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

### Assessing Asthma Control and Adjusting Therapy in Children

#### Components of Control

<table>
<thead>
<tr>
<th>Impairment</th>
<th>Well Controlled</th>
<th>Not Well Controlled</th>
<th>Very Poorly Controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages 0-4</td>
<td>Ages 5-11</td>
<td>Ages 0-4</td>
<td>Ages 5-11</td>
</tr>
<tr>
<td>Symptoms</td>
<td>≤2 days/week</td>
<td>&gt;2 days/week</td>
<td>Throughout the day</td>
</tr>
<tr>
<td></td>
<td>but not more than once on each day</td>
<td>multiple times on ≤2 days/week</td>
<td></td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>≤1x/month</td>
<td>&gt;1x/month</td>
<td>≥2x/month</td>
</tr>
<tr>
<td>Interference with normal activity</td>
<td>None</td>
<td>Some limitation</td>
<td>Extremely limited</td>
</tr>
<tr>
<td>Short-acting beta-agonist use for symptom control (not prevention of EIB)</td>
<td>≤2 days/week</td>
<td>&gt;2 days/week</td>
<td>Several times per day</td>
</tr>
<tr>
<td>Lung function</td>
<td>FEV₁ (predicted) or peak flow personal best</td>
<td>&gt;80%</td>
<td>N/A</td>
</tr>
<tr>
<td>Risk</td>
<td>Exacerbations requiring oral systemic corticosteroids</td>
<td>0-1x/year</td>
<td>2-3x/year</td>
</tr>
<tr>
<td>Reduction in lung growth</td>
<td>N/A</td>
<td>Requires long-term followup</td>
<td>N/A</td>
</tr>
<tr>
<td>Treatment-related adverse effects</td>
<td>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.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Stepwise Approach for Managing Asthma

- For side effects, consider alternative treatment options.
- Before step up:
  - Review adherence to medication, inhaler technique, and environmental control.
  - If alternative treatment was used, discontinue it and use preferred treatment for that step.
  - Reevaluate the level of asthma control in 2–6 weeks to achieve control; every 1–6 months to maintain control.
  - Consider short course or oral systemic corticosteroids, Step up 1–2 steps.
  - For side effects, consider alternative treatment options.

#### Review Current Asthma Treatment Plan

**Is patient adherent?**
- Yes
- No

**Barriers/Obstacles?**
- Patient is Well-Controlled
- Patient is Not Well-Controlled
- Patient is Very Poorly Controlled

**Childhood Asthma Control Test (Ages 4-11) Score**

(Assessing Asthma Control Test.com)

- 0-4 years old
- 5-11 years old

**Review of Trigger Tracker (If applicable)**

**Review of Peak Flow Diary (If applicable)**

**Evaluate patient technique with all prescribed devices:**

- Device:___________ Good technique
- Device:___________ Good technique
- Device:___________ Good technique

**Patient’s Goal of Treatment Ask Your Patient and Family:**

- What worries you most about your child’s asthma?
- What do you want your child to be able to do that your child can’t do now?
- What problems has your child had using the prescribed medications?
- Are there things in your environment that make your child’s asthma worse?
- What other questions do you have for me today?

**Schedule Asthma Follow-up Visit:**

- ___Weeks ___Months _______Date

- Remind patient to bring all devices and medications to every visit.

---

**Key:** EIB, exercise-induced bronchospasm, FEV₁, 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.

**Reference:**
FIGURE 13. STEPWISE APPROACH FOR MANAGING ASTHMA LONG TERM IN CHILDREN, 0-4 YEARS OF AGE AND 5-11 YEARS OF AGE

- **Step up if needed (first check inhaler technique, adherence, environmental control, and comorbid conditions)**
- **Assess control**
- **Step down if possible (and asthma is well controlled at least 3 months)**

**Step 1**
**Intercurrent Asthma**
- Consult with asthma specialist if step 3 care or higher is required. Consider consultation at step 2.

**Step 2**
**Preferred**
- SABA PRN
- Low-dose ICS
- Medium-dose ICS
- Medium-dose ICS + LABA
- LABA or Montelukast

**Step 3**
**Preferred**
- SABA PRN
- Low-dose ICS
- Medium-dose ICS
- High-dose ICS
- LABA or Montelukast

**Step 4**
**Preferred**
- SABA PRN
- Low-dose ICS
- Medium-dose ICS
- High-dose ICS
- LABA
- Oral corticosteroids

**Step 5**
**Preferred**
- SABA PRN
- Low-dose ICS
- Medium-dose ICS
- High-dose ICS
- LABA
- Oral corticosteroids

**Step 6**
**Preferred**
- SABA PRN
- Low-dose ICS
- Medium-dose ICS
- Medium-dose ICS + LTRA
- LTRA
- Theophylline

**Notes**
- The stepwise approach is meant to assist, not replace, the clinical decision-making required to meet individual patient needs.
- If an alternative treatment is used and response is inadequate, discontinue it and use the preferred treatment before stepping up.
- If clear benefit is not observed within 4–6 weeks, and patient's family's medication technique and adherence are satisfactory, consider adjusting therapy or an alternative diagnosis.
- Studies on children 0–4 years of age are limited. Step 2 preferred therapy is based on Evidence A. All other recommendations are based on expert opinion and extrapolation from studies in older children.
-Clinicians who administer immunotherapy should be prepared and equipped to identify and treat anaphylaxis that may occur.

Key: Alphabetic order is used when more than one treatment option is listed within either preferred or alternative therapy.
- ICS, inhaled corticosteroid; LABA, inhaled long-acting beta2-agonist; LTRA, leukotriene receptor antagonist; oral corticosteroids; oral systemic corticosteroids; SABA, inhaled short-acting beta2-agonist

**Children 0-4 Years of Age**
- Each Step: Patient Education and Environmental Control
- Quick-Relief Medication
  - SABA as needed for symptoms. Intensity of treatment depends on severity of symptoms: up to 3 treatments at 20-minute intervals as needed. Short course of oral systemic corticosteroids may be needed.

**Children 5-11 Years of Age**
- Each Step: Patient Education, Environmental Control, and Management of Comorbidities
- Steps 2–4: Consider subcutaneous allergen immunotherapy for patients who have persistent, allergic asthma.