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 (e.g., 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 (i.e., 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:
- 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
### Table 1: Stepwise approach to managing asthma

<table>
<thead>
<tr>
<th>Steps</th>
<th>Preferred treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>SABA prn</td>
</tr>
<tr>
<td>Step 2</td>
<td>Low dose ICS</td>
</tr>
</tbody>
</table>
| 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 |

### Table 2: Classifying asthma severity and initiating therapy

#### Components of severity

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Intermittent</th>
<th>Persistent</th>
</tr>
</thead>
</table>
| Nighttime awakenings | ≤2/night (≤4 years)  
≤2/night (≥5 years) | >2/night (≤4 years) | Daily |
| SABA use for symptoms | ≤2/month (≤4 years)  
≥3/month (≥5 years) | >2/month (≥5 years) | Throughout the day |

#### Impairment

<table>
<thead>
<tr>
<th>Limitation of normal activity</th>
<th>Intermittent</th>
<th>Persistent</th>
</tr>
</thead>
</table>
| None | ≤2/month (≤4 years)  
>2/month (≥5 years) | >2/month (>5 years) | Daily |
| Minor | ≤2/month (≤4 years)  
≥3/month (≥5 years) | >2/month (>5 years) | Several times per day |
| Some | ≤2/month (≤4 years)  
≥3/month (≥5 years) | >2/month (>5 years) | Throughout the day |
| Extreme | ≤2/month (≤4 years)  
≥3/month (≥5 years) | >2/month (>5 years) | Throughout the day |

#### Risk

<table>
<thead>
<tr>
<th>Exacerbations requiring OCS</th>
<th>Intermittent</th>
<th>Persistent</th>
</tr>
</thead>
</table>
| 0-1/year | ≥2/6 months (0-4 years)  
≥2/year (≥5 years) | Step 1  
Step 2  
Step 3 (≤5 years)  
Step 3 or 4 (5-11 years)  
Step 4 or 5 (≥12 years) |

#### Recommended step for initiating therapy

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
</table>
| 0-4 years | ≥2/3x/month (if <12 years)  
≥3x/month (if ≥12 years) | ≥2/3x/month (if <12 years)  
≥3x/month (if ≥12 years) |
| >2/week (if <12 years)  
>3x/week (if ≥12 years) | ≥2/week (if <12 years)  
>3x/week (if ≥12 years) |

### Table 3: Assessing asthma control and adjusting therapy

#### Components of control

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Well controlled</th>
<th>Not well controlled</th>
<th>Very poorly controlled</th>
</tr>
</thead>
</table>
| Symptoms | ≤2 days/week | >2 days/week (if ≤11 years)  
multiple times ≤2 days/week | Throughout the day |
| Nighttime awakenings | ≤1/night (≤4 years)  
≤2/night (≥5 years) | ≥1/night (if ≤11 years)  
1-3/night (if >11 years) | ≥2x/night (if ≤11 years)  
≥4x/night (if >11 years) |
| Interference with normal activity | None | Some limitation | Extremely limited |
| SABA use for symptoms | ≤2/day | >2/day | Several times per day |
| Lung function | FEV1 > 80%  
FEV1/FVC > 80% | FEV1 60-80%  
FEV1/FVC 75-80% | FEV1 < 60%  
FEV1/FVC < 75% |

#### Risk

<table>
<thead>
<tr>
<th>Exacerbations requiring OCS</th>
<th>Well controlled</th>
<th>Not well controlled</th>
<th>Very poorly controlled</th>
</tr>
</thead>
</table>
| 0-1/year | ≥2/3x/month (if <12 years)  
≥3x/month (if ≥12 years) | ≥2/3x/month (if <12 years)  
≥3x/month (if ≥12 years) | ≥2x/3x/month (if <12 years)  
≥3x/month (if ≥12 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

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
</table>
| 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. | |

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**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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