Pediatric Asthma
Clinical Practice Guidelines

Inclusion/Exclusion Criteria
- This clinical pathway is designed for children 2 years of age or older with a known diagnosis of asthma, who present to the ED with an asthma exacerbation.
- In patients with initial episode of wheezing, consider foreign body or upper airway obstruction, or other underlying pulmonary disease.
- Patients with other chronic, comorbid conditions that may alter the treatment recommendations on this guideline should be excluded from the pathway.

Educational Process
- An initial Asthma Action Plan is completed by the admitting team and posted in the patient's room, which includes identification of environmental control and control of other triggers, method and timing of rescue actions, use of controllers, and use of relievers.
- The respiratory therapist ensures that key elements of asthma education occur during the patient's hospitalization.

Adjunctive Therapies
- Epinephrine SQ 0.01mg/kg (max 0.3mg)
- Heliox
- Ketamine: Bolus of 2-3 mg/kg, then infusion of 1-2 mg/kg/hr
- Magnesium: 1-time 75 mg/kg (max 2 gm)
- Terbutaline: Bolus of 0.01 mg/kg (max 0.4 mg), then infusion of 0.1-10 mcg/kg/min

NOT routinely recommended
- CXR
- Viral testing except for influenza
- Blood work
- Antibiotics

CXR should only be performed if:
- Persistent severe respiratory distress (including O2 Sat ≤90%) OR focal findings (including localized rales, crackles, decreased breath sounds +/- documented fever ≥38.4C) not improving on ≥12hrs of therapy
- Concern for pneumomediastinum/pneumothorax (significant chest pain, crepitus, or unilateral absence of breath sounds) during ED treatment

AAIRS Acute Asthma Severity Score

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Values</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retractions&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCM</td>
<td>No</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercostal</td>
<td>No</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subcostal</td>
<td>No</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Entry</td>
<td>Normal</td>
<td>Decreased at bases</td>
<td>Widespread decrease</td>
<td>Absent or minimal</td>
<td></td>
</tr>
<tr>
<td>Wheezing</td>
<td>Absent</td>
<td>Expiratory</td>
<td>Inspiratory &amp; Expiratory</td>
<td>Audible w/out stethoscope or silent chest</td>
<td></td>
</tr>
<tr>
<td>SpO&lt;sub&gt;2&lt;/sub&gt; (on room air)</td>
<td>≥95&lt;sup&gt;h&lt;/sup&gt;</td>
<td>92 – 94&lt;sup&gt;h&lt;/sup&gt;</td>
<td>&lt;92&lt;sup&gt;h&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expiratory phase&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Normal: 1:1</td>
<td>Prolonged: 1:2</td>
<td>Severely prolonged: ≥1:3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add component values</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
</tbody>
</table>

Total Score on scale of 0 to 16

Consider Pulmonary Consult:
- For a life-threatening asthma exacerbation
- If not meeting goals of asthma therapy, such as admission to the hospital 2 or more times in a 12 month period
- When there is uncertainty whether the patient has asthma
- When there are other conditions that complicate asthma management
- When enhanced education may improve outpatient management

Other consults to consider, as needed:
- Social Work, when issues related to housing, transportation, or finances affect care
- Pharmacy, when enhanced education about medication regimen is needed
- Case management, when a visit by a home nurse may improve management

Discharge Process
- Arrange follow up appointment with PCP (required) and with specialist (as needed)
- Discharge instructions must include appointment and name/phone number of PCP
- In combination with the discharge instruction, the Asthma Action Plan constitutes the Asthma Home Management Plan of Care. The patient and/or caregiver is given a copy of this plan at discharge
- Follow up that RT has completed asthma education
- Follow up on SW, Pharmacy, and Case Management recommendations

References

Created April 2014
This guideline does not take into account individual patient situations, and does not substitute for clinical judgement

V1.5: last mod - 12/22/15