

**CLINICAL POLICY FOR THE
MANAGEMENT OF COLORECTAL
EMERGENCY ADMISSIONS (QHB Site)**

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UHDB Hospitals NHS Foundation Trust

POLICY INDEX SHEET

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Consulted	All Consultant General Surgeons, Anaesthetists and Physicians

REVIEW AND AMENDMENT LOG

Version	Type of change	Date	Description of Change
1		Nov 2011	Original version approved by EMT
2	Minor Update	Sept 2014	Minor updates to wording and linked references
3	Update	Jan 2018	Review and update
4	Update,	Jan 2019	Review, update by Medical Director
5	Update	Jan 2022	Review, update, UHDB branding

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**CLINICAL POLICY FOR THE MANAGEMENT OF COLORECTAL
EMERGENCY ADMISSIONS**

1. Executive Summary

Emergency presentations of colorectal disease include bowel obstruction, perforation, peritonitis, severe colitis and haemorrhage. These conditions are known to have a high morbidity and mortality. Despite the high risks involved many lives can be saved by timely and effective care.

The Department of Surgery aims to provide high quality of care for all patients with emergency abdominal and life-threatening gastro-intestinal conditions. Excellent care of these critical illnesses requires good multidisciplinary working between senior surgeons and anaesthetists and their team.

Oncological outcomes may be more favourable if members of the specialist multidisciplinary team are involved in patient's investigation and treatment at an early stage. This document sets out recommendations for good clinical practice in the management of emergency admissions.

2. Aims

- To ensure that all patients admitted as an emergency are appropriately assessed and that the correct diagnosis is made prior to treatment
- To ensure that patient management is clearly led by consultant surgeons with the input of the multidisciplinary team (MDT) including anaesthetists, critical care specialists, nurses, physiotherapists and dieticians
- To ensure that all patients that have emergency colorectal surgery for bowel cancer are managed post-operatively by members of the colorectal multidisciplinary team, with timely discussion in a colorectal MDT meeting
- To ensure that accurate data on all patients is available for local and national audit
- To inform the stoma nurse specialist at an early stage to allow for appropriate pre-operative counselling and siting of potential stomata.

3. Initial assessment

- Patients presenting as colorectal emergencies may be referred by their GP or attend the emergency department (ED) directly

- All ambulant patients presenting on weekdays should be initially managed in the surgical assessment unit by the on-call specialist grade surgeon in consultation with the consultant surgeon on call
- Patients should not go to the main surgical wards until they have been assessed by the surgical middle grade on call
- Colorectal emergencies should not be handled by general physicians, and patients who develop significant abdominal signs or symptoms whilst under the care of a general physician should be referred by telephone to the on-call surgical team at a senior level backed up by a Meditech V6 consultant request for opinion
- Patients with known GI malignancy should be referred to core members of the relevant site specific MDT.

Initial assessment should include:

- Full history and physical examination, including the chest, abdomen and rectum
- Full blood count, electrolytes, renal and liver function
- Patients with haemorrhage or for laparotomy must have a group and save taken
- C-reactive protein is indicated in suspected inflammatory bowel disease
- Tumour markers have no role in initial diagnosis of GI malignancy
- Coagulation studies are not indicated unless the patient is anticoagulated
- An erect chest X-Ray can detect perforation although this is not infallible
- Plain abdominal radiography can detect bowel obstruction and may also have a role in the management of severe colitis. However, contrast enhanced CT is preferable if renal function and time permit.
- It is important that the clinical interpretation of all radiological investigations is documented in the case notes
- Enoxaparin 40 mg sc OD should be prescribed unless actively bleeding
- Patients with suspected Sepsis should have blood cultures, immediate broad spectrum antibiotics and fluids in line with the sepsis care bundle

- Arterial Blood Gas and Lactate level should be measured in all patients with suspected sepsis. Hypoxia or elevated Lactate both need immediate review by critical care team
- Patients with signs of peritonitis, perforation, sepsis or hypotension should be promptly assessed by the consultant surgeon on call and prepared for emergency surgery. In such circumstances mortality is reduced by operating within 12 hours.
- Patients with suspected obstruction but no signs of peritoneal irritation should be managed with intravenous fluids and nasogastric aspiration with a view to early diagnostic imaging usually via contrast enhanced CT. Providing there is no clinical evidence of peritonitis, early on the next working day, the admitting team should consult with a consultant colorectal surgeon regarding optimal imaging and timing of appropriate surgical intervention.

