

[HOSPITAL / HEALTH AUTHORITY NAME]

ACUTE ABDOMINAL AND FLANK PAIN PATHWAY

Protocol 24: Rapid Recognition of Surgical, Vascular, Obstetric, Urological, and Medical Emergencies; Analgesia; Targeted Investigation; Reassessment; Consultation; Transfer; and Safe Disposition

DRAFT FOR EMERGENCY MEDICINE, GENERAL SURGERY, INTERNAL MEDICINE, OBSTETRICS AND GYNAECOLOGY, UROLOGY, PAEDIATRICS, ANAESTHESIA, CRITICAL CARE, RADIOLOGY, LABORATORY, PHARMACY, EMS, TRANSFER, AND CLINICAL-GOVERNANCE REVIEW

STATUS: This is a draft clinical-governance document. Exact triage categories, analgesic and antiemetic regimens, fluid and transfusion thresholds, laboratory panels, contrast policies, imaging pathways, antibiotic choices and timing, pregnancy testing, observation intervals, surgical and specialty activation criteria, transfer arrangements, and discharge follow-up must be reconciled with current national guidance, local formulary, diagnostic capability, specialist availability, and approved linked pathways before implementation.

IMMEDIATE SAFETY RULE: Treat shock, peritonitis, ruptured or symptomatic aortic aneurysm, mesenteric ischaemia, perforation, bowel strangulation, ectopic pregnancy, ovarian or testicular torsion, cholangitis, and an infected obstructed urinary tract before diagnostic certainty. Give timely analgesia, repeat the examination, and escalate unexplained deterioration. A normal early test, temporary pain relief, or a benign first examination does not exclude evolving catastrophe.

Document control	Details
Document owner	Emergency Department / Medical Services Directorate / Nursing Services / Clinical Governance
Clinical leads	Emergency Medicine; General Surgery; Internal Medicine; Obstetrics and Gynaecology; Urology; Paediatrics; Anaesthesia / Critical Care
Supporting departments	Radiology; Laboratory; Pharmacy; Blood Bank; Cardiology; Vascular / Cardiothoracic Surgery; Gastroenterology; EMS; Patient Transport / Transfer Coordination
Applies to	All staff involved in recognition, triage, stabilization, analgesia, investigation, reassessment, consultation, transfer, admission, observation, discharge, and follow-up of patients with acute non-traumatic abdominal, pelvic, groin, or flank pain.
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Related protocols	Protocol 1 Patient Journey; Protocol 3 Chest Pain / ACS; Protocol 11 Sepsis; Protocol 15 Shock; Protocol 17 Altered Mental Status; Protocol 23 Severe Hypertension; Protocol 25 GI Bleeding; Protocol 26 Vomiting / Diarrhoea / Dehydration; Protocol 27 Diabetic Emergencies; Protocol 28 AKI / Electrolytes; Protocol 29 Poisoning; Protocol 31 Major Trauma; Protocol 38 Obstetric Emergencies; Protocol 39 Gynaecological Emergencies; Protocol 40 Seriously Ill Child.

1. Purpose

To provide a standardized emergency-department pathway for patients with acute abdominal, pelvic, groin, or flank pain, emphasizing immediate stabilization, early recognition of time-critical surgical and medical disease, humane analgesia, pregnancy-aware assessment, targeted investigation and imaging, serial reassessment, timely source control or transfer, and safe disposition from first contact through discharge, observation, admission, surgery, critical care, or interfacility transfer.

2. Scope

This protocol applies primarily to non-traumatic acute abdominal and flank pain in adults and provides escalation principles for children, adolescents, pregnant and postpartum patients, older adults, immunocompromised patients, anticoagulated patients, and those with prior abdominal or bariatric surgery. Trauma, gastrointestinal bleeding, primary obstetric emergencies, toxicological syndromes, diabetic ketoacidosis, and condition-specific pathways must be activated when indicated. The pathway supports, but does not replace, clinical judgement, specialist review, local law, approved scopes of practice, or definitive surgical and obstetric protocols.

3. Core policy statements

- Acute abdominal pain is a syndrome, not a diagnosis. Location, severity, and response to analgesia cannot alone determine risk. The diagnosis must integrate physiology, chronology, associated symptoms, examination, pregnancy status, investigations, imaging, and serial change.
- Analgesia and antiemetic treatment must not be withheld to preserve examination findings. Pain should be assessed, treated, and reassessed while diagnostic evaluation proceeds.
- Every patient with pregnancy potential and abdominal, pelvic, groin, flank pain, syncope, or unexplained shock requires prompt pregnancy-status assessment unless pregnancy is already established or biologically impossible and documented.
- Shock, peritonism, pain out of proportion, pulsatile abdominal mass, gastrointestinal haemorrhage with pain, fever with obstruction, anuria, rigid abdomen, bilious or faeculent vomiting, incarcerated hernia, or reproductive-organ torsion requires immediate senior review and early specialist activation.
- A normal lactate, white-cell count, lipase, urinalysis, ultrasound, or initial CT does not by itself exclude early mesenteric ischaemia, appendicitis, torsion, ectopic pregnancy, bowel strangulation, or other evolving disease. Persistent or progressive symptoms require reassessment and diagnostic reconsideration.
- Imaging must answer a defined clinical question. The modality and contrast phase should be selected with radiology according to suspected pathology, pregnancy status, age, renal function, prior imaging, and the urgency of a life-threatening diagnosis.
- Potential contrast-associated kidney risk should be weighed against the immediate danger of missed aortic rupture, mesenteric ischaemia, perforation, abscess, or other catastrophic disease. Life-saving imaging must not be withheld solely because renal function is abnormal.
- Patients with suspected sepsis, perforation, cholangitis, complicated intra-abdominal infection, or infected urinary obstruction require prompt antimicrobials according to the local sepsis and antimicrobial pathway, but antibiotics do not replace urgent source control.
- Serial vital signs, pain score, abdominal examination, perfusion, urine output, oral tolerance, and response to treatment are mandatory whenever the diagnosis is uncertain, symptoms are evolving, or observation is used.
- Safe discharge requires physiological stability, controlled symptoms on an oral plan, ability to hydrate and mobilize as appropriate, no unresolved high-risk feature, reviewed investigations, explicit follow-up, return precautions, and ownership of pending results.

4. Definitions

Term	Operational definition
Acute abdominal pain	Non-traumatic pain arising from the abdomen, pelvis, groin, abdominal wall, retroperitoneum, or referred extra-abdominal structures, generally of recent onset or acute worsening.
Acute abdomen	A clinical syndrome suggesting serious intra-abdominal disease that may require urgent surgery or another time-critical intervention. It is not synonymous with severe pain.
Peritonism	Involuntary guarding, rigidity, percussion tenderness, rebound, or pain aggravated by movement or coughing, suggesting peritoneal irritation. Findings may be absent in older, immunocompromised, pregnant, or steroid-treated patients.
Pain out of proportion	Severe pain with initially limited examination findings, especially concerning for mesenteric ischaemia, early obstruction or strangulation, vascular disease, or selected metabolic and toxicological conditions.
Serial assessment	Planned repeat evaluation of vital signs, pain, perfusion, abdominal findings, urine output, investigations, and diagnostic probability by a named clinician at documented intervals.
Source control	A procedure that removes or drains the anatomical source of infection or contamination, relieves obstruction, repairs perforation, restores perfusion, or removes non-viable tissue.
Infected obstructed urinary tract	Urinary obstruction with fever, sepsis, pyuria or bacteriuria, systemic illness, or infected hydronephrosis; this is a urological emergency requiring antibiotics and urgent drainage.
Shock index	Heart rate divided by systolic blood pressure. A rising value can support recognition of circulatory compromise but must not replace full clinical assessment.
Diagnostic time-out	A deliberate reassessment before disposition that asks whether the working diagnosis still explains the patient, what dangerous alternative remains, and whether new data or deterioration require escalation.

