PerforMED℠
Innovations in Care Management
A division of AmeriHealth Mercy

Clinical Practice Aids

Asthma Care in Youth >12 Years of Age and Adults

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

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

Assessing Asthma Control and Adjusting Therapy In Youth >12 Years of Age and Adults

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

Components of Severity		Classification of Asthma Severity (>12 years of age)			
		Intermittent	Persistent		
			Mild	Moderate	Severe
Impairment	Symptoms	≤ 2 days/week	>2 days/week	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)	≤ 2x days/week	>2 days/week but not daily, and not more than 1x on any day	Daily	Several times per day
Normal FEV1/FVC: 8-19 yr 85% 20-39 yr 80% 40-59 yr 75% 60-80 yr 60%	Interference with normal activity	None	Minor Limitation	Some Limitation	Extremely Limited
	Lung function	• Normal FEV$_1$ between exacerbations • FEV1 >80% predicted • FEV1/FVC normal	• FEV$_1$ >80% predicted • FEV1/FVC normal	• FEV$_1$ >60% but <80% predicted • FEV1/FVC reduced 5%	• FEV$_1$ <60% predicted • FEV1/FVC reduced >5%
Risk	Exacerbations requiring oral systemic corticosteroids	0-1/year (see note)	>2 year (see note)		
Recommended Action for Treatment **Treatment-related adverse effects**		Step 1	Step 2	Step 3	Step 4 or 5
				And considered short course of oral systemic corticosteroids	
(see figure 4-5 for treatment steps)		In 2-6 weeks, evaluate level of asthma control that is achieved and adjust therapy accordingly.			

Key: FEV1, forced expiratory volume in 1 second; FVC, forced vital capacity; ICU, intensive care unit

Notes:

- The stepwise approach is meant to assist, not replace the clinical decision making required to meet individual patient needs.
- Level of severity is determined by assessment of both impairment and risk. Assess impairment domain by patient's/caregiver's recall of previous 2-4 weeks and spirometry. Assign severity to the most severe category in which any feature occurs.
- 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.

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

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

Assessing Asthma Control and Adjusting Therapy In Youth ≥12 Years of Age and Adults

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

Components of Severity		Classification of Asthma Severity (>12 years of age)		
		Well Controlled	Not Well Controlled	Very Poorly Controlled
Impairment	Symptoms	≤ 2 days/week	>2 days/week	Throughout the day
	Nighttime awakenings	≤ 2x/month	1-3x/week	>4x/week
	Short-acting beta$_2$-agonist use for symptom control (not prevention of EIB)	≤ 2x days/week	>2 days/week	Several times per day
	FEV1 or peak flow	>80% predicted/personal best	60-80% predicted/personal best	<60% predicted/personal best
	Validated questionnaires ATAQ ACQ ACT	0 <0.75* >20	1-2 >1.5 16-19	3-4 N/A <15
Risk	Exacerbations requiring oral systemic corticosteroids	0-1/year (see note)	>2 year (see note)	
		Consider severity and interval since last exacerbation		
	Progressive loss of lung function	Evaluation requires long-term follow-up care		
	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 **(see figure 4-5 for treatment steps)**		• Maintain current step • Regular follow-ups every 1-6 months to maintain control. • Consider step down if well controlled for at least 3 months	• Step up 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

*ACQ values of 0.76-1.4 are indeterminate regarding well-controlled asthma. **Key:** EIB, exercise-induced bronchospasm; ICU, intensive care unit.

