Key Points for Asthma Guideline Implementation

GOALS OF THERAPY

Reduce Impairment
- Prevent chronic and troublesome symptoms
- Minimize the need to use SABA for relief of asthma symptoms to ≤2 days/week
- Maintain (near) normal pulmonary function
- Maintain normal activity levels

Reduce Risk
- Prevent recurrent exacerbations
- Provide optimal pharmacotherapy with minimal or no adverse effects
- Minimize the need for ED visits or hospitalizations

Optimize Health and Function
- Provide initial and ongoing education to patient and family
- Educate patient and family to recognize and avoid triggers
- Partner with patient and family to identify treatment goals and achieve well-controlled asthma that allows patient to fully and safely participate in activities (eg, physical education, recess, sports, etc)
- Maintain patient's and family's satisfaction with asthma care

ASSESSMENT

- Classify asthma severity and level of asthma control
- Identify precipitating and exacerbating factors (ie, asthma triggers, including those in the home, school, and child care settings)
- Identify comorbid medical conditions that may adversely affect asthma management
- Periodically inspect medications, inhaler, and spacer to verify appropriate type
- Regularly assess the patient's and family's knowledge and skills for self-management, including medication administration and inhaler and spacer technique

VISIT FREQUENCY

If asthma is not well controlled: Visits at 2- to 6-week intervals are recommended
If asthma is well controlled: Visits at 3- to 6-month intervals are recommended to monitor how well asthma control is maintained and to adjust medications as necessary

PATIENT AND FAMILY EDUCATION

Incorporate the following into every clinical encounter:

Use a written asthma action plan to share when and how to:
- Take daily actions to control asthma
- Adjust medication in response to signs of worsening asthma

Knowledge
- Basic facts about asthma
- Role of medications

Skills
- Take medications correctly, use appropriate type of inhaler and spacer with proper technique
- Identify and avoid asthma triggers
- Self-monitor level of asthma control
- Recognize early signs and symptoms of worsening asthma
- Seek medical care as appropriate
- Communicate asthma information to school, child care center, and other caregivers

OBTAIN SUBSPECIALIST CONSULTATION IF:

(see Table 1 on the following page)
- 0-4 years and Step 3 care or higher is required (may consider consultation at Step 2)
- 5 years or older and Step 4 care or higher is required (may consider consultation at Step 3)
- Difficulty in achieving or maintaining asthma control

Information adapted from Texas Children's Health Plan's "Key Points for Asthma Guideline Implementation"

Acronyms
SABA = Short acting beta agonist
LABA = Long acting beta agonist
ICS = Inhaled corticosteroid
OCS = Oral corticosteroid
ED = emergency department

MEDICAL HOME CHAPTER CHAMPIONS PROGRAM ON ASTHMA

Table 1: Stepwise approach to managing asthma

Steps	Preferred treatment
Step 1	SABA prn
Step 2	Low dose ICS
Step 3	0-4 years: Medium dose ICS + subspecialist referral ≥5 years: Low dose ICS + LABA or medium dose ICS
Step 4	Medium dose ICS + LABA or montelukast + subspecialist referral
Step 5	High dose ICS + LABA or montelukast + subspecialist referral
Step 6	High dose ICS + LABA or montelukast + OCS + subspecialist referral

Notes

- The stepwise approach is meant to assist—not replace—clinical decision making.
- Before step up, review adherence, inhaler technique, environmental control and comorbid conditions.
- If clear benefit is not observed within 4-6 weeks and/or technique and adherence is not satisfactory, consider adjusting therapy and/or alternative diagnoses.

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Table 2: Classifying asthma severity and initiating therapy

Components of severity		Intermittent	Persistent		
			Mild	Moderate	Severe
Impairment	Symptoms	≤2 days/week	>2 days/week	Daily	Throughout the day
	Nighttime awakenings	0 (≤4 years) ≤2x/month (≥5 years)	1-2x/month (≤4 years) 3-4x/month (≥5 years)	3-4x/month (≤4 years) >1x/week (≥5 years)	>1x/week (≤4 years) Often 7x/week (≥5 years)
	SABA use for symptoms	≤2 days/week	>2 days/week	Daily	Several times per day
	Limitation of normal activity	None	Minor	Some	Extreme
	Lung function *	FEV1>80% FEV1/FVC>85% (5-11 years) FEV1/FVC normal (≥12 years)	FEV1>80% FEV1/FVC>85% (5-11 years) FEV1/FVC normal (≥12 years)	FEV1>60% FEV1/FVC>75% (5-11 years) FEV1/FVC reduced by 5% (≥12 years)	FEV1<60% FEV1/FVC<75% (5-11 years) FEV1/FVC reduced >5% (≥12 years)
Risk	Exacerbations requiring OCS	0-1/year	≥2/6 months (0-4 years) ** ≥2/year (≥5 years)		
Recommended step for initiating therapy ***		Step 1	Step 2	Step 3	Step 3 (≤4 years) Step 3 or 4 (5-11 years) Step 4 or 5 (≥12 years)

Table 3: Assessing asthma control and adjusting therapy

Components of control		Well controlled	Not well controlled	Very poorly controlled
Impairment	Symptoms	≤2 days/week	>2 days/week or (if ≤11 years) multiple times ≤2 days/week	Throughout the day
	Nighttime awakenings	≤1x/month (if ≤12 years) ≤2x/month (if >12 years)	≥2x/month (if ≤12 years) 1-3x/week (if >12 years)	≥2x/week (if ≤12 years) ≥4x/week (if >12 years)
	Interference with normal activity	None	Some limitation	Extremely limited
	SABA use for symptoms	≤2 days/week	>2 days/week	Several times per day
	Lung function *	FEV1>80% FEV1/FVC>80%	FEV1 60-80% FEV1/FVC 75-80%	FEV1<60% FEV1/FVC<75%
Risk	Exacerbations requiring OCS	0-1x/year	2-3x/year (if 0-4 years) ≥2x/year (if ≥5 years)	≥3x/year (if 0-4 years) ≥2x/year (if ≥5 years)
	Reduction in lung growth	Requires long-term follow-up		
	Treatment related to adverse effects	Medication side effects do not correlate with specific levels of control, but should be considered in overall assessment of risk.		
Recommended action for treatment ****		Consider step down if well controlled for ≥3 months.	Step up 1 step. Re-evaluate in 2-6 weeks.	Consider short course oral corticosteroid. Step up 1-2 steps. Re-evaluate in 2 weeks.

* Some individuals with smaller lungs in relation to their height (such as a thin individual with narrow A-P diameter to their chest) may normally have FEV1<80% and/or FEV1/FVC<85%. Lung function measures should be correlated with clinical assessment of asthma severity.

** For 0-4 years, ≥4 wheezing episodes per year each lasting >1 day and risk factors for persistent asthma meets risk criteria for persistent asthma.

*** For initial therapy of moderate or severe persistent asthma that is poorly controlled, consider a short course of OCS.

**** Recommended guidelines