Doncaster and Bassetlaw Teaching Hospitals
NHS Foundation Trust

Blood Transfusion Policy

Massive Haemorrhage Protocol

This procedural document supersedes: PAT/T 2 v.6 – Blood Transfusion Policy

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Executive Sponsor:	Medical Director
Author/reviewer:	Gill Bell - Chief Biomedical Scientist Transfusion
Date revised:	May 2021
Authorised by:	Atchuta Bobbili – Chair Hospital Transfusion Committee (HTC)
Approved by:	Hospital Transfusion Committee
Approval date:	14 June 2021
Date issued:	25 June 2021
Next review date:	June 2024
Target Audience:	Trust wide; all staff involved in the transfusion process

Amendment Form

Version	Date Issued	Brief Summary of Changes	Author
Version 1	25 June 2021	• This is a new procedural document, please read in full.	Gill Bell – Chief Biomedical Scientist Transfusion

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1. INTRODUCTION

The Massive Hemorrhage Protocol is in place to ensure the best outcome is achieved for the patient.

The protocol should help to identify the key roles of team leader (often the most senior doctor directing resuscitation of the patient) and coordinator responsible for communicating with laboratories and other support services to prevent time-wasting and often confusing duplicate calls.

In an emergency situation it is essential to ensure correct transfusion identification procedures for patients, samples and blood components are performed and an accurate record is kept of all blood components transfused.

Training of clinical staff and regular drills to test the protocol and ensure the rapid delivery of all blood components is essential.

2. PURPOSE

This policy is based on recognised guidelines and provides the Trust with local procedures for the ordering and administration of blood products and the management of transfused patients.

3. DUTIES AND RESPONSIBILITIES

The member of staff responsible for the care and monitoring of the patient during the transfusion must be a nurse holding current registration of the NMC Professional Register as a Registered General Nurse (RGN), Registered Sick Children's Nurse (RSCN), a Registered Midwife (RM) or a doctor.
They must take charge of the patient during the transfusion and be responsible for ensuring that all care and monitoring of the patient is performed.

- All staff involved in the transfusion process must be aware of this policy.
- All staff involved in the transfusion process should understand their role and responsibilities.
- Role specific training requirements must be met; the competencies are mandatory.
- Ensure transfusion is appropriate and alternatives have been explored.
- All transfusion documentation must be completed.
- Recognise and manage transfusion reactions.

- Always report untoward transfusion events / reactions to Blood Bank and by Datix.
- Recognition of Massive Haemorrhage; activate the Massive Haemorrhage protocol.

4. PROCEDURE

Key Recommendations:

- The massive haemorrhage protocol must be activated via the following mobile phone numbers on each site: **DRI – 07775 013348** or **BDGH – 07970 423121**

- Samples for FBC, clotting, U&E, LFT and Ca^{2+} must be taken and delivered to the laboratory after each massive haemorrhage pack is transfused to reassess the patient and decide whether further products are required or Blood Bank can stand down.

- Blood Bank must be advised to stand down when products are no longer required to avoid any unnecessary wastage of products and time.

- The use of haemostatic drugs should be considered i.e. tranexamic acid, vitamin K, prothrombin concentrate etc.

- All documentation should be fully complete and traceability information i.e. blood tags, returned to Blood Bank ASAP.

Patients Lacking Capacity:

Sometimes it will be necessary to provide care and treatment to patients who lack the capacity to make decisions related to the content of this policy. In these instances staff must treat the patient in accordance with the Mental Capacity Act 2005 (MCA 2005).

- A person lacking capacity should not be treated in a manner which can be seen as discriminatory.
- Any act done for, or any decision made on behalf of a patient who lacks capacity must be done, or made, in the persons Best Interest.
- Further information can be found in the MCA policy, and the Code of Practice, both available on the Extranet.

There is no single definition of Best Interest. Best Interest is *determined on an individual basis. All factors relevant to the decision must be taken into account, family and friends should be consulted, and the decision should be in the Best interest of the individual. Please see S5 of the MCA code of practice for further information.*

4.1. The Massive Haemorrhage Protocol

The following steps, A-F, should be followed to correctly activate and manage a massive haemorrhage.

Explanatory Notes for Clinical Areas:

1. Recognise trigger and activate pathway for management of massive haemorrhage.

2. Allocate team roles

- Team leader.
- Communication lead dedicated person for communication with other teams, especially the transfusion laboratory and support services not the most junior member of the team.
- Sample taker / investigation organiser / documenter.
- Transporter - porter, member of team from clinical area.

