ASTHMA PATHWAY Expert Panel Review-4

Children's

Stepwise Approach to Asthma by Age

Expert Panel Review-4: Stepwise Approach to Asthma by Age

- Consider a referral or consult to Asthma Clinic:
 - Diagnostic uncertainty
 - o 3 ED visits/year for asthma exacerbation
 - o Side effects of medications (weight gain, mood changes, poor growth)
 - Allergic component
 - o On steps 3 of therapy or higher
- Consider advanced asthma referral: Advanced Asthma Clinic serves children with difficult-to-treat and uncontrolled asthma when standard therapies have not helped. Specialists in this clinic include Pediatric Allergy & Immunology and Pulmonary Physicians, Behavioral Health Providers, Certified Asthma Educators, Asthma Nurse Case Managers, Clinical Social Workers, Dieticians, Respiratory Therapists, Registered Nurses, and Certified Medical Assistants. Appointments are 3-4 hours long on the third Thursday of each month.
 - Frequent exacerbations
 - High-risk patient (compliance, social or economic concerns, barriers to access, poor perception of disease, etc.)
 - More than 1 hospitalizations or 1 ICU admission in the last year

AGES 0-4 YEARS: STEPWISE APPROACH FOR MANAGEMENT OF ASTHMA

	Intermittent Asthma	Management of Persistent Asthma in Individuals Ages 0-4 Years					
Treatment	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	
Preferred	PRN SABA and At the start of RTI: Add short course daily ICSA	Daily low-dose ICS and PRN SABA	Daily low-dose ICS-LABA and PRN SABA* or Daily low-dose ICS + montelukast,* or daily medium-dose ICS, and PRN SABA	Daily medium- dose ICS-LABA and PRN SABA	Daily high-dose ICS-LABA and PRN SABA	Daily high-dose ICS-LABA + oral systemic corticosteroid and PRN SABA	
Alternative		Daily montelukast* or Cromolyn,* and PRN SABA		Daily medium- dose ICS + montelukast* and PRN SABA	Daily high-dose ICS + montelukast* and PRN SABA	Daily high-dose ICS + montelukast*+ oral systemic corticosteroid and PRN SABA	
			For children age 4 year Step 4 on Managemen In Individuals Ages 5-1	of Persistent Asthma	:		
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) Consult with asthma specialist if Step 3 or higher is required. Consider consultation at Step 2. Control assessment is a key element of asthma care. This involves both impairment and risk. Use of objective measures, self-reported control, and health care utilization are complementary and should be employed on an ongoing basis, depending on the individual's clinical situation. 							

Abbreviations: ICS, inhaled corticosteroid; LABA, long-acting beta₃-agonist; SABA, inhaled short-acting beta₃-agonist; RTI, respiratory tract infection; PRN, as needed

- ▲ Updated based on the 2020 guidelines
- Cromolyn and montelukast were not considered for this update and/or have limited availability for use in the United States. The FDA issued a
 Boxed Warning for montelukast in March 2020.



Disclaimer: Pathways are intended as a guide for practitioners and do not indicate an exclusive course of treatment nor serve as a standard of medical care. These pathways should be adapted by medical providers, when indicated, based on their professional judgement and taking into account individual patient and family circumstances.

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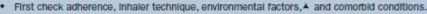


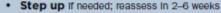
Stepwise Approach to Asthma by Age

AGES 5-11 YEARS: STEPWISE APPROACH FOR MANAGEMENT OF ASTHMA

Treatment PRN Preferred	STEP 1 RN SABA	STEP 2	STEP 3	STEP 4	STEP 5	CTED 6
PR		STEP 2	STEP 3	STED 4		STEP 6
	RN SABA			JIEP 4	SIEPS	
		Daily low-dose ICS and PRN SABA	Daily and PRN combination low-dose ICS-formoterol A	Daily and PRN combination medium-dose ICS-formoterol A	Daily high-dose ICS-LABA and PRN SABA	Daily high-dose ICS-LABA + oral systemic corticosteroid and PRN SABA
Alternative		Daily LTRA,* or Cromolyn,* or Nedocromil,* or Theophylline,* and PRN SABA	Daily medium- dose ICS and PRN SABA or Daily low-dose ICS-LABA, or daily low-dose ICS + LTRA, or daily low-dose ICS +Theophylline," and PRN SABA	Daily medium- dose ICS-LABA and PRN SABA or Daily medium- dose ICS + LTRA* or daily medium- dose ICS + Theophylline,* and PRN SABA	Daily high-dose ICS + LTRA* or daily high-dose ICS + Theophylline,* and PRN SABA	Daily high-dose ICS + LTRA* + oral systemic corticosteroid or daily high-dose ICS + Theophylline* + oral systemic corticosteroid, and PRN SABA
	_	Steps 2-4: Conditionally recommend the use of subcutaneous Immunotherapy as an adjunct treatment to standard pharmacotherapy In Individuals ≥ 5 years of age whose asthma is controlled at the Initiation, build up, and maintenance phases of immunotherapy.			Consider Omalizumab**▲	

Assess Control





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

Consult with asthma specialist if Step 4 or higher is required. Consider consultation at Step 3.

