

Paediatric Clinical Assessment Tools For Croup



Purpose of this Guideline

This Guideline is intended to act as a quick reference guide to some of the most common medical conditions for unscheduled healthcare attendances in children and young people (ages 0-16), which are: respiratory tract infections (croup/ bronchiolitis), asthma, fever, gastroenteritis and abdominal pain. It is aimed to assist primary care professionals when treating children and guide appropriate escalation. Parent / Carer information leaflets are included.

Clinicians are expected to take this guideline fully into account when exercising their clinical judgement. The guidance does not, however, override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient or carer.

When you feel a GP review in a specific time period is clinically appropriate, but falls outside of the 'in hours' GP service, please advise your patient/family to call NHS 111 (at an agreed time interval/ level of deterioration depending on your concerns) and advise that there is a 'predetermined plan to speak with an Out of Hours GP'.

Please provide your patient/family with a letter detailing your clinical findings and concerns to help the Out of Hours GP. The patient should also be given the appropriate Parent / Carer information leaflets.

The clinical assessment tools were arrived at after careful consideration of the evidence available including, but not exclusively SIGN, NICE Guidelines, Birmingham Children's Hospital guidelines, existing Birmingham Children's Hospital Information Leaflets, EBM date and NHS Evidence.

With thanks to the team at Gloucestershire CCG who produced the original Big 6 Pathways, on which this guideline is based.

Normal Values

Normal values at different ages (APLS, Edition 5)

Age of child (years)	Under 1	1–2	2–5	5–12	Over 12
Respiratory rate	30–40	25–35	25–30	20–25	15–20
Heart rate	110–160	100–150	95–140	80–120	60–100
Systolic blood pressure	80–90	85–95	85–100	90–110	100–120

Calculations for commonly used emergency drugs (APLS, Edition 5)

	Formula	Maximum dose
Weight (kg)	Child 0–12 months Weight = $(0.5 \times \text{age in months}) + 4$	
	Child 1–5 years Weight = $(2 \times \text{age in years}) + 8$	
	Child 6–12 years Weight = $(3 \times \text{age in years}) + 7$	
Energy (J)	4 J/kg	150–200 J biphasic for first shock 150–360 J biphasic for subsequent shocks
Tube size	Pre-term babies 2.5 mm tube Babies usually 3 or 3.5 mm tube Children >1 year Tube size = $(\text{age in years}/4) + 4$	
Fluid Bolus (IV or IO)	20 mL/kg of 0.9% saline Exceptions: Trauma/DKA/cardiac problems use 10 mL/kg of 0.9% saline	500 mL of 0.9% saline in trauma/ DKA/cardiac problems 1000 mL of 0.9% saline
Lorazepam	100 micrograms/kg (IV or IO)	Max single dose 4 mg
Adrenaline (IV or IO)	10 micrograms/kg (0.1 mL/kg of 1:10,000 strength)	Max single dose 1 mg
Glucose 10% (IV or IO)	2–5 mL/kg of 10% dextrose	150–160 mL of 10% dextrose single bolus

UK immunisation schedule

Age of child (months)	Rota virus (oral vaccine)	Diphtheria and tetanus	Pertussus	Polio	Hib	PCV	MenC	MMR	HPV	No. of injections
2 months	✓	✓	✓	✓	✓	✓				2
3 months	✓	✓	✓	✓	✓		✓			2
4 months		✓	✓	✓	✓	✓	✓			3
12 months					✓		✓			1

Neonatal Fluid Requirements

Age	Total volume of fluid required per day (mL/kg)
Day 1	60
Day 2	90
Day 3	120
Day 4 to 28	150

