Outpatient Asthma Management Pathway

0-4 Years Old

Make the Diagnosis
- Consider the diagnosis of asthma if symptoms include: recurrent coughing, wheezing or shortness of breath relieved by a bronchodilator
- Consider co-morbidities or alternate diagnosis, especially if poor control: GERD, aspiration, airway anomaly, foreign body, cystic fibrosis, anxiety, vocal cord dysfunction, tobacco/secondhand smoke exposure, or COPD. GERD is a common co-morbidity
- If diagnosis is in doubt, consult with asthma specialist

Key points of Assessment and Treatment
- Asthma is a variable disease and needs to be assessed at every visit
- Use the Assess Asthma Control box to guide your assessment and make treatment decisions
- The goal of asthma therapy is to keep the patient in control as much as possible with the least amount of medication
- If at the first visit the patient is not well-controlled (see below), begin controller therapy. A patient should be diagnosed with persistent asthma if he/she needs a daily controller medication to stay in control.

Assess Asthma Control

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Well-Controlled</th>
<th>Not Well-Controlled</th>
<th>Very Poorly Controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma Control Test (ACT)</td>
<td>Score of ≥20</td>
<td>Score of 16-19</td>
<td>Score of ≤15</td>
</tr>
</tbody>
</table>

OR Assess all of the Below:
1. Daytime Symptoms ≤2 days/week >2 days/week Throughout the day
2. Nighttime Awakenings ≤1 time/month >1 time/month >1 time/week
3. Limitation of Activities None Some limitation Extremely limited
4. Short-acting β2-agonist use for symptom control (not prevention of EIB) ≤2 days/week >2 days/week Several times per day
5. Courses of prednisone in last year 0-1 per year 2 or 3 times per year >3 times per year
FEV1 % predicted NA NA NA
FEV1/FVC ratio NA NA NA

If Well Controlled:
Follow the Stepwise Approach Guideline (see page 2). Consider step down if well-controlled for 3 consecutive months. Re-assess every 1-6 months.

If Not Well Controlled:
Follow the Stepwise Approach Guideline. If initial visit, start at Step 2. Step up until well-controlled. Re-assess in 2-6 weeks. For side effects, consider alternative treatment.

If Very Poorly Controlled:
Consider short course of oral prednisone for 3 to 7 days (1-2 mg/kg, daily max 60 mg). If initial visit, start at Step 2. Step up 1-2 steps using Stepwise Approach Guideline. Re-assess in 2 weeks.

Consider Referral to a Specialist:
If not well-controlled within 3-6 months using Stepwise Approach OR if 2 or more ED visits/hospitalizations for asthma in a year

Other Things to Consider at Every Visit:
1. Environmental Controls, Pets, Smoke, Perfume, Allergies, Respiratory Infections
2. Provide Asthma Care Plan, Educate on use of MDI and Spacers
3. Treat Comorbidities
4. Check Adherence to Medication Routine

Persistent Asthma: Daily Medication

### Outpatient Asthma Management Pathway
0-4 Years Old

**Asthma**

**Step up** as indicated, although address possible poor adherence to medication. Re-assess in 2-6 weeks

**Step down** if well controlled and re-assess in 3 months

If patient remains well-controlled, then assess control every 1-6 months

#### Step 1

- **Short-acting beta-agonist**
  - e.g., albuterol PRN
  - If used more than 2 days/week (other than for exercise), consider inadequate control and the need to step up treatment.

#### Step 2

**Preferred:**

- **Low-dose ICS:**
  - Fluticasone MDI
    - Flovent HFA
    - (44 mcg) 2 puffs 2x daily
  - Or
  - Budesonide Inhaled Suspension
    - Pulmicort Respule
    - (0.25 mg) 1 or 2x daily or
    - (0.50 mg) 1 or 2x daily
  - Or
  - Asmanex Mometasone
    - (100 mcg) 1 puff 2x daily
  - Or
  - Qvar Beclomethasone
    - (40 mcg) 2 puffs 2x daily

**Alternative:**

- Montelukast Singulair
  - Children ≥1 years
  - 4 mg orally nightly
  - Or
  - Cromolyn generic neb solution
    - (20 mg) 1 ampule 4x daily

Safety and efficacy not established <2 years

#### Step 3

**Preferred:**

- **Medium dose ICS:**
  - Fluticasone MDI
    - Flovent HFA
    - (110 mcg) 2 puffs 2x daily
  - Or
  - Budesonide Inhaled Suspension
    - Pulmicort Respules
    - (0.5 mg) 2x daily
  - Or
  - Asmanex Mometasone
    - (100 mcg) 2 puffs 2x daily
  - Or
  - Qvar Beclomethasone
    - (80 mcg) 2 puffs 2x daily

#### Step 4

**Preferred:**

- Medium-dose inhaled steroid plus LABA:
  - Should use combination product
  - (Safety and efficacy not established in children ≤4 years old)
  - Symbicort
    - (80/4.5 mcg) 2 puffs 2x daily
  - Or
  - Asmanex Mometasone
    - (100 mcg) 2 puffs 2x daily
  - Or
  - Qvar Beclomethasone
    - (80 mcg) 2 puffs 2x daily

#### Step 5

**Preferred:**

- High dose ICS plus LABA:
  - (Safety and efficacy not established in children ≤4 years old)
  - Advair
    - (230/21 mcg) 2 puffs 2x daily
  - Or
  - Symbicort
    - (160/4.5 mcg) 2 puffs 2x daily
  - Or
  - Dulera
    - (200/5 mcg) 2 puffs 2x daily
  - Or
  - Medium dose inhaled steroid plus Montelukast
    - 4 mg orally nightly

#### Step 6

**Preferred:**

- High-dose ICS plus LABA -
  - (Safety and efficacy not established in children ≤4 years old)
  - OR
  - High dose ICS plus Montelukast
    - Plus
    - Prednisone Oral
    - 0.5 mg/kg every other day

**Consider Pediatric Pulmonary Consultation at Step 3**

#### Schedule Follow-up Care:

- Step 1-2: 2x per year
- Step 3-4: every 3 months
- Step 5-6: every 1-2 months

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