3. Complete request forms / take blood samples, label samples correctly /recheck labelling

- U+E, FBC, Crossmatch, PT, APTT, Fibrinogen, ABG, Calcium, Lactate.

4. Request blood / blood components

Communications lead to contact laboratory and inform the BMS of the following:

- Activation of the massive haemorrhage protocol using the direct telephone numbers:.
  - **DRI -** 07775 013348
  - **BDGH** - 07970 423121
- Your name, location and extension number / bleep number.
- The patient's details: ideally surname, forename, district number.
- Order massive haemorrhage pack 1 (MHP1).
- Contact Blood Bank if blood has been transferred in with patient from another Trust or patient is being transferred to another Trust.

5. The clinical / laboratory interface

- Communication lead to arrange for transport of samples / request form to the laboratory.
- BMS to ring communication lead when blood / blood components are ready.
- Communication lead to arrange to collect blood and blood components from the Blood Bank.

6. Communicate stand down of pathway to Blood Bank BMS

- Return any unused products to Blood Bank immediately.

7. Ensure documentation is complete

- Clinical area: monitoring of vital signs, timings of blood samples and communications, transfusion documentation in patient case notes, return traceability information to Blood Bank (Tags).
- Blood Bank: keep record of communications / telephone requests on worksheet.
- Transfusion Practitioner: completion of audit proforma, ideally within 24 hours.

Massive Haemorrhage Protocol Telephone Numbers:

DRI – 07775 013348

BDGH – 07970 423121

Massive Haemorrhage

Ongoing severe bleeding e.g.150 mLs/min. Clinical shock, 1 volume loss (~4L) in 24 hours

Activate Massive Haemorrhage Protocol

Most senior clinician to co-ordinate contact with Blood Bank, to trigger *"Massive Haemorrhage Protocol"*

Contact Blood Bank to initiate activation on:

DRI – 07775 013348

BDGH – 07970 423121

STOP THE BLEEDING

RESUSCITATE
Airway
Breathing

Haemorrhage Control

- Direct pressure / tourniquet if appropriate
- Stabilise fractures
- Surgical intervention consider damage control surgery
- Interventional radiology
- Endoscopic techniques
- Obstetric techniques

Haemostatic Drugs

***Tranexamic acid 1g bolus IV followed by 1g after 3 hrs**

Vit K and Prothrombin complex concentrate (PCC) for warfarinised patients and

Other haemostatic agents discuss with Consultant Haematologist

Cell Salvage

If available & appropriate

Thromboprophylaxis

should be considered when patient stable

Take bloods and send to lab:

XM, FBC, PT, APTT, Fib, U+E, LFT & Ca^{2+}

Collect MHP 1

Red cells*	**4 units**
FFP (*approx. 30 mins to thaw*)	**4 units**
Platelets	**1 unit**

*Emergency group O blood or group specific blood or XM blood may be issued.

Give MHP 1

Reassess

Proceed or Stand down

Suspected continuing haemorrhage requiring further transfusion

Take repeat bloods as above and deliver to lab in exchange for MHP 2

MHP 2

Red cells	4 units
FFP	4 units
Platelets	1 unit
Cryopreciptate	2 pooled packs

Give MHP 2

Reassess

Proceed or Stand down

Suspected continuing haemorrhage requiring further transfusion

Take repeat bloods as above and deliver to lab in exchange for MHP 3

Give MHP 3

Continuous cardiac monitoring

26/07/2019

Prevent Hypothermia

- Use fluid warming device
- Used forced air warming blanket

Consider 10 mls Calcium chloride 10% over 10 mins

Aims for Therapy	
Hb	80-100 g/L
Platelets	>75 x 10^9/L
INR	< 1.5
APTT ratio	< 1.5
Fibrinogen	> 1.5 g/L
	> 2.0 g/L in obstetrics
Ca^{2+}	> 1 mmol/L
Temperature	> 36°c
pH	> 7.35 (on ABG)
Monitor for hyperkalaemia	

STAND DOWN

- Inform lab
- Return unused components
- Complete documentation

MHP = Massive Haemorrhage Pack

Author: Gemma Harte Approved: HTC
Title: MHP - Flowchart
CLS-SOP-485 Ver 9 26/07/2019

5. TRAINING/ SUPPORT

Role specific competencies are in place. Staff must have the relevant competencies to perform a transfusion related task / procedure e.g. venepucture, collection of blood products, administration of blood products and prescribing blood products. Competencies are recorded on OLM. Advice regarding the relevant competencies is available from the Transfusion Practitioner.

