

Annex 2

Management Of Acute Asthma In Children At Hospital

ASSESSMENT OF SEVERITY

<u>Mild</u>	<u>Moderate</u>	<u>Severe</u>	<u>Life threatening</u>
<ul style="list-style-type: none"> • Normal mental state • Subtle or no accessory muscle use • SpO₂ ≥ 95% • Able to talk and/or feed 	<ul style="list-style-type: none"> • Normal mental state • Minor accessory muscle use • SpO₂ 92-95% • Some limitation of ability to talk and/or feed 	<ul style="list-style-type: none"> • Agitated • Moderate/marked accessory muscle use • SpO₂ <92% • Too breathless to talk and/or feed • Tachycardia[#] • Increased respiratory rate[#] 	<ul style="list-style-type: none"> • Confused/drowsy • Maximal accessory muscle use/exhaustion • SpO₂ <92% • Silent chest • Poor respiratory effort • Altered consciousness • Cyanosis

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

TREATMENT

<ul style="list-style-type: none"> • Salbutamol via MDI & spacer <ul style="list-style-type: none"> • 6 puffs <6 years • 12 puffs ≥6 years 	<ul style="list-style-type: none"> • Consider Oxygen (high-flow) via face mask • Salbutamol via MDI & spacer <ul style="list-style-type: none"> • 6 puffs <6 years • 12 puffs ≥6 years 	<ul style="list-style-type: none"> • Oxygen (high-flow) via face mask • Salbutamol via MDI & spacer <ul style="list-style-type: none"> • 6 puffs <6 years • 12 puffs ≥6 years • Ipratropium bromide <ul style="list-style-type: none"> • 2 puffs <6 years • 4 puffs ≥6 years <p>OR</p> <ul style="list-style-type: none"> • Salbutamol via nebuliser 5 mg • Ipratropium bromide 0.25 mg 	<ul style="list-style-type: none"> • Oxygen (high-flow) via face mask • Salbutamol via nebuliser 5 mg • Ipratropium bromide 0.25 mg
<ul style="list-style-type: none"> • Consider oral prednisolone 1 mg/kg/day if episode has persisted over several days <p>Assess response to treatment 15 mins after β₂ agonist</p>	<ul style="list-style-type: none"> • Consider oral prednisolone 1 mg/kg/day <p>Assess response to treatment 15 mins after β₂ agonist</p> <ul style="list-style-type: none"> • Repeat salbutamol up to every 20 minutes according to response 	<ul style="list-style-type: none"> • Oral prednisolone 1 mg/kg/day <p>Assess response to treatment 15 mins after β₂ agonist</p> <ul style="list-style-type: none"> • Repeat salbutamol every 20-30 minutes including ipratropium bromide up to 3 times in the first hour 	<ul style="list-style-type: none"> • IV methylprednisolone 1 mg/kg/day <p>Discuss with a senior clinician, PICU team or paediatrician</p> <ul style="list-style-type: none"> • Repeat salbutamol every 20-30 minutes or continuously including ipratropium bromide up to 3 times in the first hour

Record severity of asthma, respiratory rate, heart rate, oxygen saturation

RESPONSE

RESPONDING

- Continue bronchodilators as ordered
 - Discharge when stable on 3-4 hourly treatment
 - Continue oral prednisolone 1 mg/kg/day for up to 3 days
- At discharge**
- Ensure stable on 3-4 hourly inhaled treatment
 - Review the need for regular treatment & inhaled steroids
 - Review inhaler technique
 - Provide a written Asthma Action Plan for treating future attacks and letter for GP
 - Arrange follow up with GP and/or specialist

NOT RESPONDING

- Reconsider diagnosis
 - **Continue 20-30 minute (or continuous) nebulisers and arrange HDU/PICU transfer**
- Consider in consultation with senior clinician
- **Chest x-ray and blood gases**
 - IV magnesium sulphate 40 mg/kg over 20 minutes
 - IV aminophylline 10 mg/kg loading dose over 60 minutes (maximum dose 500mg) (omit in those receiving oral theophyllines) **followed by** continuous infusion <9 years - 1.1 mg/kg/hour, ≥9 years - 0.7 mg/kg/hour
 - IV salbutamol 5 mcg/kg/min for 60 minutes **followed by** continuous infusion 1mcg/kg/min

[#]Normal parameters for Paediatric Vital Signs are given in Annex 6 in the Guidelines.