

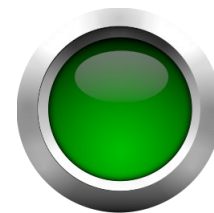
Acute severe asthma SOP

QPI

Further reading

[https://theresusroom.co.uk/asthma/BTS/SIGN guidelines 2019](https://theresusroom.co.uk/asthma/BTS/SIGN_guidelines_2019)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1414026/pdf/cc3733.pdf>



Prehospital emergency anaesthesia SOP

Paediatric PHEA SOP

Post intubation and ventilation SOP

Asthmatic patients attended by GNAAS are likely to fall in either the 'severe', 'life-threatening' or 'near-fatal' categories. Features include:

Breathless at rest

Unable to finish sentences

SpO₂ <92%

Silent chest

Hypotension

Confusion/Exhaustion

Resp rate ≥ 40 (aged 1-5 years)

≥ 30 (over 5 years)

≥ 25 (adults)

Initial management

100% oxygen

Nebulised salbutamol 5mg (2.5mg if <5yrs) and ipratropium bromide 0.5mg (0.25mg if <12yrs)

In children, consider adding 150mg (1.5mls) magnesium into each nebuliser mask

IV hydrocortisone

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Second-line management

- IV magnesium - Adult dose 2g over 20mins (may cause hypotension).
 - 40mg/kg in children if not already given via nebulizer
- IV salbutamol - Adult dose 250mcg over 5mins
 - 15mcg/kg (up to max. 250mcg) in children

Ketamine

Where patients have failed to respond to the above measures, intravenous ketamine 0.5mg/kg may improve symptoms and avoid the need for intubation.

It is strongly recommended that all preparations for prehospital emergency anaesthesia including the kit-dump and checklist have already been done if at this stage. Failure to respond will require rapid conversion to intubation and ventilation.

PHEA in near-fatal asthma

Whilst every effort should be made to avoid intubation and ventilation in asthma, PHEA will occasionally be required. Principles of management include:

- Give a fluid pre-load of 10mls/kg to reduce the risk of CVS collapse
- Avoid fentanyl. Use ketamine (not morphine/midazolam) for ongoing sedation
- **Oxygenation is the priority** - do not worry about E_tCO_2
- **Exclude tension pneumothorax** and have a low threshold for bilateral thoracostomies in near-fatal cases
- Use lung protective ventilation strategies; low tidal volumes, low frequency, prolonged expiratory time and permissive hypercapnia. Avoid PEEP initially but consider adding in gradually if it helps. If gas trapping is a concern, consider disconnecting the ventilator and applying manual compression on the chest to aid expiration
- Consideration should be given to the destination hospital. Rarely, ECMO may be required for the most severe cases