5. Roles and accountability

Role	Minimum responsibility
Triage / first-contact clinician	Identify physiological instability and red flags; obtain pain score, pregnancy possibility, key history, vital signs, glucose when indicated, and prompt senior escalation; place high-risk patients in monitored care.
Lead ED clinician	Direct ABCDE care, analgesia, focused assessment, differential diagnosis, investigation and imaging selection, serial reassessment, specialist consultation, and disposition; maintain ownership until formal handover.
Nursing team	Monitor physiology and pain, establish access, obtain specimens and ECG, administer medicines and fluids safely, document response, repeat observations, detect deterioration, and prepare transfer or discharge education.
General surgery	Provide early assessment for peritonitis, perforation, obstruction, appendicitis, complicated biliary disease, diverticulitis, ischaemia, hernia, and other surgical emergencies; direct source control and admission.
Obstetrics and gynaecology	Direct assessment and definitive care for ectopic pregnancy, pregnancy-related bleeding, adnexal torsion, pelvic infection, ovarian haemorrhage, and other reproductive emergencies.
Urology	Direct care for infected obstruction, solitary or transplant kidney obstruction, anuria, renal impairment, refractory renal colic, testicular torsion, and urgent urinary drainage.
Internal medicine / gastroenterology	Support complex medical mimics, pancreatitis, liver disease, metabolic and inflammatory conditions, and patients requiring medical admission or endoscopic intervention.
Anaesthesia / critical care	Support airway, shock resuscitation, vasopressors, massive transfusion, invasive monitoring, severe sepsis, organ failure, perioperative stabilization, and critical-care transfer.
Radiology / sonography	Advise on the most appropriate modality and protocol; prioritize time-critical imaging; communicate critical findings directly; support image transfer and review.
Laboratory / blood bank / pharmacy	Expedite critical testing, cultures, blood products, antibiotic and analgesic access, dose adjustment, allergy review, and high-risk medicine safety.
Transfer coordinator / EMS	Secure receiving acceptance, appropriate escort, monitoring, oxygen, fluids, blood or infusions, image transfer, documentation, and direct handover.

6. Pathway activation and triage

Category	Operational criteria
RED / immediate resuscitation	Shock or rapidly worsening physiology; rigid abdomen or generalized peritonitis; suspected ruptured AAA or major internal haemorrhage; ectopic pregnancy with instability; severe pain out of proportion with hypoperfusion; strangulated obstruction; sepsis with cholangitis or urinary obstruction; ongoing massive vomiting with aspiration risk; altered consciousness; or immediate airway threat.
ORANGE / very urgent	Persistent severe pain, focal peritonism, new pulsatile mass, unexplained syncope, bilious or faeculent vomiting, distension with obstipation, incarcerated hernia, fever in an immunocompromised patient, pregnancy or postpartum pain, significant anticoagulation, older or frail patient with new pain, solitary kidney, anuria, or uncontrolled symptoms.
YELLOW / urgent	Stable but undifferentiated pain requiring clinician assessment, analgesia, pregnancy testing, laboratory evaluation, imaging, or observation; repeated presentation; moderate dehydration; urinary symptoms; suspected uncomplicated appendicitis, biliary disease, diverticulitis, pancreatitis, or renal colic.

Category	Operational criteria
GREEN / routine	Only after triage confirms stable physiology, no red flags, mild symptoms, reliable follow-up, and no high-risk age, pregnancy, immune, surgical, or vascular context. Triage category must follow the local system and may escalate at any time.
DO NOT MISS: Older adults, pregnant patients, immunocompromised patients, people taking steroids or anticoagulants, and patients after bariatric or abdominal surgery may have minimal tenderness despite perforation, ischaemia, bleeding, internal hernia, or sepsis. Lower the threshold for senior review, imaging, observation, and admission.	

7. First 10 minutes: parallel action

Action	Required practice
Stabilize	ABCDE assessment; cardiac monitoring and oximetry when unstable; oxygen for hypoxaemia; two IV lines when shock or haemorrhage is possible; bedside glucose; early blood products, vasopressor support, and airway assistance when indicated.
Treat pain and vomiting	Record pain score; give timely multimodal analgesia and antiemetic therapy; reassess effect and adverse events. Do not delay treatment while awaiting imaging or surgical review.
Identify immediate catastrophe	Look for shock, peritonism, pulsatile mass, pain out of proportion, obstruction, hernia, pregnancy-related haemorrhage, testicular or ovarian torsion, cholangitis, infected urinary obstruction, and extra-abdominal causes such as ACS.
Clarify pregnancy and bleeding risk	Establish pregnancy possibility, last menstrual period when relevant, vaginal bleeding, anticoagulants, bleeding disorder, prior ectopic pregnancy, and blood group / crossmatch needs.
Obtain time-critical tests	ECG for upper abdominal or epigastric pain and cardiovascular risk; urine and pregnancy test; CBC, renal function, electrolytes, liver tests, lipase, lactate / blood gas, coagulation and crossmatch as indicated; cultures before antibiotics when this will not delay therapy.
Activate imaging and specialists	Discuss the clinical question and urgency with radiology. Activate surgery, vascular, obstetrics / gynaecology, urology, gastroenterology, or critical care early rather than waiting for every result.
Plan reassessment	Document the working diagnosis, dangerous alternatives, observation frequency, trigger for repeat examination or imaging, and the clinician responsible for reviewing results and disposition.

8. Immediate stabilization: ABCDE

8.1 Airway and breathing

- Protect the airway when consciousness is reduced, vomiting is uncontrolled, or aspiration risk is high. Use suction and position safely; involve anaesthesia early when intubation may be required.
- Give oxygen for hypoxaemia and assess respiratory mimics or complications: lower-lobe pneumonia, pulmonary embolism, pneumothorax, metabolic acidosis, aspiration, and diaphragmatic irritation.
- Obtain ECG and troponin for epigastric or upper abdominal pain when ACS is plausible. Do not label upper abdominal pain as gastrointestinal before cardiac disease is considered.

8.2 Circulation

- Assess pulse, blood pressure, capillary refill, skin temperature, mental state, urine output, neck veins, and evidence of haemorrhage or sepsis. Repeat observations after every intervention.
- Use balanced, diagnosis-directed resuscitation. Avoid large unmonitored crystalloid volumes in suspected haemorrhage, ruptured AAA, heart or renal failure, and in patients at risk of abdominal compartment or pulmonary oedema.
- Activate major haemorrhage and obtain crossmatched or emergency blood when internal bleeding is suspected. In possible ruptured AAA or uncontrolled haemorrhage, prioritize blood products, rapid vascular / surgical control, and avoidance of excessive pressure targets before haemostasis according to the local pathway.
- For septic shock, follow the current local sepsis pathway, using repeated perfusion assessment and early vasopressors when hypotension persists despite appropriate fluid resuscitation.

8.3 Disability and exposure

- Assess GCS, confusion, glucose, pupillary and focal neurological findings, pain behaviour, and capacity. Consider DKA, adrenal crisis, hypercalcaemia, porphyria, toxicological causes, and withdrawal.

- Expose sufficiently to inspect the abdomen, flanks, back, groins, hernia sites, surgical scars, skin, and external genitalia when indicated, while preserving dignity and using a chaperone according to policy.
- Assess temperature and look for rash, zoster, bruising, Cullen or Grey Turner signs, stomas, drains, dialysis access, pregnancy, and evidence of trauma or abuse.

