



Management - Acute Setting

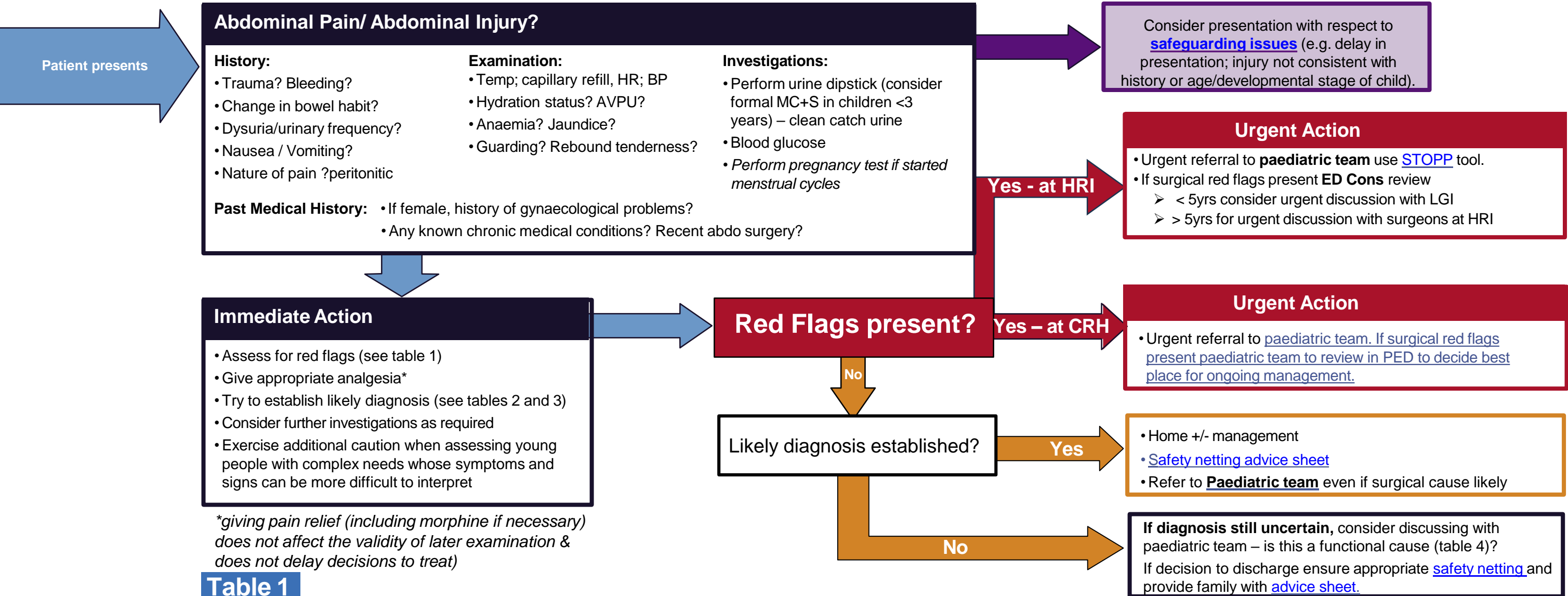


Table 1

Medical Red Flags	Surgical Red Flags	Red Flags (medical or surgical)
<ul style="list-style-type: none"><li>• Septic appearance (fever, tachycardia, generally unwell)</li><li>• Respiratory symptoms (tachypnoea, respiratory distress, cough)</li><li>• Generalised oedema - suspect nephrotic syndrome</li><li>• Significant dehydration (clinically or &gt;5% weight loss)</li><li>• Purpuric or petechial rash (suspect sepsis and/or meningococcal disease if febrile)</li><li>• Jaundice</li><li>• Polyuria / polydipsia (suspect diabetic ketoacidosis)</li></ul>	<ul style="list-style-type: none"><li>• Peritonitis (guarding, percussion tenderness, constant dull pain exacerbated by movement)</li><li>• Suggestion of bowel obstruction (colicky abdo pain, bilious vomiting, resonant bowel sounds)</li><li>• History of recent significant abdominal trauma</li><li>• History of recent abdominal surgery</li><li>• Irreducible hernia</li><li>• Testicular pain – consider torsion, esp after puberty</li><li>• “Red currant jelly” stool</li></ul>	<ul style="list-style-type: none"><li>• Severe or increasing abdominal pain</li><li>• Blood in stool</li><li>• Abdominal distension</li><li>• Bilious (green) or blood-stained vomit</li><li>• Palpable abdominal mass</li><li>• Child unresponsive or excessively drowsy</li><li>• Child non-mobile or change in gait pattern due to pain</li><li>• Ongoing moderate to severe pain despite analgesia</li></ul>