6. MONITORING COMPLIANCE WITH THE PROCEDURAL DOCUMENT

- The Hospital Transfusion Team will ensure that systematic audit and review of the transfusion process is undertaken and will report outcomes to the Hospital Transfusion Committee.

- This will include participation in the programme for national comparative audit of blood transfusion as well as local and regional audits.

- The Hospital Transfusion Committee will review all serious adverse transfusion events / reactions which must be notified direct to blood bank staff in addition to the Trust's incident reporting system; Datix.

7. DEFINITIONS

All defined within the document.

8. EQUALITY IMPACT ASSESSMENT

The Trust aims to design and implement services, policies and measures that meet the diverse needs of our service, population and workforce, ensuring that none are disadvantaged over others. Our objectives and responsibilities relating to equality and diversity are outlined within our equality schemes. When considering the needs and assessing the impact of a procedural document any discriminatory factors must be identified.

An Equality Impact Assessment (EIA) has been conducted on this procedural document in line with the principles of the Equality Analysis Policy (CORP/EMP 27) and the Fair Treatment for All Policy (CORP/EMP 4).

The purpose of the EIA is to minimise and if possible remove any disproportionate impact on employees on the grounds of race, sex, disability, age, sexual orientation or religious belief. No detriment was identified. (See Appendix 1)

9. ASSOCIATED TRUST PROCEDURAL DOCUMENTS

- PAT/PA 19 Mental Capacity Act 2005 Policy and Guidance, including Deprivation of Liberty Safeguards (DoLS)
- PAT/PA 28 Privacy and Dignity Policy
- PAT/T 8 Specimen and Request Form Labelling Policy
- PAT/PS 7 Patient Identification Policy
- PAT/PA 2 Consent to Examination or Treatment Policy
- PAT/PA 24 Transfer of Patients and their Records

10. DATA PROTECTION

Any personal data processing associated with this policy will be carried out under 'Current data protection legislation' as in the Data Protection Act 2018 and the UK General Data Protection Regulation (GDPR) 2021.

For further information on data processing carried out by the trust, please refer to our Privacy Notices and other information which you can find on the trust website: https://www.dbth.nhs.uk/about-us/our-publications/information-governance/

11. REFERENCES

This policy is written in accordance with the following guidelines and policies: **BSH Guidelines**

- Use of Platelet Transfusions 2016
- Haematological Management of Major Haemorrhage 2015
- Management of Anaemia and Red Cell Transfusion in Adult Critically Ill Patients 2012
- Pre-transfusion Compatibility Procedures in Blood Transfusion Laboratories 2012
- Administration of Blood Components 2017
- Spectrum of Fresh-Frozen Plasma and Cryoprecipitate products 2018

APPENDIX 1 – EQUALITY IMPACT ASSESSMENT - PART 1 INITIAL SCREENING

Service/Function/Policy/Project/ Strategy	**Division**	**Assessor (s)**	**New or Existing Service or Policy?**	**Date of Assessment**
Blood Transfusion Policy – Massive Haemorrhage Protocol	Pathology	Gill Bell	New Policy	14.06.2021

1) Who is responsible for this policy? Name of Division/Directorate: Pathology

2) Describe the purpose of the service / function / policy / project/ strategy? The policy provides the Trust with local procedures for pre-administration of blood products.

3) Are there any associated objectives? Legislation, targets national expectation, standards – Yes compliance with BSQR 2005, BSH & NICE guidelines.

4) What factors contribute or detract from achieving intended outcomes? Lack of compliance

5) Does the policy have an impact in terms of age, race, disability, gender, gender reassignment, sexual orientation, marriage/civil partnership, maternity/pregnancy and religion/belief? No

. **If yes, please describe current or planned activities to address the impact** [e.g. Monitoring, consultation]

6) Is there any scope for new measures which would promote equality? [any actions to be taken

7) Are any of the following groups adversely affected by the policy?

Protected Characteristics	**Affected?**	**Impact**
a) Age	No	
b) Disability	No	
c) Gender	No	
d) Gender Reassignment	No	
e) Marriage/Civil Partnership	No	
f) Maternity/Pregnancy	No	
g) Race	No	
h) Religion/Belief	No	
i) Sexual Orientation	No	

8) Provide the Equality Rating of the service / function /policy / project / strategy – tick (✓) outcome box

Outcome 1 ✓	**Outcome 2**	**Outcome 3**	**Outcome 4**	

If you have rated the policy as having an outcome of 2, 3 or 4, it is necessary to carry out a detailed assessment and complete a* **Detailed Equality Analysis form - see CORP/EMP 27.

Date for next review: June 2024

Checked by: Atchuta Bobbili **Date: 14.06.2021**