

Asthma-Involve PeopleCare Clinical Guidelines

Topic	Optimal Goal	Clinical Intervention Provided – Coaching provided to Parent/Guardian or Member with participation by child/adolescent or member based on age-appropriate self-management, as appropriate
1. Symptoms	Achieve and maintain control of symptoms utilizing the NIH guidelines ² to assess and monitor asthma	<p>Obtain baseline asthma severity classification through the use of the NIH guidelines¹</p> <p>Discuss the pathophysiology of asthma</p> <p>Describe an asthma episode and early warning signs</p> <p>Assess barriers to care and refer needs or case issues to health plan Case Management</p> <p>Provide a Self-management Kit consisting of: (account specific)</p> <ul style="list-style-type: none"> ▪ Peak flow meter (asthma only ages 5 and above) (based on criteria met for Employer market) ▪ Holding chamber (spacer/spacer with mask) for metered dose inhaler (MDI) (based on criteria met for Employer market) ▪ Instructional video for peak flow meter and spacer (based on criteria met for Employer market) ▪ Asthma self management guide <p>Complete collection and evaluation of the member's medical and lifestyle status upon assessment/ baseline call/ subsequent phone follow ups to include:</p> <ul style="list-style-type: none"> ▪ Health Care Utilization for the past year (ER visits, urgent care visits, and hospitalizations; missed work/school days) ▪ Current symptoms ▪ Review of current medication regimen, including type and frequency of rescue and controller medications used ▪ Co-morbid conditions ▪ Identification of environmental triggers ▪ Home medical equipment use ▪ Quality of Life ▪ Functional Status ▪ Body Mass Index (calculated from height and weight) ▪ Caregiver availability and family support <p>Review member's/caregiver's goals and planning with focused education and problem solving as necessary</p> <p>Review clinical action path and send to physician for clarification of medications as well as instructions for increased symptoms</p> <p>Review of the self-management plan developed in collaboration with the member's physician according to NIH guidelines^{3, 5}</p> <p>Perform re-instruction of any poorly understood topics</p> <p>Assess changes in symptom severity</p>

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		<p>Assess the member's/caregiver's understanding and compliance of disease self-management</p> <p>Perform regular (30, 60 or 90 days) data collection and follow up reporting to the physician, if needed</p> <p>Recognize the co-morbidities that may impact asthma (Obesity, GERD, OSA, Rhinitis/ Sinusitis, etc.)</p>
2. Pulmonary Function	Maintain (near) "normal" pulmonary function	<p>Children 0-4 years of age</p> <ul style="list-style-type: none"> ▪ N/A - (Pulmonary Function (FEV₁, PEF) unreliable in children under 6) <p>Children 5-11 years of age and youths ≥ 12 years of age and adults</p> <p>Peak Flow Monitoring – Compliance and technique are assessed</p> <p>PEF should be >80% of predicted or personal best (if known)</p> <p>PEF personal best should be re-evaluated every 6 months in children up to the age of 18</p> <p>Inform member on follow up calls or visits to ask their doctor to re-assess spirometry, (if age appropriate):</p> <ul style="list-style-type: none"> ▪ during periods of progressive or prolonged loss of asthma control ▪ after treatment is initiated and symptoms and PEF have stabilized ▪ at least every 1-2 years for maintenance of airway function (may be more often depending on the clinical severity and response to management) <p>Field Health Coach to conduct spirometry screening at every in-home visit, (if age appropriate) (Health Plan only)</p>
3. Medications	Proper use Compliance Avoid adverse effects	<p>Provide education on appropriate timing, technique and consistency of medication administration.</p> <ul style="list-style-type: none"> ▪ Re-evaluation of patient MDI and spacer technique and cleaning ▪ Re-evaluation of patient DPI technique and cleaning ▪ Re-evaluation of nebulizer technique and cleaning ▪ Ensure proper instruction of keeping track of MDI content and expiration (calculating or counting puffs) ▪ Encourage that all asthma participants carry a form of inhaled SABD with them at all times ▪ Ensure that medication chart is kept up to date and encourage them to give it to all of their physicians ▪ Teach the difference between "controller" (maintenance) medication and "reliever" (rescue) medications ▪ Encourage compliance with "controller" (maintenance) medications (including pregnant women) ▪ Review possible side effects and potential drug-drug interactions for medications prescribed for other co-morbidities; encourage patient to discuss potential side effects with their doctor
4. Exacerbations	Manage asthma exacerbations	<p>Assist in identifying triggers (allergens and irritants) and methods to avoid or reduce them.</p> <ul style="list-style-type: none"> ▪ Encourage participants/caregivers to do an environmental assessment and take environmental control/avoidance measures ▪ Special attention should be considered for environment of the bedroom for night time symptoms ▪ Possible triggers in the schools/ daycare/ workplace <p>Encourage regular hand washing</p> <p>Encourage regular cleaning and disinfection techniques of respiratory equipment</p> <p>Teach signs and symptoms and how to avoid infection</p>

