

**PEDIATRIC EMERGENCY MEDICINE
EVIDENCE-BASED PATHWAY
MANAGEMENT OF ACUTE ASTHMA
EXACERBATIONS**
© BCH - Oakland Emergency Department



Inclusion Criteria
Age: ≥ 24 months of age

H/o asthma, reactive airway disease or wheezing, family history of asthma

Exclusion Criteria
Contraindication/allergy to medications used within guideline.

Disease of other origin: pneumonia, bronchiolitis, croup

Complicated medical history including congenital/acquired heart disease, chronic lung disease/bronchopulmonary dysplasia/cystic fibrosis, immune-mediated disorders, tracheostomy

Criteria for radiographic imaging or labs:
No absolute indication.

Consider radiographic imaging in children with:

- Fever $\geq 39^{\circ}\text{C}$, hypoxia, focal abnormality on pulmonary examination,
- Absence of family history of asthma, or those who respond less favorably than expected to bronchodilator therapy.
- May also consider in patients with concern for presence of foreign body, pneumomediastinum or pneumothorax.

Consider blood gas testing if there is a clinical worsening of mental status, neurologic and/or respiratory exam.

| Medication | Dosing (per orderset) |
|----------------------------------|---|
| Albuterol (nebulized) | <20 kg: 2.5 mg ≥ 20 kg: 5 mg |
| Albuterol (metered-dose inhaler) | <20 kg: 4 puffs with aerochamber ≥ 20 kg: 8 puffs with aerochamber |
| Albuterol/Ipratropium (Duoneb) | <20 kg: 2.5mg Albuterol/0.5mg Ipratropium ≥ 20 kg: 2.5mg Albuterol/0.5mg Ipratropium + 2.5mg Albuterol |
| Continuous albuterol | Rarely utilized. If indicated, 20mg/hr regardless of weight |
| Adjunctive Medications | |
| Magnesium Sulfate | 50 mg/kg IV x 1 (max 2 g) Administer with 20ml/kg normal saline bolus |
| Epinephrine | Epinephrine 1:1,000 (1 mg/mL): 0.01 mg/kg IM (max 0.3-0.5 mg) |
| Terbutaline | Loading dose: 10 mcg/kg IV/IM x 1 Infusion of 0.08 mcg/kg/min IV; titrate to effect |

Respiratory distress **AND** concern for Asthma Exacerbation
(use ED PED Asthma/Albuterol Orderset)

Impending respiratory failure?
Yes \rightarrow Off Algorithm

| Nurse | RT |
|---|---|
| <ul style="list-style-type: none">Initial assessment: MPASS, Vital Signs, place on monitorsO₂ to maintain SpO₂>90%Voalte: MPASS score, Rm# | <ul style="list-style-type: none">AssessInitiate nebsAssist with provision of steroids* |
| * For MPASS ≥ 6 : steroids should be administered within 60 minutes of arrival RN and RT to assist each other in providing nebs and steroids | |

