Management of Acute Exacerbation of Asthma / Wheeze

Primary Care Clinical Assessment Tool for Children Under 2 Years

NHS England

Assessment

History
- Breathless/wheeze/cough
- Viral or allergic trigger
- Previous episodes or interval symptoms
- FH or personal history asthma, eczema or atopy
- Current/Previous treatment and response

Examination
- Feeding and speech
- Respiratory rate
- Chest wall expansion and movement
- Use of accessory muscles
- Auscultation of chest – reduced air entry, wheeze, prolonged expiration
- Oxygen Saturation (Sats)

Consider other diagnosis
- Pneumonia
- Bronchiolitis in under 1yr old
- Croup
- Foreign body

→ No – treat as below

→ Yes → **It may not be asthma. Seek expert help**

Treat according to most severe feature

Moderate
- Able to feed or talk
- Moderate use of accessory muscles
- Audible wheeze
- Sats>92% in air

<1 year
- RR<40/min HR 120-170/min

1-2 yrs
- R<35/min HR 80-110/min

- Give salbutamol 2-10 puffs via spacer+facemask (one puff at a time.)
- Increase by 2 puffs every 2 minutes up to 10 puffs according to response
- Assess response and repeat if necessary
- Give stat dose soluble prednisolone 10mg

Good response
- Reassess within 1 hour
- Subtle or no use of accessory muscles
- Minimum wheeze
- Sats >92% in air

Poor Response
Reconsider diagnosis or severe & life threatening episode

Severe
- Previous attack within last 2 weeks
- Too breathless to feed or talk
- Marked use of accessory muscles and wheeze
- Sats< 92 % in air

<1 yr:
- RR >40/min HR>170/min

1- 2yrs:
- RR >35/min HR >110/min

- Call 999
- Give high flow oxygen via fitted mask aim for Sats 94-98%
- Give nebulised Salbutamol 2.5mg (using 6L-8L oxygen)
- Reassess and repeat at 20-30 minute intervals or as necessary
- Give stat dose soluble Prednisolone 10mg
- Consider nebulised Ipratropium Bromide 250mcg (using 6L-8L oxygen). Repeat every 20-30 minutes

Life Threatening
- Sats <92% in air plus any of the following:
- Silent chest
- Poor respiratory effort
- Exhausted and unresponsive
- Coma/agitation
- Cyanosis
- Bradycardia
- Apnoea
- Respiratory arrest

- Commence resuscitation
- Call 999
- Give high flow Oxygen via fitted mask
- Give **back to back** nebulised Salbutamol 2.5mg (using 6L-8L oxygen)
- Give stat dose soluble Prednisolone 10mg
- Give nebulised Ipratropium Bromide 250mcg (using 6L-8L oxygen). Repeat every 20-30 minutes

Ensure a health professional stays with child
Contact duty paediatric registrar or consultant to arrange admission

Ambulance transfer pathway
Continue to administer oxygen driven nebulised salbutamol if symptoms are severe whilst transferring the child to the emergency department

Discharge from hospital and GP

Patient must be stable have minimal recession with Sats >92% and manage 3-4 hourly between doses of inhaler

- Discharge on salbutamol 2-10 puffs up to 4 hourly via spacer + facemask
- Complete a 3 day course of Prednisolone 10mg or 2mg/kg/dose
- Give acute asthma management plan
- Check inhaler technique and regular medication
- Review overall asthma control and consider need to step up medication

Arrange a review at GP practice within 48 hours and give advice on re-accessing medical care if condition worsens e.g. OOH service (or open access to Children's Assessment unit if an option.)

Full Respiratory assessment in 7-14 days in primary care

THINK TTT –
consider compliance with existing **Therapy**, Inhaler **Technique** and **Triggers** before stepping up treatment

Ref: The British Thoracic Society (BTS) and SIGN Guideline on the Management of Asthma (Revised Jan 2012) and thanks to The Suffolk Respiratory Pathway Group
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