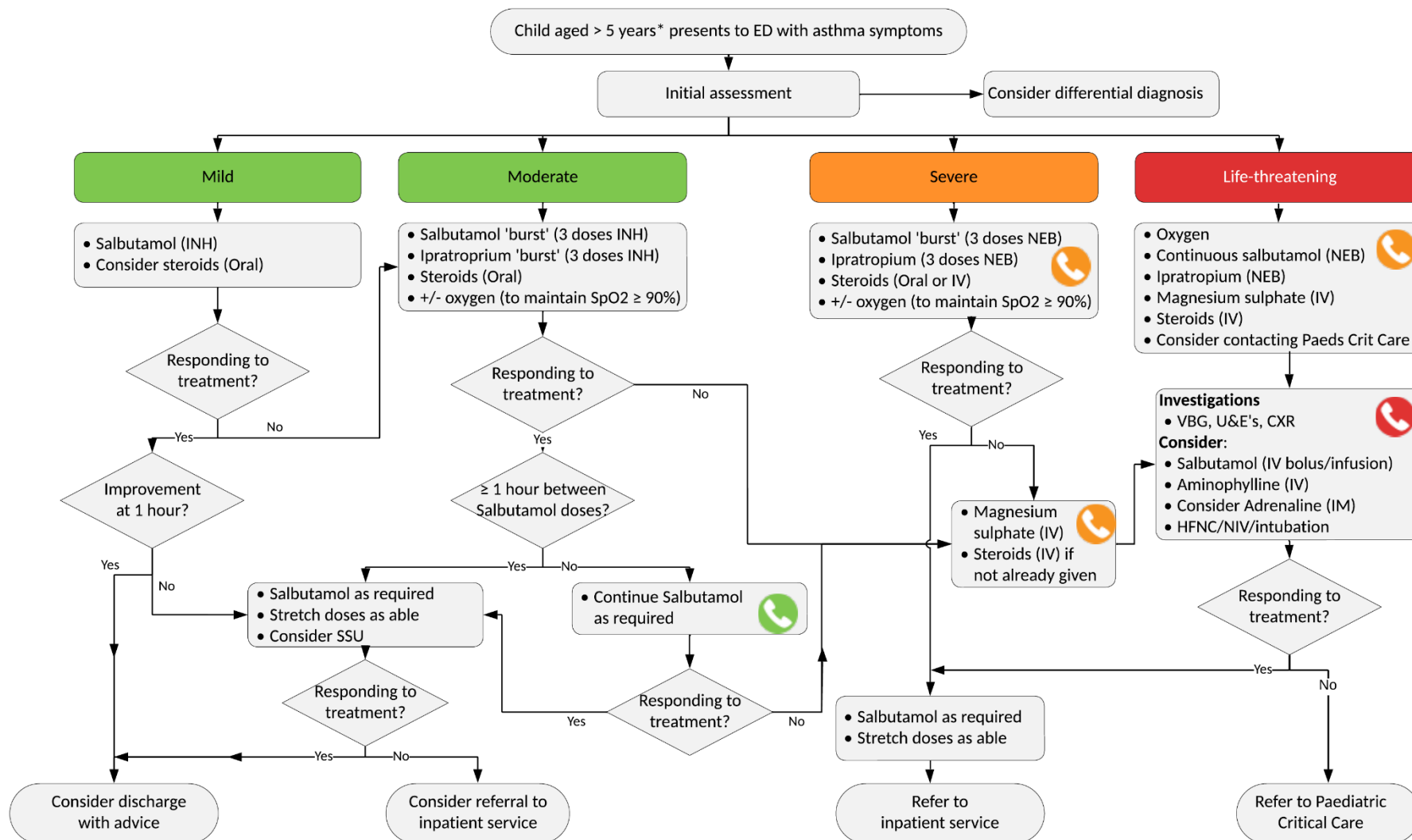





Appendix 1: Asthma – Emergency management in children – Flowchart



*Refer to the Pre-school wheeze Guideline for children aged 1-5 years

 Consider seeking senior emergency/paediatric advice as per local practices

 Seek senior emergency/paediatric advice as per local practices. Consider contacting paediatric critical care.

 Seek urgent paediatric critical care advice (onsite or via Retrieval Services Queensland (RSQ) on 1300 799 127



Appendix 1: Asthma – Emergency management in children - Flowchart

Asthma – Emergency management in children – Medications

Inhaled Salbutamol dosing for the treatment of asthma in children

Metered dose inhaler (MDI)* 100 micrograms	Age 5 years: 6 puffs	Age 6 years or more: 12 puffs
Nebulised	Age 5 years: 2.5 mg	Age 6 years or more: 5 mg
Salbutamol burst	Administer three doses as above at twenty-minute intervals	
Continuous nebulised Salbutamol	Neat salbutamol nebuliser solution (5 mg/mL), replenish where reservoir empty. Use 5 mg/1 mL nebulisers or 30 mL multi-use bottle.	

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



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

Steroid dosing for the treatment of asthma in children

Dexamethasone (oral/IM/IV)	Single dose on day 1 of 0.6mg/kg (maximum 16mg)
Prednisolone (oral)	Day 1: 2 mg/kg (maximum 50 mg) Day 2 and 3: 1 mg/kg Can extend course to five days if still symptomatic after three-day course.
Hydrocortisone (IV)	4 mg/kg (maximum 100 mg) then every six hours on day one.
OR Methylprednisolone (IV)	1 mg/kg (maximum 60 mg) then every six hours on day one.

Ipratropium dosing for the treatment of asthma in children

Age 5 years	4 puffs (84 micrograms) via spacer OR 250 micrograms nebulised every twenty minutes for three doses. Can be mixed in nebuliser with Salbutamol. Followed by 2 puffs (42 micrograms) every six hours.
Age greater than 6 years	8 puffs (168 micrograms) via spacer OR 500 micrograms nebulised every twenty minutes for three doses. Can be mixed in nebuliser with Salbutamol. Followed by 4 puffs (84 micrograms) every six hours.

Magnesium sulphate (IV) dosing for the treatment of asthma in children

Bolus dose	0.2 mmol/kg (equivalent to 50 mg/kg) infused intravenously over twenty minutes (maximum 10 mmol = equivalent to 2,500 mg) Doses up to 0.4 mmol/kg (maximum of 10 mmol) have been used. Must be administered in syringe driver using safety software.
Side effects	Usually minor, including epigastric or facial warmth and flushing, pain and/or numbness at infusion site and dry mouth. Severe reactions include allergy, hypotension, respiratory depression and circulatory collapse.
Monitoring	Full cardiac monitoring with blood pressure every five minutes. Cease infusion if hypotension persists. Monitor knee reflexes if repeating dose to assess for magnesium toxicity which can result in respiratory failure. Cease magnesium if reflexes absent.

Salbutamol (IV) dosing for the treatment of asthma in children

Bolus dose	15 microg/kg infused over ten minutes (maximum 300 micrograms)
Infusion	0.5-1 microgram/kg/min (to maximum 40 microgram/min)
Monitoring	Full cardiac monitoring. Monitor venous potassium levels.