9. Analgesia, antiemesis, fasting, and fluids

Intervention	Safety principles
Paracetamol / acetaminophen	Useful for mild to moderate pain and as part of multimodal therapy. Adjust maximum dose for low body weight, malnutrition, chronic alcohol use, or liver disease according to local policy.
NSAID	Often effective for renal and biliary colic when not contraindicated. Avoid or use cautiously with AKI, advanced CKD, dehydration, active GI bleeding or ulcer, anticoagulation, significant heart failure, allergy, and pregnancy according to gestation and local policy.
Titrated opioid	Use for severe pain or when non-opioid therapy is inadequate or contraindicated. Give small titrated doses with respiratory, sedation, blood-pressure, and nausea monitoring; adjust for age, frailty, renal or hepatic impairment.
Antiemetic	Select according to ECG/QT risk, pregnancy, Parkinsonism, bowel obstruction, adverse-effect profile, and local formulary. Reassess hydration and aspiration risk.
Regional / local techniques	May reduce opioid exposure for selected abdominal-wall, groin, or renal pain when performed by trained clinicians and without delaying definitive care.
Fasting	Keep patients with suspected surgical, endoscopic, procedural, or anaesthetic need nil by mouth except essential medication, while avoiding unnecessary prolonged fasting once a safe oral plan is established.
IV fluids	Treat shock and clinically important dehydration; replace ongoing losses and correct electrolytes. Do not force fluids to promote stone passage. In pancreatitis, use moderate isotonic crystalloid with frequent reassessment rather than automatic high-volume infusion.
ANALGESIA RULE: Improvement after analgesia is clinically useful but does not prove a benign diagnosis. Re-examine the patient after treatment and document whether tenderness, guarding, function, and vital signs improve or worsen.	

10. Focused history

Domain	Key questions
Pain chronology	Exact onset, sudden versus gradual, maximal at onset, duration, progression, migration, previous episodes, precipitating event, relation to meals, movement, urination, defecation, menstruation, intercourse, exertion, or medication.
Pain character and site	Central or generalized, RUQ, epigastric, RLQ, LLQ, suprapubic, flank, back, groin, shoulder-tip, chest, or testicular; colicky, tearing, burning, constant, or pain out of proportion.
Associated symptoms	Vomiting and content; diarrhoea or constipation; obstipation; haematemesis, melaena, haematochezia; fever; jaundice; dysuria, frequency, haematuria, anuria; syncope; dyspnoea; chest pain; vaginal bleeding or discharge; genital pain.
Pregnancy / reproductive	Pregnancy possibility, last menstrual period, contraception, fertility treatment, prior ectopic pregnancy, pregnancy location if known, parity, recent delivery, bleeding, discharge, and fetal movement when relevant.
Past history	AAA or vascular disease, AF, thrombosis, diabetes, gallstones, pancreatitis, ulcer, IBD, diverticulitis, cancer, renal stones, UTI, endometriosis, sickle cell disease, porphyria, immunosuppression, and prior similar diagnosis.

Domain	Key questions
Operations and anatomy	Prior abdominal, pelvic, bariatric, transplant, vascular, gynaecological, urological, or hernia surgery; stomas; adhesions; altered anatomy; recent endoscopy or procedure.
Medicines and substances	Anticoagulants, antiplatelets, NSAIDs, steroids, immunosuppressants, GLP-1 agents, SGLT2 inhibitors, opioids, antibiotics, alcohol, cocaine or stimulants, and recent medication changes.
Context and safety	Recent travel, food or water exposure, sick contacts, sexual history when relevant, safeguarding concerns, access to follow-up, and possibility of non-accidental injury.

11. Focused examination

- Record full vital signs, pain score, mental state, hydration, perfusion, body habitus, mobility, and general appearance. Repeat after analgesia and during observation.
- Inspect for distension, scars, bruising, rash, visible peristalsis, hernia, stoma changes, pulsation, jaundice, and respiratory movement. Auscultation has limited standalone diagnostic value and must not delay palpation or imaging.
- Palpate gently away from the pain, then assess focal and generalized tenderness, involuntary guarding, rigidity, masses, organomegaly, pulsatile mass, percussion tenderness, and pain with movement or cough.
- Assess costovertebral-angle tenderness, back and spine, femoral pulses, limb perfusion, oedema, and signs of DVT. Compare pulses and blood pressure when aortic disease is possible.
- Examine groins and hernia sites. Perform external genital and testicular examination when lower abdominal, groin, flank, or unexplained vomiting pain could represent torsion, incarcerated hernia, or infection.
- Pelvic examination should be targeted, consented, chaperoned, and performed only when findings will change management. A normal pelvic examination does not exclude ectopic pregnancy or torsion.
- Digital rectal examination is not routine for all abdominal pain. Use selectively for suspected rectal pathology, impaction, bleeding, spinal or cauda equina disease, or when the finding will change care.

12. Time-critical diagnoses and red flags

Threat	Red flags / action
Ruptured or symptomatic AAA / aortic disease	Older age, vascular risk, known aneurysm, sudden abdominal/back/flank pain, syncope, shock, pulsatile mass, limb ischaemia. Immediate vascular / surgical activation; bedside ultrasound may confirm aneurysm, but instability with high suspicion must not be delayed for comprehensive imaging.
Acute mesenteric ischaemia	Severe pain out of proportion, AF, embolic disease, low-flow state, atherosclerosis, vasopressors, thrombophilia, postprandial pain, metabolic acidosis, or unexplained deterioration. Obtain urgent CTA and early surgery / vascular review; normal lactate does not exclude early disease.
Perforation / generalized peritonitis	Sudden severe pain, rigid abdomen, free air, sepsis, recent endoscopy, ulcer risk, diverticular or inflammatory disease. Resuscitate, give antibiotics, obtain urgent surgical review and source control; CT if stable and it will not delay treatment.
Obstruction / strangulation / incarcerated hernia	Distension, colicky then constant pain, bilious or faeculent vomiting, obstipation, previous surgery, hernia, focal tenderness, fever, tachycardia, acidosis, closed-loop features. NPO, decompression when indicated, IV resuscitation, CT, and urgent surgery.
Ectopic pregnancy / reproductive haemorrhage	Pregnancy possibility, pelvic or abdominal pain, bleeding, shoulder-tip pain, syncope, hypotension, fertility treatment, or prior ectopic pregnancy. Immediate pregnancy testing, resuscitation, ultrasound and gynaecology; do not rely on a single beta-hCG threshold.
Ovarian or testicular torsion	Sudden unilateral pelvic, lower abdominal, groin, or testicular pain with vomiting. Immediate specialist review; normal or preserved Doppler flow does not reliably exclude torsion when clinical suspicion is high.
Cholangitis / infected urinary obstruction	Fever or sepsis with jaundice and RUQ pain, or with flank pain, pyuria, hydronephrosis, anuria, solitary kidney, or AKI. Give antibiotics and arrange urgent biliary or urinary drainage.
Extra-abdominal emergency	ACS, lower-lobe pneumonia, PE, DKA, adrenal crisis, sickle crisis, porphyria, hypercalcaemia, spinal disease, zoster, toxicological disease, or abuse may present primarily as abdominal pain. Test according to context.