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		<p>Teach the importance of recognizing the severity of asthma exacerbations⁴</p> <ul style="list-style-type: none"> ▪ Compliance with home treatment plan (per NIH - if instructed by physician on ActionPath®)⁵ ▪ Seek medical help as appropriate
5. Physical Activity	Maintain normal activity levels, including exercise and attendance at work and/or school	<p>Obtain current physical activity status upon assessment (modified based on physical/medical limitations):</p> <ul style="list-style-type: none"> ▪ Provide specific recommendations to control symptoms ▪ Teach proper breathing, relaxation and conservation techniques. Provide specific recommendations for maintaining current physical activity program <p>Provide education on risk of increasing or decreasing the amount of physical activity as well as a warm up period or premedicating prior to physical activity</p> <ul style="list-style-type: none"> ▪ Always consult physician in regards to increased physical activity ▪ Those with exercise induced asthma should utilize SABD 20-30 minutes prior to physical activity ▪ Educate how inactivity and obesity can lead to additional breathing problems
6. Self-Management/Prevention	Develop a patient/family/doctor partnership	<p>Encourage and assist with tracking of regular office visits to include: physical assessment with breath sounds, pulse oximetry, spirometry, PEF, heart rate and respiratory rate</p> <p>Teach importance of keeping a PEF and/or symptom diary</p> <p>Teach importance of inhaler technique with and without the use of a spacer</p> <p>Teach importance of environmental exposure control measures</p> <p>Recommend current immunizations:</p> <ul style="list-style-type: none"> ▪ Childhood immunizations ▪ Influenza vaccines are recommended for ages 6 months and older (refer to physician) ▪ Pneumonia vaccines (refer to physician) <p>Instruct on proper identification of symptoms, appropriate treatment, and when to seek medical help</p> <p>Ensure that caregivers notify schools/daycares of asthma diagnosis and medication and that there is an inhaled SABD available at school (up to age 18)</p> <p>Teach participants and caregivers to follow treatment plan and keep it up to date in accordance with their physician and the stepwise approach for management according to NIH guidelines^{3, 5}</p>
7. Tobacco Cessation*	Life-long Abstinence	<ul style="list-style-type: none"> ▪ Obtain tobacco use status and history during assessment ▪ If currently using tobacco products: <ul style="list-style-type: none"> ○ Determine readiness to quit ○ Provide education and motivational coaching for those not ready to quit ○ Provide cessation coaching for those committed to setting quit date and/or refer to appropriate resources ▪ If former tobacco user: Offer relapse prevention coaching as needed

I have reviewed and approved the Involve PeopleCare Clinical Guidelines for Asthma and agree with the use in supporting the clinical staff in providing Disease

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Management services as outlined in the Standards of Care.

