# Clinical Guideline
## ED Asthma
### Pediatric Emergency Medicine

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**Supplemental O2 to keep O2 saturation > 90%**

**Calculate PAS score**

**Notify Attending Physician if PAS > 3**

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### PAS 0-2
- Albuterol MDI 4-8 puffs
- Consider dexamethasone PO 0.6 mg/kg (max 16 mg)
- Discharge home

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### PAS 3-6
- Albuterol 17.5 mg/hr by large volume neb or 15 mg/hr by RT neb, if expected admit on continuous
  - OR Albuterol 4-8 puffs q20 min x 3
  - Atrovent neb 1.5 mg, if not given
  - Dexamethasone PO 0.6 mg/kg (max 16 mg)
- Dexamethasone tablets (Can be crushed)

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### PAS 7-10
- Albuterol 175 mg/hr by large volume neb or 15 mg/hr by RT neb, if expected admit on continuous
  - OR Albuterol 4-8 puffs q20 min x 3
  - Atrovent neb 1.5 mg, if not given
  - Dexamethasone PO 0.6 mg/kg, if not given
  - Consider NS bolus 20 ml/kg
  - Magnesium Sulfate IV 50 mg/kg, if not given
  - NS bolus 20 ml/kg, if not given
  - Call Respiratory Therapy
  - Consider HeliOx
  - Admit to PICU

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### Discharge Criteria
- PAS 0-2 for at least 1 hour
- Tolerating PO
- Asthma education
- Close medical follow up within 48-72 hrs
- Albuterol MDI 2-6 puffs PRN
- Dexamethasone tablets (Can be crushed)

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### Reassess and score at the end of the 1st hour

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### Reassess and score at the end of the 2nd hour

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**Inclusion criteria:**
- Children ≥ 2 y/o
- Known history of asthma
- History consistent with asthma or recurrent wheezing

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**Note:** This guideline serves as a guide and does not replace clinical judgment.

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**For questions concerning this guideline, contact:**
chorclinicalguidelines@vcuhealth.org

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**Next expected update:** April 2025
Instructions for assessment of PAS
1. If applicable, turn oxygen therapy off on entry into patient’s room.
2. Step-wise assessment (RR, dyspnea, retractions, auscultation).
3. Throughout assessment, monitor oxygen saturation. Determine score for oxygen saturation based on overall assessment throughout exam (i.e. an unsustained downward drift to 88% with self-resolution to 94% would be scored as “1.” Alternatively, a progressive decline in saturations from 97% to 85% following cessation of O2 should be scored as “2” and oxygen therapy should be resumed immediately).
4. Calculate total score

Table 1: (Modified) Pediatric Asthma Score (PAS):

<table>
<thead>
<tr>
<th>Variable</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 points</td>
</tr>
<tr>
<td>Resp Rate (b/min)</td>
<td></td>
</tr>
<tr>
<td>2-3 years</td>
<td>&lt;35</td>
</tr>
<tr>
<td>4-5 years</td>
<td>&lt;31</td>
</tr>
<tr>
<td>6-12 years</td>
<td>&lt;27</td>
</tr>
<tr>
<td>&gt;12 years</td>
<td>&lt;24</td>
</tr>
<tr>
<td>Dyspnea</td>
<td></td>
</tr>
<tr>
<td>Full sentences</td>
<td></td>
</tr>
<tr>
<td>and Good PO intake</td>
<td></td>
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<tr>
<td>Partial sentences</td>
<td></td>
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<tr>
<td>or poor PO</td>
<td></td>
</tr>
<tr>
<td>Retractions*</td>
<td>1 or less accessory group</td>
</tr>
<tr>
<td>Auscultation</td>
<td>Normal breath sounds</td>
</tr>
<tr>
<td>Oxygen Sats (%)</td>
<td>&gt;95</td>
</tr>
<tr>
<td>On Room Air</td>
<td></td>
</tr>
</tbody>
</table>

*Accessory muscle groups considered in evaluation of retractions:
1. Nasal (flaring)
2. Supra-sternal (retractions)
3. Intercostals (retractions)
4. Substernal (retractions)