Outpatient Asthma Management 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.

Exercise-Induced Bronchospasm (EIB)
- If symptoms resolve without treatment after 5 minutes of rest, it is more likely poor conditioning.
- If EIB is unresponsive to albuterol and the patient has allergies, consider starting an inhaled steroid (see Stepwise Treatment Table)
- If still unresponsive after starting albuterol, refer to specialist
-Pretreat

Assess Asthma Control			
Criterion	**Well-Controlled** (Yes 3/5)	**Not Well-Controlled** (Yes 3/5)	**Very Poorly Controlled** (Yes 5/5)
Asthma Control Test (ACT)	Score of ≥ 20	Score of 16 - 19	Score of ≤ 15
OR Assess all 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 beta2-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

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 60mg). If initial visit, start at Step 2. Step up 1-2 steps using Stepwise Approach Guideline. Re-assess in 2 weeks.

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

Recommended: Consider consultation with pulmonologist at step 2. Referral to an asthma specialist if step 3 or higher or If not well-controlled within 3-6 months using Stepwise Approach OR if 2 or more ED visits/hospitalizations for asthma in a year

Reviewers:

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Intermittent Asthma	Persistent Asthma: Daily Medications				
	Step up as indicated, although address possible poor adherence to medication. Re-assess in 2 – 6 weeks **Step down if well controlled, re-assess in 3 months. If remain well-controlled, re-assess every 1-6 months**				
Step 1 **PRN Short-acting beta-agonist e.g., Albuterol** or For recurrent wheeze* at onset of a respiratory illness, add short course daily ICS (7-10 days) and PRN SABA. • Recurrent wheeze defined as at least three episodes of wheezing triggered by apparent infection in their lifetime, or two episodes in the past year, no symptoms between infections.	**Step 2** **Preferred:** Daily Low-dose ICS and PRN SABA: **Flovent HFA** Fluticasone MDI (44 mcg) 2 puffs BID **Pulmicort Respule** Budesonide Inhaled Suspension (0.25 mg) 1-2x daily or (0.50 mg) 1-2x daily **Asmanex HFA** Mometasone (50 mcg) 2 puffs BID **Alternative:** **Cromolyn** Generic neb solution (20 mg) 1 ampule QID Safety and efficacy not established<2 years **And PRN SABA**	**Step 3** **Preferred:** Daily Medium Dose ICS and PRN SABA: **Flovent HFA** Fluticasone (110mcg) 2 puffs BID **Pulmicort Respule** Budesonide Inhaled Suspension (0.5 mg) BID **Asmanex HFA** Mometasone (100mcg) 2 puffs BID **Alternative:** Daily Low dose ICS plus LABA and PRN SABA: **Advair HFA** Fluticasone/Salmeterol (45/21 mcg) 2 puffs BID **Dulera** Mometasone/Formoterol (50 mcg) 2 puffs BID	**Step 4** **Preferred:** Daily Medium-dose ICS plus LABA and PRN SABA: Should use combination product (Safety and efficacy not established in children < 4 years old) **Symbicort** Budesonide/Formoterol (80/4.5 mcg) 2 puffs BID **Dulera** Mometasone/Formoterol (100 mcg) 2 puffs BID **Advair HFA** Fluticasone/Salmeterol 115/21mcg 2 puffs BID	**Step 5** **Preferred:** Daily High dose ICS plus LABA and PRN SABA: (safety and efficacy not established in children <4years old) **Symbicort** Budesonide/Formoterol (160/4.5 mcg) 2 puffs BID **Dulera** Mometasone/Formoterol (200/5 mcg) 2 puffs BID **Advair HFA** Fluticasone/Salmeterol (230/21) mcg 2 puffs BID Or Daily Medium doe ICS plus LABA and PRN SABA And **Cromolyn** Generic neb solution (20 mg) 1 ampule QID	**Step 6** **Preferred:** Daily High dose ICS plus LABA and PRN SABA: (safety and efficacy not established in children <4 years) **Symbicort** Budesonide/Formoterol (160/4.5 mcg) 2 puffs BID **Dulera** Mometasone/Formoterol (200/5 mcg) 2 puffs BID **Advair** Fluticasone/Salmeterol (230/21 mcg) 2 puffs BID **Plus:** **Cromolyn** Generic neb solution (20 mg) 1 ampule QID And/or **Prednisone Oral** 0.5 mg/kg every other day
Consider Pediatric Pulmonary consultation at Step 2					
Schedule Follow-up Care: Frequency of follow-up visits based on severity: Steps 1 -2: 2 times per year, **Steps 3-4**: Every 3 months, **Steps 5-6**: Every 1-2 months					

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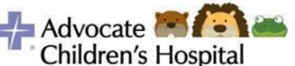
https://www.advocatechildrenshospital.com/healthcare-professionals/peds-pathways



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References:
2021 GINA Main Report - Global Initiative for Asthma - GINA (ginasthma.org)
Guidelines for the Diagnosis and Management of Asthma 2007 (EPR-3) | NHLBI, NIH

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