Symptoms and signs unresolved continue bronchodilator Any of: any persisting dyspnoea, inability to lie flat without dyspnoea, FEV1 <60% predicted, Persisting severe or life-threatening acute asthma

**IMMEDIATELY**

- **Mild/Moderate**
  - Can walk and speak whole sentences in one breath
  - Give 4-12 puffs salbutamol (100 microg per actuation) via pMDI plus spacer

- **Severe**
  - Any of: unable to speak in sentences, visibly breathless, increased work of breathing, oxygen saturation 90-94%
  - Salbutamol 12 puffs (100 mcg per actuation) via pMDI plus spacer
  - Ipratropium 8 puffs (21 microg/actuation) via pMDI plus spacer
  - OR
  - Use intermittent nebulisation if patient cannot breathe through spacer. Give 5 mg nebuliser salbutamol. Add 500 microg ipratropium to nebulised solution.
  - Drive nebuliser with air unless oxygen needed
  - Start oxygen
  - Titrate to target oxygen saturation 93-95%

- **Life-threatening**
  - Any of: drowsy, collapsed, exhausted, cyanotic, poor respiratory effort, oxygen saturation less than 90%
  - Salbutamol 2 x 5 mg nebulises via continuous nebulisation. Ipratropium 500 microg added to nebulised solution.

**ARRANGE IMMEDIATE TRANSFER TO HIGHER-LEVEL CARE**

- Notify senior staff
- Ventilate if required (NPPV or intubate and ventilate)

**ARRANGE HOSPITAL ADMISSION**

- Continue bronchodilator and add-on treatment
- Arrange hospital admission
- OR
- Discuss transfer or retrieval with senior medical staff

**POST-ACUTE CARE**

- Ensure person (or carer) is able to monitor and manage asthma at home
- Provide oral predniolone for 5-10 days
- Ensure person has regular inhaled corticosteroid
- Check and coach in correct inhaler technique
- Provide spacer if needed
- Provide interim asthma action plan
- Advise/arrange follow-up review

**AFTER 1-HOUR CHECK**

- Dyspnoea resolved
- Symptoms and signs unresolved
- Persisting severe or life-threatening acute asthma

**1 HOUR**

- Perform spirometry (if patient capable)
- Repeat pulse oximetry
- Check for dyspnoea while supine

- **Dyspnoea resolved**
- **Symptoms and signs unresolved**
  - Any of: any persisting dyspnoea, inability to lie flat without dyspnoea, FEV1 <60% predicted,

**1 HOUR AFTER STARTING BRONchodilATOR**

- **Dyspnoea resolved**
- **Symptoms and signs unresolved**
  - Any of: any persisting dyspnoea, inability to lie flat without dyspnoea, FEV1 <60% predicted,
- **Persisting severe or life-threatening acute asthma**

**WITHIN FIRST HOUR**

- **START SYSTEMIC CORTICOSTEROIDS**
  - Oral predniolone 37.5-50 mg then continue 5-10 days
  - OR, if oral route not possible
  - Hydrocortisone 100 mg IV every 6 hours

**WITHIN MINUTES**

- **REASSESS SEVERITY**
  - In non-acute care settings, arrange immediate transfer if no improvement

**CONTINUE BRONchodilATOR**

- Repeat dose every 20-30 mins for first hour if needed or sooner as needed
- Repeat dose every 20 minutes for first hour (3 doses) or sooner as needed

**IF POOR RESPONSE, ADD IV MAGNESIUM SULFATE**

- 10 mmol diluted (2.5 g) in a compatible solution as a single IV infusion over 20 minutes.

**CONSIDER OTHER ADD-ON TREATMENT OPTIONS**

- Arrange immediate transfer to higher-level care if no improvement or worsening

**1 HOUR AFTER STARTING BRONchodilATOR**

- **Dyspnoea resolved**
- **Symptoms and signs unresolved**
  - Any of: any persisting dyspnoea, inability to lie flat without dyspnoea, FEV1 <60% predicted,
- **Persisting severe or life-threatening acute asthma**

**Table. Rapid primary assessment of acute asthma in adults and children**

**Table. Secondary severity assessment of acute asthma in adults and children aged 6 years and over**

**Table. Add-on treatment options for acute asthma**

**Figure. Initial management of life-threatening acute asthma in adults and children**

For more details on the initial management of life-threatening acute asthma, see Initial management of life-threatening acute asthma in adults and children

asthmahandbook.org.au Australian Asthma Handbook v2.0 asset ID: 65