Woody Kageler, MD

Medical Director Signature and Credentials

Approved by the Quality Management Committee

1/12/2018

Date

Jeremy Corbett, MD

QMC Chairperson

1/12/2018

Date

REVISION LOG

Date	Description	Author(s) Initials	Reviewers	Review Schedule	Comments/overview of changes
12/14/07	2007 annual review	KG	Kaneshia Agnew RRT Woody Kageler MD	Annual	
4/02/09	2008 annual review	KG	Kaneshia Agnew RRT Woody Kageler MD	Annual	
10/13/09	2009 annual review	KG	Kaneshia Agnew RRT Woody Kageler MD	Annual	
2/7/11	2010 annual review		Kaneshia Agnew RRT	Annual	No changes made
2/15/12	2011 annual review		Kaneshia Agnew RRT	Annual	No changes made
2/7/13	2012 annual review		KA/HC/WK	Annual	Additional interventions added to medications and management/prevention; added qualifiers regarding spacer, DVD, and spirometry screening during in-home visits. Also updated GOLD guidelines reference.
3/7/13			KA		Updated the approval dates
3/5/14	2013 Review		KA/WK	Annual	Updated interventions under topics: Medications and Physical Activity
2/23/15	Annual review		KA/DH/WK/JC	Annual	Updated interventions under topics: Medications and Tobacco Cessation sections
1/4/2016	Annual Review		DH/LI/WK/JC	Annual	Basic formatting completed, changed document abbreviations to

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					align with updated approved abbreviations document. Updated interventions under topics Medications and Self-Management to specify that SABD should be the inhaled form.
1/4/2017	Annual Review		DL/LI/WK/JC	Annual	Annual review completed. Basic formatting changes made. Changed “Nurtur” to “Involve PeopleCare”. Added urgent care visits to utilizations in Topic: 1. Symptoms.
1/4/2018	Annual Review		DL/LI/PK/WK/JC	Annual	No changes made.

¹ See attached table: Figure 4-2a: Classifying Asthma Severity and Initiating Treatment in Children 0-4 years of age
 Figure 4-2b: Classifying Asthma Severity and Initiating Treatment in Children 5-11 years of age
 Figure 4-6: Classifying Asthma Severity and Initiating Treatment in Youths ≥ 12 years of age and Adults

² See attached table: Figure 3-5a: Assessing Asthma Control and Adjusting Therapy in Children 0-4 years of age
 Figure 4-3b: Assessing Asthma Control and Adjusting Therapy in Children 5-11 years of age
 Figure 4-7: Assessing Asthma Control and Adjusting Therapy in Youths ≥ 12 years of age and Adults

³ See attached table: Figure 4-1a: Stepwise Approach for Managing Asthma in Children 0-4 years of age
 Figure 4-1: Stepwise Approach for Managing Asthma in Children 5-11 years of age
 Figure 4-5: Stepwise Approach for Managing Asthma in Youths ≥ 12 years of age and Adults

⁴ See attached table: Figure 5-3: Severity of Asthma Exacerbations

⁵ See attached table: Figure 3-4: Management of Asthma Exacerbations: Home Treatment

National Heart Lung and Blood Institute (NHLBI) of the National Institutes of Health (NIH). *Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma- Full Report 2007*. <http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.pdf>

* Fiore MC, Jaen CR, Baker TB, et al. *Treating Tobacco Use and Dependence: 2008 Update*. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. May 2008.

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FIGURE 4-2a. CLASSIFYING ASTHMA SEVERITY AND INITIATING TREATMENT IN CHILDREN 0-4 YEARS OF AGE

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

¹Classifying asthma severity: (0-4 years of age)

Components of Severity		Classification of Asthma Severity (0-4 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	0	1-2x/month	3-4x/month	>1x/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
Risk	Exacerbations requiring oral systemic corticosteroids	0-1/year	≥2 exacerbations in 6 month requiring oral systemic corticosteroids, or ≥4 wheezing episodes/1 year lasting >1 day AND risk factors for persistent asthma.		
		← Consider severity and interval since last exacerbation. Frequency and severity may fluctuate over time. → Exacerbations of any severity may occur in patients in any severity category.			
Recommended Step for Initiating Therapy (See figure 4-1a for treatments steps)		Step 1	Step 2	Step 3 and consider short course of oral systemic corticosteroids	
In 2-6 weeks, depending on severity, evaluate level of asthma control that is achieved. If no clear benefits is observed in 4-6 weeks, consider adjusting therapy or alternative diagnoses.					

Key: EIB, exercise-induced bronchospasm

Notes

- The stepwise approach is meant to assist, not replace, the clinical decisionmaking required to meet individual patient needs.
- Level of severity is determined by both impairment and risk. Assess impairment domain by patient's/caregiver's recall of previous 2-4 weeks. 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. 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. For treatment purpose, patients who had ≥2 exacerbations requiring oral systemic corticosteroids in the past 6 month, or ≥4 wheezing episodes in the past year, and who have risk factors for persistent asthma 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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FIGURE 4-2b. 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.