13. Targeted investigations

Investigation	Indications and cautions
Bedside glucose	All unstable, confused, diabetic, pregnant, paediatric, or metabolically unwell patients; repeat during treatment.
ECG and troponin	Epigastric or upper abdominal pain, syncope, dyspnoea, older age, diabetes, vascular risk, hypotension, or diagnostic uncertainty.
Urinalysis and culture	Flank or urinary symptoms, fever, pregnancy, unexplained sepsis, or renal colic. Haematuria supports but neither confirms nor excludes a stone. Send culture before antibiotics when feasible.
Pregnancy test / beta-hCG	Any patient with pregnancy potential unless established or impossible and documented. Quantitative beta-hCG supports, but does not independently locate or exclude, pregnancy.
CBC	Anaemia, leukocytosis, thrombocytopenia, haemoconcentration, infection, bleeding, or baseline before procedure; a normal result does not exclude serious disease.
Electrolytes, urea, creatinine, glucose	Dehydration, vomiting, renal disease, contrast planning, obstruction, metabolic illness, medication adjustment, and resuscitation.
Liver tests and bilirubin	RUQ/epigastric pain, jaundice, pancreatitis, sepsis, or suspected hepatobiliary disease.
Lipase	Suspected pancreatitis. Diagnosis generally requires two of three: characteristic pain, lipase or amylase greater than three times the upper limit, or compatible imaging.
Lactate / blood gas	Shock, sepsis, pain out of proportion, ischaemia, obstruction, DKA, toxicological disease, or unexplained deterioration. A normal early lactate does not exclude mesenteric ischaemia.
CRP / inflammatory markers	Can support severity assessment and trend, but must not determine urgent imaging or surgical review alone.
Coagulation, group and screen / crossmatch	Bleeding, anticoagulation, liver disease, shock, pregnancy-related haemorrhage, anticipated operation, or invasive procedure.
Cultures	Blood cultures for sepsis or cholangitis and urine cultures for urinary infection when collection will not delay antibiotics or source control.

14. Pregnancy and reproductive safety

- Pregnancy status must be established early, but emergency resuscitation and life-saving imaging must not wait when delay creates greater maternal or fetal risk.
- Use transabdominal and transvaginal ultrasound with Doppler as appropriate for acute pelvic pain and suspected early-pregnancy complications. MRI without gadolinium can be used when ultrasound is nondiagnostic and the patient is stable; CT remains appropriate for selected life-threatening non-gynaecological diagnoses after risk-benefit discussion.
- Do not use a discriminatory beta-hCG threshold as the sole reason to diagnose or exclude ectopic pregnancy. Integrate symptoms, haemodynamics, serial beta-hCG, ultrasound, and specialist review.
- In a pregnancy of unknown location, establish a named follow-up pathway and emergency return advice. Patients with instability, significant pain, peritonism, bleeding, anaemia, or unreliable follow-up require admission or urgent specialist management.
- Assess RhD status and anti-D prophylaxis according to the current maternity pathway. Use pregnancy-compatible analgesia, antiemetics, antibiotics, and thromboprophylaxis.

15. Imaging strategy

Clinical question	Preferred initial / urgent approach
Unstable suspected AAA	Immediate bedside aortic ultrasound may identify an aneurysm and free fluid, but a negative or limited scan does not exclude rupture. Activate vascular / surgical transfer immediately. CTA is for patients stable enough when it will guide intervention without harmful delay.
Mesenteric ischaemia	Urgent multiphase CT angiography of abdomen and pelvis. Request the correct arterial and portal venous phases; do not substitute routine portal-venous CT when mesenteric ischaemia is the question.

Clinical question	Preferred initial / urgent approach
Generalized pain, fever, peritonism, abscess, or unclear serious disease	CT abdomen and pelvis with IV contrast is commonly appropriate in adults. Select protocol with radiology; oral contrast is usually not required for initial emergency CT unless a specific local indication exists.
Right lower quadrant / appendicitis	Adults: CT with IV contrast is commonly appropriate; ultrasound can be used in selected young adults. Children and pregnancy: graded-compression ultrasound first, then MRI when available if nondiagnostic; CT when necessary.
Right upper quadrant / suspected biliary disease	Ultrasound is first line. If negative or equivocal with persistent concern, consider CT, MRCP, or hepatobiliary scintigraphy according to the clinical question and local capability.
Left lower quadrant / diverticulitis	CT abdomen and pelvis with IV contrast when first presentation, severe disease, immunocompromise, diagnostic uncertainty, or concern for complication.
Small-bowel obstruction / internal hernia	CT abdomen and pelvis with IV contrast to identify transition point, closed loop, ischaemia, perforation, and alternative diagnoses. Plain radiography has a limited role and must not delay CT in high-risk disease.
Acute flank pain / suspected stone	Non-contrast low-dose CT is highly accurate in most non-pregnant adults when imaging is required. Ultrasound is first line in pregnancy and useful in children, recurrent low-risk presentations, and assessment of hydronephrosis or AAA.
Acute pelvic pain	Transabdominal and transvaginal pelvic ultrasound with Doppler are usually first line for suspected gynaecological disease, whether beta-hCG is positive or negative. CT is appropriate when a non-gynaecological cause is suspected.
Child with abdominal pain	Use clinical risk stratification and ultrasound-first pathways where appropriate. Escalate to MRI or CT when ultrasound is nondiagnostic and serious disease remains likely.
CONTRAST SAFETY: Check previous severe contrast reaction, renal function, pregnancy, metformin and other relevant factors, but discuss rather than automatically cancel urgent contrast imaging. The risk of delayed diagnosis may greatly exceed the contrast risk in aortic rupture, bowel ischaemia, perforation, or sepsis.	

16. Serial reassessment and observation

- Record a baseline pain score, vital signs, perfusion, hydration, abdominal findings, urine output, and working diagnosis before or immediately after initial treatment.
- Repeat observations and examination after analgesia, fluid or blood resuscitation, antiemetic therapy, passage of time, and receipt of major results. The interval must reflect risk and be shorter in older, pregnant, immunocompromised, or deteriorating patients.
- Trend haemoglobin, lactate, electrolytes, renal function, inflammatory markers, ECG/troponin, and urine output when clinically indicated. Repeat testing must answer a defined question rather than substitute for examination.
- Observation requires explicit entry criteria, a named responsible clinician, expected milestones, maximum duration, and triggers for imaging, specialist review, admission, or discharge.
- Before disposition, perform a diagnostic time-out: Does the working diagnosis fit the entire presentation? What dangerous alternative remains? Is the patient improving objectively? Are all results reviewed and pending tests owned?

17. Symptomatic or ruptured abdominal aortic aneurysm

- Suspect in older or high-risk patients with sudden abdominal, flank, back, groin, or hip pain; syncope; hypotension; unexplained anaemia; limb ischaemia; or a known aneurysm. The classic triad is often incomplete.
- Activate senior ED, vascular / surgical, anaesthesia, blood bank, theatre and transfer pathways immediately. Avoid repeated low-yield examinations and delays awaiting routine laboratory results.
- Use bedside ultrasound to identify aneurysm when rapidly available, but do not use a negative scan to exclude rupture. Stable patients generally require urgent CTA for operative planning; unstable patients with convincing rupture may require direct transfer to definitive control.
- Use haemorrhage-focused resuscitation, blood products, warming, correction of anticoagulation, and controlled blood-pressure targets according to the approved vascular pathway. Minimize excessive crystalloid and transport delay.

18. Acute mesenteric ischaemia

- Consider embolic, thrombotic, venous, and non-occlusive causes in patients with pain out of proportion, AF, atherosclerosis, cardiac failure, recent MI, low-flow shock, vasopressor exposure, thrombophilia, malignancy, portal disease, or unexplained metabolic acidosis.
- Request urgent CT angiography without waiting for peritonism or a high lactate. Contact surgery and vascular / interventional expertise early. Delay markedly worsens bowel viability.
- Resuscitate, correct hypoxia and low flow, give broad-spectrum antibiotics when bowel ischaemia or infarction is suspected, and use anticoagulation for selected arterial or venous disease only after specialist review and bleeding assessment.
- Peritonitis, perforation, or haemodynamic deterioration indicates likely bowel infarction and need for immediate operative assessment.

