

Management of acute asthma in children in A&E

Age 2-5 years

ASSESS ASTHMA SEVERITY

Moderate exacerbation

- SpO₂ ≥92%
- No clinical features of severe asthma

NB: If a patient has signs and symptoms across categories, always treat according to their most severe features

Severe exacerbation

- SpO₂ <92%
- Too breathless to talk or eat
- Heart rate > 130/min
- Respiratory rate >50/min
- Use of accessory neck muscles

Life threatening asthma

- SpO₂ <92%
- Silent chest
- Poor respiratory effort
- Agitation
- Altered consciousness
- Cyanosis

- β₂ agonist 2-10 puffs via spacer ± facemask
- Reassess after 15 minutes

- Give nebulised β₂ agonist: salbutamol 2.5 mg or terbutaline 5 mg with oxygen as driving gas
- Continue O₂ via face mask/nasal prongs
- Give soluble prednisolone 20 mg or IV hydrocortisone 50 mg

RESPONDING

- Continue inhaled β₂ agonist 1-4 hourly
- Give soluble oral prednisolone 20 mg

NOT RESPONDING

- Repeat inhaled β₂ agonist
- Give soluble oral prednisolone 20 mg

ARRANGE ADMISSION
(lower threshold if concern over social circumstances)

IF LIFE THREATENING FEATURES PRESENT

Discuss with senior clinician, PICU team or paediatrician

Consider:

- Chest x-ray and blood gases
- Repeat nebulised β₂ agonist
- Plus:**
- ipratropium bromide 0.25 mg
- Bolus IV salbutamol 15 mcg/kg of 200 mcg/ml solution over 10 minutes

DISCHARGE PLAN

- Continue β₂ agonist 4 hourly prn
- Consider prednisolone 20 mg daily for up to 3 days
- Advise to contact GP if not controlled on above treatment
- Provide a written asthma action plan
- Review regular treatment
- Check inhaler technique
- Arrange GP follow up

Arrange immediate transfer to PICU/HDU if poor response to treatment
Admit all cases if features of severe exacerbation persist after initial treatment

Age > 5 years

ASSESS ASTHMA SEVERITY

Moderate exacerbation

- SpO₂ ≥92%
- PEF ≥50% best or predicted
- No clinical features of severe asthma

NB: If a patient has signs and symptoms across categories, always treat according to their most severe features

Severe exacerbation

- SpO₂ <92%
- PEF <50% best or predicted
- Heart rate > 120/min
- Respiratory rate >30/min
- Use of accessory neck muscles

Life threatening asthma

- SpO₂ <92%
- PEF <33% best or predicted
- Silent chest
- Poor respiratory effort
- Altered consciousness
- Cyanosis

- β₂ agonist 2-10 puffs via spacer
- Reassess after 15 minutes

- Give nebulised β₂ agonist: salbutamol 2.5 mg or terbutaline 5 mg with oxygen as driving gas
- Continue O₂ via face mask/nasal prongs
- Give soluble prednisolone 30-40 mg or IV hydrocortisone 100 mg

RESPONDING

- Continue inhaled β₂ agonist 1-4 hourly
- Add 30-40 mg soluble oral prednisolone

NOT RESPONDING

- Repeat inhaled β₂ agonist
- Add 30-40 mg soluble oral prednisolone

ARRANGE ADMISSION
(lower threshold if concern over social circumstances)

IF LIFE THREATENING FEATURES PRESENT

Discuss with senior clinician, PICU team or paediatrician

Consider:

- Chest x-ray and blood gases
- Bolus IV salbutamol 15 mcg/kg of 200 mcg/ml solution over 10 minutes
- Repeat nebulised β₂ agonist
- Plus:**
- ipratropium bromide 0.25 mg nebulised

DISCHARGE PLAN

- Continue β₂ agonist 4 hourly prn
- Consider prednisolone 30-40 mg daily for up to 3 days
- Advise to contact GP if not controlled on above treatment
- Provide a written asthma action plan
- Review regular treatment
- Check inhaler technique
- Arrange GP follow up

Arrange immediate transfer to PICU/HDU if poor response to treatment
Admit all cases if features of severe exacerbation persist after initial treatment