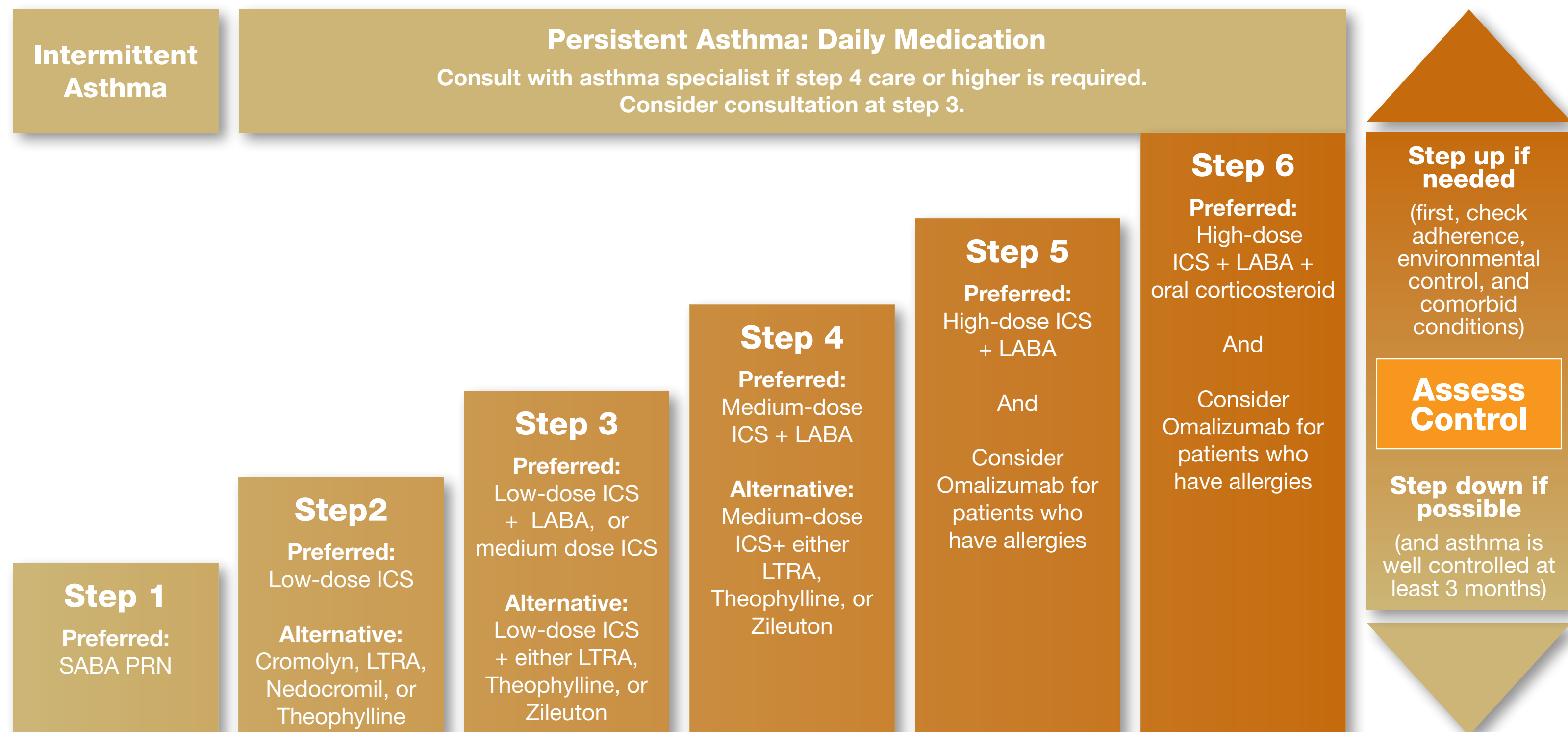
Notes:

- The stepwise approach in meant to assist, not replace, the clinical decision making required to meet individual patient needs.
- The level of control is based on the most severe impairment or risk category. Assess impairment domain by patient's recall of previous 2-4 weeks and by spirometry/or peak flow measures. Symptom assessment for longer periods should reflect a global assessment, such as inquiring whether the patient's asthma is better or worse since the last visit.
- At present, there are inadequate data to correspond frequencies of exacerbation with different levels of asthma control. In general, more frequent and intense exacerbations (e.g. requiring urgent, unscheduled care, hospitalization, or ICU admission) indicate disease control. For treatment purposes, patients who have >2 exacerbations requiring oral systemic corticosteroids in the past year may be considered the same as patients who have not-well-controlled asthma, even in the absence of impairment levels consistent with non-well controlled asthma.
- Validated Questionnaires for the impairment domain (the questionnaires do not assess lung function or the risk domain)
  - ATAQ =Asthma Therapy Assessment Questionnaire © (see sample in "Component 1: Measures of Asthma Assessment and Monitoring.")
  - ACQ = Asthma Control Questionnaire © (user package my be obtained at www.qoltech.co.uk or juniper@qoltech.co.uk)
  - ACT = Asthma Control Test™ (see sample in "Component 1: Measures of Asthma Assessment and Monitoring.") Minimal Important Difference: 1.0 for the ATAQ; 0.5 for the ACQ; not determined for the ACT.
- Before step up in therapy: 1) Review adherence to medication, inhaler technique, environmental control, and comorbid conditions. 2) If alternative treatment option was used in a step, discontinue and use the preferred treatment for the step.

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

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

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 (see notes).

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.
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. EIB, exercise-induced bronchospasm; ICS, inhaled corticosteroid; LABA, long-acting inhaled beta$_2$-agonist; LTRA, leukotrine receptor antagonist; SABA, inhaled short-acting beta$_2$-agonist

Notes:
- The stepwise approach is meant to assist, not replace, the clinical decision making required to meet individual patient needs.
- If alternative treatment is used and response is inadequate, discontinue it and use the preferred treatment before stepping up.
- Zileuton is a less desirable alternative due to limited studies as adjunctive therapy and the need to monitor liver function. Theophylline requires monitoring of serum concentration levels.
- In step 6, before oral systemic corticosteroids are introduced, a trial of high-dose ICS + LABA + either LTRA, theophylline, or zileuton may be considered, although this approach has not been studies in clinical trials.
- Step 1, 2, and 3 preferred therapies are based on Evidence A; step 3 alternative therapy is based on Evidence A for LTRA, Evidence B for theophylline, and Evidence D for zileuton. Step 4 preferred therapy is based on Evidence B, and alternative therapy is based on Evidence B for LTRA and theophylline and Evidence D for zileuton. Step 5 preferred therapy is based on Evidence B. Step 6 preferred therapy is based on (EPR – 2 1997) and Evidence B for omalizumba.
- 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 or omalizumab should be prepared and equipped to identify and treat anaphylaxis that may occur.

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

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