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Innovations in Care Management
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Clinical Practice Aids

Asthma Care in Children 5-11 Years of Age

These guidelines were developed to provide guidance to primary care providers and are not intended to replace or preclude the provider's clinical judgment.

National Heart, Lung, and Blood Institute: National Asthma Education and Prevention Program Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma, 2007, http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm and Global Strategy for Asthma Management and Prevention, Global Initiative for Asthma (GINA) 2006. http://www.ginasthma.org

Classifying Asthma Severity and Initiating Treatment in Children 5-11 Years of Age

Assessing severity and initiating therapy in children who are not currently taking long-term control medication

Components of Severity		Classification of Asthma Severity (5-11 years of age)			
		Intermittent	Persistent		
			Mild	Moderate	Severe
Impairment	Symptoms	≤ 2 days/week	> 2 days/week but not daily	Daily	Throughout the day
	Nighttime awakenings	≤ 2x/month	3-4x/month	> 1x/week but not nightly	Often 7x/week
	Short-acting $beta_2$-agonist use for symptom control (not prevention of EIB)	≤ 2 days/week	> 2 days/week but not daily	Daily	Several times per day
	Interference with normal activity	None	Minor Limitation	Some Limitation	Extremely Limited
	Lung function	• Normal FEV_1 between exacerbations • FEV_1 > 80% predicted • FEV_1/FVC > 85%	• FEV_1 = > 80% predicted • FEV_1/FVC > 80%	• FEV_1 = 60-80% predicted • FEV_1/FVC = 75-80%	• FEV_1 < 60% predicted • FEV_1/FVC < 75%
Risk	Exacerbations requiring oral systemic corticosteroids	0-1/year (see note)	≥ 2/year (see note) →		
		← Consider severity and interval since last exacerbation. → Frequency and severity may fluctuate over time for patients in any severity category Relative annual risk of exacerbations may be related to FEV_1			
Recommended Action for Treatment Treatment-related adverse effects		Step 1	Step 2	Step 3, medium-dose ICS option or Step 4	
				And considered short course of oral systemic corticosteroids	
		In 2-6 weeks, evaluate level of asthma control that is achieved and adjust therapy accordingly			

Key: EIB, exercise-induced bronchospasm; FEV1, forced expiratory volume in 1 second; FVC, forced vital capacity; ICS, inhaled corticosteroids

Notes:
At present, there are inadequate data to correspond frequencies of exacerbations with different levels of asthma severity. In general, more frequent and intense exacerbations (e.g. requiring urgent, unscheduled care, hospitalization, or ICU admission) indicate greater underlying disease severity. For treatment purposes, patients who had ≥ 2 exacerbations requiring oral systemic corticosteroids in the past year may be considered the same as patients who have persistent asthma, even in the absence of impairment levels consistent with persistent asthma.

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Source: NHBLI Expert Panel Report 3 (EPR3): Guidelines for the diagnosis and Management of Asthma, available at http://www.nhlbi.nih.gov/guidelines/index.htm#asthma

Classifying Asthma Severity and Initiating Treatment in Children 5-11 Years of Age

Assessing severity and initiating therapy in children who are not currently taking long-term control medication

Components of Severity		Classification of Asthma Severity (5-11 years of age)		
		Well Controlled	Not Well Controlled	Very Poorly Controlled
Impairment	Symptoms	≤ 2 days/week but not more than once each day	> 2 days/week or multiple times on ≤ 2 days/week	Throughout the day
	Nighttime awakenings	≤ 1x/month	≥ 2x/month	≥ 2x/week
	Short-acting $beta_2$-agonist use for symptom control (not prevention of EIB)	≤ 2x days/week	>2 days/week	Several times per day
	Interference with normal activity	None	Some Limitation	Extremely Limited
	Lung function • FEV_1 or peak flow • FEV_1/FVC	• > 80% predicted/personal best • > 80%	• 60-80% predicted/personal best • 75-80%	• < 60% predicted/personal best • < 75%
Risk	Exacerbations requiring oral systemic corticosteroids	0-1/year (see note)	>2 year (see note)	
		Consider severity and interval since last exacerbation		
	Reduction in lung growth	Evaluation requires long-term follow-up		
	Treatment-related adverse effects	Medication side effects can vary in intensity from none to very troublesome and worrisome. The level of intensity does not correlate to specific levels of control but should be considered in the overall assessment of risk		
Recommended Action for Treatment Treatment-related adverse effects		• Maintain current step • Regular follow-ups every 1-6 months • Consider step down if well controlled for at least 3 months	• Step up at least 1 step and • Reevaluate in 2-6 weeks • For side effects, consider alternative treatment options	• Consider short course of oral systemic corticosteroids, • Step up 1-2 steps, and • Reevaluate in 2 weeks • For side effects, consider alternative treatment options

Key: EIB, exercise-induced bronchospasm; FEV1, forced expiratory volume in 1 second; FVC, forced vital capacity

Notes:
At present, there are inadequate data to correspond frequencies of exacerbations with different levels of asthma severity. In general, more frequent and intense exacerbations (e.g. requiring urgent, unscheduled care, hospitalization, or ICU admission) indicate greater underlying disease severity. For treatment purposes, patients who had ≥ 2 exacerbations requiring oral systemic corticosteroids in the past year may be considered the same as patients who have persistent asthma, even in the absence of impairment levels consistent with persistent asthma.

