## Assessment and initial management of acute asthma

Reconsider diagnosis if the child is less than one year, has high fever or responds poorly to Asthma treatment.

### Initial Severity Assessment

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Mild: Likely to go home</th>
<th>Moderate: Possibly be admitted</th>
<th>Severe and Life Threatening: Will be admitted or transferred</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oximetry in Air</strong></td>
<td>&gt; 94%</td>
<td>90 – 94%</td>
<td>&lt; 90%</td>
</tr>
<tr>
<td><strong>Heart Rate</strong></td>
<td>Close to normal range for age</td>
<td>Mild-Moderate Tachycardia for age</td>
<td>Marked Tachycardia – beware relative Bradycardia for age</td>
</tr>
<tr>
<td><strong>Ability to talk in:</strong></td>
<td>Sentences or Long vigorous Cry</td>
<td>Phases or Shortened Cry</td>
<td>Words / Weak Cry or Unable to Speak / Cry</td>
</tr>
<tr>
<td>(age appropriate)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accessory Muscle Use</strong></td>
<td>None</td>
<td>Mild to Moderate</td>
<td>Moderate to Severe</td>
</tr>
<tr>
<td><strong>Altered Consciousness</strong></td>
<td>Alert</td>
<td>Easily Engaged Age Appropriate</td>
<td>Be concerned if Agitated or Drowsy or Confused</td>
</tr>
<tr>
<td><strong>Cyanosis in Air</strong></td>
<td>None</td>
<td>None</td>
<td>Any Cyanosis is very concerning</td>
</tr>
</tbody>
</table>

### Treatment

**Oxygen**
- No
- Maintain SaO₂ >94%
- To maintain SaO₂ >94%
- Consider High flow Oxygen

**Salbutamol 100 micrograms Metered Dose Inhaler (MDI) & Spacer**
- < 6 years 6 x puffs stat
- ≥ 6 years 12 x puffs stat
- review frequently and repeat when required

**Salbutamol Nebulised**
- Not recommended

**Ipratropium (Atrovent) 20 micrograms**
- (3 doses always together with Salbutamol)
- No
- Consider 20 minutely x 3
- < 6 years – 4 puffs MDI
- ≥ 6 years – 8 puffs MDI

**No or poor response to Treatment**
- Check diagnosis and treat as per Moderate
- Check diagnosis and treat as per Severe and Life Threatening
- Immediate Senior Review
- Consult PICU (via NETS if outside a children’s hospital)

**If contemplating giving any of IV Salbutamol, IV Aminophylline or IV Magnesium Sulphate**
- Not applicable

**Systemic corticosteroids**
- Consider Oral Prednisone 1-2mg/kg depending on history and response to treatment
- Oral Prednisone 1-2mg/kg
- Hydrocortisone IV 4mg/kg or Methylprednisolone IV 1mg/kg

**Investigations**
- Nil (routine) required
- Nil routine required
- Consider Blood Gases, Chest X-ray and UEC

**Observation & Review**
- Continuous observations (HR, RR, SaO₂) pre and post treatment – initially Q 30 min then MO review within 1 hour
- Continuous cardiorespiratory monitoring (HR, RR, SaO₂)
- Regular medical review

**Disposition**
- Home if Salbutamol requirement >3 hourly See “Discharge Criteria: Assessment & Initial Management of Acute Asthma Clinical Practice Guideline”
- Observe for 3 hours after last dose. If not suitable for discharge then Admit or Transfer, Otherwise Home.
- Admit to Level 4 facility or above if improving or retrieve to paediatric ICU (call NETS)