NHS
Bristol, North Somerset and South Gloucestershire
Clinical Commissioning Group

Common Childhood Presentations to Urgent Care: A Guide for Primary Care Professionals

This guide has been produced for primary care professionals in the Bristol, North Somerset & South Gloucester (BNSSG) area and is designed to complement existing clinical guidelines available to GPs via Remedy.

The aim of this guide is to provide the headline clinical assessment priorities for children presenting with the most common **urgent care** presentations. It is not exhaustive and clinicians should also familiarise themselves with full clinical guidelines for each condition.

The most common urgent care presentations are:

1) Abdominal pain
2) Asthma & wheeze
3) Bronchiolitis
4) Croup
5) Fever & minor infections
6) Gastroenteritis
7) Head injury

Normal values for infants and children					
Age	<6 months	6 months	1 year	2 years	5 years
Heart rate	110-180	120-160	100-150	95-140	80-120
Respiratory rate	30-60	30-50	20-40	20-30	20-25

Shaping better health

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Abdominal pain

Key points:

1) The key diagnostic distinction that needs to be made with acute abdominal pain is between surgical and non-surgical causes. When a surgical cause is considered likely the child should be discussed directly with the paediatric surgery team via the UHBW switchboard on 0117 9230000. If there is uncertainty, the case can be discussed with the Children's Emergency Department (CED) team on 0117 3428666.

2) Non-specific abdominal pain is very common but is a diagnosis of exclusion and this diagnosis should only be made once serious pathology has been considered.

3) Symptoms in neonates and younger infants are often erroneously attributed to abdominal pain by parents. A thorough examination and consideration of a broad range of differential diagnoses is required in this age range.

4) Repeated examination is useful to assess for the persistence or evolution of signs and response to treatment.

5) Analgesia should be given and does not mask potentially serious causes of pain.

6) Investigation should be guided by the clinical assessment – most children do not require further investigation.

7) True bilious vomiting is dark green and warrants urgent surgical referral.

Common and *time critical* causes of abdominal pain in children:

Neonates	Infants and younger children	Adolescents
Hirschprung enterocolitis	*Abdominal trauma*	Appendicitis
Incarcerated hernia	Appendicitis	*Abdominal trauma*
Intussusception	Constipation	Cholecystitis/
Necrotising enterocolitis	Gastroenteritis	Cholelithiasis
Volvulus	*Incarcerated hernia*	Constipation
	Intussusception	*Ectopic pregnancy*
	Meckel diverticulum	Gastroenteritis
	Mesenteric adenitis	Inflammatory bowel disease
	Ovarian torsion	*Ovarian cyst – torsion/rupture*
	Pyloric stenosis	Pancreatitis
	Testicular torsion	Pelvic Inflammatory Disease
	Volvulus	Renal calculi
		Testicular torsion

Non-abdominal causes of abdominal pain:

1) DKA (including as a new presentation of diabetes)
2) Migraine
3) Henoch Schonlein Purpura
4) Hip pathology
5) Pneumonia
6) Psychological factors
7) Sepsis
8) Sexually transmitted infection
9) Sickle cell disease
10) Toxin exposure or overdose
11) UTI/pyelonephritis

Click this link to access guidance about the assessment of chronic abdominal pain

Asthma & wheeze

Key points:

1) Acute wheeze can have a number of different causes including asthma, viral infections, pneumonia, inhaled foreign bodies, gastro-oesophageal reflux and cardiac failure.

2) Acute wheeze with viral infections is very common in pre-school children and can be severe. These wheezing episodes are often different from those in older children with asthma. They are usually due to viral infections alone and they often respond differently (or not at all) to ß2 agonists. The evidence for the use of steroids in children with preschool wheeze is not robust and frequent courses have significant side effects. Steroids are unlikely to be beneficial in children <5 years if they have saturations >92% and only mild respiratory distress.

3) Wheeze in infants (<12 months) is usually associated with bronchiolitis and should be managed accordingly.

Assessment of acute wheeze/asthma:

Severity	Signs
Mild-Moderate	• Normal mental state • Able to talk in sentences • SpO_2 ≥92% in air • PEF ≥ 50% best or predicted • Respiratory rate ≤ 40/min (1-5 years) ≤ 30/min (> 5 years) • Heart Rate ≤140 (1-5 years) ≤125/min (>5 years)

Severe*	• Agitated/distressed
	• Marked accessory muscle use
	• Unable to complete sentences in one breath
	• Too breathless to feed
	• SpO_2 <92% in air
	• PEF 33-50% best or predicted
	• Tachycardia
	  ○ Heart Rate >140 (1-5 years)
	  ○ Heart Rate >125 (>5 years)
	• Tachypnoea
	  ○ Respiratory Rate >40 (1-5 years)
	  ○ Respiratory Rate >30 (>5 years)

Life Threatening*	Any one of the following in a child with severe asthma: • SpO_2 <92% in air • Marked tachycardia • Maximal accessory muscle use/recession • Exhaustion with poor respiratory effort • Unable to talk • Silent chest • Cyanosis • Confusion / Coma • Hypotension ***Wheeze is a poor predictor of severity***