¹Classifying asthma severity: (5-11 years of age)

Components of Severity		Classification of Asthma Severity (5-11 years of age)			
		Intermittent	Persistent		
Impairment	Symptoms	≤2 days/week	> 2 days/week but not daily	Daily	Throughout the day
	Nighttime awakenings	≤2 x/week	3-4x/month	>1x/week but not nightly	Often 7x/week
	Short-acting beta2-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	<ul style="list-style-type: none"> Normal FEV1 between exacerbations FEV1 > 80% predicted FEV1/FVC > 85% 	<ul style="list-style-type: none"> FEV1 > 80% predicted FEV1/FVC > 80% 	<ul style="list-style-type: none"> FEV1 = 60-80% predicted FEV1/FVC = 75-80% 	<ul style="list-style-type: none"> FEV1 = 80% predicted FEV1/FVC = 75%
Risk	Exacerbations requiring oral systemic corticosteroids	0-1/year (see more)	≥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 exacerbation may be related to FEV1					
Recommended Step for Initiating Therapy (See figure 4-1b for treatments steps)		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, depending on severity, evaluate level of asthma control that is achieved. If no clear benefits is observed in 4-6 weeks, consider adjusting therapy or alternative diagnoses.					

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

Notes

- The stepwise approach is meant to assist, not replace, the clinical decisionmaking required to meet individual patient needs.
- Level of severity is determined by 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 purpose, 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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FIGURE 4-6. CLASSIFYING ASTHMA SEVERITY AND INITIATING TREATMENT IN YOUTH ≥12 YEARS OF AGE AND ADULTS

Assessing severity and initiating treatment for patients who are not currently taking long-term control medications.

¹Classifying asthma severity: (≥ 12 years of age)

Components of Severity		Classification of Asthma Severity ≥12 years of age			
		Intermittent	Persistent		
			Mild	Moderate	Severe
Impairment Normal FEV ₁ /FVC: 8-19 yr 85% 20-39 yr 80% 40-59 yr 75% 60-80 yr 70%	Symptoms	≤2 days/week	>2 days/week but not daily	Daily	Throughout the day
	Nighttime awakenings	≤2 x/month	3-4x/month	>1x/week but not daily	Often 7x/week
	Short-acting beta ₂ -agonist use for symptom control (not prevention of EIB)	≤2 days/week	>2 day/week but not daily, and not more than 1x on any day	Daily	Several times per day
	Interface with normal activity	None	Minor limitation	Some limitation	Extremely limited
	Lung function	<ul style="list-style-type: none"> • Normal FEV₁ between exacerbations • FEV₁ >80% predicted • FEV₁/FVC normal 	<ul style="list-style-type: none"> • FEV₁ >80% predicted • FEV₁/FVC normal 	<ul style="list-style-type: none"> • FEV₁ >60% but <80% predicted • FEV₁/FVC reduced 5% 	<ul style="list-style-type: none"> • FEV₁ >60% predicted • FEV₁/FVC reduced 5%
	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 FFV.			
	Recommended Step for Initiating Therapy (See figure 4-5 for treatments steps)	Step 1	Step 2	Step 3 and consider short course of oral systemic corticosteroids	Step 4 or 5
		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 decisionmaking required to meet individual patient needs.
- Level of severity is determined by 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 purpose, 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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FIGURE 3-5a. ASSESSING ASTHMA CONTROL IN CHILDREN 0-4 YEARS OF AGE

Components of Control		Classification of Asthma Severity (Children 0-4 years of age)		
		Well Controlled	Not Well Controlled	Very Poorly Controlled
Impairment	Symptoms	>2 days/week	>2 days/week	Throughout the day
	Nighttime awakenings	1x/month	1-3x/week	≥1x/week
	Interface with normal activity	None	Some limitation	Extremely limited
	Short-acting beta ₂ -agonist use for symptom control (not prevention of EIB)	≤2 days/week	>2 days/week	Several times
Risk	Exacerbations requiring oral systemic corticosteroids	0-1/year	2-3/year	>3/year
	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.		