4. Resuscitation

- Patients with suspected obstruction or perforation should be fluid resuscitated with crystalloid solutions; Hartmanns is recommended in the absence of a specific electrolyte imbalance. In small bowel obstruction considerable volumes of fluids may be needed to achieve euvolaemia.
- Bladder catheterisation and commencement of fluid balance and national early warning score (NEWS) is part of optimal care and should be initiated whilst still in the emergency department or the surgical assessment unit
- In patients in whom surgery is planned early discussion with the consultant anaesthetist on call is recommended. Critically ill patients may benefit from a short period of pre-optimisation in an anaesthetic room or critical care environment prior to surgery.

5. Diagnostic Imaging

- If a patient has suspected peritonitis or a perforation on the basis of clinical and basic radiological examinations there is no role for further cross-sectional imaging. Such cases should be optimally resuscitated and then prepared for an exploratory procedure
- Patients with bowel obstruction are frequently investigated by CT scanning, although this cannot always differentiate true obstruction from pseudo-obstruction and can be mis-interpreted: a proportion of bowel cancers do not show on CT
- An apparently normal CT still demands clinical vigilance and an appreciation that further imaging with contrast studies and or endoscopy

may be required. The imaging should be discussed with a colorectal surgeon and considered for MDT discussion

- Rigid sigmoidoscopy is important in suspected rectal cancer, but fiberoptic endoscopy is not otherwise useful in suspected large bowel obstruction. Excess air insufflations can exacerbate closed loop obstruction and cause caecal injury. Endoscopy with a view to urgent stenting should only be taken if facilities to operate immediately if the stent fails are available
- Endoscopy is useful in GI bleeding and in assessment of suspected colitis, and in such cases every effort should be made to perform endoscopy on the next working day.

6. The Decision to Operate and Consent

- The consultant surgeon on call should always be involved in a decision to perform emergency surgery on large bowel disease
- If the patient is stable and peritonitis has been excluded the optimal timing of surgery is on a daytime Emergency list
- Consent for surgery requires time for discussion with the patient and relatives. Consent must not be obtained during a busy 'post-take' ward round. Detailed patient information leaflets are available on the intranet for many colorectal procedures and should be offered to patients and their carers
- Referral to the stoma nurse specialists should be made to allow for appropriate pre-operative counselling and siting of potential stoma and referral to a colorectal nurse specialist should be made to allow for appropriate pre-operative or post-operative counselling
- The use of mortality risk calculator such as P-Poosum or NELA model to estimate the risk of mortality for the proposed procedure is recommended as part of informed consent.
- Remember that P-POSSUM significantly over-estimates the risk of death in some higher risk patients. Decision as to whether to operate must not be made merely on risk but also potential benefits in the face of life-threatening illness
- See <https://data.nela.org.uk/riskcalculator> or www.riskprediction.org.uk. Some risk calculators, particularly on smartphone apps, have incorrect algorithms

- Appropriate documentation for the National Emergency Laparotomy Audit should also be completed on line at <https://data.nela.org.uk>. The clinical audit department can arrange log-in passwords for this site
- Patients with a predicted mortality of more than 5% are considered at high risk and should be always managed at a consultant level. Nearly all urgent or emergency colorectal operations have a predicted mortality that makes the patient high risk and mandates that such surgery should be supervised by a consultant however experienced the middle grade
- Those with more than 10% predicted mortality should be managed in the critical care unit with both consultant surgeon and consultant anaesthetist present during surgery.

7. Preparation for Surgery and Anaesthesia

- Prior to surgery every effort should be made to correct dehydration and electrolyte imbalance. Balanced Lactate solutions have been shown to be superior to Saline for this purpose. All diabetics should be managed with a sliding scale insulin regime
- Patients who are deemed not to be obstructed should be offered fluids and nutritional supplement drinks until 6 hours before proposed surgery
- Oral bowel preparation is usually unnecessary unless an on-table colonoscopy is anticipated
- Anaesthetic assessment should include discussion between the consultant surgeon and the consultant general anaesthetist on call, who should be immediately available during induction of anaesthetic
- In most cases where large bowel resection is contemplated the staff of the critical care unit should be informed so that a post-operative bed can be reserved
- Prior to anaesthesia all surgical and anaesthetic team members should conduct a pre-op team brief
- Techniques to measure and optimise fluid balance and oxygen delivery such as Oesophageal Doppler monitoring should be used in all cases undergoing urgent major bowel resection. Peri-operative arterial pressure monitoring and gas sampling is important in higher risk patients
- Maintenance of body temperature is known to reduce infective complications, so facilities for body warming and temperature monitoring must be used.

