Pre-school wheeze – Emergency management in children – Flowchart

Pre-school child presents to ED service with wheeze

Initial rapid severity assessment

- **Mild**
  - Salbutamol (1 dose)

- **Moderate**
  - Salbutamol burst (3 doses)

- **Severe**
  - Salbutamol nebuliser (continuous)

Secondary assessment concurrently with bronchodilator

- **Mild-moderate**
  - Salbutamol as required
  - Reassess, stretch doses as able

- **Severe**
  - Salbutamol as required
  - Consider oral steroids
  - Reassess

- **Life-threatening**
  - Salbutamol as required
  - Consider:
    - IV
    - Magnesium sulphate
    - Steroids
    - Salbutamol
    - High flow nasal cannula therapy

1. **≥ 1 hour between Salbutamol doses?**
   - Yes
   - Continue Salbutamol as required
   - Yes
   - No
   - Consider discharge home with advice

2. **≥ 3 hours between Salbutamol doses?**
   - Yes
   - No
   - Consider referral to inpatient service

3. **≥ 1 hour between Salbutamol doses?**
   - Yes
   - Continue Salbutamol as required
   - No
   - Consider referral to inpatient service

4. **Responding to treatment?**
   - Yes
   - No
   - Consider referral to Paediatric Critical Care

5. **Suitable for stepdown to continue management in SSU or Paediatric Ward**

6. **Investigations:**
   - VBG
   - U&E
   - CXR

For more information refer to [CHQ-GDL-60009 – Pre-school wheeze–Emergency management in children](#)
### Pre-school wheeze – Emergency management in children – Medications

<table>
<thead>
<tr>
<th><strong>Inhaled Salbutamol dosing for the treatment of wheeze in pre-school children</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Metered dose inhaler (MDI)</strong> 100 micrograms</td>
</tr>
<tr>
<td><strong>Nebulised</strong></td>
</tr>
<tr>
<td><strong>Salbutamol burst</strong></td>
</tr>
<tr>
<td><strong>Continuous nebulised Salbutamol</strong></td>
</tr>
</tbody>
</table>

*Always use with a spacer. Also use a mask if unable to form a reliable seal around the spacer.*

---

**ALERT** – Cumulative Salbutamol doses can cause agitation, tremor, tachycardia, tachypnoea and rarely, hypertension. Raised lactate, hypokalaemia and raised glucose on VBG are markers of Salbutamol toxicity.

---

<table>
<thead>
<tr>
<th><strong>Magnesium sulphate (IV) dosing for the treatment of wheeze in pre-school children</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bolus dose</strong></td>
</tr>
<tr>
<td><strong>Side effects</strong></td>
</tr>
<tr>
<td><strong>Monitoring</strong></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th><strong>Steroid dosing for the treatment of wheeze in pre-school children</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prednisolone (Oral)</strong></td>
</tr>
<tr>
<td><strong>Hydrocortisone (IV)</strong></td>
</tr>
<tr>
<td><strong>OR</strong> <strong>Methylprednisolone (IV)</strong></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th><strong>Salbutamol (IV) dosing for the treatment of wheeze in pre-school children</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bolus dose</strong></td>
</tr>
<tr>
<td><strong>Infusion</strong></td>
</tr>
<tr>
<td><strong>Monitoring</strong></td>
</tr>
</tbody>
</table>

For more information refer to [CHQ-GDL-60009 – Pre-school wheeze–Emergency management in children](#)