Clinical Assessment Tool

Suspected Croup in child 3 months - 6 years

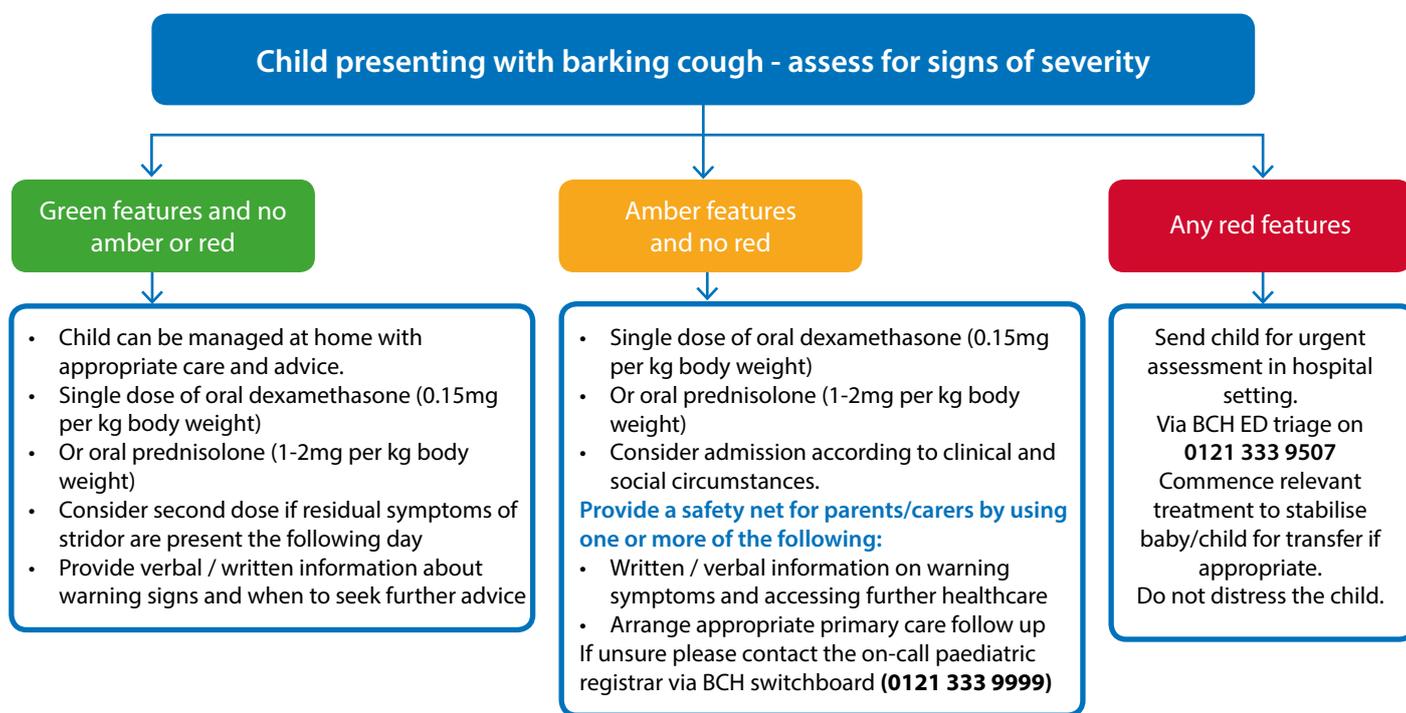


Table 1: Traffic light system for identifying severity of illness

	Green - low risk	Amber - intermediate risk	Red - High Risk
Colour and Activity	<ul style="list-style-type: none"> Normal Child Alert 	<ul style="list-style-type: none"> Quieter than normal 	<ul style="list-style-type: none"> Pale Lethargy Distress / agitation
Respiratory	Respiratory rate <ul style="list-style-type: none"> Under 12 months: less than 50 breaths/minute Over 12 months: less than 40 breaths/minute Sats 95% or above	Respiratory rate <ul style="list-style-type: none"> Under 12 months: 50-60 breaths/minute Over 12 months: 40-60 breaths/minute Sats 92-94%	Respiratory rate <ul style="list-style-type: none"> over 60 (all ages) Sats less than 92%
Cough	Occasional barking cough No Stridor	Frequent barking cough and stridor	Struggling with persistent cough
Chest recession	NO chest recession	Subcostal and retrosternal recession	Marked subcostal and retrosternal recession
Circulation and Hydration	CRT less than 2 seconds	CRT 2-4 seconds	CRT more than 4 seconds
		<ul style="list-style-type: none"> Poor response to initial treatment Reduced fluid intake Uncertain diagnosis Significant parental anxiety, late evening/night presentation. No access to transport or long way from hospital 	

Refer to page 1 for normal values

CRT - Capillary refill time

Sats - Saturations In Air

Information for Parents / Carers:

Caring for your child with croup



What are the symptoms of Croup?

- Croup starts with a mild fever and runny nose.
- Dry cough often described as 'barking like a seal'.
- Noisy breathing when breathing in (known as stridor).
- Hoarseness of voice
- Restless and irritable
- When breathing in, pulling in of the muscles between ribs and around the neck.
- Difficulty swallowing or drooling (in severe cases)

Symptoms may be worse at night.

How can I help my child?