19. Perforation, peritonitis, and complicated intra-abdominal infection

- Treat generalized peritonitis or septic shock as a source-control emergency. Obtain surgical review at the same time as resuscitation, antibiotics, blood cultures when feasible, and imaging if the patient is stable enough.
- Use broad-spectrum therapy selected for community versus healthcare exposure, local resistance, allergy, renal function, pregnancy, and source. Document the intended source, review time, and de-escalation plan.
- CT with IV contrast is usually appropriate for stable patients. Free air on radiography may support perforation but a normal radiograph does not exclude it.
- Do not allow temporary improvement after fluids, analgesia, or antibiotics to postpone drainage, endoscopy, operation, or transfer when source control is required.

20. Bowel obstruction, strangulation, and hernia

- Assess for previous surgery, hernia, malignancy, inflammatory disease, gallstone ileus, volvulus, and bariatric anatomy. Constant pain, fever, tachycardia, focal tenderness, leucocytosis, acidosis, free fluid, pneumatosis, or reduced enhancement suggests ischaemia or strangulation.
- Keep nil by mouth, provide IV access and electrolyte correction, use nasogastric decompression for persistent vomiting, marked distension, aspiration risk, or as directed by surgery, and measure urine output in severe disease.
- Obtain urgent CT with IV contrast and early surgical review. Do not delay consultation while awaiting a trial of conservative care in a closed-loop obstruction, incarcerated hernia, peritonism, or physiological deterioration.
- Water-soluble contrast protocols and non-operative observation must be surgery-led, with defined contraindications, monitoring, and failure criteria.

21. Suspected appendicitis

- Use history, examination, inflammatory markers, and an age-appropriate score such as AIR, Adult Appendicitis Score, or Pediatric Appendicitis Score as an adjunct, not a standalone rule-out test.
- Select imaging by age, sex, pregnancy, risk level, and local expertise. Persistent or progressive right lower quadrant pain after negative or equivocal testing requires reassessment and possible repeat or alternative imaging or surgical evaluation.
- Give analgesia, antiemetics, IV fluids as needed, and antibiotics for complicated disease or according to the surgical pathway. Consult surgery when imaging confirms appendicitis or clinical suspicion remains high.
- Non-operative antibiotic management of selected uncomplicated appendicitis must occur under an approved shared-decision and surgical follow-up pathway. It is not an automatic ED discharge strategy.

22. Biliary pain, cholecystitis, and cholangitis

- Use RUQ ultrasound as first-line imaging for suspected gallstone disease. Assess bilirubin, liver enzymes, lipase, sepsis, and duct dilatation; use MRCP, CT, or hepatobiliary scintigraphy when ultrasound is nondiagnostic and concern persists.
- Uncomplicated biliary colic may be discharged only after pain control, oral tolerance, exclusion of cholecystitis, pancreatitis and obstruction, and a reliable surgical follow-up plan.
- Acute cholecystitis requires surgical review, analgesia, fluids, and antibiotics when indicated. Early definitive management is preferred when feasible under the local surgical pathway.
- Suspected acute cholangitis is a sepsis and source-control emergency. Give antibiotics and arrange urgent biliary decompression / ERCP or transfer, particularly with shock, altered mental status, renal failure, coagulopathy, or marked cholestasis.

23. Acute pancreatitis

- Diagnose when at least two of three are present: typical epigastric pain, lipase or amylase greater than three times the upper limit of normal, or characteristic imaging. Routine early CT is not required when diagnosis is clear and there is no concern for alternative catastrophe or complication.
- Assess cause, organ failure, hypovolaemia, BUN / creatinine, haematocrit, oxygenation, mental state, urine output, and comorbidity. Use moderate isotonic crystalloid with frequent reassessment; avoid automatic aggressive fluid loading.
- Provide early effective analgesia and antiemetic therapy. Begin oral feeding as tolerated in mild disease rather than prolonged fasting. Do not give prophylactic antibiotics for sterile pancreatitis.

- Biliary pancreatitis with cholangitis or persistent obstruction requires urgent gastroenterology / surgical assessment for ERCP. Persistent organ failure, shock, hypoxaemia, AKI, or worsening systemic response requires high-dependency or critical-care management.

24. Diverticulitis and colonic disease

- Use CT with IV contrast for first or atypical presentation, severe symptoms, immunocompromise, diagnostic uncertainty, or concern for abscess, perforation, fistula, or obstruction.
- Selected immunocompetent patients with uncomplicated diverticulitis may not require antibiotics under a locally approved pathway. Antibiotics are required for systemic infection, complicated disease, significant comorbidity, or immune compromise.
- Admit or consult surgery for peritonitis, abscess, perforation, obstruction, sepsis, inability to hydrate, uncontrolled pain, frailty, or unreliable follow-up. Arrange post-episode colorectal evaluation according to local policy and imaging findings.

25. Renal colic, pyelonephritis, and infected obstruction

- For uncomplicated renal colic, NSAIDs are generally first-line when safe; use IV paracetamol and then titrated opioid when NSAIDs are contraindicated or inadequate according to the local analgesia pathway. Do not use forced IV hydration to expel a stone.
- Image when diagnosis is uncertain, the patient is older or high risk, pain is refractory, infection or renal impairment is present, there is a solitary / transplant kidney, pregnancy, recurrent presentation, or intervention may be required. Consider AAA and reproductive diagnoses before assuming a stone.
- Fever or sepsis with obstruction, pyonephrosis, anuria, bilateral obstruction, solitary kidney obstruction, rising creatinine, or transplant obstruction requires immediate urology, antibiotics, and urgent decompression. Antibiotics alone are insufficient.
- Discharge only when pain and vomiting are controlled, renal function and infection risk are acceptable, the patient can hydrate and void, stone size/location and follow-up are addressed, and clear return precautions are provided. Medical expulsive therapy may be considered only under the approved urology pathway.

26. Gynaecological, pregnancy-related, and genital emergencies

- Unstable suspected ectopic pregnancy or haemorrhagic ovarian event requires simultaneous resuscitation, blood products, ultrasound, and immediate obstetric / gynaecological intervention or transfer.
- Adnexal torsion is a clinical and surgical emergency. Sudden unilateral pain and vomiting warrant urgent specialist review; do not delay because ultrasound is normal or Doppler flow is present when suspicion remains high.
- Assess pelvic inflammatory disease, tubo-ovarian abscess, ovarian cyst complication, endometriosis, fibroid degeneration, and pregnancy-related causes according to sexual, reproductive, and imaging findings. Preserve privacy, consent, and safeguarding standards.
- Testicular torsion can present as lower abdominal, groin, or flank pain, particularly in children and adolescents. Perform genital examination when relevant and obtain immediate urology / surgery review without delaying for ultrasound when clinical suspicion is high.

27. Children and adolescents

- Use age-adjusted vital signs, weight-based treatment, paediatric pain assessment, hydration assessment, and early senior / paediatric input. Children may deteriorate rapidly and may not localize pain reliably.
- Consider appendicitis, intussusception, volvulus, incarcerated hernia, torsion, UTI, DKA, constipation, gastroenteritis, pneumonia, non-accidental injury, and pregnancy in adolescents.
- Use ultrasound-first imaging when appropriate and avoid repeated radiation, but do not withhold CT or transfer when serious disease remains likely after nondiagnostic ultrasound.
- Bilious vomiting, peritonism, shock, blood per rectum with systemic illness, testicular pain, severe dehydration, or altered consciousness requires immediate escalation and paediatric surgical consultation / transfer.

