Acute Asthma / Wheeze Pathway (not for Bronchiolitis)

May 2015 Refreshed

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

NHS South East Coast Strategic Clinical Networks Children and Young People

Management – Primary Care and Community Setting

Patient >1 yr with wheeze presents:

Consider other diagnoses:
- Cough without a wheeze
- foreign body
- croup
- bronchiolitis

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	≥ 92%; 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

GREEN ACTION

First Steps
Salbutamol 100 mcg x **2-6 'puffs'** via inhaler & spacer

Advise – Person prescribing ensure it is given properly
- Continue 4 – 6 hourly Salbutamol 100 mcg x 2- 6 'puffs' while symptoms persist

Provide:
- Appropriate and clear guidance should be given to the patient/ carer in the form of a Personal Asthma/Wheeze Action Plan (see image);
- Confirm they are comfortable with the decisions / advice given and then think "Safeguarding" before sending home.
- The Personal Asthma/Wheeze Action Plan & follow-up appointment are most important.

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 – consider compliance

AMBER ACTION

First Steps
Salbutamol 100 mcgs x **10 'puffs'** via inhaler and spacer
- Reassess after 20 – 30 minutes
- Oral Prednisolone within 1 hour for 3 days **if known asthmatic**

2-5 years 20 mg/day
Over 5 years 30-40 mg/day

IMPROVEMENT?

YES

Follow Amber Action if:
- Relief not lasting 4 hours
- Symptoms worsen or treatment is becoming less effective

URGENT ACTION

NO

Refer immediately to emergency care by 999

Alert Paediatrician-On-Call*
- **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
- 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

If cardio-respiratory arrest – start CPR

***Paediatric Emergency Dept. Tel Nos. overleaf**

Hospital Emergency Department / Paediatric Unit

*To calculate Predicted Peak Flow–measure the child's height and then go to www.peakflow.com

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Supporting Information

Where can I learn more about paediatric assessment?

We also recommend signing up to the online and interactive learning tool Spotting the Sick Child. It is free of charge. It was commissioned by the Department of Health to support health professionals in the assessment of the acutely sick child. It is also CPD certified.

www.spottingthesickchild.com

*GP / Clinician Priority Phonelines / Contact Numbers at Local Hospitals

Surrey and Sussex Area Hospitals

Ashford and St Peter's Hospital NHS Foundation Trust, Chertsey
01932 872000

Brighton and Sussex University Hospitals NHS Trust Royal Alexandra Hospital, Brighton
01273 523230

East Sussex Healthcare NHS Trust Conquest Hospital, Hastings
01424 755255

Eastbourne District General Hospital **01323 417400**

Frimley Park Hospital NHS Foundation Trust, Camberley
01276 604604 Bleep 100

Royal Surrey County Hospital NHS Foundation Trust, Guildford
01483 571122

Surrey and Sussex Healthcare NHS Trust East Surrey Hospital, Redhill
01737 231807

Western Sussex Hospitals NHS Trust St Richards Hospital, Chichester
01243 536180/1 Worthing Hospital **01903 285060**

Kent and Medway Area Hospitals

Dartford and Gravesham NHS Trust Darent Valley Hospital / Queen Marys Hospital Sidcup / Erith and District Hospital
01322 428100 Bleep 316
(same number applies to both hospital sites)

East Kent Hospitals NHS Trust
Queen Elizabeth The Queen Mother Hospital, Margate / William Harvey Hospital, Ashford
01227 783190
(same number applies to both hospital sites)

Maidstone and Tonbridge Wells NHS Trust
01622 723011

Medway Maritime Hospital, Gillingham
01634 825000

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This pathway has been peer reviewed by Dr Mark Levy, Clinical Lead for the National Review of Asthma Deaths (NRAD) and in collaboration with "The National Paediatric Asthma Initiative".

Based on: British Thoracic Society (BTS) / Scottish Intercollegiate Guidelines Network (SIGN) – Guideline 141 - British Guideline on the Management of Asthma (May 2008 Revised October 2014) http://www.sign.ac.uk/guidelines/fulltext/141/index.html; NICE Quality Standard for Asthma QS25 February 2013; Why Asthma Still Kills? The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. Healthcare Quality Improvement Partnership / Royal College of Physicians (RCP) May 2014.

'Every 10 seconds someone has a potentially life threatening Asthma attack (Asthma UK)'

NHS
South East Coast Strategic Clinical Networks
Children and Young People

Dear Colleague,

I would like to introduce you to the **Acute Asthma / Wheeze Pathway (not for Bronchiolitis) - Clinical Assessment / Management Tool for Children Over 1 year old – Primary Care and Community Settings**. This is one of a series of urgent care pathways developed by the Children and Young People's Network for the most common conditions requiring primary and / or acute care.

The local clinical groups who played such an important role in creating these tools, starting from 2010, have included representatives from acute, community and primary care as well as parents, education and social care. In particular we would also like to thank Paediatrics and Emergency Medicine colleagues for their support in finalising these versions for circulation.

The professionals were all working towards four main objectives:

- To promote **evidence-based** assessment and management of unwell children and young people. The pathway tools aim to ensure that accurate and prompt advice is available to assist health professionals to make safe decisions that can be taken quickly
- To build **consistency** across the Network area, so all healthcare professionals understand the pathway and can assess, manage and support children, young people and their families during the episode, to the same high standards, regardless of where they present
- To support local healthcare professionals to share **learning** and expertise across organisations in order to drive **continuous development** of high quality care
- To build the **confidence/resilience** of parents to manage their child's illness which should be increased with the consistent advice offered for unwell children and young people accessing all local NHS services in an emergency or urgent scenario.

This pathway is comprised of three elements: parental advice, a pathway for use in primary care and community settings and a pathway for use in acute (hospital) settings. Each part has been designed to be compatible with existing pathways in the acute sector and should be particularly valuable for use in Hospital Emergency Departments and primary care settings.

It is an expectation that these pathways will not only provide a guide for clinicians faced with an unwell child, but will also be used in training and disseminated across all relevant departments and team-members.

We hope you will find this a quality tool to be used within your practice. We look forward to hearing back on how the consistency of assessment and management of these children and the overall quality of practice and patient experience has been improved with this relatively simple but whole system initiative.

To feedback or for further information including how to obtain more copies of this document we have one mailbox for these queries on behalf of the South East Coast Strategic Clinical Networks area (Kent, Surrey and Sussex). Please email: CWSCCG.cypSECpathways@nhs.net

May we commend it to your use.

Yours sincerely

The Network

Glossary of Terms and Abbreviations

CPD Continuous Professional Development
O_2 Sat in Air Oxygen Saturation in Air