Whittington Health NHS

Upper Gastrointestinal Haemorrhage - Management

Subject:	Upper Gastrointestinal Haemorrhage - Management
Policy Number	N/A
Ratified By:	Clinical Guidelines Committee (original)
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Policy Executive Owner:	Divisional director for ICAM
Designation of Author:	Deepak Suri (Consultant, Acute Medicine & Gastroenterology), Dr R Jennings (Consultant, Infectious Diseases & Acute Medicine and Divisional Director, ICAM) Oct 2013: Updated by Joanna Pleming CT1 and Rishi Patel FY1
Name of Assurance Committee:	Clinical Guidelines Committee
Date Issued:	October 2013
Review Date:	Three years hence
Target Audience:	All doctors looking after patients with GI haemorrhage
Key Words:	Upper gastrointestinal haemorrhage, upper gastrointestinal endoscopy

Version Control Sheet

Version	Date	Author	Status	Comment
1.0	Oct 2010	Deepak Suri (Consultant, Acute Medicine & Gastroenterology).	Off-line	Due for review
2.0	Apr 2011	Deepak Suri (Consultant, Acute Medicine & Gastroenterology).	Off-line	Minor amendments
3.0	Apr 2013	Deepak Suri (Consultant, Acute Medicine & Gastroenterology).	Off-line	Due for review
4.0	Oct 2013	Deepak Suri (Consultant, Acute Medicine & Gastroenterology). Updated by Joanna Pleming CT1 and Rishi Patel FY1 Amendments approved by Richard Jennings 18/10/13	Current	Reviewed with amendments to reflect updated local and national policy. All amendments contained within a comprehensive summary, available from the Clinical Governance and Quality Department. Amendments approved by lead authors, Dr D Suri and Dr RJennings.

➢ Criteria for use

1. How to assess and manage upper gastrointestinal haemorrhage (UGIH)
2. How identify **High Risk** patients
3. When to request an upper gastrointestinal endoscopy (UGIE)
4. When to request an **emergency UGIE**
5. How to obtain an **emergency UGIE out of normal working hours**
6. When to consider **surgery** or **interventional radiology**

N.B. The Whittington Hospital has a 24/7 Emergency UGIE service

➢ Background/ introduction

- Upper GI haemorrhage (UGIH) is a common medical emergency. In a UK wide audit in 2007, the overall mortality of patients admitted with acute GI bleeding was 7%.
- UGIH is defined as haematemesis, melaena or coffee-ground vomit witnessed by medical or nursing staff.
- Massive UGIH requires immediate application of the Trust **Major Haemorrhage in Adults** guideline**.**

	Please see Whittington Health Guideline: ***'Major Haemorrhage in Adults'*** **http://whittnet/document.ashx?id=2987**

- If you have identified that your patient has a **Lower GI bleed** please see the **Lower Gastrointestinal Bleeding** guideline on the intranet.

	Please see Whittington Health Guideline: ***'Lower Gastrointestinal Bleeding'*** **http://whittnet/document.ashx?id=2954**

- The key steps in the management of UGIH are ***prompt clinical assessment and resuscitation.***
- ***All patients must be adequately resuscitated before endoscopy.***

- Upper GI endoscopy (UGIE) is an important diagnostic and therapeutic investigation in patients with suspected GI haemorrhage. All patients must be adequately resuscitated before endoscopy. However, it is inappropriate to perform UGIE in inadequately resuscitated patients.

- Patients who need or may need **emergency UGIE** must be identified as soon as possible to allow planning of the optimal timing of their endoscopy.

- This guideline has been agreed with the Endoscopy User's Group.

➢ Admission

- Patients presenting with UGIH should be admitted under the care of the medical team. Inpatients already under the care of a surgical team who develop UGIH will normally continue to be managed by the surgical team.

Admission ward guided by Blatchford score

Blatchford Score (Appendix 1)	Appropriate Ward to admit to:
≥7	HDU / ITU
1-6	AAU, Mercers Ward, Victoria Ward
0	Consider early discharge and booking UGIE as outpatient

➢ Clinical management

2.1. Assessment of the patient:

- Obtain history, examination (including per rectal examination) full blood count, clotting screen, urea, electrolytes, creatinine, liver function tests, group and save. Cross-match blood if Hb <80 (<100 in patients with cardiac co-morbidities) or patient unstable.

- Calculate and document the Blatchford score (Appendix 1) - **THIS IS ESSENTIAL IN ORDER TO STRATIFY RISK.**

- Consider there may be undiagnosed varices in patients with;
  - Clinical evidence of chronic liver disease, jaundice
  - Thrombocytopenia
  - Signs of portal hypertension (e.g. splenomegaly, caput medusa)

- Identify **High Risk** patients: these are the patients with any of:

    - Evidence of hypovolaemia (pulse >*100/min,* systolic BP< 100 mmHg),
    - Co-morbidity
    - Varices
    - Over 60 years of age
    - Haemoglobin (Hb) <*100g/L.*
    - Blatchford score >7

2.2 Management of High Risk patients:

- Perform ABC of resuscitation if indicated
- Obtain peripheral venous access with at least 2x 16G IV cannulae.
- Urgent volume replacement with crystalloid, then blood as soon as ready.
- Correct significant coagulopathy, i.e. INR > 1.5 or platelets <60
- Monitor pulse and BP half hourly, or more often if indicated.
- Insert a urinary catheter and monitor fluid balance. Aim for urine output >30ml/hr.
- If the patient can guard his/her airway, a nasogastric tube is not usually necessary, and may be detrimental.
- **All patients who are unstable after resuscitation must be discussed early with the duty endoscopist.**
- The surgical registrar **must** be informed **early** about the patient
- Massive UGIH requires immediate application of the Trust's **Major Haemorrhage in Adults** guideline.

	Please see Whittington Health Guideline: ***'Major Haemorrhage in Adults'*** **http://whittnet/document.ashx?id=2987**

NB – Empirical PPI IV or orally is no longer indicated (NICE 2012)
Give PPI in patients with known gastric or duodenal ulceration.

2.3 Management of suspected/known variceal haemorrhage

In addition to the measures immediately above:

- Give terlipressin 0.5 – 2 mg IV 4 hourly. Treatment should be stopped after haemostasis has been achieved or after 5 days.

- Give ceftriaxone 2g intravenously od for 5 days, or if allergic to beta lactams then give instead ciprofloxacin 500 mg bd orally or ciprofloxacin 200 mg bd intravenously.

	Please see Whittington Health Guideline: **'*Antimicrobial Use in Gastroenterology Guideline*'** **http://whittnet/document.ashx?id=1995**

- Consider Sengstaken tube insertion (located in endoscopy room 6 and 9 fridges) if ongoing bleeding.

2.4 Indications for blood transfusion

Haemoglobin (Hb) values requiring blood transfusion will vary and depend on careful clinical assessment.

2.4.1. For haemodynamically stable patients with no evidence of ongoing bleeding and no cardovascular co-morbidity:

- Transfuse only if Hb <80 g/L, with a target Hb of 100 g/L. If clear evidence of chronic rather than acute blood loss consider a single dose of intravenous iron rather than transfusion - discuss with pharmacist – but avoid in those known to have iron overload or if ferritin >300ug/L.

2.4.2 For haemodynamically stable patients with no evidence of ongoing bleeding but significant cardiovascular co-morbidity:

- Transfuse if Hb is <100 g/L aiming for a Hb of 100g/L

2.4.3 For haemodynamically unstable patients with evidence of active bleeding:

- Transfuse to achieve and maintain a target Hb of 90g/L.

Upper Gastrointestinal Endoscopy (UGIE)

Upper Gastrointestinal Endoscopy (UGIE) is done in the endoscopy rooms within the Day Treatment Centre (DTC), on the Intensive Care Unit (ICU) or in theatre

3.1 When to request Upper Gastrointestinal Endoscopy (UGIE)

- All admitted patients with a GI bleed should be endoscoped within 24 hours of admission.
- Patients should be nil by mouth for at least 6 hours before UGIE – however, this must be balanced against the degree of urgency of the UGIE.

- Those admitted before 17.00 hrs should be endoscoped on the same day.
- Please discuss directly with an Endoscopist in the DTC (extension 3827/3828) as soon as admitted.
- Those admitted after 17.00 hrs should be endoscoped the following day unless they fulfil any criteria for needing **Emergency UGIE**(see below). An Endoscopist in DTC should be contacted at 08:30 the next day to arrange the endoscopy.
- If out of hours endoscopy is required the duty Endoscopist should be contacted via switch board.
- Consider I.V. Metoclopramide or Erythromycin to empty stomach.

3.2 When to request Emergency Upper Gastrointestinal Endoscopy (UGIE)

Emergency UGIE should be requested if the patient has:

- Ongoing bleeding (haematemesis or malaena with significant drop in Hb).
- Haemodynamic instability.
- Known or suspected varices.
- Previous history of a major GI bleed.

There may be other indications - **if in doubt, always discuss** with the duty Endoscopist.

3.3 How to request Upper Gastrointestinal Endoscopy (UGIE)

- Patients admitted between 08:00 and 17:00 hrs Monday to Friday: **Discuss directly with the endoscopist,** in person in the DTC, and fill in an Endoscopy Request Form **(including the Blatchford score)** and take it to the DTC.

3.4 How to request UGIE OUT OF NORMAL WORKING HOURS

N.B. The Whittington Hospital has a **24/7 Emergency Endoscopy Service**

- Patients admitted after 17.00 and before 08:00 Monday to Friday, and patients admitted at any time over the weekend: **Contact the On-Call Endoscopist via switchboard.**

3.5 Management after UGIE

- Patients with non-variceal haemorrhage with stigmata of recent bleeding on upper GI endoscopy should be offered proton-pump inhibitors.
- I.V. PPI only if endoscopic therapy performed.
- Parenteral omeprazole is available as both an intravenous infusion and as a bolus injection. THESE FORMULATIONS ARE NOT INTERCHANGEABLE. Bolus administration of the intravenous infusion formulation may cause pain and vein damage. Dosage: 80mg IV stat, followed by a continuous infusion of 8mg per hour for 72 hours. Doctors or nurses may contact pharmacy for advice on setting up the IV omeprazole infusion.
- Patients, if stable, should be fed after UGIE - food is a good buffer of acid!
- Patients should have close ward observation on an appropriate ward (see under "Admission" above) with twice daily Hb measurement for 48 hrs.
- Patients who are Helicobacter positive should receive eradication therapy. Patients with complications from peptic ulcer disease (haemorrhage, perforations) should have this confirmed by stool testing. Note – if results not available on Anglia ICE or Unisoft within 24 hours – contact Day Treatment Centre.

	Please see Whittington Health Guideline: **'Antimicrobials in Bacterial Infections in Adults - Guidelines for Management'** **http://whittnet/document.ashx?id=613**

- Patients with a gastric ulcer should have a repeat endoscopy organised 6 weeks after index endoscopy.
- Elderly patients with significant co-morbidity should be considered for life-long PPI therapy in addition to Helicobacter eradication.

If the patient has re-bled after UGIE:

- **The responsible Endoscopist should document and communicate a clear management plan including at least half-hourly observations of blood pressure and pulse for 6 hours**
- **The responsible Endoscopist should hand over to the receiving surgical and intensive care team**
- **The responsible Endoscopist should document the events in the GI reporting software**

4. Patients who fail to improve, deteriorate or re-bleed: Inform the following-

Inform the following:

- Duty Endoscopist early
- On-call Consultant Surgeon early
- On-call Consultant Anaesthetist early
- Intensive Care Unit Consultant early
- Consultant in charge early
- Manage the patient on HDU/ICU

With consultant support, consider:

- Repeat UGIE in theatre, with possible continuation to laparotomy
- Immediate laparotomy
- Interventional radiology
- Surgery

The indications for consideration of interventional radiology or surgery are:

- Continued uncontrolled bleeding or massive bleeding
- Active bleeding at endoscopy that does not immediately respond to endoscopic treatment.
- In-hospital re-bleed

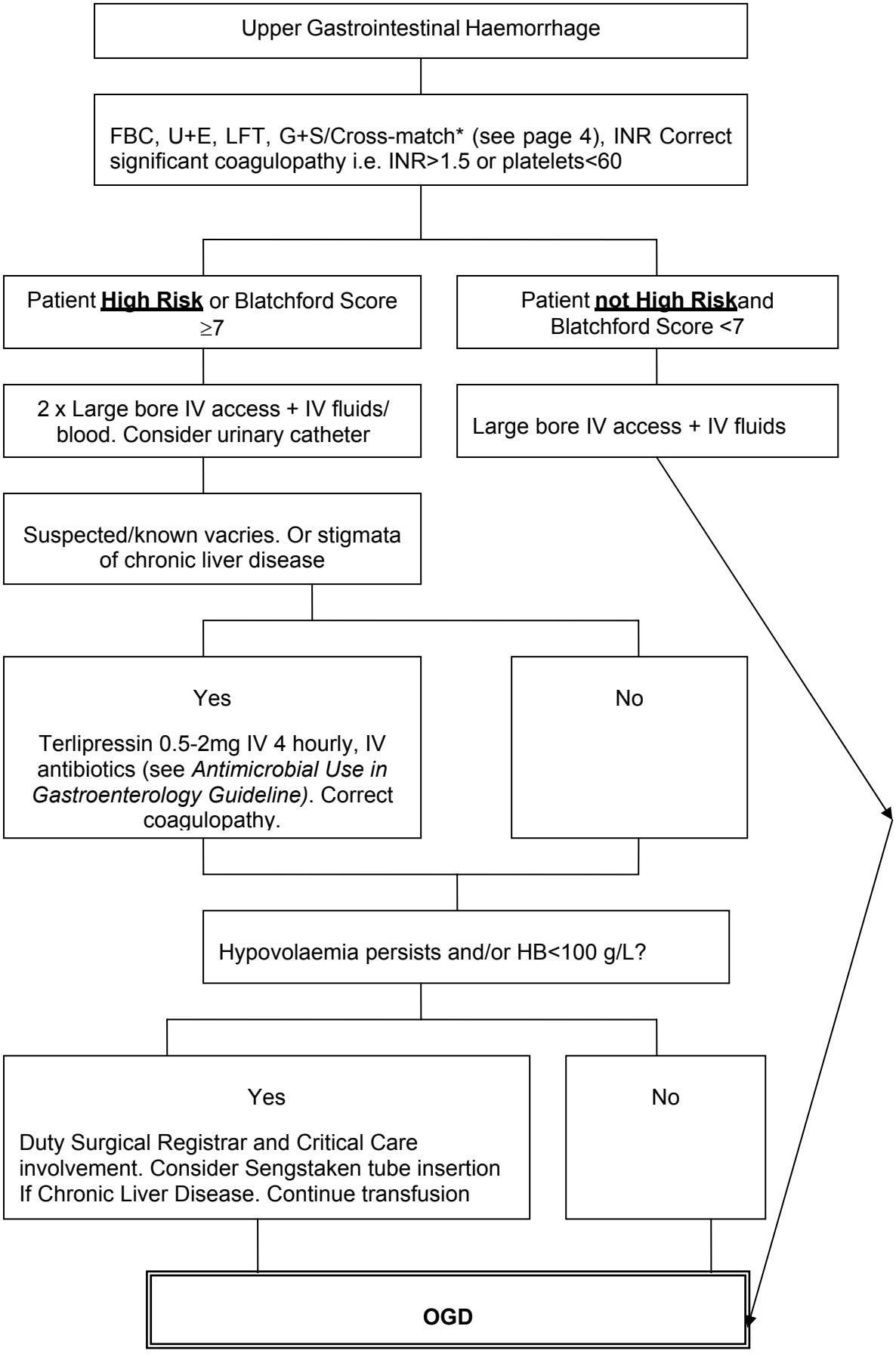
Availability of interventional radiology and pathways for accessing interventional radiology may change over time, and it is essential for the options around this to be considered early by the relevant consultants.

The interventional radiology service can only be activated by the named **Consultant** responsible for the patient's care, or the ITU Consultant at the Whittington Hospital, having considered the appropriate management options in the case. Patients must, in the opinion of the responsible consultant, be unfit or unsafe to be transferred to another hospital for the purpose of treatment.

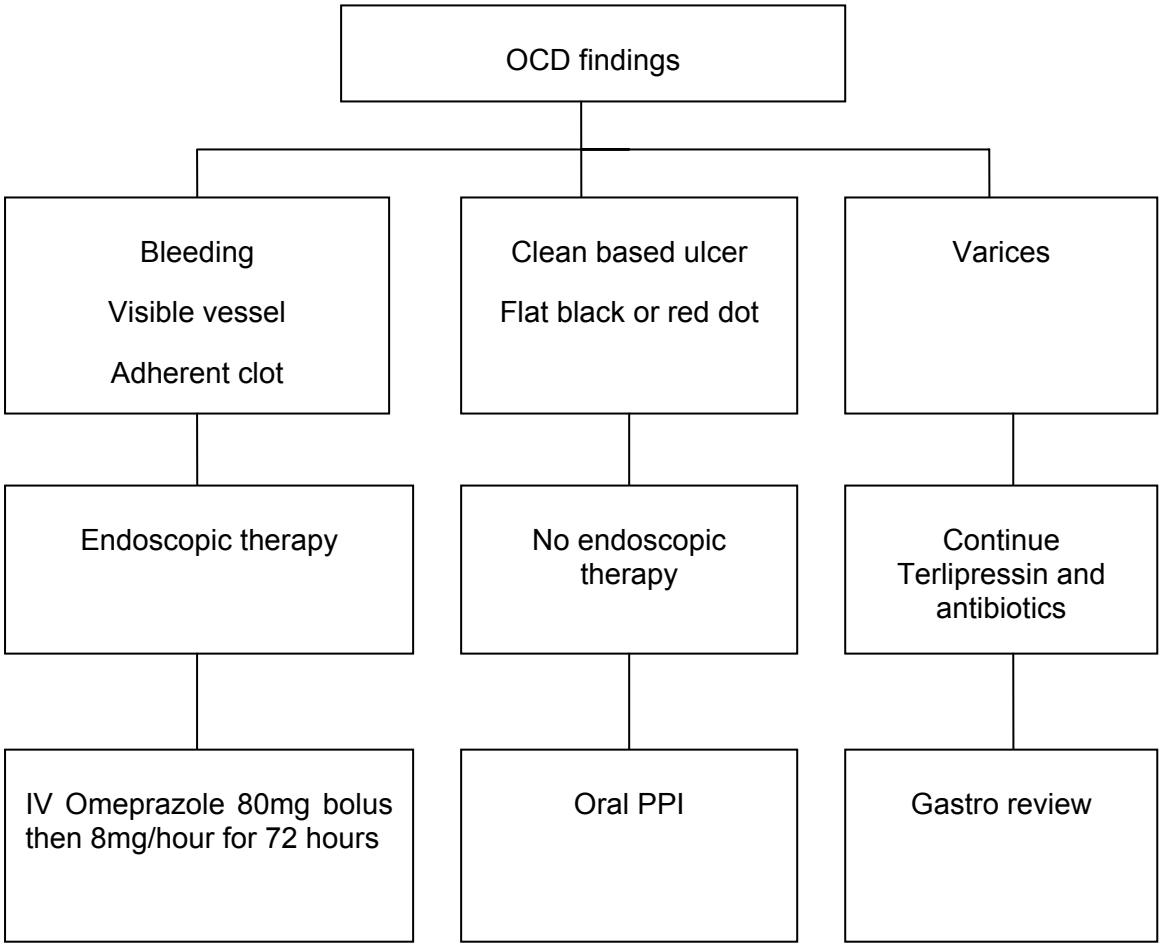
How to activate the emergency interventional radiology service-
Consultants wishing to activate the service will ask the Cencom operator to place them in contact with the Emergency Interventional Radiology Service.

Daytime requests 9am -5pm Monday – Friday i.e. core working day
Please **bleep 2616** to inform the department that a request to the emergency interventional service has been made.

Investigations and Management of Upper GI Bleed



Post Endoscopy Management



NB: Oral PPI: omeprazole 40 mg OD or lansoprazole 30 mg OD.

Use of PPI only indicated if there are signs of recent haemorrhage on endoscopy.
Not indicated if UGIE not performed unless known ulceration

7. Contacts

During working hours:

- Consultant Radiologist (via Cencom)
- Consultant ITU (via Cencom)
- GI SpR (bleep 3036/3113)
- Surgical SpR (bleep 3376)
- Endoscopist in Endoscopy unit to discuss management of difficult cases and daytime requests (extension 3827 or 3828)

Out of hours

- On call Endoscopist (via Cencom)
- Endoscopy on-call rota is available on the intranet

Pharmacist

- Mercers Ward Pharmacist – bleep 3188
- Medicines Information – phone 5021
- On Call Pharmacist available via switchboard out of hours

Appendix 1 Blachford Score

The Blachford score is designed to be used pre-endoscopy[6]. Those with a Blatchford score of 0 may be considered for early discharge. Blatchford score was considered more accurate than pre-endoscopy Rockall score at evaluating risk of re-bleeding and / or need for intervention.

The Blachford Score[6]

Admission risk marker	Score component value
Blood urea (mmol/L)	
≥6.5 <8.0	2
≥8.0 <10.0	3
≥10.0 <25	4
≥25	6
Haemoglobin (g/L) for men	
≥120 <130	1
≥100 <120	3
<100	6
Haemoglobin (g/L) for women	
≥100 <120	1
<100	6
Systolic blood pressure (mmHg)	
100-109	1
90-99	2
<90	3
Other markers	
Pulse ≥100 (per min)	1
Presentation with malaena	1
Presentation with syncope	2
Hepatic disease	2
Cardiac failure	2

An online calculator is available at;

http://www.mdcalc.com/glasgow-blatchford-bleeding-score-gbs/

Please note that the units have to be converted to SI units to ensure urea is calculated in mmol/L.

Medical calculation apps for smartphones are available – e.g. Qx calculate (free)

Blatchford score of >0 is considered to indicate a possible risk for re-bleeding or the need for intervention.

Patients identified at low risk (with Blatchford score of 0) can be considered for early discharge with an arrangement made for urgent outpatient UGIE. If there is

Appendix 2 Rockall Score

The Rockall score (http://www.bsg.org.uk/rockall-score-calculator.html)is an externally validated mortality risk assessment score for patients admitted with upper gastrointestinal bleeding. It is a simple and practical scoring system designed to identify those at highest risk of dying (based on a combination of clinical and endoscopic findings) and needing active intervention. Post-endoscopy Rockall score should be calculated on all patients with suspected upper GI haemorrhage. ***This should be used as a guide and must not be substituted for clinical assessment of individual patients. If doubt, discuss with consultant or duty Endoscopist.***

Variable	Score 0	Score 1	Score 2	Score 3	
Age	<60	60- 79	>80		Pre-endoscopic score (maximum=7)
Evidence of Shock	'No shock' SBP>100 Pulse<100	'Tachycardia' SBP>100 Pulse>100	'Hypotension' SBP<100 Pulse>100		
Co-morbidity	None	None	Cardiac failure, IHD, other major co-morbidity	Renal failure, liver failure, disseminated carcinoma	
Post-endoscopy diagnosis	Mallory Weiss tear, no lesion identified and no SRH	All other diagnoses	Malignancy of upper GI tract		Post-endoscopic (maximum=11)
Post-endoscopy Major stigmata of recent haemorrhage	None or dark spots		Blood in upper GI tract, adherent clot, visible or spurting vessel		

***SBP – Systolic blood pressure, *SRH – Stigmata of recent haemorrhage.**

➢ References

1. Rockall, T.A. et al (1996) Risk assessment after acute upper gastrointestinal haemorrhage Gut 38(3) 316 – 321
2. Vreeberg, E.M. et al (1999) Validation of the Rockall risk scoring system in upper gastrointestinal bleeding Gut 44(3) 331 – 335
3. Out of Hours Gastroenterology – A Position Paper, British Society of Gastroenterology (BSG): March 2007: **www.bsg.org.uk**
4. **http://www.bsg.org.uk/rockall-score-calculator.html**
5. **www.sign.ac.uk/pdf/qrg105.pdf**
6. NICE guideline (June 2012) Acute upper gastrointestinal bleeding: management: **http://www.nice.org.uk/nicemedia/live/13762/59549/59549.pdf**

➢ Compliance with this guideline

This guideline was audited in December 2012 and the guidelines updated.

A re-audit is planned in January 2014.

To be completed and attached to any procedural document when submitted to the appropriate committee for consideration and approval

		Yes/No	Comments
1.	**Does the procedural document affect one group less or more favourably than another on the basis of:**		
	• Race	No	
	• Ethnic origins (including gypsies and travellers)	No	
	• Nationality	No	
	• Gender	No	
	• Culture	No	
	• Religion or belief	No	
	• Sexual orientation including lesbian, gay and bisexual people	No	
	• Age	No	
	• Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
2.	**Is there any evidence that some groups are affected differently?**	No	
3.	**If you have identified potential discrimination, are any exceptions valid, legal and/or justifiable?**	No	
4.	**Is the impact of the procedural document likely to be negative?**	No	
5.	**If so can the impact be avoided?**	N/A	
6.	**What alternatives are there to achieving the procedural document without the impact?**	N/A	
7.	**Can we reduce the impact by taking different action?**	N/A	

If you have identified a potential discriminatory impact of this procedural document, please refer it to the Director of Human Resources, together with any suggestions as to the action required to avoid/reduce this impact.

For advice in respect of answering the above questions, please contact the Director of Human Resources.

Checklist for the Review and Approval of Procedural Document

To be completed and attached to any procedural document when submitted to the relevant committee for consideration and approval.

	Title of document being reviewed:	Yes/No	Comments
1.	**Title**		
	Is the title clear and unambiguous?	Yes	
	Is it clear whether the document is a guideline, policy, protocol or standard?	Yes	
2.	**Rationale**		
	Are reasons for development of the document stated?	Yes	
3.	**Development Process**		
	Is it clear that the relevant people/groups have been involved in the development of the document?	Yes	
	Are people involved in the development?	Yes	
	Is there evidence of consultation with stakeholders and users?	Yes	
4.	**Content**		
	Is the objective of the document clear?	Yes	
	Is the target population clear and unambiguous?	Yes	
	Are the intended outcomes described?	Yes	
5.	**Evidence Base**		
	Are key references cited in full?	N/A	
	Are supporting documents referenced?	N/A	
6.	**Approval**		
	Does the document identify which committee/ group will approve it?	Yes	
7.	**Dissemination and Implementation**		
	Is there an outline/plan to identify how this will be done?	Yes	
8.	**Document Control**		

	Title of document being reviewed:	Yes/No	Comments
	Does the document identify where it will be held?	Yes	
9.	**Process to Monitor Compliance and Effectiveness**		
	Are there measurable standards or KPIs to support the monitoring of compliance with and effectiveness of the document?	Yes	
	Is there a plan to review or audit compliance with the document?	Yes	
10.	**Review Date**		
	Is the review date identified?	Yes	
	Is the frequency of review identified? If so is it acceptable?	Yes	
11.	**Overall Responsibility for the Document**		
	Is it clear who will be responsible for co-ordinating the dissemination, implementation and review of the document?	Yes	

Executive Sponsor Approval			
If you approve the document, please sign and date it and forward to the author. Procedural documents will not be forwarded for ratification without Executive Sponsor Approval			
Name		Date	
Signature			
Relevant Committee Approval			
The Director of Nursing and Patient Experience's signature below confirms that this procedural document was ratified by the appropriate Governance Committee.			
Name		Date	
Signature			
Responsible Committee Approval – only applies to reviewed procedural documents with minor changes			
The Committee Chair's signature below confirms that this procedural document was ratified by the responsible Committee			
Name		Date	
Name of Committee		Name & role of Committee Chair	
Signature			

Tool to Develop Monitoring Arrangements for Policies and guidelines

What key element(s) need(s) monitoring as per local approved policy or guidance?	Who will lead on this aspect of monitoring? Name the lead and what is the role of the multidisciplinary team or others if any.	What tool will be used to monitor/check/observe/Asses s/inspect/ authenticate that everything is working according to this key element from the approved policy?	How often is the need to monitor each element? How often is the need complete a report ? How often is the need to share the report?	What committee will the completed report go to?
Element to be monitored	**Lead**	**Tool**	**Frequency**	**Reporting arrangements**
All sections of version 4.0 to be audited in January 2014, 3 months post introduction	**Dr D Suri**	**Auditable standards (guidleine itself)**	**Annual audit of guideline elements is best practice**	**Gastroenterology meeting and ICAM Divisional Board if results warrant their review,**