28. Older adults and other high-risk groups

Group	Additional safeguards
Older adult / frailty	Atypical symptoms, absent fever, minimal guarding, medication effects, and competing diagnoses are common. Lower threshold for ECG, CT, observation, admission, medication review, mobility and delirium assessment.
Immunocompromised / neutropenic / steroids	Inflammation and peritonism may be muted. Consider neutropenic enterocolitis, opportunistic infection, perforation, and early sepsis. Obtain senior, surgical, oncology / infectious disease input and CT early.
Anticoagulated / bleeding disorder	Consider retroperitoneal, rectus-sheath, intramural, splenic, adrenal, ovarian, and gastrointestinal bleeding. Check haemoglobin and coagulation, reverse when indicated, image early, and involve blood bank / specialists.

Group	Additional safeguards
Previous bariatric or abdominal surgery	Internal hernia, closed-loop obstruction, marginal ulcer, leak, adhesions, and altered anatomy may present subtly. Early CT and direct contact with bariatric / surgical expertise are required.
Transplant / solitary kidney	Lower threshold for imaging and specialist review; preserve graft perfusion, adjust medicines, consider atypical infection and drug interactions, and treat obstruction urgently.
Sickle cell disease	Evaluate vaso-occlusive pain while actively excluding cholecystitis, splenic or hepatic sequestration, mesenteric disease, infection, pancreatitis, and acute chest syndrome.

29. Antibiotics and source control

- Start empiric antibiotics promptly for septic shock, perforation, complicated intra-abdominal infection, cholangitis, infected urinary obstruction, tubo-ovarian abscess, or other serious infection according to the local sepsis and antimicrobial policy.
- Select therapy according to likely source, community versus healthcare acquisition, previous resistant organisms, allergies, pregnancy, age, renal and hepatic function, immune status, and local antibiogram. Document indication, dose, time, and planned review.
- Obtain appropriate cultures before antibiotics when this does not delay urgent therapy. Drainage or operative specimens are often more useful than superficial cultures.
- Identify the required source-control procedure and target time: operation, percutaneous drainage, ERCP, urinary stent or nephrostomy, detorsion, or vascular reperfusion. Escalate immediately when local capability is unavailable.

30. Monitoring, consultation, escalation, and transfer

- Use continuous ECG, oximetry, frequent blood pressure, urine output, temperature, pain score, and mental-state monitoring for unstable patients, severe sepsis, internal bleeding, major electrolyte disturbance, or opioid / sedative use.
- Consult the service that can deliver definitive treatment early. A consultation request must state the concern, physiology, examination, key results, imaging status, treatment given, and the time-critical decision required.
- When definitive surgery, endoscopy, interventional radiology, urology, obstetrics, vascular care, or critical care is unavailable, initiate transfer while resuscitation and diagnostics continue. Do not wait for deterioration or completion of low-priority tests.
- Transfer requires receiving acceptance, images and reports, appropriate escort, monitoring and pumps, oxygen and blood capacity, analgesia and antiemetic plan, antibiotics, vascular access, resuscitation status, and a contingency plan for deterioration.

31. Disposition

Disposition	Minimum criteria
Immediate theatre / intervention / transfer	Confirmed or strongly suspected rupture, mesenteric ischaemia, perforation, generalized peritonitis, strangulation, ectopic haemorrhage, torsion, cholangitis requiring drainage, infected urinary obstruction, uncontrolled bleeding, or physiological deterioration.
Admission	Ongoing diagnostic uncertainty with risk; need for IV treatment, serial laboratory or imaging review, inability to hydrate, persistent pain or vomiting, AKI, sepsis, complicated infection, pancreatitis with risk, frailty, immune compromise, unsafe social situation, or specialist management.
ED observation / short stay	Stable patient with a defined question that can reasonably be resolved within the locally approved observation period, with planned reassessment, result ownership, and explicit admission or discharge milestones.
Discharge	Stable and improving; pain and vomiting controlled on an oral regimen; able to drink and function safely; no peritonism, shock, sepsis, dangerous pregnancy concern, obstructed infection, AKI, or unresolved high-risk feature; results reviewed; follow-up and return advice documented.

32. Discharge information and safety net

- Explain the working diagnosis and uncertainty in plain language. Avoid falsely reassuring labels such as nonspecific abdominal pain without a clear review plan.
- Provide written medication instructions, hydration and diet advice, activity limits, follow-up service and date, pending tests, and who will communicate results.

- Return immediately for worsening or localized pain, fainting, weakness, fever, repeated vomiting, inability to drink, distension, no stool or gas, blood in vomit or stool, jaundice, reduced urine, new pregnancy-related bleeding, shoulder-tip pain, testicular pain, breathlessness, chest pain, confusion, or any concern.
- Confirm transport, access to medicines, language and health-literacy needs, caregiver support, and ability to return. High-risk patients should not be discharged solely because imaging is negative if symptoms remain unexplained or progressive.

33. Documentation and handover

Required element	Minimum content
Presentation	Onset and chronology; pain site and character; associated GI, urinary, vascular, respiratory and reproductive symptoms; pregnancy possibility; operations; medicines; anticoagulation; comorbidity.
Assessment	Serial vital signs, pain score, perfusion, hydration, abdominal and relevant groin / pelvic / genital findings, red flags, working diagnosis, and dangerous alternatives.
Treatment	Analgesia, antiemetics, fluids, blood, antibiotics, decompression, reversal, response, adverse events, fasting status, and monitoring.
Investigations	ECG, pregnancy status, laboratory results, imaging question, modality and contrast, reports, direct critical-result communication, and pending results.
Reassessment	Time and findings after treatment and results; whether pain, tenderness, physiology, oral tolerance, urine output, and diagnostic probability changed.
Consultation / transfer	Clinician, service, time, advice, acceptance, destination, transport capability, and escalation plan.
Disposition	Reason for admission, observation, transfer or discharge; medication plan; follow-up; return precautions; capacity; caregiver understanding; pending-result ownership.

34. Quality indicators and audit

Indicator	Suggested measure
Timely analgesia	Percentage of moderate or severe pain cases receiving analgesia within the locally approved target, with documented reassessment.
Pregnancy safety	Percentage of eligible patients with documented pregnancy status before disposition or radiation / teratogenic medication, unless emergency necessity is documented.
Red-flag recognition	Percentage of AAA, mesenteric ischaemia, perforation, torsion, ectopic pregnancy, cholangitis, and infected obstruction cases with timely senior and specialty activation.
Imaging quality	Appropriate modality and protocol selected for the documented clinical question; critical results directly communicated and acted upon.
Serial reassessment	Percentage of observed or undifferentiated cases with repeat vital signs, pain score, abdominal examination, and diagnostic time-out before disposition.
Sepsis / antibiotics	Timely antibiotics and source-control planning in septic shock and high-likelihood complicated infection, aligned with current sepsis guidance.
Safe discharge	Documented oral tolerance, symptom control, result review, follow-up, return precautions, and pending-result ownership.
Reattendance / harm	72-hour unplanned return, missed surgical diagnosis, delayed source control, unplanned ICU transfer, opioid adverse event, contrast event, and transfer delay reviewed through governance.

35. Training and implementation

- All ED clinicians and nurses must receive orientation to red flags, pregnancy testing, abdominal and groin examination, analgesia, sepsis and haemorrhage resuscitation, imaging selection, serial reassessment, and transfer activation.
- Maintain simulation for ruptured AAA, ectopic haemorrhage, mesenteric ischaemia, septic obstructed kidney, paediatric surgical abdomen, and deterioration during interfacility transfer.

- Display the one-page workflow, red-flag card, imaging card, and transfer dataset in triage, resuscitation, observation, radiology request areas, and electronic order sets.
- Audit implementation at 3 and 6 months, then at least annually, with multidisciplinary review of misses, delays, repeated presentations, and local resource constraints.

