Acute Asthma / Wheeze Pathway (not for Bronchiolitis)

Clinical Assessment / Management Tool for Children & Young People Older than 1 year old with Acute Wheeze

Management – Primary Care and Community Setting

Patient >1 yr with wheeze presents:

ASSESSMENT	Low Risk MILD - GREEN	Intermediate Risk MODERATE - AMBER	High Risk SEVERE - RED	IMMEDIATELY LIFE-THREATENING - PURPLE
Behaviour	Alert; No increased work of breathing	Alert; Some increased work of breathing	May be agitated; Unable to talk freely or feed	Can only speak in single words; Confusion or drowsy; Coma
O2 Sat in air	≥ 95%; Pink	≥ 92%; Pink	< 92%; Pale	< 92%; Cyanosis; Grey
Heart Rate	Normal	Normal	Under 5yr >140/min Over 5 yr >125/min	Under 5yr >140/min Over 5 yr >125/min Maybe bradycardic
Respiratory Peak Flow □ (only for children > 6yrs with established technique)	Normal Respiratory rate Normal Respiratory effort PEFR >75% l/min best/predicted	Under 5 yr <40 breaths/min Over 5 yr <30 breaths/min **Mild** Respiratory distress: mild recession and some accessory muscle use PEFR 50-75% l/min best/predicted	Under 5 yr >40 breaths/min Over 5 yr >30 breaths/min **Moderate** Respiratory distress: moderate recession & clear accessory muscle use PEFR <50% l/min best/predicted	**Severe** Respiratory distress Poor respiratory effort: Silent chest Marked use of accessory muscles and recession PEFR <33% l/min best/predicted or too breathless to do PEFR

Normal Values	
Respiratory Rate at rest [b/min]	
1-2yrs	25-35
>2-5 yrs	25-30
>5-12 yrs	20-25
>12 yrs	15-20
Heart Rate [bpm]	
1-2yrs	100-150
>2-5 yrs	95-140
>5-12 yrs	80-125
>12 yrs	60-100

Ref: Advanced Paediatric Life Support 5th Edition. Life Advance Support group edited by Martin Samuels; Susan Wieteska Wiley Blackwell/2011 BMJ Books

***avoid oral steroids in episodic wheezers (wheezers only with colds). Oral steroids play a role in treating acute exacerbations in multiple trigger wheezers (asthma, eczema, allergies)**

Consider other diagnoses:

- Cough without a wheeze
- foreign body
- croup
- bronchiolitis

HOME

FOLLOWING ANY ACUTE EPISODE, THINK:

1. Asthma / wheeze education and inhaler technique
2. Written Asthma/Wheeze action plan
3. Early review by GP / Practice Nurse –

GREEN ACTION

Salbutamol 2-4 'puffs' via inhaler & spacer (check inhaler technique) - use higher dose if Tx started by parent as per asthma action plan.

Advise – Person prescribing ensure it is given properly

- Continue Salbutamol 4 hourly as per instructions on safety netting document.

Provide:

- Appropriate and clear guidance should be given to the patient/carer in the form of an Acute exacerbation of Asthma/Wheeze safety netting sheet.
- If exacerbation of asthma, ensure they have a personal asthma plan.
- Confirm they are comfortable with the decisions / advice given and then think "Safeguarding" before sending home.
- Consider referral to acute paediatric community nursing team if available

AMBER ACTION

Salbutamol (check inhaler technique) x **10 'puffs'** via inhaler and spacer

- Reassess after 20 – 30 minutes
- Oral Prednisolone within 1 hour for 3 days **if known asthmatic**

<2 years - avoid steroids if episodic wheeze. 10mg/day if multiple trigger wheezer.*
2-5 years 20 mg/day
Over 5 years 30-40 mg/day

IMPROVEMENT?
Lower threshold for referral to hospital if concerns about social circumstances/ability to cope at home or if previous severe/life threatening asthma attack

YES

Follow Amber Action if:

- Relief not lasting 4 hours
- Symptoms worsen or treatment is becoming less effective

NO

URGENT ACTION

Refer immediately to emergency care by 999

Alert Paediatrician

- **Oxygen to maintain O_2 Sat > 94%, using paediatric nasal cannula if available**
- **Salbutamol 100 mcg x 10 'puffs' via inhaler & spacer**

OR Salbutamol 2.5 – 5 mg Nebulised

- Repeat every 20 minutes whilst awaiting transfer
- If not responding add Ipratropium 20mcg/dose - 8 puffs or 250 micrograms/dose nebulised mixed with the salbutamol.
- Oral Prednisolone start immediately: 2-5 years 20 mg/day Over 5 years 30-40 mg/day
- Paramedics to give nebulised Salbutamol, driven by O_2, according to protocol
- Stabilise child for transfer and stay with child whilst waiting
- Send relevant documentation

ACTION IF LIFE THREATENING

Repeat Salbutamol 2.5 - 5 mg via Oxygen-driven nebuliser whilst arranging immediate hospital admission - 999

Hospital Emergency Department / Paediatric Unit

First Draft Version: Oct 2011 • Final Version: May 2016 • Review Date: May 2018

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Management – Primary Care and Community Setting

Glossary of Terms	
ABC	Airways, Breathing, Circulation
APLS	Advanced Paediatric Life Support
AVPU	Alert Voice Pain Unresponsive
B/P	Blood Pressure
CPD	Continuous Professional Development
CRT	Capillary Refill Time
ED	Hospital Emergency Department
GCS	Glasgow Coma Scale
HR	Heart Rate
MOI	Mechanism of Injury
PEWS	Paediatric Early Warning Score
RR	Respiratory Rate
WBC	White Blood Cell Count