatments include inhaled corticosteroids with either leukotriene receptor antagonist or theophylline.

²Alternative therapies for mild persistent asthma include cromolyn (nebulizer is preferred or metered-dose inhaler with holding chamber) or leukotriene receptor antagonist.

²Prescribe these medications for the patient to have at home to use in the event of an acute exacerbation

⁴Alternative treatment: Oral beta₂agonists

Levels of Evidence for the most significant recommendations: A =randomized controlled trials; B =controlled trials, no randomization; C =observational studies; D =opinion of expert panel

This guideline lists core management steps. It is based on several sources, including: the Diagnosis and Outpatient Management of Asthma Guideline, Institute for Clinical Systems Improvement, 2005 (www.icsi.org) and the 2002 National Asthma Education and Prevention Program Expert Panel Report, Guidelines for the Diagnosis and Management of Asthma., Update on Selected Topics (www.nhlbi.nih.gov) . Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors August 2006