8. Intra-operative Techniques

- All patients should have antibiotics according to published policy
- There is a role for laparoscopy in management of colorectal emergencies, since laparoscopic techniques can be successfully used for perforated localised diverticulitis, appendiceal disease, duodenal ulcers and inflammatory bowel disease.
- Laparoscopy may however overlook some pathologies, particularly synchronous large bowel tumours, and further colonic imaging may be required post-operatively
- Open surgery is usually required in large bowel obstruction, perforation or major haemorrhage. The aim of the surgery is to control sepsis and where possible removed the diseased segment of bowel. Restoration of intestinal continuity is a secondary consideration, and stomata can be life-saving in urgent surgery for sigmoid and rectal pathology
- There is increasing evidence to support 'damage-control' surgical techniques in critically ill patients, particularly those with acidosis and coagulopathy. In such cases once the primary pathology e.g. perforation or bleeding point is dealt with, the abdomen is closed temporarily and the patient resuscitated further in ITU. The patient is then re-operated on 2-3 days later to fashion anastomoses, stomata etc.
- Completion of National Emergency Laparotomy Audit forms will calculate predicted mortality at the end of surgery. This together with assessment of lactate and arterial blood gases is of benefit in ensuring the patient receives the optimal level of post-operative care.

9. Post Operative Instructions

- The operating surgeon must complete the electronic operation note on v6 and ensure that an accurate assessment of co-morbidities is completed within the operation note. This permits optimal coding of co-morbidities and correct risk stratification for Hospital Episode Statistics
- The operating surgeon is responsible for ensuring that Thromboprophylaxis risk assessment and postoperative antibiotics have been prescribed according to protocol
- A plan for intravenous fluids should be established between senior anaesthetists and surgeons. Instructions for Early Warning Score Trigger points should be made clear with a plan for colloid bolus and additional clinical review if needed

- A plan for post-operative nutrition also needs to be documented. Critically ill patients should be considered for naso-gastric or jejunal feeding and appropriate feeding tubes should be inserted whilst under the anaesthetic. Even low volumes of enteral feed are known to reduce complications after surgery
- The consultant surgeon present at operation should continue the patient care or refer it to a named specialist colorectal colleague
- After major surgery patient care should not continue to be rotated between surgical admitting (SAU) teams.

10. Post Operative Care

- In many cases safe care can be delivered on the ward, but all patients undergoing a large bowel resection should be considered for Level 2 care in the Critical Care Unit in discussion with the critical care consultant on call
- Patients where the primary pathology could not be dealt with or where metastatic disease limits life expectancy should still be offered Level 2 care to ensure they have an optimal chance to recover from anaesthetic and have good analgesia
- Patients returning to the ward should always be nursed on core general surgical wards, currently wards 14 or 15
- Post-operative observation monitoring should include hourly urine output, TPR and BP recorded in the National Early Warning Score format for at least 24 hours after surgery
- It is acceptable for the urine output to be between 0.5 and 1 ml/kg/hour for the first 72 hours after surgery. Oliguria below 0.5ml/kg/hr or 30 mls/hr for more than three hours should prompt assessment by an experienced speciality doctor
- Nursing and other staff **are empowered to call senior medical staff** to review patients who remain oliguric, hypotensive or are otherwise causing concern
- Excessive crystalloid fluid should be avoided; many patients only require 2 litres of fluid per day and can be stopped when oral intake is established
- Oral nutrition after colonic surgery can usually commence as soon as the patient has recovered from anaesthetic. Low residue high carbohydrate nutrition is ideal at this stage
- Patient controlled analgesia should be offered to all patients

- Patients should receive regular antiemetics and analgesia as required
- Selected patients may be offered regular laxatives in accordance with the principles of enhanced recovery
- Analgesia via TAP catheters can be safely delivered on the surgical wards with the assistance of the anaesthetic team
- Early mobilisation is crucial so drips, catheters and drains should be removed as soon as possible to permit this
- Thromboprophylaxis must continue throughout admission.

