

**FIGURE 12. ASSESSING ASTHMA CONTROL AND ADJUSTING THERAPY IN CHILDREN**

Components of Control		Assessing Asthma Control and Adjusting Therapy in Children					
		Well Controlled		Not Well Controlled		Very Poorly Controlled	
		Ages 0–4	Ages 5–11	Ages 0–4	Ages 5–11	Ages 0–4	Ages 5–11
Impairment	Symptoms	≤2 days/week but not more than once on each day		>2 days/week or multiple times on ≤2 days/week		Throughout the day	
	Nighttime awakenings	≤1x/month		>1x/month	≥2x/month	>1x/week	≥2x/week
	Interference with normal activity	None		Some limitation		Extremely limited	
	Short-acting beta <sub>2</sub> -agonist use for symptom control (not prevention of EIB)	≤2 days/week		>2 days/week		Several times per day	
	Lung function • FEV <sub>1</sub> (predicted) or peak flow personal best • FEV <sub>1</sub> /FVC	N/A	>80%	N/A	60–80% 75–80%	N/A	<60% <75%
Risk	Exacerbations requiring oral systemic corticosteroids	0–1x/year		2–3x/year	≥2x/year	>3x/year	≥2x/year
	Reduction in lung growth	N/A	Requires long-term followup	N/A		N/A	
	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.					
<b>Recommended Action for Treatment</b>  (See “Stepwise Approach for Managing Asthma” for treatment steps.)  The stepwise approach is meant to assist, not replace, clinical decisionmaking required to meet individual patient needs.		<ul style="list-style-type: none"> <li>Maintain current step.</li> <li>Regular followup every 1–6 months.</li> <li>Consider step down if well controlled for at least 3 months.</li> </ul>		Step up 1 step	Step up at least 1 step	<ul style="list-style-type: none"> <li>Consider short course of oral systemic corticosteroids,</li> <li>Step up 1–2 steps</li> </ul>	
				<ul style="list-style-type: none"> <li><b>Before step up:</b> Review adherence to medication, inhaler technique, and environmental control. If alternative treatment was used, discontinue it and use preferred treatment for that step.</li> <li><b>Reevaluate the level of asthma control in 2–6 weeks to achieve control; every 1–6 months to maintain control.</b> Children 0–4 years old: If no clear benefit is observed in 4–6 weeks, consider alternative diagnoses or adjusting therapy. Children 5–11 years old: Adjust therapy accordingly.</li> <li><b>For side effects,</b> consider alternative treatment options.</li> </ul>			

Key: EIB, exercise-induced bronchospasm; FEV<sub>1</sub>, forced expiratory volume in 1 second; FVC, forced vital capacity; ICU, intensive care unit; N/A, not applicable

**Notes:**

- The level of control is based on the most severe impairment or risk category. Assess impairment domain by patient’s or caregiver’s recall of previous 2–4 weeks. Symptom assessment for longer periods should reflect a global assessment, such as 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.

**FIGURE 15. ASSESSING ASTHMA CONTROL AND ADJUSTING THERAPY IN YOUTHS  $\geq 12$  YEARS OF AGE AND ADULTS**

Components of Control		Classification of Asthma Control ( $\geq 12$ years of age)		
		Well Controlled	Not Well Controlled	Very Poorly Controlled
Impairment	Symptoms	$\leq 2$ days/week	$> 2$ days/week	Throughout the day
	Nighttime awakenings	$\leq 2$ x/month	1–3x/week	$\geq 4$ x/week
	Interference with normal activity	None	Some limitation	Extremely limited
	Short-acting beta <sub>2</sub> -agonist use for symptom control (not prevention of EIB)	$\leq 2$ days/week	$> 2$ days/week	Several times per day
	FEV <sub>1</sub> or peak flow	$> 80\%$ predicted/ personal best	60–80% predicted/ personal best	$< 60\%$ predicted/ personal best
	Validated questionnaires			
	ATAQ ACQ ACT	0 $\leq 0.75^*$ $\geq 20$	1–2 $\geq 1.5$ 16–19	3–4 N/A $\leq 15$
Risk	Exacerbations requiring oral systemic corticosteroids	0–1/year	$\geq 2$ /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 “Stepwise Approach for Managing Asthma” for treatment steps.)		<ul style="list-style-type: none"> <li>Maintain current step.</li> <li>Regular followup at every 1–6 months to maintain control.</li> <li>Consider step down if well controlled for at least 3 months.</li> </ul>	<ul style="list-style-type: none"> <li>Step up 1 step.</li> <li>Reevaluate in 2–6 weeks.</li> <li>For side effects, consider alternative treatment options.</li> </ul>	<ul style="list-style-type: none"> <li>Consider short course of oral systemic corticosteroids.</li> <li>Step up 1–2 steps.</li> <li>Reevaluate in 2 weeks.</li> <li>For side effects, consider alternative treatment options.</li> </ul>

\*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 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 purposes, patients who had  $\geq 2$  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.
  - ATAQ = Asthma Therapy Assessment Questionnaire<sup>®</sup>
  - ACQ = Asthma Control Questionnaire<sup>®</sup>
  - ACT = Asthma Control Test<sup>™</sup>
  - 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 medication, inhaler technique, environmental control, and comorbid conditions.
- If an alternative treatment option was used in a step, discontinue and use the preferred treatment for that step.