Key: EIB, exercise-induced bronchospasms; ICU, intensive care unit

Notes

- The level of control is based on the most severe impairment or risk category. Assess impairment domain by caregiver's recall of previous 2-4 weeks. 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 exacerbations with different levels of asthma control. In general, more frequent and intense exacerbations (e.g., requiring urgent, unscheduled care, hospitalization, or ICU admission) indicate poorer disease control. For treatment purpose, patients who had ≥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 persistent asthma.

²Assessing asthma control: (0-4 years of age)

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FIGURE 4-3b. ASSESSING ASTHMA CONTROL AND ADJUSTING THERAPY IN CHILDREN 5-11 YEARS OF AGE

Components of Control		Classification of Asthma Severity (5-11 years of age)		
		Well Controlled	Not Well Controlled	Very Poorly Controlled
Impairment	Symptoms	>2 days/week	>2 days/week	Throughout the day
	Nighttime awakenings	1-3x/week	1-3x/week	≥4x/week
	Interface with normal activity	None	Some limitation	Extremely limited
	Short-acting beta ₂ -agonist use for symptom control (not prevention of EIB)	>2 days/week	>2 days/week	Several times
	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		≥2/year (see note)
		Consider severity and interval since last exacerbation		
	Reduction in lung growth	Evaluation requires long-term followup		
	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 (see figure 4-1b for treatment steps)		<ul style="list-style-type: none"> • Maintain current step. • Regular followups every 1-6 month • Consider step down if well controlled for at least 3 months. 	<ul style="list-style-type: none"> • Step up at least 1 step and • Reevaluate in 2-6 weeks. • For side effects, consider alternative treatment options. 	<ul style="list-style-type: none"> • 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

- The stepwise approach is meant to assist, not replace, the clinical decisionmaking 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/caregiver'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 exacerbations with levels of asthma control. In general, more frequent and intense exacerbations (eg., requiring urgent, unscheduled care, hospitalization, or ICU admission) indicate poorer disease control. 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.
- Before step up in therapy:
 - Review adherence to medications, inhaler technique, environmental control, and comorbid conditions.
 - If alternative treatment option was used in a step, discontinue it and use preferred treatment for that step.

²Assessing asthma control: (5-11 years of age)

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Section 4, Managing Asthma Long term-Youth ≥12 Years of Age and Adults

FIGURE 4-7. ASSESSING ASTHMA CONTROL AND ADJUSTING THERAPY IN YOUTH ≥12 YEARS OF AGE AND ADULTS

Components of Control		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	1-3x/week	1-3x/week	≥4x/week
	Interface with normal activity	None	Some limitation	Extremely limited
	Short-acting beta ₂ -agonist use for symptom control (not prevention of EIB)	>2 days/week	>2 days/week	Several times
	FEV ₁ or peak flow	>80% predicted/ personal best	60-80% predicted/ personal best	<60% predicted/ personal best
	Validated questionnaires ATAQ ACQ ACT	1-2 ≥1.5 16-19	1-2 ≥1.5 16-19	3-4 N/A ≤15
Risk	Exacerbations requiring oral systemic corticosteroids	0-1/year	≥2/year (see note)	
		Consider severity and interval since last exacerbation		
	Progressive loss of lung function	Evaluation requires long-term followup 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 (see figure 4-5 for treatment steps)		<ul style="list-style-type: none"> • Maintain current step. • Regular followups every 1-6 month to maintain control. • Consider step down if well controlled for at least 3 months. 	<ul style="list-style-type: none"> • Step 1 step and Reevaluate in 2-6 weeks. • For side effects, consider alternative treatment options. 	<ul style="list-style-type: none"> • 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 is meant to assist, not replace, the clinical decisionmaking 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 exacerbations with levels of asthma control. In general, more frequent and intense exacerbations (eg., requiring urgent, unscheduled care, hospitalization, or ICU admission) indicate poorer disease control. 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 not-well-controlled asthma, even in the absence of impairment levels consistent with not-well-controlled asthma.
- Validate 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 may be obtained at www.qoltech.co.uk or juniper@qoltech.co.uk)
ACT = Asthma Control Test™ (See sample in "Component 1: Measure 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:
 - Review adherence to medications, inhaler technique, environmental control, and comorbid conditions.
 - If alternative treatment option was used in a step, discontinue it and use preferred treatment for that step.