11. The Management of Post-Operative Organ Dysfunction

- Patients who remain unstable after surgery should be reviewed by a consultant surgeon and intensivist, and considered for transfer to the Critical Care Unit
- Nursing staff must feel empowered to contact senior medical staff to review deteriorating patients even if middle grade staff have attended to the patient. See Trust Escalation policy.
- CT or contrast imaging can help delineate the cause of some post-operative complications. However, if doubts about the integrity of an anastomosis or the absence of ongoing haemorrhage persist re-laparotomy is strongly recommended
- There is increasing recognition of the pathological processes in the abdominal compartment syndrome. Measurement and documentation of intra-abdominal pressure is recommended after prolonged surgery for peritonitis. Laparostomy in such cases can be directly life-saving.

12. Lower GI Bleeding and Suspected Colitis

- Patients with bright red rectal bleeding should be initially managed by the general surgical team with referral on to a specialist colorectal surgeon
- Patients with bloody diarrhoea should be managed by either consultant physician on call or the colorectal surgical team
- Patients who are otherwise well, cardiovascularly stable and not anaemic do not need to be admitted but can be referred for urgent outpatient GI endoscopy
- Patients who are admitted should have a flexible sigmoidoscopy requested in the endoscopy department, usually after a phosphate enema preparation

- Admitted patients should be fluid resuscitated and have any anticoagulation stopped. Antibiotics active against anaerobes e.g. Metronidazole should be considered if the patient may have diverticular disease or C.difficile infection
- Patients with features of a possible upper GI bleed should be considered for an OGD by the gastroenterologist or surgeon on call
- Patients who are shown to have inflammatory bowel disease should be transferred to a consultant gastroenterologist via an electronic consultant-consultant referral. They will then be managed according to the Trust guidelines with steroids and thromboprophylaxis
- A dietician referral and regular nutritional supplements are also required in all cases of severe inflammatory bowel disease
- Patients with Colitis whose symptoms are not settling (Diarrhoea >6/day, falling Hb, CRP>45) after 3 days of intensive treatment should be formally discussed with a colorectal surgeon and managed jointly. If surgery is not undertaken, arrangements should be made for the consultant surgeon on call or a colorectal surgeon to review the patient daily until the patient has recovered. Daily blood tests and abdominal radiography are advised
- Patients with toxic megacolon or progressive colonic dilatation whether related to inflammatory or infective colitis should be offered emergency colectomy.

13. Breaking Bad News

- Communication of a diagnosis of cancer to a patient will occur by the Trust and Cancer Network agreed Breaking Bad News Policy
- Nursing support from nurse specialists or ward staff should always be obtained before communicating bad news
- Detailed discussion of diagnosis and prognosis should not be performed during a busy post-take ward round. It is recommended that such discussions occur between senior staff and patients when relatives and nurse specialists are available
- Communication with the GP of a patient's colorectal cancer diagnosis is provided within 24 hours of the patient being informed as per Policy.

14. Discharge Documentation

- The consultant in charge of a patient's care must ensure a discharge letter is prepared. Many consultants dictate a letter for patients who have had

complex large bowel surgery, detailing operation, co-morbidity, outcome and follow up plan

- Patients with bowel cancer should be followed up by a colorectal surgeon
- Patients who are deemed to require outpatient endoscopy should have a written request completed before leaving the hospital.

15. The Role of the Colorectal Multi Disciplinary Team (MDT)

- Following surgical intervention for suspected malignancy or high-grade adenomatous disease the patient should be referred to the colorectal MDT meeting for discussion of histology. Such patients should be referred to a colorectal specialist surgeon for additional in/out patient management and routine surveillance
- Referrals for colorectal multidisciplinary team discussion must be made to the colorectal MDT coordinator via email to oncologydatateam@nhs.net
- All patients found to have a malignancy will be entered into the National Bowel Cancer Audit database by the oncology data team. Data will be made available for upload via Infoflex to the National Bowel Cancer Audit. Anonymised patient data will also be available for local and regional audit projects approved by the clinical audit team or the cancer network.

16. References and Linked Resources

1. The Higher Risk General Surgical Patient, RCS/DOH 2011
www.rcseng.ac.uk/publications/docs/higher-risk-surgical-patient/
2. East Midlands Cancer network Guidelines on Colorectal Cancer 2017
http://emsenate.nhs.uk/downloads/documents/expert%20clinical%20advisory%20groups/Colorectal/ECAG_Colorectal_guidelines_V1_Ratified.pdf.
3. Achieving world class cancer outcome 2015
http://www.cancerresearchuk.org/sites/default/files/achieving_world-class_cancer_outcomes_-_a_strategy_for_england_2015-2020.pdf.
4. www.Nela.org.uk
5. www.riskprediction.org.uk
6. Information on National Bowel cancer Audit is at
<http://www.nboca.org.uk>.