ANNEX A. One-page acute abdominal and flank pain workflow

1. Triage physiology and red flags: shock, peritonism, pulsatile mass, pain out of proportion, obstruction, pregnancy bleeding, torsion, sepsis with obstruction, older / frail or immunocompromised state.
2. ABCDE stabilization, pain score, analgesia, antiemetic, IV access, glucose, monitoring, pregnancy status, ECG when appropriate, bloods and urine.
3. Activate immediate pathway: vascular / surgery / obstetrics-gynaecology / urology / critical care; start haemorrhage or sepsis care and antibiotics when indicated.
4. Focused history and examination including groins, flanks, scars, hernias, pregnancy and genital assessment when relevant.
5. Choose imaging for the question: CTA for vascular / mesenteric disease; contrast CT for serious generalized disease; ultrasound for RUQ, pelvic, pregnancy and many paediatric pathways; non-contrast CT for stone disease when appropriate.
6. Reassess after treatment and results. If worsening, persistent, or discordant, escalate, repeat examination, reconsider diagnosis and imaging, and involve specialists.
7. Disposition only after diagnostic time-out: intervene / transfer, admit, observe with milestones, or discharge with controlled symptoms, oral tolerance, follow-up, return precautions, and result ownership.

ANNEX B. Abdominal red-flag card

- ☐ Shock, syncope, pallor, diaphoresis, rising shock index, or unexplained anaemia.
- ☐ Rigid abdomen, involuntary guarding, rebound, or pain with movement / cough.
- ☐ Sudden maximal-at-onset abdominal, back, flank, pelvic, or testicular pain.
- ☐ Pulsatile mass, pulse deficit, limb ischaemia, known AAA, or vascular disease.
- ☐ Pain out of proportion, AF, low-flow state, vasopressor exposure, or metabolic acidosis.
- ☐ Bilious / faeculent vomiting, distension, obstipation, incarcerated hernia, or closed-loop risk.
- ☐ Pregnancy possibility with pain, bleeding, syncope, shoulder-tip pain, or fertility treatment.
- ☐ Fever / sepsis with jaundice, obstruction, hydronephrosis, anuria, solitary kidney, or transplant.
- ☐ Older, frail, immunocompromised, steroid-treated, anticoagulated, post-bariatric, or recent procedure.
- ☐ Repeated attendance, persistent severe pain, unexplained deterioration, or mismatch between tests and clinical state.

ANNEX C. First-10-minute checklist

- ☐ ABCDE and full vital signs; glucose; pain score; mental state; perfusion.
- ☐ Monitoring and IV access appropriate to risk; blood bank / major haemorrhage activation if needed.
- ☐ Analgesia and antiemetic given; allergies, renal / hepatic function, pregnancy and anticoagulation considered.
- ☐ Pregnancy possibility and vaginal / genital symptoms assessed.
- ☐ ECG obtained for epigastric / upper abdominal pain or cardiovascular risk.
- ☐ Peritonism, pulsatile mass, hernia, obstruction, pain out of proportion, torsion and septic obstruction assessed.
- ☐ Time-critical bloods / urine / cultures / crossmatch sent.
- ☐ Radiology and definitive specialty contacted early; transfer initiated if capability unavailable.
- ☐ Named clinician and time for repeat assessment documented.

ANNEX D. Focused history and examination card

History	Examination
Onset, maximal intensity, migration, site, character, prior episodes	Appearance, vital signs, shock index, pain score, hydration, mental state
Vomiting content, bowel movement / flatus, bleeding, fever, jaundice	Inspection, distension, scars, stoma, rash, bruising, hernias, pulsation
Urinary symptoms, haematuria, anuria, flank or genital pain	Gentle palpation, guarding, rigidity, percussion, masses, CVA tenderness
Pregnancy, LMP, bleeding, discharge, fertility treatment, prior ectopic	Groins, pulses, back; pelvic / genital / testicular examination when indicated
Operations, bariatric / transplant anatomy, vascular history	Respiratory and cardiac examination; ECG context; DVT and limb perfusion
Anticoagulants, NSAIDs, steroids, immunosuppression, alcohol, drugs	Repeat after analgesia and during observation; document objective change

ANNEX E. Initial investigation card

- ☐ Bedside: glucose, ECG, urine dip, pregnancy test, POCUS when trained and indicated.
- ☐ CBC, electrolytes, urea / creatinine, glucose.
- ☐ Liver tests / bilirubin and lipase when upper abdominal or systemic disease is possible.
- ☐ Lactate / VBG or ABG for shock, sepsis, ischaemia, obstruction, metabolic or toxicological concern.
- ☐ Coagulation, group and screen / crossmatch for bleeding, anticoagulation, operation, pregnancy haemorrhage.
- ☐ Urine culture, blood cultures and other microbiology when infection suspected and without delaying treatment.
- ☐ Troponin, ketones, cortisol, toxicology or other targeted tests when indicated.
- ☐ Result owner and planned review time documented.

ANNEX F. Imaging selection card

Presentation	Preferred approach
Suspected rupture / symptomatic AAA	POCUS to identify aneurysm; immediate vascular pathway; CTA only if stable enough and no harmful delay.
Pain out of proportion / mesenteric risk	Urgent multiphase CTA abdomen and pelvis.
Peritonitis / generalized serious pain	CT abdomen and pelvis with IV contrast if stable; urgent surgery regardless of imaging when required.
RUQ / biliary	Ultrasound first; CT, MRCP or HIDA if unresolved.
RLQ / appendicitis	Adult CT with IV contrast; child / pregnancy ultrasound first, then MRI or CT as needed.
Obstruction / internal hernia	CT abdomen and pelvis with IV contrast.
Renal colic	Low-dose non-contrast CT when imaging required; ultrasound first in pregnancy and often children.
Acute pelvic pain	Transabdominal + transvaginal ultrasound with Doppler; CT for non-gynaecological cause.

ANNEX G. Analgesia, antiemetic, and fluid safety checklist

- ☐ Pain score and allergies recorded; renal, hepatic, bleeding, pregnancy and frailty risks reviewed.
- ☐ Multimodal non-opioid therapy used when safe; NSAID contraindications checked.
- ☐ Opioid titrated with sedation, respiratory, blood-pressure and nausea monitoring.
- ☐ Antiemetic selected with QT, pregnancy, Parkinsonism and obstruction considerations.
- ☐ Response and adverse effects documented; patient re-examined after analgesia.
- ☐ IV fluid indication, type, amount and reassessment endpoint documented.
- ☐ No forced hydration for stone passage; no automatic aggressive fluids in pancreatitis or haemorrhage.
- ☐ Fasting status and medication exceptions documented.

ANNEX H. Vascular catastrophe checklist

- ☐ AAA / aortic disease and mesenteric ischaemia considered from age, risk and pain pattern.
- ☐ Vascular / surgery, anaesthesia, blood bank and transfer activated early.
- ☐ POCUS used only as an adjunct; negative or limited scan not treated as exclusion.
- ☐ Correct CTA protocol requested when patient stable enough.
- ☐ Blood products, warming, anticoagulant reversal and haemorrhage control addressed.
- ☐ Normal lactate not used to exclude mesenteric ischaemia.
- ☐ Receiving acceptance, images and monitored transport secured without avoidable delay.

ANNEX I. Peritonitis, perforation, obstruction, and hernia checklist

- ☐ NPO, IV access, analgesia, antiemetic, fluids / blood and urine output monitoring.
- ☐ Sepsis and haemorrhage pathways activated as indicated.
- ☐ Broad-spectrum antibiotics given when perforation or complicated infection likely.
- ☐ Nasogastric decompression considered for persistent vomiting, distension or aspiration risk.
- ☐ Urgent contrast CT obtained if stable and it will guide care.

☐ Surgery contacted before all results when peritonism, strangulation, closed loop or deterioration present.

☐ Source-control and transfer time targets documented.