²Assessing asthma control: (≥ 12 years of age)

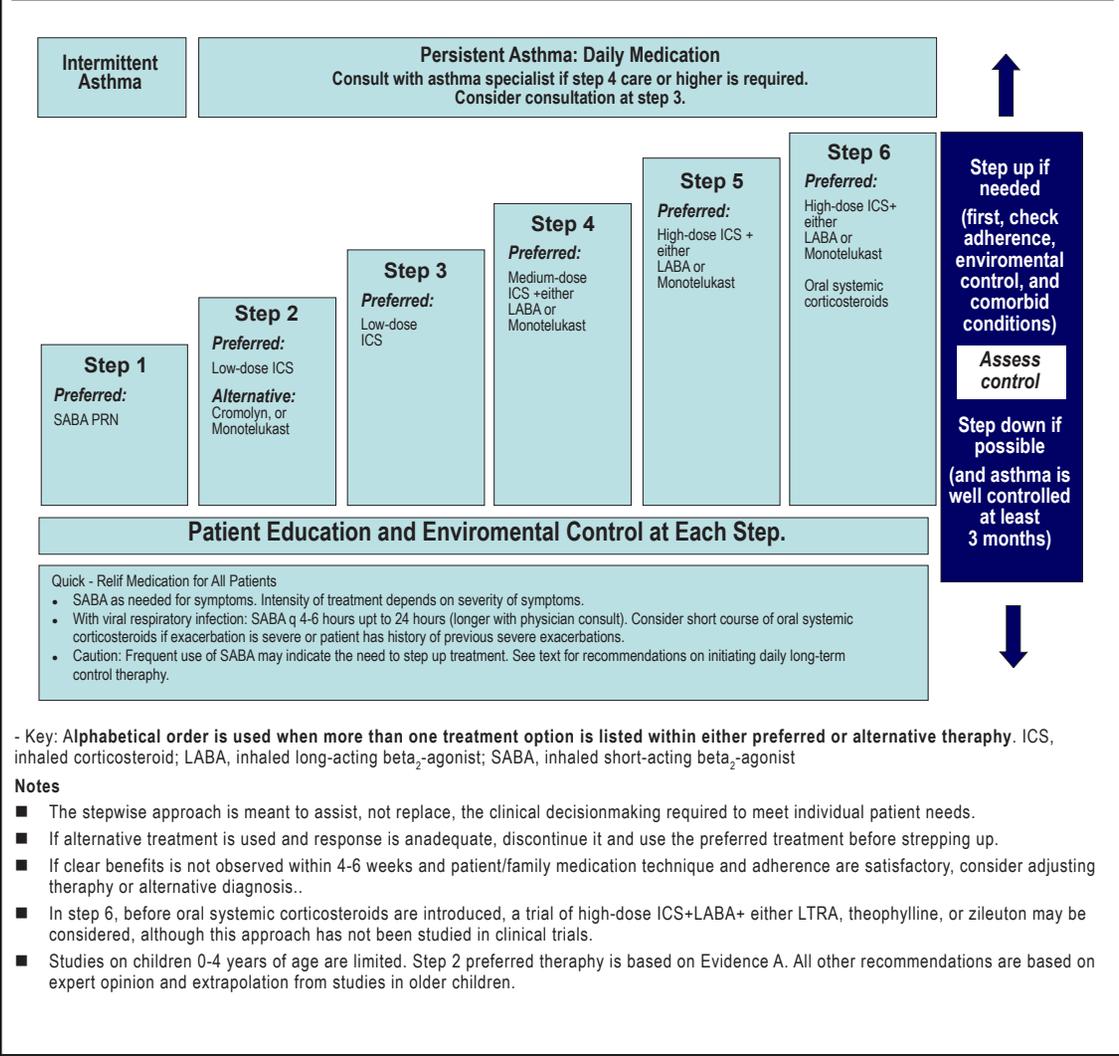
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Section 4, Managing Asthma Long term in Children 0-4 Years of Age and 5-11 Years of Age