# Acute Abdominal Pain Pathway

Clinical Assessment/ Management tool for Children

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**Table 2**

Differential Diagnosis	Most important features
<b>Appendicitis</b>	Fever, anorexia, migration of pain from central to RIF, peritonism (clinical or history suggestive), tachycardia, raised WCC. Consider the <a href="#">PAS score</a> .
<b>Constipation</b>	History of infrequent, large or hard stools. Pain mainly left sided/ supra pubic. If acute look for organic causes (ie obstruction). New onset constipation is unusual in teenagers. A history of 'normal' does not exclude – what is normal?
<b>Diabetic ketoacidosis</b>	Known diabetic or history of polydipsia/ polyuria and weight loss, BM >15, metabolic acidosis ( $\text{HCO}_3^- < 15$ ) and ketosis
<b>Gastroenteritis</b>	Diarrhoea and/or vomiting, other family members affected
<b>Haemolytic Uraemic Syndrome (HUS)</b>	Unwell child with bloody diarrhoea and triad of: anaemia, thrombocytopenia & renal failure
<b>Henoch Schoenlein Purpura (HSP)</b>	Diffuse/colicky abdominal pain, non-blanching rash (obligatory sign), swollen ankles/knees, haematuria/ proteinuria
<b>Infantile colic</b>	Young healthy infant with episodes of inconsolable cry and drawing up of knees, flatus
<b>Intussusception</b>	Mostly < 2 yrs, pain intermittent with increasing frequency, vomits (sometimes with bile), drawing up of knees, lethargy, may be calm/well between episodes, redcurrant jelly stool (late sign)
<b>Irreducible hernia</b>	Painful enlargement of previously reducible hernia +/- signs of bowel obstruction
<b>Lower lobe pneumonia</b>	Referred abdominal pain and triad of: fever, cough and tachypnoea
<b>Meckel's diverticulum</b>	Usually painless rectal bleeding. Symptoms of intestinal obstruction. Can mimic appendicitis
<b>Mesenteric adenitis</b>	Generally occurs age 5-10 years. There is often a current or recent URTI. Can be hard to distinguish from appendicitis but no peritonism. Site and severity of pain typically not constant and child may be hungry.
<b>Non-specific recurrent abdominal pain</b>	With excluded organic causes. Non-specific recurrent abdominal pain
<b>Pancreatitis</b>	Central severe pain. Nausea. Unusual in children but important to not miss. Include amylase in blood tests.
<b>Sickle cell crisis</b>	Nearly exclusively in black children. Refer to <a href="#">sickle cell disease</a> guideline for differentiation with non-crisis causes
<b>Testicular torsion</b>	More common after puberty. Sudden onset, swollen tender testis. Have low threshold for discussing all testicular pain with paediatric surgical team
<b>Trauma</b>	Always consider NAI. Surgical review necessary
<b>UTI</b>	Fever, dysuria, loin/abdominal pain, urine dipstick positive for nitrites/ leucocytes – Investigate and manage as per <a href="#">UTI pathway</a>

**Table 3**

Female gynaecological pathologies	
<b>Menarche</b>	On average 2 yrs after first signs of puberty (breast development, rapid growth). Average age in UK is 13 yrs
<b>Mittelschmerz</b>	One sided, sharp, usually < few hours, in middle of cycle (ovulation)
<b>Pregnancy</b>	Sexually active, positive urine pregnancy test
<b>Ectopic pregnancy</b>	Pain usually 5-8 weeks after last period, increased by urination/ defaecation,. Late presentations associated with bleeding (PV, intra-abdominal)
<b>Pelvic inflammatory disease</b>	Sexually active. Risk increase with: past hx of PID, IUD, multiple partners. Fever, lower abdo pain, discharge, painful intercourse
<b>Ovarian torsion</b>	Sudden, sharp, unilateral pain often with nausea/ vomiting. Fever if necrosis develops

**Table 4**

Functional Abdominal Pain	
<b>Indigestion (functional dyspepsia)</b>	<ul style="list-style-type: none"> <li>Bothersome postprandial fullness</li> <li>Early satiety</li> <li>Epigastric pain and burning not associated with bowel habit</li> </ul>
<b>Irritable bowel syndrome (IBS)</b>	<ul style="list-style-type: none"> <li>Abdominal pain at least 4 days per month, associated with change in bowel habit                             <ul style="list-style-type: none"> <li>Pain associated with change in frequency or form of stool</li> <li>Pain related to defecation</li> </ul> </li> </ul>
<b>Abdominal migraine (similar symptoms to a regular migraine, but no headache)</b>	<ul style="list-style-type: none"> <li>Stereotypical, paroxysmal episodes of periumbilical or diffuse abdominal pain with few or no GI complaints between attacks</li> <li>Migraine in child (or family)</li> </ul>
<b>Non-specified functional abdominal pain</b>	<ul style="list-style-type: none"> <li>No obvious organic aetiology</li> <li>Pain may be episodic or continuous</li> <li>Not associated with change in stool frequency/consistency</li> <li>Chronic abdominal pain may develop as a response to psychosocial stressors or emotional distress</li> </ul>