

## **Pediatric Inpatient Asthma Exacerbation Protocol**

The following information is intended as a guideline for the acute management of children with asthma. Management of your patient may require a more individualized approach



Inclusion Criteria: 2 years old and older with a diagnosis of asthma with wheezing, difficulty breathing, cough, or hypoxia

Exclusion Criteria: < 2 yo, diagnosed with viral bronchiolitis or croup, history of Cystic Fibrosis, Chronic Lung Disease, Cardiac Disease, or known Airway Anomalies

- Review orders and ensure systemic steroids have been given prior to admission to floor. Contact Licensed Independent Practitioner (LIP) if not given.
- Review Orders and ensure medications (albuterol, oxygen to keep saturations >90%), systemic steroids, and home medications) have been ordered.
- Identify triggers for asthma exacerbation (allergies, reflux, infections, medication adherence).
- Advise parents of how to contact nurse if patient's condition worsens.
- Registered nurse (RN) to obtain vital signs and Admission Pediatric Asthma Score (Admission PAS) within 30 minutes of patient's arrival to the floor.
- Review most recent PRE-albuterol Pediatric Asthma Score (PRE-Albuterol PAS).

Use the greater of the most recent PRE-Albuterol PAS and Admission PAS to determine initial standing albuterol orders

#### Mild = PAS 0-2

- ( < 20 kg) Albuterol MDI 4 puffs Q4 x 12 hrs
- $(\ge 20 \text{ kg})$  Albuterol MDI 4-8 puffs Q4 x 12 hrs Alternative:
  - ( < 20 kg) Albuterol neb 2.5 mg Q4 x 12 hrs
- ( > 20 kg) Albuterol neb 5 mg Q4 x 12 hrs • Repeat PAS 15 min after treatment
- (preferably by same provider)
- · Notify LIP if PAS increases above this level or does not decrease following albuterol
- LIP to reassess after 12 hours of Q4 treatment

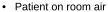
#### Moderate = PAS 3-5

- ( < 20 kg ) Albuterol MDI 4 puffs Q2 x 12 hrs</li>
- ( > 20 kg) Albuterol MDI 4-8 puffs Q2 x 12 hrs Alternative:
  - ( < 20 kg) Albuterol neb 2.5 mg Q2 x 12 hrs
  - $(\ge 20 \text{ kg})$  Albuterol neb 5 mg Q2 x 12 hrs
- Repeat PAS 15 min after albuterol (preferably by the same provider)
- Notify LIP if PAS increases above this level or does not decrease following albuterol
- LIP to reassess after 12 hours of O2 treatment

### Severe = PAS 6-10

- Albuterol MDI 8 puffs or start continous Albuterol
  - Albuterol 20 mg/hr continuously for 1 hour
- · Notify LIP immediately
- Consider Rapid Response
- Repeat PAS within 15 min after albuterol (Preferably by the same provider)
- Rapid Response if PAS is equal to or greater than 6 after albuterol or after 1 hour of continuous albuterol

#### Discharge Criteria



- · Albuterol spaced to every 4 hours
- · Asthma education completed
- Ensure PCP f/u within 7 days of hospital discharge
- Ensure hospital f/u scheduled with Pulmonary/Allergy within 90 days of discharge
- Rx for albuterol Q4 hours for 48 hours
- Rx for oral corticosteroids for 3-10 days
- Ensure patient has inhaled corticosteroids
- Provide Asthma Action Plan
- · Consider flu shot when appropriate







# PEDIATRIC ASTHMA SCORE (PAS)



- 1. PAS should be done prior to treatment and repeated 15 minutes afterward (preferably by the same provider)
- 2. Add elements into a single score
- 3. Document score in Epic flowsheet and/or other areas of clinical documentation

ELEMENT		POINTS		
		0	1	2
1. Respiratory Rate Obtain over 30 sec and multiply by 2	2 - 3 yrs	<u>&lt;</u> 34	35-39	<u>≥</u> 40
	4 - 5 yrs	<u>≤</u> 30	31-35	<u>≥</u> 36
	6 - 11 yrs	<u>&lt;</u> 26	27-30	≥ 31
	<u>&gt;</u> 12 yrs	<u>≤</u> 23	24-27	<u>≥</u> 28
2. <u>Ausculatation</u> Auscultate anterior and posterior lung fields Assess air entry and presence of wheezing		No Wheezes	Expiratory Wheezes	Inspiratory & expiratory wheezes <u>OR</u> diminished breath sounds
3. Work of Breathing Assess for nasal flaring or retractions (suprasternal, intercostal, subcostal)		≤1 sign	2 signs	≥ 3 signs
4. <u>Dyspnea</u> * As developmentally appropriate. * If sleeping AND not showing physical signs of respiratory distress, sscore the patient zero for this category		Speaks full sentences, playful, <u>AND</u> takes PO well	Speaks partial sentences, short cry <u>OR</u> poor PO	Speaks short phrases, grunting, <u>OR</u> unable to take PO
5. O2 Requirement **  ** Do not take patients off supplemental oxygen to obtain score		<u>&gt;</u> 92% on RA		Supplemental oxygen required to maintain saturations above 92%