The Asthma Office Visit

- Assess "severity" and "control"
  - Reduce current impairment
  - Reduce future risk
- Address inflammation vs. bronchoconstriction
- Differentiate controller vs. rescue medication
- Prescribe an inhaled steroid (for at least 4-6 weeks)
- Teach spacer device technique
- Write an Asthma Action Plan
  - Daily management and recognizing signs and symptoms of worsening
  - Step-up "Yellow Zone" plan for home management
- Set up follow up in 4-6 weeks: step-up/step-down and modify Asthma Action Plan
- Prescribe albuterol and spacer
- Annual influenza vaccine, regardless of severity
- Annual spirometry and as needed for monitoring control

When to Refer to an Asthma Specialist

- Patient has difficulty achieving or maintaining control
- Patient has required more than 2 bursts of oral systemic corticosteroids in 1 year
- Patient has had an exacerbation requiring hospitalization - hospitalization is a risk factor for mortality
- Patient requires "Step 4" care or higher (Step 3 for children 0-4 years)
- Immunotherapy or omalizumab are considered for patient's care
- Additional testing is indicated (allergy skin testing, bronchoscopy, etc.)
- Signs and symptoms are atypical
- Co-morbid conditions complicate asthma
- Patient requires additional education/guidance

Terms to Know:

Impairment (present)
- Frequency and intensity of symptoms
- Functional limitations (quality of life)

Risk (future)
- Asthma exacerbations (utilization)
- Progressive loss of pulmonary function
- Risk of adverse reaction from medication

Abbreviations
- ICS — inhaled corticosteroid
- LABA — long-acting beta2-agonist
- SABA — short-acting beta2-agonist
- RTI — respiratory tract infection
- LTRA — leukotriene receptor antagonist
- LAMA — long-acting muscarinic antagonist
- PRN — as needed

Resources available at https://getasthmahelp.org/asthma-guidelines.aspx

- 6 Key Messages from Expert Panel Report-3
- Tri-fold Guide
- Classifying Severity, Control, and Stepwise Treatment Guidelines excerpted from Expert Panel Report-3
- Links to validated instruments to assess and monitor asthma. (ATAQ and ACT)
- Links to American College of Allergy, Asthma & Immunology Asthma Yardsticks for help with step up and step down
- Link to Global Initiative on Asthma (GINA) guidelines

Reference: National Heart, Lung, and Blood Institute:

Guidelines for the Diagnosis and Management of Asthma: Expert Panel Report 3. National Institutes of Health Publication Number 08-4051. August 2007. https://www.nhlbi.nih.gov/health-topics/guidelines-for-diagnosis-management-of-asthma

2020 Focused Updates to the Asthma Management Guidelines: A Report from the National Asthma Education and Prevention Program Coordinating Committee Expert Panel Working Group. December 2020. DOI: https://doi.org/10.1016/j.jaci.2020.10.003

Essential Information from the

2007 NHLBI Guidelines for the Diagnosis and Treatment of Asthma

&

Asthma Management Guidelines: Focused Updates 2020

Link to the Complete Expert Panel Report:
www.nhlbi.nih.gov/guidelines/asthma
Link to the 2020 Focused Updates to the Asthma Management Guidelines
www.nhlbi.nih.gov/health-topics/asthma-management-guidelines-2020-updates

Stepwise Approach for Managing Asthma: **Quick Relief Medication for All Aged Patients**: SABA PRN 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 symptoms (not prevention of EIB) indicates inadequate control and the need to step up treatment.

Children 0 to 4 Years

COMPONENTS OF SEVERITY		Classification of Asthma Severity			
		Intermittent	Persistent		
			Mild	Moderate	Severe
Impairment	Symptoms	≤2 days/wk	>2 days/wk not daily	Daily	Throughout day
	Nighttime Awakenings	0	1-2x /month	3-4x /month	>1x /wk
	SABA Use for Symptoms	≤2 days/wk	>2 days/wk 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 risk factors for persistent asthma		
		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.			

COMPONENTS OF CONTROL		Classification of Asthma Control		
		Well Controlled	Not Well Controlled	Very Poorly Controlled
Impairment	Symptoms	≤2 days/wk but not >1 /day	>2 days/wk or many times on ≤2 days/wk	Throughout day
	Nighttime Awakenings	≤1x /month	>1x /month	>1x /wk
	SABA Use for Symptoms	≤2 days/wk	>2 days/wk	Several times /day
	Interference with Normal Activity	None	Some limitation	Extremely limited
Risk	Exacerbations requiring oral steroids	0-1x /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 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 ≥3 months.	• Step up 1 step. • Re-evaluate in 2-6 wks • If no clear benefit in 4-6 wks, consider alternative diagnosis or adjust therapy.	• Consider oral steroids • Step up 1-2 steps

