I. PURPOSE:
To define the expected standards of care for management of Asthma in Adults and Children. The overarching goal of asthma care is to achieve asthma control, enabling a patient to live without functional limitations, impairment in quality of life, or risk of adverse events.

II. POPULATION:
All currently enrolled DHMP and DHMC members with a diagnosis of asthma. This guideline will focus primarily on the management of asthma for those members who have already been diagnosed. For further information regarding the diagnosis of asthma, please refer to national guidelines or the Denver Health CHS Adult Asthma Care Guideline PolicyStat ID 2033380

III. GUIDELINE:
DHMC supports the National Heart, Lung, and Blood Institute (NHLBI) Education and Prevention Program. Program guidelines stress the assessment of asthma severity and control as a means of selecting and titrating treatment. NHLBI: Summary of Recommendations can be accessed at: https://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines/full-report. Specifically this guideline provides a framework to incorporate the Expert Panel Report 3 (EPR-3) into standard work for members with asthma.

A. Asthma Diagnosis:
1. Determine that symptoms of recurrent airway obstruction are present based on history and exam.
   a. History of cough, recurrent wheezing, difficulty breathing, or chest tightness
   b. Symptoms occur or worsen at night, with exercise, viral infection, exposure to allergens and irritants, changes in weather, hard laughing or crying, stress, or other factors.
2. Use spirometry to determine that airway obstruction is at least partially reversible in all patients 8 years of age.
3. Consider other causes of obstruction.

B. Goals of Therapy: Control of Asthma
1. Reduce Impairment: the frequency and intensity of symptoms and functional limitations experienced
   a. Prevent chronic and troublesome symptoms.
   b. Achieve infrequent use less than 2 days/wk of inhaled short-acting beta2- agonist (SABA).
   c. Maintain (near) normal pulmonary function and activity levels.
2. Reduce Risk:
   a. Prevent exacerbations
   b. Minimize the need for emergency department visits or hospitalizations
   c. Prevent loss of lung function
   d. For children: prevent reduced lung growth
   e. Minimize adverse effects of therapy

NOTE:
This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician’s judgment or to establish a protocol for all patients with a particular condition.
C. Care and Management:

Initial Visit:
- Diagnose Asthma
- Assess Asthma Severity
- Initiate Medication and Demonstrate Use
- Develop Written Asthma Action Plan
- Schedule Follow-up Appointment

Follow-up Visits:
- Assess and Monitor Asthma Control
- Review medication technique & adherence; assess side effects; review environmental control
- Review asthma action plan, revise as needed
- Maintain, step up, or step down medication
- Schedule next follow-up appointment

D. Four Components of Care and Management:

NOTE:
This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition.
1. Assessment and monitoring:
   a. Assess asthma severity to initiate therapy.
   b. Assess asthma control to monitor and adjust therapy.
   c. Schedule follow-up care.
   d. Consider specialty consult/referral with asthma symptoms that are difficult to control or requires frequent hospitalization and/or ED visits.
2. Education for a partnership in asthma care:
   a. Provide self-management education.
   b. Develop a written asthma action plan in partnership with the patient.
   c. Integrate education into all points of care where health professionals interact with patients.
3. Control environmental factors and comorbid conditions:
   a. Recommend measures to control exposures to allergens and pollutants or irritants that make asthma worse.
   b. Treat comorbid conditions.
4. Medications:
   a. Select medication and delivery devices to meet patient’s need and circumstances.

**STEPWISE APPROACH FOR MANAGING ASTHMA IN CHILDREN 0-4 YEARS OF AGE:**

<table>
<thead>
<tr>
<th>Intermittent Asthma</th>
<th>Persistent Asthma: daily medication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Consult with asthma specialist if step 3 care or higher is required</td>
</tr>
<tr>
<td></td>
<td>Consider consultation at step 2</td>
</tr>
</tbody>
</table>

**STEP 1**
- Preferred: SABA PRN

**STEP 2**
- Preferred: Medium-dose ICS
- Alternative: Cromolyn or Montelukast

**STEP 3**
- Preferred: High-dose ICS + either LABA or Montelukast

**STEP 4**
- Preferred: High-dose ICS + either LABA or Montelukast

**STEP 5**
- Preferred: High-dose ICS + either LABA or Montelukast
- Oral Systemic Corticosteroids

**STEP 6**
- Preferred: High-dose ICS + either LABA or Montelukast
- Oral Systemic Corticosteroids

Step up if needed
(first check adherence, inhaler technique, and environmental control)

**ASSESS CONTROL**
Step down if possible
(and asthma is well controlled at least 3 months)

Quick-relief medication for all patients
- SABA as needed for symptoms, intensity of treatment depends on severity of symptoms
- With viral respiratory infections: SABA every 4-6 hours up to 24 hours (longer with physician consult). Consider short course of oral systemic corticosteroids if exacerbation is severe or patient has history of previous exacerbations.
- Caution: Frequent use of SABA may indicate the need to step up treatment.

