

**Michigan Quality Improvement Consortium Guideline
Management of Asthma in Children 0 to 4 Years**

Key Components		Recommendation and Level of Evidence				
First, assess severity to decide initial therapy	Assess Asthma Severity					
	Components of Severity		Intermittent	Persistent (Mild)	Persistent (Moderate)	Persistent (Severe)
	Impairment	Symptoms	< 2 days/week	> 2 days/week, not daily	Daily	Throughout day
		Nighttime awakenings	0	1-2x/month	> 3-4x/month	> 1x/wk
		Short-acting beta ₂ -agonist use for symptoms	< 2 days/week	> 2 days/week, not daily	Daily	Several times daily
		Interference with normal activity	None	Minor limitation	Some limitation	Extremely limited
	Risk	Exacerbations requiring oral steroids	0-1/year	> 2 in 6 months requiring oral steroids, or > 4 in 1 year lasting > 1 day and have risk factors for persistent asthma		
		<ul style="list-style-type: none"> Consider severity & interval since last exacerbation. Frequency & severity may fluctuate over time for patient of any severity class. 				
Recommended step for initiating treatment		Step 1	Step 2	Step 3		
		Re-evaluate control in 2-6 weeks and adjust therapy accordingly.				
On follow-up, assess control and step therapy up or down	Assess Asthma Control					
	Components of Control		Well-Controlled	Not Well-Controlled	Very Poorly Controlled	
	Impairment	Symptoms	< 2 days/week, but not > 1/day	> 2 days/week or many times on < 2 days/week		Throughout day
		Nighttime awakenings	< 1x/month	1x/month		> 1x/week
		Short-acting beta ₂ -agonist use for symptoms	< 2 days/week	> 2 days/week		Several times/day
		Interference with normal activity	None	Some limitation		Extremely limited
	Risk	Exacerbations requiring oral steroids	0-1 x/year	> 2-3x/year		> 3x/year
	Treatment-related adverse effects	Intensity of medication-related side effects does not correlate to specific levels of control, but should be considered in overall assessment of risk.				
Recommended treatment and follow-up		<ul style="list-style-type: none"> Maintain current step Regular follow-up every 1-6 months Consider step down if well-controlled > 3 months 	Step up 1 step	<ul style="list-style-type: none"> Consider oral steroids Step up 1-2 steps 		
			<ul style="list-style-type: none"> Re-evaluate in 2-6 weeks If no clear benefit in 4-6 weeks, consider alternative diagnosis or adjust therapy [D] 			
Step approach for asthma management (Use lowest treatment level required to maintain control.)	<ul style="list-style-type: none"> Quick relief medication for all patients: Inhaled short-acting beta₂-agonist (SABA) as needed for symptoms. Intensity of treatment depends on severity of symptoms; up to 3 treatments at 20-minute intervals as needed. Short course of systemic oral corticosteroids may be needed. Use of SABA > 2 days a week for symptom control (not prevention of exercise-induced bronchospasm) indicates inadequate control and the need to step up treatment. Patient education and environmental control at each step Persistent asthma: Daily long-term control therapy [A]; consult with asthma specialist if step 4 or higher [D]; consider consultation at step 3 [D] 					
	Intermittent	Mild Persistent	Moderate Persistent		Severe Persistent	
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
	Preferred Short-acting beta ₂ -agonist as required	Preferred Low-dose inhaled corticosteroid [A] Alternative Cromolyn Or Montelukast [B]	Preferred Low-dose inhaled corticosteroid [D]	Preferred Medium-dose inhaled corticosteroid + either a long-acting beta ₂ -agonist or montelukast [D]	Preferred High-dose inhaled corticosteroid + either a long-acting beta ₂ -agonist or montelukast [D]	Preferred High-dose inhaled corticosteroid + oral systemic corticosteroid + either a long-acting beta ₂ -agonist or montelukast [D]

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 the 2007 National Asthma Education and Prevention Program Expert Panel Report 3, Guidelines for the Diagnosis and Management of Asthmas, National Heart, Lung and Blood Institute (www.nhlbi.nih.gov). Individual patient considerations and advances in medical science may supersede or modify these recommendations.