Intermittent Asthma	Persistent Asthma: Daily Medication Consult with asthma specialist step 3 or higher. Consider consultation at step 2. *These medications were not considered in this update and/or have limited availability for use in the U.S. and/or have an increased risk of adverse consequences and need for monitoring.				
	Step 2 Preferred: • Low-dose ICS & PRN SABA Alternative: • Montelukast* or Cromolyn & PRN SABA	Step 3 Preferred: • Low-dose ICS-LABA & PRN SABA • Medium-dose ICS, & PRN SABA • Montelukast *+ low-dose ICS	Step 4 Preferred: • Medium dose ICS-LABA and PRN SABA Alternative: • Montelukast *+ medium dose ICS * and PRN SABA	Step 5 Preferred: • High-dose ICS-LABA & PRN SABA Alternative: • High-dose ICS + montelukast* & PRN SABA	Step 6 Preferred: • High-dose ICS-LABA + oral systemic corti-costeroid & PRN SABA Alternative: • Montelukast*+ high-dose ICS + oral systemic corticosteroid & PRN SABA
Step 1 Preferred: • SABA pm • At the start of RTI: Add short course daily ICS	For children age 4 years only, see Step 3 and Step 4 on Management of Persistent Asthma in Individuals Ages 5–11 Years diagram.				
Assess Control: First check adherence, inhaler technique, environmental factors, and comorbid conditions. Step up if needed; reassess in 4–6 weeks. Step down if possible (if asthma is well controlled for at least 3 consecutive months)					

Children 5 to 11 Years

COMPONENTS OF SEVERITY		Classification of Asthma Severity			
		Intermittent	Persistent		
			Mild	Moderate	Severe
Impairment	Symptoms	≤2 days/wk	>2 days/wk not daily	Daily	Throughout day
	Nighttime Awakenings	≤2x / month	3-4x /month	>1x /wk not nightly	Often 7x /wk
	SABA Use for Symptoms	≤2 days/wk	>2 days/wk not daily	Daily	Several times daily
	Interference with Normal Activity	None	Minor limitation	Some limitation	Extremely limited
	Lung Function FEV_1 or Peak Flow FEV_1/FVC	Normal FEV_1 btwn exacerbations >80% >85%	 >80% >80%	 60-80% 75-80%	 <60% <75%
Risk	Exacerbations requiring oral steroids	0-1 /year	≥2 /year		
		Consider severity & interval since last exacerbation. Frequency & severity may fluctuate over time for patient of any severity class.			
		Relative annual risk of exacerbations maybe related to FEV_1			
Recommended Step for Initiating Treatment		Step 1	Step 2	Step 3	
		Re-evaluate control in 2-6 weeks and adjust therapy accordingly.			

COMPONENTS OF CONTROL		Classification of Asthma Control		
		Well Controlled	Not Well Controlled	Very Poorly Controlled
Impairment	Symptoms	≤2 days/wk but not >1 /day	>2 days/wk or many times on ≤2 days/wk	Throughout day
	Nighttime Awakenings	≤1x /month	≥2x /month	≥2x /week
	SABA Use for Symptoms	≤2 days/wk	>2 days/wk	Several times /day
	Interference with Normal Activity	None	Some Limitation	Extremely Limited
	FEV_1 or Peak Flow FEV_1/FVC	>80% >80%	60-80% 75-80%	<60% <75%
Risk	Exacerbations requiring oral steroids	0-1x /year	≥2x /year	
	↓ Lung Growth	Evaluation requires long-term follow-up care.		
	Treatment-related adverse effects	Intensity of medication-related side effects 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 ≥3 months.	• Step up 1 step. • Re-evaluate in 2-6 wks • Adjust therapy accordingly	• Consider oral steroids • Step up 1-2 steps

Intermittent Asthma	Persistent Asthma: Daily Medication Consult with asthma specialist step 4 or higher. Consider consultation at step 3.					
	Step 2 Preferred: • Low-Dose ICS & PRN SABA Alternative: PRN SABA + • LTRA* • Cromolyn* • Nedocromil* • Theophylline*	Step 3 Preferred: • Combination low-dose ICS-formoterol daily & PRN Alternative: • Medium dose ICS & PRN SABA • Low-dose ICS-LABA • Low-dose ICS + LTRA,* • Low-dose ICS +Theophylline,* & PRN SABA	Step 4 Preferred: • Combination medium-dose ICS-formoterol daily & PRN Alternative: • Medium dose ICS-LABA & PRN SABA • Medium dose ICS + LTRA* • Theophylline,* + Medium dose ICS & PRN SABA	Step 5 Preferred: • High-dose ICS-LABA & PRN SABA Alternative: • High-dose ICS + LTRA* • Theophylline,* + High-dose ICS & PRN SABA	Step 6 Preferred: • High-dose ICS-LABA + oral corticosteroid & PRN SABA Alternative: • High-dose ICS + LTRA* + oral corticosteroid • Theophylline* + high-dose ICS + oral corticosteroid & PRN SABA
Step 1 Preferred: PRN SABA	Steps 2–4: Conditionally recommend the use of subcutaneous immunotherapy as an adjunct treatment to standard pharma-cotherapy in individuals whose asthma is controlled at the initiation, build up, and maintenance phases of immunotherapy			Consider appropriate asthma biologic treatment	
Assess Control: First check adherence, inhaler technique, environmental factors, and comorbid conditions. Step up if needed; reassess in 2–6 weeks. Step down if possible (if asthma is well controlled for at least 3 consecutive months)					