*intended either to replace a clinicians judgment or to establish a protocol for all patients with a particular condition.*
Classifying Asthma Severity and Initiating Treatment in Children 0-4 Years of Age

<table>
<thead>
<tr>
<th>Components of Severity</th>
<th>CLASSIFICATION OF ASTHMA SEVERITY: CHILDREN 0-4 YEARS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intermittent</td>
</tr>
<tr>
<td></td>
<td>Mild</td>
</tr>
<tr>
<td>Impairment</td>
<td></td>
</tr>
<tr>
<td>Symptoms</td>
<td>≤2 days/week</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>SABA use for symptom control</td>
<td>≤2 days/week</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Interference with normal activity</td>
<td>None</td>
</tr>
<tr>
<td>Exacerbations requiring oral systemic corticosteroids</td>
<td>0-1/year</td>
</tr>
<tr>
<td>Risk</td>
<td>Consider severity and interval since last exacerbation. Frequency and severity may fluctuate over time in any severity category. Exacerbations of any severity may occur in patients in any severity category. Relative annual risk of exacerbations may be related to FEV1.</td>
</tr>
</tbody>
</table>

**Recommended step for initiating therapy**
(see Stepwise Approach chart)

- **Step 1**: In 2-6 weeks, depending on severity, evaluate level of asthma control that is achieved. If no clear benefit is observed in 4-6 weeks, consider adjusting therapy or alternative diagnosis.
- **Step 2**: Consider short course of oral systemic corticosteroids.
- **Step 3**:  

**Notes:**
- Level of severity is determined by both impairment and risk. Assess impairment domain by caregiver’s recall of previous 2-4 weeks. Assign severity to the most severe category in which any feature occurs.
- At present, there are inadequate data to correspond frequencies of exacerbations with different levels of asthma severity. For treatment purposes, patients with ≥2 exacerbations requiring oral systemic corticosteroids in the past 6 months, or ≥4 wheezing episodes in the past year, and who have risk factors for persistent asthma may be considered the same as patients who have persistent asthma, even in the absence of impairment levels consistent with persistent asthma.

Assessing Asthma Control in Children 0-4 Years of Age

**NOTE:**
This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician’s judgment or to establish a protocol for all patients with a particular condition.
### Assessing Asthma CONTROL in Children 0-4 Years of Age

<table>
<thead>
<tr>
<th>Components of Control</th>
<th>CLASSIFICATION OF ASTHMA CONTROL: CHILDREN 0-4 YEARS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Well Controlled</td>
</tr>
<tr>
<td>Impairment</td>
<td></td>
</tr>
<tr>
<td>Symptoms</td>
<td>≤2 days/week</td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>≤1x/month</td>
</tr>
<tr>
<td>SABA use for symptom control</td>
<td>≤2 days/week</td>
</tr>
<tr>
<td>Interference with normal activity</td>
<td>None</td>
</tr>
<tr>
<td>Exacerbations requiring oral systemic corticosteroids</td>
<td>0-1/year</td>
</tr>
<tr>
<td>Treatment-related adverse events</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>
</tr>
</tbody>
</table>

#### Recommended Action for Treatment

The stepwise approach is meant to assist, not replace clinical decision making requires to meet individual patient needs.

- Maintain current step
- Regular follow ups every 1-6 months
- Consider step down if well controlled 3+ months
- Step up 1 step and reevaluate in 2-6wks
- If no clear benefit in 4-6 wks, consider alternative diagnoses or adjusting therapy
- For side effects, consider alternative treatment options
- Consider short course of oral systemic corticosteroids
- Step up 1-2 steps and reevaluate in 2 wks.
- If no clear benefit in 4-6 wks, consider alternative diagnoses or adjusting therapy
- Consider expert consultation with difficult-to-control asthma or for help with the diagnosis and/or adherence
- For side effects, consider alternative treatments options

Before step up in therapy:
- Review adherence, technique, environmental control and comorbid conditions
- If an alternative treatment option was used in a step, discontinue and use preferred treatment for that step.