Control assessment is a key element of asthma care. This involves both impairment and risk. Use of objective measures, self-reported control, and health care utilization are complementary and should be employed on an ongoing basis, depending on the individual's clinical situation.

Abbreviations: ICS, inhaled corticosteroid; LABA, long-acting beta, agonist; LTRA, leukotriene receptor antagonist; SABA, inhaled short-acting beta,-agonist

- ▲ Updated based on the 2020 guidelines.
- Cromolyn, Nedocromil, LTRAs including montelukast, and Theophylline were not considered in this update and/or have limited availability for use in the United States, and/or have an increased risk of adverse consequences and need for monitoring that make their use less desirable. The FDA issued a Boxed Warning for montelukast in March 2020.
- ** Omalizumab is the only asthma biologic currently FDA-approved for this age range.



ASTHMA PATHWAY

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Stepwise Approach to Asthma by Age

AGES 12+ YEARS: STEPWISE APPROACH FOR MANAGEMENT OF ASTHMA

	Intermittent Asthma	Management of Persistent Asthma in Individuals Ages 12+ Years					
Treatment	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	
Preferred	PRN SABA	Daily low-dose ICS and PRN SABA or PRN concomitant ICS and SABA	Daily and PRN combination low-dose ICS- formoterol	Daily and PRN combination medium-dose ICS-formoterol▲	Daily medium-high dose ICS-LABA + LAMA and PRN SABA▲	Daily high-dose ICS-LABA + oral systemic corticosteroids + PRN SABA	
Alternative		Daily LTRA* and PRN SABA or Cromolyn,* or Nedocromil,* or Zileuton,* or Theophylline,* and PRN SABA	Daily medium- dose ICS and PRN SABA or Daily low-dose ICS-LABA, or daily low-dose ICS + LAMA,* or daily low-dose ICS + LTRA,* and PRN SABA or Daily low-dose ICS + Theophylline* or Zileuton,* and PRN SABA	Daily medium- dose ICS-LABA or daily medium-dose ICS + LAMA, and PRN SABAA or Daily medium- dose ICS + LTRA,* or daily medium- dose ICS + Theophylline,* or daily medium-dose ICS + Zileuton,* and PRN SABA	Daily medium-high dose ICS-LABA or daily high-dose ICS + LTRA,* and PRN SABA		
		Steps 2-4: Conditionally recommend the use of subcutaneous immunotherapy as an adjunct treatment to standard pharmacotherapy in Individuals ≥ 5 years of age whose asthma is controlled at the initiation, build up, and maintenance phases of immunotherapy.			Consider adding Asthma Biologics (e.g., anti-igE, anti-ILS, anti-ILSR, anti-IL4/IL13)**		

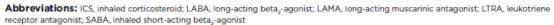
Assess Control



- First check adherence, inhaler technique, environmental factors, A 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)

Consult with asthma specialist if Step 4 or higher is required. Consider consultation at Step 3.

Control assessment is a key element of asthma care. This involves both impairment and risk. Use of objective measures, self-reported control, and health care utilization are complementary and should be employed on an ongoing basis, depending on the individual's clinical situation.



- ▲ Updated based on the 2020 guidelines.
- Cromolyn, Nedocromil, LTRAs including Zileuton and montelukast, and Theophylline were not considered for this update, and/or have limited availability for use in the United States, and/or have an increased risk of adverse consequences and need for monitoring that make their use less desirable. The FDA issued a Boxed Warning for montelukast in March 2020.
 The AHRQ systematic reviews that informed this report did not include studies that examined the role of asthma biologics
- ** The AHRQ systematic reviews that informed this report did not include studies that examined the role of asthma biologics (e.g. anti-IgE, anti-IL5, anti-IL5R, anti-IL4/IL13). Thus, this report does not contain specific recommendations for the use of biologics in asthma in Steps 5 and 6.
- Data on the use of LAMA therapy in individuals with severe persistent asthma (Step 6) were not included in the AHRQ systematic review and thus no recommendation is made.