Youths ≥ 12 Years and Adults

COMPONENTS OF SEVERITY		Classification of Asthma Severity			
		Intermittent	Persistent		
			Mild	Moderate	Severe
Impairment	Symptoms	≤2 days/wk	>2 days/wk not daily	Daily	Throughout day
	Nighttime Awakenings	≤2x / month	3-4x /month	>1x /wk not nightly	Often, 7x /wk
Normal FEV_1/FVC: 8-19 yr 85% 20-39 yr 80% 40-59 yr 75% 60-80 yr 70%	SABA Use for Symptoms	≤2 days/wk	>2 days/wk not daily and not >1 /day	Daily	Several times daily
	Interference with Normal Activity	None	Minor limitation	Some limitation	Extremely limited
	Lung Function FEV_1 FEV_1/FVC	Normal FEV_1 btwn exacerbations >80% Normal	 >80% Normal	 60-80% Reduced 5%	 <60% Reduced >5%
Risk	Exacerbations requiring oral steroids	0-1 /year	≥2 /year		
		Consider severity & interval since last exacerbation. Frequency & severity may fluctuate over time for patient of any severity class.			
		Relative annual risk of exacerbations maybe related to FEV_1			
Recommended Step for Initiating Treatment		Step 1	Step 2	Step 3	Step 4 or 5
		Re-evaluate control in 2-6 weeks and adjust therapy accordingly.			

COMPONENTS OF CONTROL		Classification of Asthma Control		
		Well Controlled	Not Well Controlled	Very Poorly Controlled
Impairment	Symptoms	≤2 days/wk	>2 days/wk	Throughout day
	Nighttime Awakenings	≤2x /month	1-3x /wk	≥4x /week
	SABA Use for Symptoms	≤2 days/wk	>2 days/wk	Several times daily
	Interference with Normal Activity	None	Some limitation	Extremely limited
	FEV_1 or Peak Flow	>80%	60-80%	<60%
Risk	Exacerbations requiring oral steroids	0-1 /year	≥2 /year	
	Progressive ↓ Lung Function	Evaluation requires long-term follow-up care.		
	Treatment-related adverse effects	Intensity of medication-related side effects 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 ≥3 months.	• Step up 1 step. • Re-evaluate in 2-6 wks.	• Consider oral steroids • Step up 1-2 steps • Re-evaluate in 2 wks.

Intermittent Asthma	Persistent Asthma: Daily Medication Consult with asthma specialist step ≥4 Consider consultation at step 3					
	Step 2 Preferred: PRN SABA + • Low-Dose ICS • concomitant ICS PRN Alternative: PRN SABA + • LTRA* • Cromolyn* • Nedocromil* • Zileuton* • Theophylline*	Step 3 Preferred: • Combination low-dose ICS-formoterol daily & PRN Alternative: PRN SABA + • Medium dose ICS • Low-dose ICS-LABA • Low-dose ICS + ◊ LAMA ◊ LTRA* ◊ Theophylline* ◊ Zileuton*	Step 4 Preferred: • Combination medium-dose ICS-formoterol daily & PRN Alternative: PRN SABA + • Medium dose ICS-LABA • Medium dose ICS + ◊ LAMA ◊ LTRA* ◊ Theophylline* ◊ Zileuton*	Step 5 Preferred: • Medium-high dose ICS-LABA + LAMA & PRN SABA Alternative: PRN SABA + • Medium-high dose ICS-LABA • High dose ICS + LTRA*	Step 6 Preferred: • High-dose ICS-LABA + oral corticosteroid & PRN SABA
Step 1 Preferred: PRN SABA	Steps 2–4: Conditionally recommend the use of subcutaneous immunotherapy as an adjunct treatment to standard pharma-cotherapy in individuals whose asthma is controlled at the initiation, build up, and maintenance phases of immunotherapy			Consider appropriate asthma biologic treatment	
Assess Control: First check adherence, inhaler technique, environmental factors, and comorbid conditions. Step up if needed; reassess in 2–6 weeks. Step down if possible (if asthma is well controlled for at least 3 consecutive months)					

* Cromolyn, Nedocromil, LTRAs including Zileuton and montelukast, and Theophylline were not considered for the 2020 update, and/or have limited availability for use in the U.S., and/or have an increased risk of adverse consequences and need for monitoring that make their use less desirable.