- The level of control is based on the most severe impairment or risk category. Assess impairment domain by caregivers recall of previous 2-4 weeks. 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 indicate poorer disease control. For treatment purposes,

**NOTE:**
This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician’s judgment or to establish a protocol for all patients with a particular condition.
patients who had ≥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 persistent asthma.

### Intermittent Asthma

**STEP 1**
- **Preferred**: SABA PRN

**STEP 2**
- **Preferred**: Low-dose ICS
- **Alternative**: Cromolyn, LTRA, Nedocromil, or Theophylline

**STEP 3**
- **Preferred**: EITHER Low-dose ICS + LABA
- **Alternative**: Medium-dose ICS + either LTRA or Theophylline OR Medium-dose ICS

**STEP 4**
- **Preferred**: Medium-dose ICS + LABA
- **Alternative**: High-dose ICS + either LTRA or Theophylline

**STEP 5**
- **Preferred**: High-dose ICS + LABA + oral systemic corticosteroid
- **Alternative**: High-dose ICS + either LTRA or Theophylline + oral systemic corticosteroid

**STEP 6**
- **Preferred**: High-dose ICS + LABA + oral systemic corticosteroid
- **Alternative**: High-dose ICS + either LTRA or Theophylline + oral systemic corticosteroid

### Persistent Asthma: daily medication

Consult with asthma specialist if step 3 care or higher is required
Consider consultation at step 2

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**ASSESS CONTROL**

Step up if needed
(first check adherence, inhaler technique, and environmental control)

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

---

**Quick-relief medication for all patients**
- 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.
- Caution: Increasing use of SABA, or use >2 days per week for symptom relief (not for prevention of EIB) generally indicates inadequate control and need to step up treatment.

**NOTES:**
- The stepwise approach is meant to assist, not replace, the clinical decision making required to meet individual patient needs
- Abbreviations:
  - ICS: Inhaled corticosteroid
  - LABA: inhaled long-acting beta2-agonist
  - LTRA: leukotriene receptor antagonist
- Theophylline is less desirable due to the need to monitor serum concentration levels.
- The role of allergy in asthma is greater in children than in adults.

**NOTE:**
This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition.
### Classifying Asthma Severity and Initiating Therapy in Children 5-11 Years of Age

#### Assessing severity and initiating therapy in children who are not currently taking long-term control medication

<table>
<thead>
<tr>
<th>Components of Severity</th>
<th>Classification of Asthma Severity: Children 5-11 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intermittent</td>
</tr>
<tr>
<td></td>
<td>Mild</td>
</tr>
<tr>
<td><strong>Impairment</strong></td>
<td></td>
</tr>
<tr>
<td>Symptoms</td>
<td>≤2 days/week</td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>≤2x/month</td>
</tr>
<tr>
<td>SABA use for symptom control</td>
<td>≤2 days/week</td>
</tr>
<tr>
<td>Interference with normal activity</td>
<td>None</td>
</tr>
<tr>
<td>Lung Function</td>
<td>Normal FEV₁ between exacerbations &gt;80%</td>
</tr>
<tr>
<td>FEV₁ (% predicted)</td>
<td>&gt;85%</td>
</tr>
<tr>
<td>FEV₁/FVC</td>
<td></td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>Exacerbations requiring oral systemic corticosteroids</td>
</tr>
</tbody>
</table>

- Consider severity and interval since last exacerbation. Frequency and severity may fluctuate over time for patients in any severity category.
- Exacerbations of any severity may occur in patients in any severity category. Relative annual risk of exacerbations may be related to FEV₁.

#### Recommended step for initiating therapy

<table>
<thead>
<tr>
<th>STEP 1</th>
<th>STEP 2</th>
<th>STEP 3</th>
<th>STEP 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>medium-dose inhaled corticosteroid option</td>
<td></td>
<td>Medium-dose inhaled corticosteroid option, or</td>
<td></td>
</tr>
<tr>
<td>Consider short course of oral systemic corticosteroids</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In 2-6 weeks, depending on severity, evaluate level of asthma control that is achieved. If no clear benefit is observed in 4-6 weeks, consider adjusting therapy or alternative diagnosis.

**Notes:**
- Level of severity is determined by both impairment and risk. Assess impairment by caregiver’s recall of previous 2-4 weeks. Assess risk over the last year. Assign severity to the most severe category in which any feature occurs.
- At present, there are inadequate data to correspond frequencies of exacerbations with different levels of asthma severity. It is suggested that patients with ≥2 exacerbations, requiring oral systemic corticosteroids in the past 6 months, or ≥4 wheezing episodes in the past year, with risk factors for persistent asthma be considered the same as those with persistent asthma, even in the absence of impairment levels consistent with persistent asthma.