***Children with severe or life-threatening wheeze/asthma should be treated with salbutamol nebulisers and prednisolone (if possible) whilst arranging emergency transfer to CED. Call the CED team on 0117 3428666 for guidance on acute management whilst awaiting an ambulance.**

In children with mild-moderate wheeze/asthma give up to 10 puffs of Salbutamol by MDI + spacer & assess response (in < 5 years: 5-10 puffs, 1 puff per minute)

- If there is a good response to treatment:
    - Discharge home with β_2 agonist
    - **Consider** 3 day course of once daily prednisolone *(see notes on preschool wheeze above)*
    - Provide a written wheeze discharge plan

- If there is a poor response refer to CED on 0117 3428666

Click this link to access guidance about Asthma & wheeze

Bronchiolitis

Key points:

1) Bronchiolitis is a clinical diagnosis usually made in infants less than 12 months. A characteristic history and examination includes cough and coryzal symptoms with widespread inspiratory crackles and expiratory wheeze.

2) Mild bronchiolitis can usually be managed in the community. Clinical features of mild bronchiolitis are listed below. Infants with more severe features should be referred to CED (0117 3428666).
    - Alert and normal behaviour
    - Warm and well perfused with a CRT <2 secs and normal colour
    - Moist mucus membranes and no signs of dehydration
    - Respiratory rate <60 in infants <12 months (<40 in older children)
    - Sats 94% or above
    - None or mild chest recession with no nasal flaring or grunting
    - Feeding >50% of normal

3) A lower threshold for referral to CED is required in infants with the following:
    - Pre-existing lung disease, congenital heart disease, neuromuscular weakness, immunocompromised
    - Age <6 weeks (corrected)
    - Prematurity
    - Duration of illness <3 days
    - Concern regarding parental inability to recognise deterioration

4) There is no place for β_2 agonists or steroids in the treatment of bronchiolitis

Click this link to access guidance about Bronchiolitis

Croup

Key points:

1) Croup is a clinical syndrome resulting from upper airway inflammation. It is a clinical diagnosis characterised by a barking cough, inspiratory stridor and a hoarse voice. A moderate fever may be present. It is usually viral in cause (80% parainfluenza virus).

2) The usual age range for croup is 6 months to 6 years with a peak incidence at 2 years of age.

3) It is important to consider differential diagnoses such as:
    - Foreign body inhalation
    - Epiglottitis – rapid onset, toxic looking child with high temperatures and drooling
    - Anaphylaxis
    - Laryngomalacia
    - Peritonsillar abscess (quinsy)

4) Mild croup can be managed in the community. Symptoms of mild croup are listed below. Children with more severe features should be referred to CED (0117 3428666).
    - Alert and normal behaviour
    - Warm and well perfused with a CRT <2 secs and normal colour
    - Respiratory rate <60 in infants <12 months (<40 in older children)
    - No stridor when calm and occasional barking cough

5) In mild croup consider a single dose of dexamethasone (0.15mg/kg). Not all pharmacies keep in stock. If likely to be a delay in issuing then give oral prednisolone 1-2mg/kg - a repeat dose may be required at 12 hours.

6) Children with persistent stridor and/or subcostal or sternal recession should be referred to CED (0117 3428666). If possible administer a dose of dexamethasone (0.15mg/kg) or prednisolone (1-2mg/kg).

Click this link to access guidance about Croup

Fever & mild infections

Key points:

1) In infants <4 weeks measure body temperature with an electronic thermometer in the axilla. An infra-red tympanic thermometer can be used in children >4 weeks.

2) In infants under 3 months:
   - **Any fever of ≥38°C requires referral to CED (0117 3428666).** The only exceptions are clinically well infants who have developed a temperature within 12 hours of vaccinations (not the rota virus vaccine).
   - Take any parental report of fever seriously, even if not measured by a medical professional.
   - When a child has been given antipyretics, do not rely on a decrease or lack of decrease in temperature to differentiate between serious and non-serious illness.
   - Beware that classic signs of meningitis are often absent in infants with bacterial meningitis.
   - Children with evidence of meningitis or sepsis should be treated with IM benzylpenicillin (300 mg). If there is clinical uncertainty discuss the case with CED (0117 342 8666).

3) In children 3 months – 5 years:
   - Take any parental report of fever seriously, even if not measured by a medical professional.
   - Do not use a reduction in temperature after antipyretics to differentiate between serious and non- serious illness.
   - Beware that classic signs of meningitis are often absent in infants with bacterial meningitis.