FIGURE 4-1a. STEPWISE APPROACH FOR MANAGING ASTHMA IN CHILDREN 0-4 YEARS OF AGE

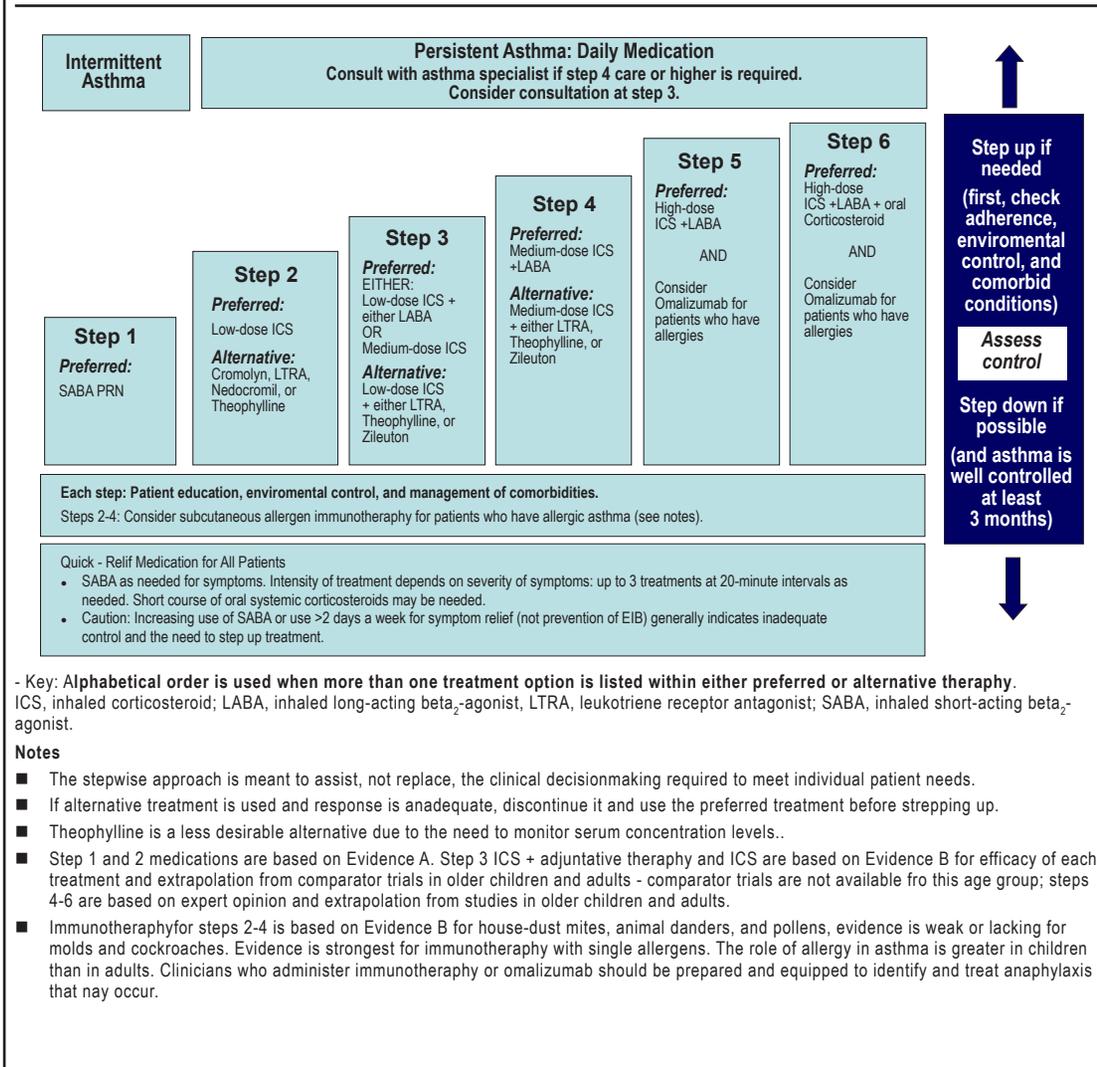
³Stepwise approach for management: (0-4 years of age)



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FIGURE 4-1B. STEPWISE APPROACH FOR MANAGING ASTHMA IN CHILDREN 5-11 YEARS OF AGE