**NOTE:**
This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician’s judgment or to establish a protocol for all patients with a particular condition.
Assessing Asthma Control in Children 5-11 Years of Age

<table>
<thead>
<tr>
<th>Components of Control</th>
<th>CLASSIFICATION OF ASTHMA CONTROL: CHILDREN 0-4 YEARS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Well Controlled</td>
</tr>
<tr>
<td>Impairment</td>
<td>≤2 days/week but not more than once on each day</td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>≤1x/month</td>
</tr>
<tr>
<td>SABA use for symptom control</td>
<td>≤2 days/week</td>
</tr>
<tr>
<td>Interference with normal activity</td>
<td>None</td>
</tr>
<tr>
<td>Lung Function: FEV\textsubscript{1} or Peak/Flow FEV\textsubscript{1}/FVC</td>
<td>&gt;80% predicted/personal best</td>
</tr>
<tr>
<td></td>
<td>&gt;80%</td>
</tr>
<tr>
<td>Risk</td>
<td>0-1/year</td>
</tr>
</tbody>
</table>

Recommended Action for Treatment

The stepwise approach is meant to assist, not replace clinical decision making requires to meet individual patient needs.

- Maintain current step
- Regular follow ups every 1-6 months
- Consider step down if well controlled 3+ months
- Step up 1 step and reevaluate in 2-6wks
- For side effects, consider alternative treatment options
- Consider short course of oral systemic corticosteroids
- Step up 1-2 steps and reevaluate in 2wks
- Consider expert consultation with difficult-to-control asthma or for help with the diagnosis and/or adherence
- For side effects, consider alternative treatment options

Before step up in therapy:
- Review adherence, technique, environmental control and comorbid conditions

If an alternative treatment option was used in a step, discontinue and use preferred treatment for that step.

NOTE: This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinicians judgment or to establish a protocol for all patients with a particular condition.
- The level of control is based on the most severe impairment or risk category. Assess impairment domain by patient/caregiver’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 indicate poorer disease control. For treatment purposes, those with ≥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 persistent asthma.

**STEPWISE APPROACH FOR MANAGING ASTHMA FOR MEMBERS ≥12 YEARS OF AGE:**

<table>
<thead>
<tr>
<th>Intermittent Asthma</th>
<th>Persistent Asthma: Daily Medication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Consult with asthma specialist if step 3 care or higher is required</td>
</tr>
<tr>
<td></td>
<td>Consider consultation at step 2</td>
</tr>
</tbody>
</table>

**STEP 1**
- **Preferred:** SABA PRN

**STEP 2**
- **Preferred:** Low-dose ICS
- **Alternative:** Cromolyn, LTRA, Nedocromil, or Theophylline

**STEP 3**
- **Preferred:** High-dose ICS + LABA
- **Alternative:** Medium-dose ICS + either LTRA, Theophylline, or Zileuton

**STEP 4**
- **Preferred:** High-dose ICS + LABA
- **Consider:** Omalizumab for patients who have allergies

**STEP 5**
- **Preferred:** High-dose ICS + LABA
- **Alternative:** Medium-dose ICS + either LTRA, Theophylline, or Zileuton
- **Consider:** Omalizumab for patients who have allergies

**STEP 6**
- **Preferred:** High-dose ICS + LABA + oral systemic corticosteroid
- **Consider:** Omalizumab for patients who have allergies

Step up if needed
(First check adherence, inhaler technique, and environmental control)

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

**ASSESS CONTROL**

Quick-relief medication for all patients
- 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.
- Caution: Use of SABA >2 days per week for symptom relief (not for prevention of EIB) generally indicates inadequate control and need to step up treatment.

**NOTES:**
- The stepwise approach is meant to assist, not replace, the clinical decision making required to meet individual patient needs

**NOTE:**
This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinicians judgment or to establish a protocol for all patients with a particular condition.
### Assessing severity and initiating therapy in children who are not currently taking long-term control medication

<table>
<thead>
<tr>
<th>Components of Severity</th>
<th>CLASSIFICATION OF ASTHMA SEVERITY: ≥12 YEARS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intermittent</td>
</tr>
<tr>
<td></td>
<td>Mild</td>
</tr>
<tr>
<td>Symptoms</td>
<td>≤2 days/week</td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>≤2x/month</td>
</tr>
<tr>
<td>SABA use for symptom control</td>
<td>≤2 days/week</td>
</tr>
<tr>
<td>Interference with normal activity</td>
<td>None</td>
</tr>
<tr>
<td>Lung Function</td>
<td>Normal FEV1 between exacerbations</td>
</tr>
<tr>
<td>FEV1 (% predicted)</td>
<td>Normal*</td>
</tr>
<tr>
<td>FEV1/FVC</td>
<td>Normal*</td>
</tr>
</tbody>
</table>