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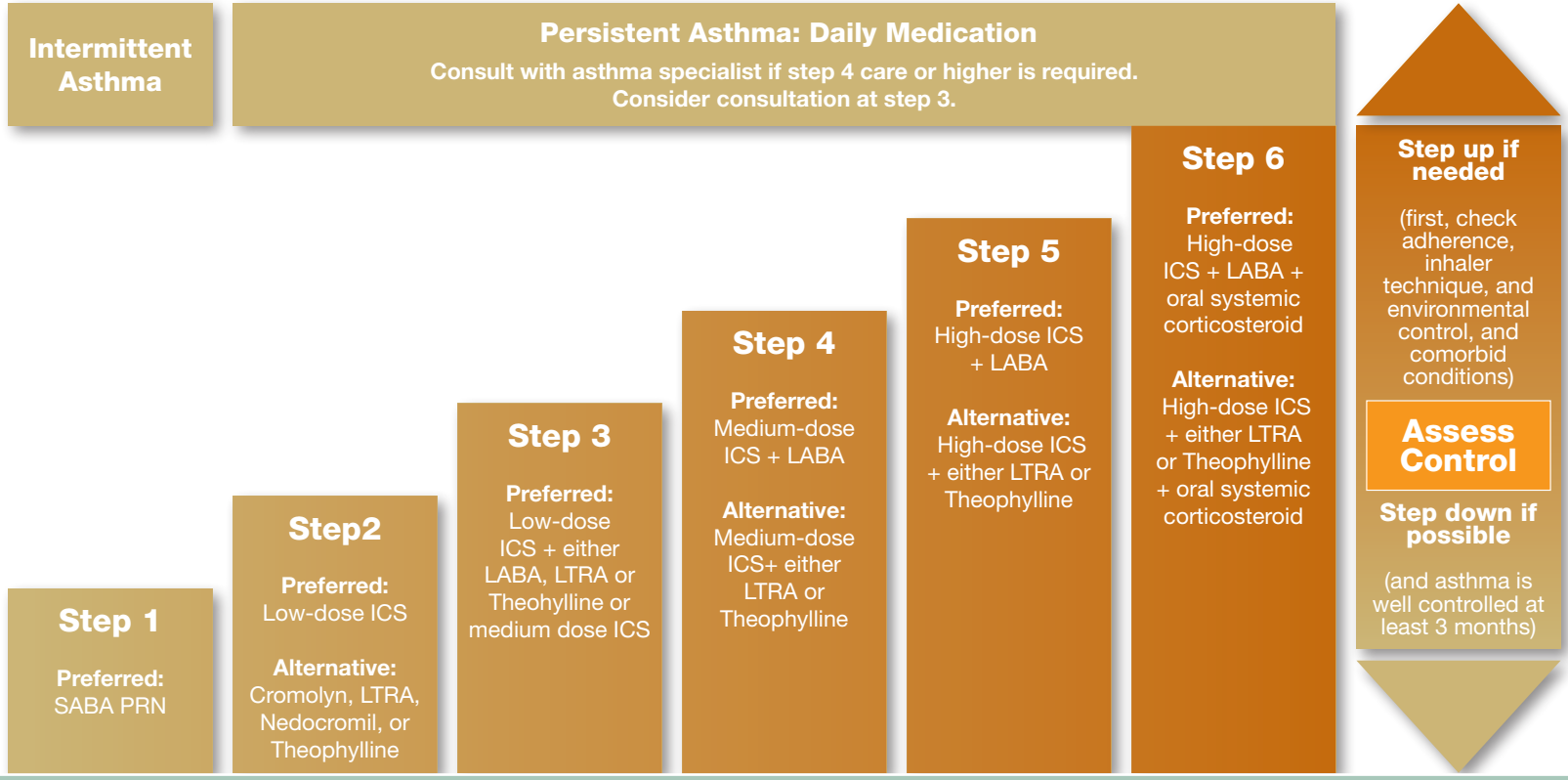
Stepwise Approach
for Managing Asthma In Children 5-11 Years of Age



Each step: Patient education, environmental control, and management of comorbidities.*
Steps 2-4: Consider subcutaneous allergen immunotherapy for patients who have allergic asthma.

Quick-Relief Medication for All Patients
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 oral systemic corticosteroids may be needed.
Caution: Increasing use of SABA or use >2 days a week for symptom relief (not prevention of EIB) generally indicates inadequate control and the need to step up treatment.

Key: Alphabetical order is used when more than one treatment option is listed within either preferred or alternative therapy.
ICS, inhaled corticosteroid; LABA, long-acting inhaled beta$_2$-agonist; LTRA, leukotrine receptor antagonist; SABA, inhaled short-acting beta$_2$-agonist

Notes:
*Immunotherapy for steps 2-4 is based on Evidence B for house-dust mites, animal danders, and pollens; evidence is weak or lacking for molds and cockroaches. Evidence is strongest for immunotherapy with single allergens. The role of allergy in asthma is greater in children than in adults. Clinicians who administer immunotherapy should be prepared and equipped to identify and treat anaphylaxis that may occur.

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