ASTHMA MANAGEMENT: 5–11 YEARS OF AGE (Part 1 of 2)

Classifying Asthma Severity and Initiating Treatment

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

Components of Severity		Classification of Asthma Severity: Intermittent	Persistent: Mild	Persistent: Moderate	Persistent: Severe
Impairment	Symptoms	$\le$2 days/week	>2 days/week but not daily	Daily	Throughout the day
	Nighttime awakenings	$\le$2×/month	3–4×/month	>1×/week but not nightly	Often 7×/week
	Short-acting β_2-agonist use for symptom control (not prevention of EIB)	$\le$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 $\ge$80% predicted • FEV_1/FVC >80%	• FEV_1 = 60%–80% predicted • FEV_1/FVC = 75%–80%	• FEV_1 <60% predicted • FEV_1/FVC <75%
Risk	**Exacerbations requiring oral systemic corticosteroids**	**0–1/year**	**$\ge$2/year →**		
		← 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 Step for Initiating Therapy		**Step 1**	**Step 2**	**Step 3, medium-dose ICS option**	**Step 3, medium-dose ICS option, or Step 4**
				and consider short course of oral systemic corticosteroids	
		In 2–6 weeks, evaluate level of asthma control that is achieved and adjust therapy accordingly.			

Stepwise Approach for Managing Asthma

Intermittent Asthma	Persistent Asthma: Daily Medication Consult with asthma specialist if Step 4 care or higher is required. Consider consultation at Step 3.				
Step 1 ***Preferred:*** SABA PRN	**Step 2** ***Preferred:*** Low-dose ICS ***Alternative:*** Cromolyn, LTRA, Nedocromil, or Theophylline	**Step 3** ***Preferred:*** EITHER: Low-dose ICS + either LABA, LTRA, or Theophylline OR Medium-dose ICS	**Step 4** ***Preferred:*** Medium-dose ICS + LABA ***Alternative:*** Medium-dose ICS + either LTRA or Theophylline	**Step 5** ***Preferred:*** High-dose ICS + LABA ***Alternative:*** High-dose ICS + either LTRA or Theophylline	**Step 6** ***Preferred:*** High-dose ICS + LABA + oral systemic corticosteroid ***Alternative:*** High-dose ICS + either LTRA or Theophylline and oral systemic corticosteroid

Step up if needed
(first, check adherence, inhaler technique, environmental control, and comorbid conditions)

Assess control

Step down if possible
(and asthma is well controlled at least 3 months)

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

(continued)

ASTHMA MANAGEMENT: 5–11 YEARS OF AGE (Part 2 of 2)

Assessing Asthma Control and Adjusting Therapy

Components of Control		Classification of Asthma Control: Well Controlled	Not Well Controlled	Very Poorly Controlled
Impairment	Symptoms	$\leq$2 days/week but not more than once on each day	$>$2 days/week or multiple times on $\leq$2 days/week	Throughout the day
	Nighttime awakenings	$\leq 1\times$/month	$\geq 2\times$/month	$\geq 2\times$/week
	Interference with normal activity	None	Some limitation	Extremely limited
	Short-acting β_2-agonist use for symptom control (not prevention of EIB)	$\leq$2 days/week	$>$2 days/week	Several times per day
	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 $<$75%
Risk	**Exacerbations requiring oral systemic corticosteroids**	**0–1/year**	**$\geq$2/year**	
		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		• Maintain current step • Regular follow-up 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

NOTES

Key: EIB = exercise-induced bronchospasm; FEV_1 = forced expiratory volume in 1 second; FVC = forced vital capacity; ICS = inhaled corticosteroid; LABA = inhaled long-acting β_2-agonist; LTRA = leukotriene receptor antagonist; SABA = inhaled short-acting β_2-agonist.

REFERENCES

Adapted from National Asthma Education and Prevention Program. *Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma* 2007. U.S. Department of Health and Human Services. Available at: http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.pdf. Accessed on: November 26, 2012.

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