**Figure. Managing acute asthma in children**

**IMMEDIATELY**

**ASSESS SEVERITY AND START BRONCHODILATOR**
- Consider spontaneous and manage if suspected
- See Table. Rapid primary assessment of acute asthma in adults and children

**Mild/Moderate**
- Can walk and speak with whole sentences in one breath (Young children: can move about and speak in phrases)
- Give salbutamol (100 microg per actuation via pMDI and spacer (plus mask for younger children))
- 4 years and over: 2–3 puffs, 1–3 years: 1–2 puffs

**Severe**
- Any of: unable to speak in sentences, mouth breathing, increased work of breathing, oxygen saturation 90–94%
- Salbutamol (100 microg per actuation via pMDI plus spacer (plus mask for infants))
- 6–13 years: 12 puffs
- 1–5 years: 6 puffs

**Life-threatening**
- Any of: drowsy, collapsed, exhausted, cyanotic, poor respiratory effort, oxygen saturation less than 90%
- Salbutamol via continuous nebulisation driven by oxygen
- 6–13 years: 2 x 2.5 mg (maximum 25 mg)
- 1–5 years: 2 x 2.25 mg (maximum 22.5 mg)

**ARRANGE IMMEDIATE TRANSFER TO HIGHER-LEVEL CARE**
- Notify senior staff
- Ventilate if required (NPPV or intubate and ventilate)
- See Figure. Initial management of life-threatening acute asthma in adults and children

**WITHIN MINUTES**

**REASSESS SEVERITY**
- Table. Secondary severity assessment of acute asthma in children 6 years and over
- If child remains unwell:
  - Reassess severity
  - Start systemic corticosteroids

**IF POOR RESPONSE, ADD IV MAGNESIUM SULFATE**
- 2 years and over: 0.1–0.2 mmol/kg (maximum 10 mmol; use 2 x 5 mmol)
- If poor response, add IV MAGNESIUM SULFATE
- 6–11 years: 0.1–0.2 mmol/kg (maximum 5 mmol)
- 1–5 years: 0.1 mmol/kg (maximum 1 mmol)

**CONSIDER OTHER ADD–ON TREATMENT OPTIONS**
- Table. Add-on treatment options for acute asthma
- If oral route not possible
- Oral prednisolone 1 mg/kg (maximum 50 mg) for 3–5 days

**WITHIN 1 HOUR**

**START SYSTEMIC CORTICOSTEROIDS**
- Oral prednisolone 1 mg/kg (maximum 50 mg) for 3–5 days
- OR, if oral route not possible
- Hydrocortisone IV 4 mg/kg (maximum 100 mg) every 6 hours on day 1, then every 12 hours on day 2, then once on day 3
- OR
- Methylprednisolone IV 4 mg/kg (maximum 60 mg) every 6 hours on day 1, then every 12 hours on day 2, then once on day 3
- For children <3 years, add systemic corticosteroids if moderate worsening follows initial bronchodilator treatment

**1 HOUR AFTER STARTING BRONCHODILATOR**

**REASSESS RESPONSE TO TREATMENT**
- Perform spirometry (if child capable)
- Report peak flow
- No breathing difficulty
- Breathing difficulty persists

**ARRANGE HOSPITAL ADMISSION**
- Table. Add-on treatment options for acute asthma
- Breathing difficulty persists
- Persisting severe or life-threatening acute asthma

**POST-ACUTE CARE**
- Ensure parents or are able to monitor and manage asthma at home
- Provide oral prednisolone for 3 days
- Provide infants with regular inhaled prevention if indicated
- Check and coach in correct inhaler technique
- Provide spacer if needed
- Provide immediate asthma action plan
- Administer follow-up review

**FOR MORE DETAILS ON THE INITIAL MANAGEMENT OF LIFE-THREATENING ACUTE ASTHMA, SEE**
- Initial management of life-threatening acute asthma in adults and children