- Try and stay calm for your child – anxiety could affect your child's breathing. A small child may become distressed with croup, crying can make things worse.
- Allow your child to stay in the position they prefer. Sit your child upright if breathing is noisy or difficult. Do not make your child lie down if they do not want to.
- If your child has a temperature, give them the medicine that you would normally use to lower their temperature, following the instructions on the bottle or as advised by the chemist.
- Your child may be reluctant to eat, so encourage them to have plenty of clear cool drinks. Do not make your child drink if they do not want to.
- A cool environment may help, such as taking your child outside.
- If your child is having difficulty breathing, swallowing or is drooling a doctor should see them immediately.

Croup Advice Guide:

How is your child?

 <p>Red</p>	<ul style="list-style-type: none">• Blue lips• Unresponsive and very irritable• Finding it difficult to breathe• Pauses in breathing or irregular breathing pattern	<p>You need urgent help Please phone 999 or go to the nearest Accident and Emergency</p>
 <p>Amber</p>	<ul style="list-style-type: none">• Not improving with treatment• Breathing more noisy• Breathing is more laboured• Your baby's temperature is above 39°C• Drooling	<p>You need to contact a doctor or nurse today Please ring your GP surgery or call NHS 111 - dial 111</p>
 <p>Green</p>	<ul style="list-style-type: none">• If none of the above factors are present	<p>Self care Using the advice in this guide you can provide the care your child needs at home</p>

Name of Child

Age Date/Time advice given

Further advice / Follow up

.....

.....

.....

.....

Name of professional

Signature of professional

Some Useful Phone Numbers

GP Surgery (make a note of the number here)

.....

NHS 111 - Dial 111
(available 24hrs - 7 days a week)

GP Out of Hours Service - appointments booked via NHS 111
(Open from 6:30pm - 8:30am, 7 days a week)

For online advice:
NHS Choices www.nhs.uk
(available 24hrs - 7 days a week)

Urgent Care Centre

Warren Farm Urgent Care Centre

Warren Farm Road, Birmingham, West Midlands, B44 0PU
8.00am-8.00pm

Erdington Health and Wellbeing Walk In Centre

196 High Street, 1st Floor, Erdington, Birmingham, B23 6SJ
8.00am-8.00pm

Washwood Heath Urgent Care Centre

Clodeshall Road, Washwood Heath, Birmingham, West Midlands, B8 3SN
9.00am-9.00pm

The Hill Urgent Care Centre

Sparkhill Primary Care Centre, 856 Stratford Road,
Sparkhill, Birmingham, B11 4BW
8.00am-8.00pm

South Birmingham GP Walk In Centre

0121 415 2095

15 Katie Road, Selly Oak, Birmingham, B29 6JG.

8.00am-8.00pm

Birmingham NHS Walk In Centre

0121 255 4500

Lower Ground Floor, Boots The Chemists Ltd,
66 High Street, Birmingham, West Midlands, B4 7TA

Mon-Fri: 8.00am – 7.00pm (last patient seen at 6:30pm)

Sat: 9.00am – 6.00pm (last patient seen at 5:30pm)

Sun: 1.00am – 4.00pm (last patient seen at 3:30pm)

Solihull UCC

Solihull Hospital, Lode Lane, Solihull, B91 2JL

8.00am-8.00pm

Summerfield GP and Urgent Care Centre

Summerfield Primary Care Centre, 134 Heath Street,
Winson Green, Birmingham, B18 7AL.

8.00am-8.00pm

If you require an interpreter, inform the member of staff you are speaking with.

Data Protection

Looking after and sharing information about your child

We have a duty of care to help patients and families understand how information about them is kept and shared and we include the following information in all our patient leaflets:

Information is collected about your child relevant to their diagnosis, treatment and care. We store it in written records and electronically on computer. As a necessary part of that care and treatment we may have to share some of your information with other people and organisations who are either responsible or directly involved in your child's care. This may involve taking your child's information off site. We may also have to share some of your information for other purposes, such as research etc. Any information that is shared in this way will not identify your child unless we have your consent. If you have any questions and/or do not want us to share that information with others, please talk to the people looking after your child or contact PALS (Patient Advice and Liaison Service) on 0121 333 8403.

Birmingham Children's Hospital NHS Foundation Trust

Steelhouse Lane Birmingham B4 6NH

Telephone 0121 333 9999

Fax: 0121 333 9998

Website: www.bch.nhs.uk

© CPADS 53491/16
Produced: Oct 2016
Review Date: Oct 2020
Version 1.0.0

