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 y/o or greater with history of asthma or recurrent wheezing presenting with wheezing, cough, dyspnea, hypoxia, and/or tachypnea. 12-23 months to be included on a case-by-case basis.

Exclusion Criteria: <2 y/o, diagnosed with viral bronchiolitis or croup, history of cystic fibrosis, cardiac disease, airway abnormalities, and chronic lung disease other than asthma. These patients are excluded unless cleared by a Provider for inclusion.

- Review orders and ensure systemic steroids have been given prior to admission to floor
- Review orders and ensure medication (albuterol, oxygen to keep saturations >92%, systemic steroids, and home medications) have been ordered
- Order spacer for all patients receiving MDI therapy
- Identify triggers for asthma exacerbation (allergies, reflux, infections, medication adherence, weather change, cigarette smoke)
- Consider additional inhaled corticosteroid for all admitted patients not already prescribed the same and to be administered by RT
- Begin asthma education at admission
- Advise parents how to contact nurse if patient's condition worsens
- RN to obtain vital signs
- RT to obtain Admission Pediatric Asthma Score (Admission PAS) within 30 minutes of patient's arrival to the floor
- Review the 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. 
Respiratory Therapy (RT) administers albuterol, scoring patient before and after each treatment.

Mild = PAS 0-2
- Albuterol MDI 4 puffs Q4h
- RT repeat PAS 15min after Albuterol
- Notify Provider if PAS increases above this level or does not decrease
- Consider Albuterol 4 puffs Q6h
- Provider to reassess Q4-6h
- Discharge home at Q4-6h Albuterol

Mild-Moderate = PAS 3
- Albuterol MDI 4 puffs Q3h
- RT repeat PAS 15min after Albuterol
- Notify Provider if PAS increases above this level or does not decrease
- If PAS 0-2, go to Mild on pathway
- Provider to reassess Q6h

Moderate = PAS 4-5
- Albuterol MDI 8 puffs Q2h
- RT repeat PAS 15min after Albuterol
- Notify Provider if PAS increases above this level or does not decrease
- If PAS <4 go to the appropriate pathway level
- Provider to reassess Q6h

Severe = PAS 6-8
- Albuterol 5mg nebulized
- Contact Provider for PAS >5
- Consult PICU
- Repeat PAS within 15min after Albuterol
- Notify Provider and PICU if PAS remain ≥6 and initiate 2nd Albuterol 5mg nebulized. Transfer to PICU
- If PAS <6, go to appropriate pathway level

Discharge Criteria:
- Patient on room air
- Albuterol spaced to every 4-6hrs
- Asthma education completed
- Contact PCP for follow-up
- Rx for Albuterol, oral corticosteroids, and other home medications as needed
- Consider new or increased dose of inhaled corticosteroid Rx
- Review and provide Asthma Action Plan (AAP)
- Consider Flu Shot when appropriate

Based on the UNC Health Care Pediatric Asthma Inpatient Asthma Exacerbation Protocol
Modified for the LifeBridge Health Pediatric Asthma Care Path.
## Pediatric Asthma Score (PAS)

<table>
<thead>
<tr>
<th>Element</th>
<th>Points</th>
<th>0</th>
<th>1</th>
<th>2</th>
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</thead>
<tbody>
<tr>
<td>1. Respiratory Rate</td>
<td>2-3 yrs</td>
<td>≤ 34</td>
<td>35-39</td>
<td>≥ 40</td>
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<tr>
<td></td>
<td>4-5 yrs</td>
<td>≤ 30</td>
<td>31-35</td>
<td>≥ 36</td>
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<td></td>
<td>6-11 yrs</td>
<td>≤ 26</td>
<td>27-30</td>
<td>≥ 31</td>
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<td></td>
<td>≥ 12 yrs</td>
<td>≤ 23</td>
<td>24-27</td>
<td>≥ 28</td>
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<tr>
<td>2. Auscultation</td>
<td>No Wheezes</td>
<td>Expiratory Wheezes</td>
<td>Inspiratory &amp; expiratory wheezes OR diminished breath sounds</td>
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<tr>
<td>Auscultation anterior and posterior lung fields. Assess air entry and presence of wheezing.</td>
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<td>3. Work of Breathing</td>
<td>≤ 1 sign</td>
<td>2 signs</td>
<td>≥ 3 signs</td>
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<td>Assess for nasal flaring or retractions. (suprasternal, intercostal, subcostal)</td>
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<td>4. O2 Requirement</td>
<td>≥ 92% on RA</td>
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<td>Supplemental oxygen required to maintain saturations above 92%</td>
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<td>Date</td>
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<tr>
<td>Time</td>
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<tr>
<td>Treatment Y/N</td>
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<tr>
<td>Score Before/After Treatment</td>
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