³Stepwise approach for management: (5-11 years of age)



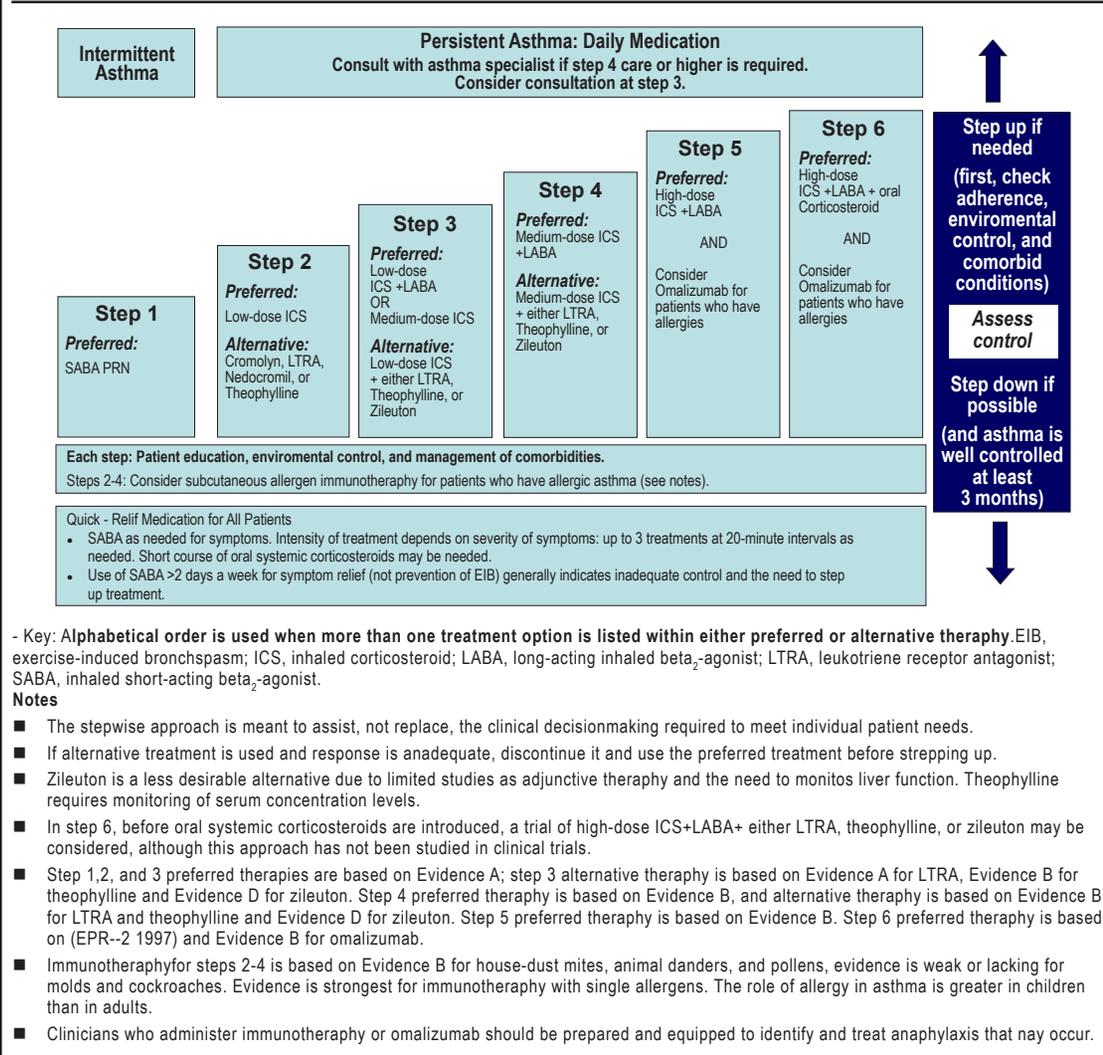
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Section 4, Managing ASthma Long term-Youth ≥12 Years of Age and Adults

FIGURE 4-5. STEPWISE APPROACH FOR MANAGING ASTHMA IN YOUTH ≥12 YEARS OF AGE AND ADULTS

³Stepwise approach for management: (≥ 12 years of age)



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5Home
Treatment
Plan