#### Risk

- Exacerbations requiring oral systemic corticosteroids

**Recommended step for initiating therapy**

<table>
<thead>
<tr>
<th>STEP 1</th>
<th>STEP 2</th>
<th>STEP 3</th>
<th>STEP 4 OR 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consider short course of oral systemic corticosteroids</td>
<td>Consider short course of oral systemic corticosteroids</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- Level of severity is determined by both impairment and risk. Assess impairment by caregiver’s recall of previous 2-4 weeks. Assess risk over the last year. Assign severity to the most severe category in which any feature occurs.

#### Abbreviations:
- ICS: Inhaled corticosteroid
- LABA: inhaled long-acting beta2-agonist
- LTRA: leukotriene receptor antagonist
- SABA: inhaled short-acting beta2-agonist
- Zileuton is a less desirable alternative due to limited studies as adjunctive therapy and the need to monitor liver function.
- Theophylline requires monitoring concentration levels.
- The role of allergy in asthma is greater in children than in adults.

**NOTE:**
This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician’s judgment or to establish a protocol for all patients with a particular condition.
-At present, there are inadequate data to correspond frequencies of exacerbations with different levels of asthma severity. It is suggested that patients with ≥2 exacerbations, requiring oral systemic corticosteroids in the past 6 months, or ≥4 wheezing episodes in the past year, with risk factors for persistent asthma be considered the same as those with persistent asthma, even in the absence of impairment levels consistent with persistent asthma.

**Classifying Asthma Severity and Initiating Treatment in Members ≥12 Year of Age**

*normal FEV₁/FVC by age: 8-19 years, 85%; 20-39 years, 80%; 40-59 years, 75%; 60-80 years, 70%

**Assessing Asthma Control in Members ≥12 Years of Age**

**NOTE:**

This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinicians judgment or to establish a protocol for all patients with a particular condition.
### Assessing Asthma CONTROL in youth and adults ≥12 Years of Age

<table>
<thead>
<tr>
<th>Components of Control</th>
<th>CLASSIFICATION OF ASTHMA CONTROL: ≥12 YEARS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Well Controlled</td>
</tr>
<tr>
<td><strong>Impairment</strong></td>
<td></td>
</tr>
<tr>
<td>Symptoms</td>
<td>≤2 days/week</td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>≤2x/month</td>
</tr>
<tr>
<td>SABA use for symptom control</td>
<td>≤2 days/month</td>
</tr>
<tr>
<td>Interference with normal activity</td>
<td>None</td>
</tr>
<tr>
<td>Lung Function: FEV₁ or Peak/Flow</td>
<td>&gt;80% predicted/personal best</td>
</tr>
<tr>
<td>Validated Questionnaires</td>
<td>ATAQ: 0</td>
</tr>
<tr>
<td></td>
<td>ACQ: ≤0.75</td>
</tr>
<tr>
<td></td>
<td>ACT: ≥20</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td></td>
</tr>
<tr>
<td>Exacerbations requiring oral systemic corticosteroids</td>
<td>0-1/year</td>
</tr>
<tr>
<td>Progressive loss of lung function</td>
<td></td>
</tr>
<tr>
<td>Treatment-related adverse events</td>
<td></td>
</tr>
</tbody>
</table>

**Recommended Action for treatment**

- The stepwise approach is meant to assist, not replace clinical decision making requires to meet individual patient needs.

- Maintain current step
- Regular follow ups every 1-6 months
- Consider step down if well controlled 3+ months

- Step up 1 step and reevaluate in 2-6wks
- For side effects, consider alternative treatment options

- Consider short course of oral systemic corticosteroids
- Step up 1-2 steps and reevaluate in 2wks
- Consider expert consultation with difficult-to-control asthma or for help with the diagnosis and/or adherence
- For side effects, consider alternative treatment options

Before step up in therapy:

- Review adherence, technique, environmental control and comorbid conditions
- If an alternative treatment option was used in a step, discontinue and use preferred treatment for that step.

---

**NOTE:**

This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition.
- At present, there are inadequate data to correspond frequencies of exacerbations with different levels of asthma control. In general, more frequent and intense exacerbations indicate poorer disease control. For treatment purposes, those with ≥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.

REFERENCES: