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STANDARD OPERATING PROCEDURE FOR THE MANAGEMENT OF MAJOR HAEMORRHAGE WITHIN INHEALTH ENDOSCOPY UNITS

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REVISION HISTORY

Version	Date	Description	Author(s)
V001	April 2019	New document	Dr Lister Metcalfe, Heidi Husted
V002	May 2019	Amended spelling errors	Ben Peregrine

1.0 INTRODUCTION

This document sets out the Standard Operating Procedure for managing Major Haemorrhage in InHealth Endoscopy Units.

Whilst patients are carefully triaged by Endoscopists, with the aim of treating low risk patients who are suitable for procedures in a community setting, it is best practice for our services to have a policy in place to manage endoscopy complications such as major haemorrhage, should they occur.

2.0 PURPOSE

The purpose of this Standard Operating Procedure is to outline the correct processes for endoscopy staff to follow in the event of a major haemorrhage occurring in a patient undergoing an endoscopic procedure within an InHealth Endoscopy facility thus protecting both patients and staff.

This SOP will support safe and effective management of major haemorrhage through defining

- Appropriate staff training requirements, and monitoring of competency relating to major haemorrhage.
- Equipment Requirements
- The process for preparation of the environment prior to endoscopy.
- Approach to treatment and stabilisation of the patient.
- Access to information on emergency transfer arrangements for secondary care defining roles and responsibilities of the professionals involved in managing major haemorrhage

3.0 SCOPE

This policy standard operating procedure applies to all InHealth Endoscopy medical and nursing staff, practitioners with practising privileges, agency workers and bank staff.

4.0 ABBREVIATIONS

MH- Major Haemorrhage
MHK- Major Haemorrhage Kit
SOP- Standard Operating Procedure
UGI- Upper Gastrointestinal
LGI- Lower Gastrointestinal
ILS- Intermediate Life Support
BLS- Basic Life Support
JAG – Joint advisory Group on GI Endoscopy
AVPU – Alert, Verbal, Pain, Responsive (a system by which a health care professional can measure and record a patient's level of consciousness)

5.0 ROLES & RESPONSIBILITIES

5.1 Clinical Lead

- Ensure up to date training records are available.
- Ensure medical staff induction checklist includes review of MH SOP.
- Ensure endoscopists have access to MH SOP.
- Ensure endoscopists adhere to the MH SOP.
- Review any Major Haemorrhage with endoscopist following event, and at Quality Circle Meetings.

5.2 Lead nurse/Unit manager

- Ensure appropriate equipment for the management of MH is kept in a designated container, in the designated area (to be decided locally and disseminated) and is appropriately labelled 'Major Haemorrhage Kit'.
- Ensure that the MHK' is checked daily for missing or out of date items and that the daily checklist is completed. (Appendix 1)
- Ensure that the daily checklist is scanned and included in monthly audit programme.
- Ensure that nursing staff have access to appropriate training and remain compliant.
- Ensure that nursing staff are competent in their area of work (specifically competency END 9 – Assist colleagues during endoscopic procedures) and re-assess endoscopy competencies annually
- Ensure nursing staff induction checklist includes a review of the MH SOP, the MHK and their location.
- Ensure nursing staff have access to MH SOP.
- Ensure Upper and Lower Patient Care Pathways (Appendix 2 and 5), AVPU and Observation Scoring Card (Appendix 3,) are laminated and visible on the wall procedure rooms.
- Ensure AVPU and Observation Scoring Card (Appendix 3) is available in recovery.
- Ensure nursing staff adhere to the MH SOP.
- Ensure up to date contact details for local hospitals are kept on display.

5.3 Nursing Staff

- Should know where to find the Major Haemorrhage SOP, and the patient care pathways. (Appendix 2,5 and 6)
- Should read (and sign to say they have read) the MH SOP.
- Adhere to the MH SOP in the event of a major haemorrhage.
- Should know the location of MHK.
- Should be familiar with contents of MHK
- Should complete MHK daily checklist as delegated by Lead Nurse.
- Should develop and maintain competence to practice by keeping knowledge skills and competencies up to date.
- Be familiar with secondary care transfer arrangements.

5.4 Individual Endoscopists

- Should know where to find the Major Haemorrhage SOP, and the patient care pathways. (Appendix 2,5 and 6)
- Should read (and sign to say they have read) the MH SOP.
- Adhere to the MH SOP in the event of a major haemorrhage.
- Should know the location of MHK.
- Should be familiar with contents of MHK
- Should complete MHK daily checklist as delegated by Lead Nurse.
- Should develop and maintain competence to practice by keeping knowledge skills and competencies up to date.
- Be familiar with secondary care transfer arrangements.
- Maintain competency and keep up to date with developments in clinical practice

6.0 TRAINING

- Nursing staff should maintain clinical competency of level 4 or above in all endoscopy competencies. Especially, assisting, clipping and injecting for registered nurses.
- The Lead/Senior nurse (or Unit Manager, where they exist) should reassess clinical competencies on an annual basis and provide further training where appropriate.
- All registered nurses should have received ILS training.

7.0 DEFINITIONS

Major Haemorrhage

Major haemorrhage is defined as severe or life-threatening bleeding which cannot be resolved, or following treatment/stabilisation is regarded as being at high risk of recurrence.

Upper and Lower Gastrointestinal Bleeding

Upper gastrointestinal bleeding (or haemorrhage) is that originating from the oesophagus, stomach and duodenum.
Lower gastrointestinal bleeding is that originating from the small bowel and colon. This guideline focuses upon upper GI and colonic bleeding, due to or discovered during an endoscopic procedure, since acute small bowel bleeding is uncommon.

Varices
Varices are abnormal distended veins usually in the oesophagus (oesophageal varices) and less frequently in the stomach (gastric varices) or other sites (ectopic varices) usually occurring as a consequence of liver disease. Bleeding is characteristically severe and may be life threatening.

Gastric ulcer
Stomach ulcers, also known as gastric ulcers, are open sores that develop on the lining of the stomach. Ulcers can also occur in part of the intestine just beyond the stomach. These are known as duodenal ulcers.

Shock
Shock is circulatory insufficiency resulting in inadequate oxygen delivery leading to global hypoperfusion and tissue hypoxia. In the context of GI bleeding shock is most likely to be hypovolaemic (due to inadequate circulating volume from acute blood loss). The shocked, hypovolaemic patient generally exhibits one or more of the following signs or symptoms:

- a rapid pulse (tachycardia)
- anxiety or confusion
- a high respiratory rate (tachypnoea)
- cool clammy skin
- low urine output (oliguria)
- low blood pressure (hypotension).

It is important to remember that a patient with normal blood pressure may still be shocked and require resuscitation.

Endoscopy
Endoscopy is the visualisation of the inside of the gastrointestinal tract using telescopes. Examination of the upper gastrointestinal tract (oesophagus, stomach and duodenum) is known as gastroscopy or upper gastrointestinal endoscopy. Examination of the colon (large bowel) is called colonoscopy.

8.0 PREPARATION OF THE ENVIRONMENT

- Highlight ILS trained staff on duty at the morning safety briefing.
- Check the MHK and additional equipment i.e. crash trolley, suction etc at the beginning of each operational day. Ensure all the items listed on the checklist *(Appendix 1)* are present and in date.
- The MHK should be located in a designated area – known to all staff.
- Ensure any new starters or bank staff have been made aware of the MH SOP and the location of the MHK on induction.
- Ensure copy of MH SOP is available in each procedure room.
- Ensure laminated patient care pathway for both upper GI and lower GI bleeds, are visible on the wall of the procedure room. *(Appendix 2 and 5)*
- Ensure laminated AVPU and Observation Scoring Card *(Appendix 3)* are laminated and available in each procedure room and recovery.
- Ensure laminated patient care pathway for recovery is visible on the wall of recovery. *(Appendix 6)*
- Ensure laminated emergency transfer to secondary care instructions and contact details are available in recovery area.

9.0 EQUIPMENT REQUIRED

All equipment to be checked daily and replaced in advance of expiry date.

- 1 x box of Adrenaline 1:10,000
- Adrenaline drug labels
- 2 x Gastric injection needles
- 2 x Colon injection needles
- 4 x 10ml syringe
- 4 x Drawing up needle with filter
- 10 x Colonic haemoclips
- 2 x Aquagel sachets (for lubricating the injection needles).
- 1 x Pack of sterile gauze swabs
- 2 x 60ml luer slip syringes
- 2 x Small lengths of suction tubing (for drawing up sterile water).
- 2 x Grey Cannulas
- 2 x Green Cannulas
- 2 x Blue cannulas
- 2 x Tourniquets
- 4 x 5mls syringes
- 4 x Normal saline flush (10mls)
- Normal saline drug labels
- 4 x Steri wipe

- 4 x Cannula dressings.
- 2 x IV giving sets
- 2 x 1000mls Saline
- 2 x 500mls Gelofusin

Additional equipment required that is not kept in this kit:

- Suction unit (should be in procedure room) – additional portable suction can be found on the crash trolley.
- Crash trolley for commencement of BLS/ILS in the event of loss of spontaneous circulation/respiration.

10.0 PATIENT CARE PROTOCOL

10.1 Upper Gastrointestinal Haemorrhage - refer also to 'Upper GI Patient Care Pathway' *(Appendix 2)*

Endoscopist to assess the severity of the bleed - Major haemorrhage or severe bleed?
Initiate the steps below:

- Procedure room staff to summon help from other unit staff.
- The procedure room nurse should stay in the procedure room with the endoscopist and the patient and a request for the following items should be made to other members of staff.

    i. *Major Haemorrhage Kit (from designated area)*
    ii. *Suction machine (if further required)*
    iii. *Crash trolley available in close vicinity*.

- Recovery staff to initiate local transfer to hospital protocol immediately and inform local hospital of transfer to ED – see Section 11.
- A further ILS trained nurse should be summoned to the room to monitor the patients' airway and cannulate the patient if they are not already cannulated. Consider inserting at least 1 wide bore cannula, if not 2, if possible. IV fluids may need to be administered if there is clinical deterioration or signs of hypovolaemic shock, these should be prescribed by an endoscopist.
- The head end practitioner should monitor and record, heart rate, respiratory rate, oxygen saturations and level of consciousness (AVPU), together with 5-minute blood pressures, or more frequently if there is clinical deterioration. S/He should keep the nurse and endoscopist informed of any deterioration. Please use the AVPU and Observation Scoring Card. *(Appendix 3)*

A. Then, if the origin of bleed is determined to be from an ulcer:

- The assisting nurse should draw up 10mls of adrenaline into a 10ml syringe and prime a gastric injection needle and then hand it to the endoscopist.
- The endoscopist should inject into and around the ulcer with adrenaline.
- Once injecting has finished, remove the needle and flush with water to ensure the bleeding has stopped.
- In the event of ongoing bleeding, remove the scope and manage the clinical condition of the patient. If the patient is stable enough and it is safe to do so, transfer the patient to recovery for monitoring until the ambulance arrives. ***Initiate: Recovery Patient Care Pathway. 10.3.***
- The endoscopist should review the relevant paperwork and formulate a handover for the ambulance/secondary care provider.
- Make sure that the patient is reassured and informed throughout the treatment process.
- In the event of loss of consciousness and/or cessation of spontaneous circulation/respiration initiate BLS/ILS. *(Appendix 4)*

B. Or, if origin of bleed is determined to be from varices:

- Remove the scope from the patient.
- Keep the patient on their left-hand side and their airway should be managed with suction.
- If it is deemed safe to do so by the endoscopist, move the patient to recovery until the ambulance arrives to transfer the patient to hospital. ***Initiate: Recovery Patient Care Pathway. 10.3.***
- The endoscopist should review the relevant paperwork and formulate a handover for the ambulance/secondary care provider.
- Make sure patient is reassured and informed throughout the treatment process.
- In the event of loss of consciousness and/or cessation of spontaneous circulation/respiration initiate BLS/ILS. *(Appendix 4)*

10.2 Lower Gastrointestinal Haemorrhage - refer also to 'Lower GI Patient Care Pathway' *(Appendix 5)*

Endoscopist to assess severity of bleed - Major haemorrhage or severe bleed?
Initiate the steps below:

- Procedure room staff to summon help from other unit staff.
- The procedure room nurse should stay in the procedure room with the endoscopist and the patient and a request for the following items should be made to other members of staff.
    - *iv. Major Haemorrhage Kit (from designated area)*
    - *v. Suction machine (if further required)*
    - *vi. Crash trolley available in close vicinity*

- Recovery staff to initiate the local transfer to hospital protocol immediately and inform local hospital of transfer to A+E.
- A further ILS trained nurse should be summoned to the room to cannulate the patient if they are not already cannulated. Consider using a wide bore cannula if possible. IV fluids may need to be administered if there is clinical deterioration or signs of hypovolaemic shock, these should be prescribed by an endoscopist.
- The head end practitioner should monitor and record, heart rate, respiratory rate, oxygen saturations and level of consciousness (AVPU), together with 5-minute blood pressures, or more frequently if there is clinical deterioration. S/He should keep the nurse and endoscopist informed of any deterioration. Please use the AVPU and Observation Scoring Card. *(Appendix 3).*
- The assisting nurse should draw up 10mls of adrenaline into a 10ml syringe and prime a colon injection needle and then hand it to the endoscopist.
- Endoscopist will inject in and around bleed site. Once the endoscopist has finished injecting, remove the needle and flush with water to see if bleeding has stopped or slowed sufficiently to allow placement of a haemoclip.
- Hand a haemoclip to the endoscopist, and apply to bleed site.
- If, once the haemoclip is applied, the bleeding stops, observe the site for one minute to look for recurrence. If no recurrence, then remove the scope and transfer to recovery.
- If bleeding continues, consider applying further haemoclips until the bleeding is stabilised.
- In the event of ongoing uncontrollable bleeding, remove the scope and manage the clinical condition of the patient. If the patient is stable enough and it is safe to do so, transfer the patient to recovery for monitoring until the ambulance arrives ***Initiate: Recovery Patient Care Pathway. 10.3.***

- The endoscopist should review the relevant paperwork and formulate a handover for the ambulance/secondary care provider.
- Ensure that the patient is reassured and informed throughout the treatment process.
- In the event of loss of consciousness and/or cessation of spontaneous respiration initiate BLS/ILS. *(Appendix 4)*

10.3 Recovery - refer also to 'Recovery Patient Care Pathway' *(Appendix 6)*

- Keep patient on their left-hand side and in the recovery position.
- Manage their airway with suction at bedside if necessary.
- If oxygen saturations are less than 94% administer oxygen with face mask.
- Monitor their vital observations (blood pressure, heart rate, respiratory rate, oxygen saturations and level of consciousness) every 5 minutes, or more frequently if there is evidence of shock and/or deterioration. Inform the endoscopist of any change in condition – see observation scoring system. *(Appendix 3)*
- Administer and maintain IV fluids at a rate dependant on blood pressure and as prescribed by the endoscopist.
- Keep them nil by mouth.
- Reassure the patient and contact their relatives or carers if appropriate to do so.
- In the event of loss of consciousness and/or cessation of spontaneous respiration initiate BLS/ILS. *(Appendix 4)* Post event, record this as an incident on the Sentinel incident reporting system.
- In the event of rectal bleeding, or the vomiting of blood, the Registered Nurse or Health Care Support Worker must summon the endoscopist immediately. The endoscopist must decide on the most appropriate course of action – return to the procedure room and re-scope the patient to rectify the bleeding (refer to either the Upper GI (Section 10.1) or Lower GI (Section 10.2) protocols outlined above) or to obtain emergency support and transfer to an acute hospital (see section 11 below).

11.0 TRANSFER TO HOSPITAL

Each unit should have their own arrangements in place for transferring patients to secondary care. These transfer arrangements should be displayed in the recovery area of the unit and be easily seen.

They should clearly stipulate;

- How a patient is transferred to hospital i.e. in an ambulance.
- Handover requirements for the 999-call handler i.e. patient details and the nature of the emergency.
- Instructions on whether the hospital will require you to call ahead and inform them of the admission.
- Up to date contact numbers for the local hospitals/secondary care providers.

It is the responsibility of the unit manager/lead nurse to keep these details accurate and up to date.

12 MONITORING & COMPLIANCE

- All staff to sign 'Read and Understood 'sheet once SOP is introduced.
- Annual clinical competencies sign off.
- Registered Nurses to have mandatory ILS training.
- Evidence of induction of new staff, bank staff, agency staff and visiting endoscopists, which should include review of this SOP

13 REFERENCES

- Acute upper gastrointestinal bleeding overview. https://pathways.nice.org.uk/pathways/acute-upper-gastrointestinal-bleeding
- Management of acute upper and lower gastrointestinal bleeding, *A national clinical guideline. https://www.sign.ac.uk/assets/sign105.pdf*

14 APPENDICES

Appendix 1: Major Haemorrhage Daily Checklist
Appendix 2: Upper GI Patient Care Pathway
Appendix 3: AVPU and Observation Scoring Card
Appendix 4: BLS and ILS Algorithms
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