



**CHILD AND ADOLESCENT HEALTH SERVICE  
PRINCESS MARGARET HOSPITAL FOR CHILDREN**

**CLINICAL MANAGEMENT OF ACUTE PAEDIATRIC ASTHMA ON THE WARDS  
QUICK GUIDE**

**ASSESSMENT:** Reassess severity on arrival to ward  
Select the highest category that matches patients' symptoms to establish severity and treatment required. Modify management as the patient improves, as outlined below.

<b>MILD ASTHMA</b>	<b>MODERATE ASTHMA</b>	<b>SEVERE ASTHMA</b>
Normal mental state Subtle or no accessory muscle use O <sub>2</sub> saturations > 95%	Normal mental state Some accessory muscle use  O <sub>2</sub> Saturations 92 - 95% Tachycardia Talks in phrases Wheeze ± reduced breath sounds	Agitated Moderate-marked accessory muscle use O <sub>2</sub> Saturations < 92% Tachycardia Talks in single words Wheeze ± reduced breath sounds

**MEDICAL REVIEW**

Reviewed by registrar on admission	Reviewed by registrar on admission	Immediate review by registrar on admission
Consultant notified at end of duty	Consultant notified at end of duty period or earlier if indicated	Consultant notified ASAP
Medical review at least daily	Medical review at least daily	Review at least 3 hourly to reassess severity & ensure management remains appropriate

**TREATMENT**

**Oxygen**  
Via face mask if O<sub>2</sub> Saturation <92%, or otherwise clinically indicated

<b>Short acting β<sub>2</sub> agonist 3 to 4 hourly</b>	<b>Short acting β<sub>2</sub> agonist 2 to 4 hourly</b>	<b>Short acting β<sub>2</sub> agonist ½ to 2 hourly</b>
Salbutamol inhaler (100microgram) via spacer: Dose: < 6 years - 6 puffs ≥ 6 years - 12 puffs	Salbutamol inhaler (100microgram) via spacer: Dose: < 6 years - 6 puffs ≥ 6 years - 12 puffs	Salbutamol inhaler (100microgram) via spacer: Dose: < 6 years - 6 puffs ≥ 6 years - 12 puffs
<b>Consider switching to nebulised salbutamol:</b> If patient unable to cooperate with spacer or is deteriorating despite appropriate use of spacer. Nebulisers driven with O <sub>2</sub> at 8L/min Dose: < 6 years – 2.5 mg/2.5 mL salbutamol nebule (do not dilute) ≥ 6 years – 5 mg/2.5 mL salbutamol nebule (do not dilute)		
<b>Oral Corticosteroid</b>  Prednisolone 1mg/kg daily (50mg max.)  <b>Review/recommence inhaled Prophylaxis</b>	<b>Oral Corticosteroid</b> Prednisolone 1mg/kg daily (50mg max.)  <b>Review/recommence inhaled Prophylaxis</b> (see long term control & preventive treatment)	<b>Oral/IV Corticosteroid</b> <b>Oral</b> Prednisolone 1mg/kg once daily (50 mg max.) <b>OR</b> <b>IV</b> Hydrocortisone 4mg/kg 6 hourly until condition improved and able to tolerate oral medication (Consider IV route if doubts about the administration, absorption or retention of oral medication)



**Frequency of nursing observations** depends on patients' clinical status. Nursing Staff to inform medical staff of clinical deterioration as indicated by one or more of the following:

- Increased work of breathing
- Increasing  $\beta_2$ agonist (salbutamol) requirement
- Decreasing O<sub>2</sub> saturations / increasing oxygen requirement

Any child on half on ½ hourly salbutamol requires medical review every 2-3 hours.

If not responding to ½ hourly salbutamol and oral/IV corticosteroid for urgent medical review & discuss with consultant. See "Children not responding to standard asthma treatment" in full guideline.

### INVESTIGATIONS

- **Allergy Testing** – Consider in atypical asthma, recurrent asthma with no obvious viral trigger, history of atopy (e.g. asthma & allergic rhinitis)
- **Spirometry with bronchodilator response if > 5 years** – Arrange as an outpatient if required. Consider prior to discharge.
- **Chest Xray** – Not routinely required. May be required if evidence of a complication, not responding to treatment or concerns regarding deterioration. Discuss with registrar/consultant if considering.
- **Nasopharyngeal Aspirate** – Only when a specific viral/atypical diagnosis needs to be considered and if it will alter management

### EDUCATION AND DISCHARGE PLANNING commences on admission

#### Nursing

- Give [Asthma Handouts](#)
- Play asthma video for parents to view
- Ensure parent & child demonstrate correct spacer technique and can explain correct care (+/- mask if required)
- Offer Follow Up Education with the [Asthma Foundation](#)
- Give & explain discharge medications (including spacer +/- mask, if needed)

#### Medical

- Complete & **explain** [Asthma Action Plan](#)
- Order discharge medications
  - ⇒ prn salbutamol up to 3-4 hourly
  - ⇒ continue oral prednisolone up to 3 days (up to 5 days for severe exacerbations)
- Arrange discharge letter & copy of action plan to GP
- Arrange medical follow up with GP & OPC/consultant rooms as appropriate
- Encourage GP review if no further improvement within 48 hours of discharge

#### Consider [Asthma CNS](#) Referral for:

- Newly diagnosed asthma
- Mismanagement at home
- Non-compliance
- Severe asthma (e.g. ICU admission)
- Poorly controlled asthma

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#### Paediatrician follow up indicated by one or more of the following:

- Asthma not controlled on total daily dose of fluticasone 250mcg or equivalent
- History of ICU admissions for asthma; severe/atypical asthma; frequent hospitalisations or ED presentations with asthma; medical conditions or psychosocial factors complicating asthma management; frequent courses of oral corticosteroids; commencing preventer treatment during admission.

### FIT FOR DISCHARGE IF:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• No significant audible wheeze with good air entry</li> <li>• Tolerating 3-4 hourly bronchodilator via spacer and metered dose inhaler</li> </ul> | <ul style="list-style-type: none"> <li>• Observations within acceptable range</li> <li>• Education &amp; discharge planning completed</li> </ul> |
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