ANNEX J. Appendicitis, biliary disease, and pancreatitis card

Condition	Key ED actions
Appendicitis	Risk score as adjunct; age- and pregnancy-appropriate imaging; analgesia; surgery; antibiotics for complicated disease / local pathway; reassess persistent pain.
Biliary colic	RUQ ultrasound; exclude cholecystitis, cholangitis, pancreatitis and obstruction; control pain; oral tolerance; reliable surgical follow-up.
Cholecystitis	Surgery, analgesia, fluids, antibiotics when indicated, early definitive plan.
Cholangitis	Sepsis care, antibiotics, urgent ERCP / drainage or transfer.
Pancreatitis	Confirm 2 of 3 criteria, assess organ failure and cause, moderate crystalloid with reassessment, analgesia, early feeding if tolerated, no prophylactic antibiotics for sterile disease.

ANNEX K. Renal colic and infected obstruction checklist

☐ AAA, ectopic pregnancy, torsion, pyelonephritis and other mimics considered.

☐ Urinalysis, pregnancy test, renal function and culture obtained as indicated.

☐ NSAID used first line when safe; alternative analgesia and antiemetic provided.

☐ Imaging selected by age, pregnancy, recurrence, risk and diagnostic certainty.

☐ Fever / sepsis, AKI, anuria, solitary or transplant kidney, bilateral obstruction and uncontrolled symptoms assessed.

☐ Urology contacted immediately for infected or high-risk obstruction; antibiotics and urgent drainage planned.

☐ Discharge includes pain plan, hydration, stone / urology follow-up, urine straining if advised, and return precautions.

ANNEX L. Pregnancy, pelvic pain, and torsion checklist

☐ Pregnancy possibility, LMP, bleeding, fertility treatment, prior ectopic and RhD status assessed.

☐ Haemodynamic stability, shoulder-tip pain, syncope, peritonism and anaemia assessed.

☐ Urine / serum beta-hCG and transabdominal + transvaginal ultrasound arranged.

☐ Single beta-hCG threshold not used to exclude ectopic pregnancy.

☐ Ovarian torsion considered with sudden unilateral pain / vomiting; normal Doppler not used as sole exclusion.

☐ Testicular examination performed when lower abdominal / groin pain could be torsion.

☐ Obstetrics-gynaecology / urology contacted early and safe follow-up established for pregnancy of unknown location.

ANNEX M. Paediatric abdominal pain checklist

☐ Age-adjusted vital signs, weight, pain score, hydration and glucose documented.

☐ Bilious vomiting, shock, peritonism, intussusception, volvulus, incarcerated hernia, appendicitis and torsion assessed.

☐ Urine testing and pregnancy testing in adolescents performed as appropriate.

☐ Ultrasound-first pathway used where appropriate; nondiagnostic imaging does not end evaluation when risk persists.

☐ Weight-based analgesia, antiemetic and fluid plan independently checked.

☐ Safeguarding and non-accidental injury considered.

☐ Paediatrics / paediatric surgery and transfer involved early for serious or uncertain disease.

ANNEX N. Observation and diagnostic time-out form

☐ Reason for observation and dangerous alternative diagnosis documented.

☐ Named responsible clinician and review times documented.

☐ Repeat vital signs, pain score, perfusion, urine output, oral tolerance and abdominal examination completed.

☐ Results and imaging personally reviewed; discordant findings reconciled.

☐ Response to analgesia / fluids / antiemetics documented objectively.

☐ Admission, repeat imaging, specialty review and discharge milestones defined.

☐ Before discharge: Does the working diagnosis explain the full presentation? What could still kill or disable the patient? Is the patient improving? Are pending results owned?

ANNEX O. Discharge checklist

- ☐ Stable vital signs and no shock, peritonism, sepsis, obstruction, torsion, dangerous pregnancy concern or high-risk renal obstruction.
- ☐ Pain and vomiting controlled on oral medicines; patient can hydrate and function safely.
- ☐ All available results reviewed and explained; pending results assigned to a named service.
- ☐ Medication doses, contraindications and duration explained; supply and access confirmed.
- ☐ Follow-up service, date / timeframe and imaging or laboratory review documented.
- ☐ Written return precautions given and understood; transport and caregiver support confirmed.
- ☐ Repeat attendance or persistent unexplained pain discussed with a senior clinician before discharge.

ANNEX P. Transfer and handover minimum dataset

- ☐ Working diagnosis, dangerous alternatives, onset, progression and reason for transfer.
- ☐ Current vital signs, pain, mental state, perfusion, urine output, pregnancy and bleeding status.
- ☐ Serial abdominal / flank / groin / pelvic findings and relevant surgical anatomy.
- ☐ Laboratory results, ECG, imaging reports and images, cultures, blood group and anticoagulants.
- ☐ Analgesia, antiemetics, fluids, blood, antibiotics, reversal, decompression and response.
- ☐ Airway / oxygen, vascular access, monitoring, pumps, blood products and anticipated deterioration.
- ☐ Receiving clinician / service acceptance, destination, transport mode, escort skill and contingency instructions.

ANNEX Q. Audit tool

Case review item	Yes / No / N/A / notes
Triage category and red flags appropriate	
Pain score and timely analgesia documented	
Pregnancy status documented when applicable	
ECG / cardiac cause considered when indicated	
Serial vital signs and abdominal examination documented	
Appropriate investigations and imaging protocol selected	
Critical results directly communicated and acted upon	
Antibiotics and source-control planning timely when indicated	
Specialist consultation / transfer timely	
Diagnostic time-out completed before disposition	
Discharge oral tolerance, follow-up and return advice documented	
Pending results assigned to named owner	
72-hour return or delayed diagnosis reviewed	

ANNEX R. Local configuration checklist

- ☐ Approved triage categories, pain-treatment targets, observation intervals, and senior-review triggers.
- ☐ Adult and paediatric analgesic, antiemetic, fluid, blood-product, anticoagulant-reversal, and antibiotic monographs.
- ☐ 24-hour access and prioritization rules for ultrasound, CT, CTA, MRI / MRCP, HIDA, interventional radiology, endoscopy, and image transfer.
- ☐ Pregnancy testing, pelvic ultrasound, RhD / anti-D, early-pregnancy follow-up, safeguarding and chaperone policies.
- ☐ Activation pathways and contact numbers for surgery, vascular / cardiothoracic, obstetrics-gynaecology, urology, paediatrics, gastroenterology / ERCP, anaesthesia / critical care, radiology, blood bank and transfer.
- ☐ Major haemorrhage, sepsis, ruptured AAA, mesenteric ischaemia, infected obstruction, torsion, and paediatric surgical emergency pathways.
- ☐ Observation-unit eligibility, maximum stay, repeat assessment standards, and pending-result ownership.
- ☐ Discharge instructions, stone / biliary / early-pregnancy / surgical follow-up access, transport support, and return pathways.
- ☐ Simulation, audit lead, adverse-event review, reattendance review, and protocol-review date.

ANNEX S. References and source tools

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13. National Institute for Health and Care Excellence. Ectopic Pregnancy and Miscarriage: Diagnosis and Initial Management. NICE Guideline NG126. Updated 17 June 2026.
14. Prescott HC, Antonelli M, Alhazzani W, et al. Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock 2026. *Intensive Care Medicine and Critical Care Medicine*. 2026.
15. Local source tools to attach before approval: analgesia / antiemetic protocol; antimicrobial formulary and antibiogram; contrast and renal-risk policy; major haemorrhage and sepsis pathways; pregnancy / early pregnancy policy; AAA, mesenteric ischaemia, appendicitis, biliary, pancreatitis, obstruction, renal colic, infected obstruction, paediatric, observation, transfer, and discharge pathways.