	Green – low risk Can be managed in the community*	Amber – intermediate risk Should be discussed with CED (0117 3428666)*	Red – high risk Should be urgently transferred to CED
Colour	• Normal colour	• Pallor reported by parent/carer	• Pale/mottled/ashen/blue
Activity	• Responds normally to social cues	• Not responding normally to social cues • No smile • Wakes only with prolonged stimulation • Decreased activity	• No response to social cues • Appears ill to a healthcare professional • Does not wake or if roused does not stay awake • Weak, high pitched cry or continuous cry
Respiratory		• Nasal flaring • Tachypnoea (RR >50/min in 6-12 month olds or >40 in >12 month olds) • Oxygen saturations ≤95% in air • Crackles in the chest	• Grunting • Tachypnoea (RR >60/min) • Moderate or severe chest indrawing
Circulation	• Normal skin and eyes • Moist mucous membranes	• Tachycardia (>160/min in <12 months, >150/min in 12–24 months, >140/min in 2-5 years • CRT ≥3 secs • Dry mucous membranes • Poor feeding in infants • Reduced urine output	• Reduced skin turgor
Other	None of the amber or red symptoms and signs	• Age 3 – 6 months, temp ≥39ºC • Fever for ≥5 days • Rigors • Swelling of a limb or joint • Non-weight bearing limb/not using an extremity	• Age <3 months, temperature ≥38ºC • Non-blanching rash • Bulging fontanelle • Neck stiffness • Status epilepticus • Focal neurological signs • Focal seizures

*** Infants < 3 months old any fever of ≥38°C requires referral to CED (0117 3428666).** The only exceptions are clinically well infants who have developed a temperature within 12 hours of vaccinations (not the rota virus vaccine).

Click this link to access ED guidance about fever in infants <3 months, fever in children 3 months to 5 years

Gastroenteritis

Key points:

1) Gastroenteritis is defined as diarrhoea +/- vomiting +/- abdominal pain.

2) Children with just vomiting or pain without diarrhoea should be assessed for other causes before a diagnosis of gastroenteritis is made.

3) There should be a lower threshold for discussing cases with CED (0117 3428666) if there are significant comorbidities.

4) The following features should prompt careful consideration of alternative differential diagnoses:
    - Severe abdominal pain or abdominal signs
    - Persistent diarrhoea (>10 days)
    - Blood in stool
    - Bilious (green) vomit - should all be referred for assessment in CED (0117 3428666)
    - Persistent vomiting without diarrhoea

5) In most children with gastroenteritis no investigations are required. Faecal samples may be collected for bacterial culture if the child has significant associated abdominal pain or blood in the faeces, as a bacterial cause of gastroenteritis is more likely. However, these results usually don't alter treatment.

6) Oral rehydration is the mainstay of gastroenteritis management either with oral rehydration solutions (e.g. dioralyte) or apple juice mixed 1:1 with water. Drinking small quantities frequently should be encouraged.

No significant dehydration	5% dehydration	10% dehydration
Can be managed in the community	Should be discussed with CED (0117 3428666)	Should be urgently transferred to CED
Symptoms: • Appears well • Alert and responsive • Normal urine output • Skin colour unchanged • Warm extremities	**Symptoms**: • Appears to be unwell or deteriorating • Altered responsiveness (e.g. irritable, lethargic) • Significantly reduced urine output • Skin colour unchanged • Warm extremities	**Symptoms**: • Decreased consciousness level • Pale or mottled skin • Cold extremities
Signs: • Alert and responsive • Skin colour unchanged • Warm extremities • Eyes not sunken • Moist mucus membranes • Normal HR • Normal breathing pattern • Normal peripheral pulses • Normal CRT • Normal skin turgor • Normal BP	**Signs**: • Altered responsiveness (e.g. irritable, lethargic) • Skin colour unchanged • Warm extremities • Sunken eyes • Dry mucus membranes (except for 'mouth breather') • Tachycardia • Tachypnoea • Normal peripheral pulses • Normal CRT • Reduced skin turgor • Normal BP	**Signs**: • Decreased level of consciousness • Pale or mottled skin • Cold extremities • Tachycardia • Tachypnoea • Waek peripheral pulses • Prolonged CRT • Hypotension

Click this link to access ED guidance about gastroenteritis

Head injury

Key points:

1) Grading of head injuries
    - **Minimal head injury:** low mechanism injury (e.g. ground level falls or walking/running into stationary objects), with no signs or symptoms of head injury other than scalp abrasions and lacerations. These can be managed in the community. A head injury information leaflet should be provided.
    - **Mild head injury:** features include witnessed loss of consciousness, definite amnesia, witnessed disorientation/confusion, or vomiting in a patient with a Glasgow Coma Score (GCS) of 13-15. These should all be referred to CED for assessment (0117 3428666).
    - **Moderate head injury:** features of intracranial injury, with GCS of 9-12 at any point. These all require emergency transfer to CED.

2) Symptoms and signs of a potential intracranial injury include:
    - GCS <15
    - Drowsiness
    - Lethargy
    - Irritability
    - Headache
    - Vomiting
    - Behavioural change
    - Lateralising neurology (including false lateralising signs)

3) All children with a bleeding tendency (congenital or acquired) should be referred to CED (0117 3428666) for assessment.

Click this link to access guidance about Childhood Head Injury Assessment And Management