

## Document Control

<b>Title</b>			
<b>Emergency Blood and Component Management Plan</b>			
<b>Author</b>		<b>Author's job title</b>	
		Clinical Nurse Specialist Intravascular Fluid Management	
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2.1	Nov 2009	Revision	Clinical Governance Committee comments addressed. Approved by the Hospital Transfusion Committee on 15th September 2009.
2.2	June 2012	Revision	Reference to pandemic flu plan (NDHT and NHSBT) deleted.
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3.0	Jul 2014	Final	Approved by HTC and published on Bob
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4.1	March 2020	Revision	Updated to include the National Blood Transfusion Committee requirements. Addition of prioritising patients to achieve the required reduction in red cell usage (section 5). For PBMG approval via email due to COVID-19.
4.2	April 2020	Revision	Following comments from PBMG HTT 30.04.20 - for ratification by the Clinical Reference Group
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<b>Main Contact</b>			
Clinical Nurse Specialist Intravascular Fluid Management North Devon District Hospital Raleigh Park Barnstaple, EX31 4JB		<b>Tel: Direct Dial –</b> <b>Tel: Internal –</b> <b>Email:</b>	
<b>Lead Director</b>			
Medical Director			
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**Consulted with the following stakeholders: (list all)**

- Patient Blood Management Group members

**Approval and Review Process**

- Patient Blood Management Group (PBMG)
- Clinical Effectiveness Committee (CEC)

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## 1. Purpose

- 1.1. NHS emergency planning requires the development of contingency plans to ensure the effective use of available blood and blood components when blood stocks fall to very low levels. Pre-determined plans will be critical to ensuring transfusion support remains available for the patients who need it most.
- 1.2. This document sets out Northern Devon Healthcare Trust's system for the management of blood and blood components in the event of a severe or prolonged national shortage. It provides a robust framework to ensure a consistent approach across the whole organisation.
- 1.3. The policy applies to all clinical staff and all biomedical scientists at NDHT.
- 1.4. Implementation of this policy will ensure that:
  - Donor blood and components are used in the most effective manner.
  - Donor blood and components will be available for emergency cases.
  - Clinical staff are kept informed of the implications of a blood shortage.

## 2. Responsibilities

### Role of the Medical Director

- 2.1. The Medical Director is responsible for:
  - Ensuring that an Emergency Blood Management Group is identified.
  - Convening the Emergency Blood Management Group in the event of notification of a Red Alert.

## Role of the Consultant Haematologist

2.2. The Consultant Haematologist is responsible for:

- Ensuring that the Hospital Transfusion Team is alerted to notification of blood shortages.
- Assessment of requests for non-urgent blood transfusions.
- Authorising the change to the appropriate phase of the Emergency Blood Management Plan.

## Role of the Hospital Transfusion Team

2.3. The Hospital Transfusion Team is responsible for:

- Reviewing requests for blood and blood components.
- Monitoring of blood availability and usage.
- Communicating with clinical staff regarding the current situation.

## Role of the Blood Transfusion Laboratory Manager

2.4. The Blood Transfusion Laboratory Manager (or deputy) is responsible for:

- Ensuring that relevant clinical staff are alerted promptly upon notification of a blood shortage.
- Alerting members of the Emergency Blood Management Group upon notification of a blood shortage.
- Regular (at least once daily) communication with the NHSBT (Blood and Transplant service) to determine availability of blood and components.
- Communication with regional colleagues to ensure the most efficient use of available blood and components.

## Role of the Emergency Blood Management Group (EBMG)

2.5. The Emergency Blood Management Group is responsible for:

- Implementing the Emergency Blood Management Plan (EBMP).
- Assessment of requests for blood and components.
- Monitoring compliance of the EBMP.

## Role of clinical staff

2.6. The clinical staff are responsible for:

- Assisting with the implementation of the EBMP.
- Ensuring that all blood requested for transfusion is essential and clinically indicated.
- Use techniques to avoid the need for transfusion where possible (eg exogenous erythropoietin, cell salvage, intravenous iron)
- Discussing the implications of the plan with affected patients as required.

## Role of the Biomedical Scientist Staff

2.7. The Biomedical Scientist Staff are responsible for:

- Deputising for the Blood Transfusion Laboratory Manager where necessary.
- The continued operation of the Laboratory and the provision of haematology results to assist the EBMG to allocate available blood and components where there is the most need.

## 3. Emergency Blood Management Plan (EBMP)

3.1. The contingency planning group of the National Blood Transfusion Committee required hospitals to develop emergency blood management arrangements which form part of the overall contingency plans to manage shortages in a variety of situations, including:

Shortage	Example
Short term shortages	During bad weather or an influenza outbreak
Very acute shortages	Security issues which prevent donors coming forward to donate blood
Prolonged shortages	<p>The introduction of further measures to reduce the risk of disease transmission by transfusion or changes in processing.</p> <p>The COVID-19 pandemic in 2020 has also prompted concerns around red cell shortages that may be prolonged.</p> <p>Unexpected increases in demand.</p>

3.2. The plan is structured to provide a framework of actions for NHSBT and hospitals at three phases

**Green: Normal circumstances where supply meets demand**

**Amber: Reduced availability of blood for a short or prolonged period**

**Red: Severe, prolonged shortages**

3.3. Should a national red cell shortage occur, NHSBT will activate their emergency plan and will notify Transfusion Laboratory Managers / Laboratory staff to implement the EBMP.

3.4. In a shortage, actions within hospitals may need to be reviewed daily by either the EBMG or a nominated group of key staff.

## Emergency Blood Management Group (EBMG)

- 3.5. In the event of blood shortages, the EBMG will be called upon to discuss the action to be taken and any measures that need to be put in place to conserve the amount of blood and blood components at NDHT.
- 3.6. The EBMG will include:
- Medical Director or nominated representative
  - Duty Consultant Haematologist (Out of hours via RD&E switchboard)
  - Blood Transfusion Laboratory Manager
  - Clinical Nurse Specialist IV Fluid Management
  - Duty Emergency Department Consultant or nominated representative
  - Duty Consultant Physician or nominated representative
  - Duty Consultant Surgeon or nominated representative
  - Duty Obstetrics/Gynaecology consultant or nominated representative
  - Duty Consultant Anaesthetist or nominated representative
  - Chief Nurse or nominated representative
  - Clinical Site Management Team
  - Administrative/Clerical Support

## 4. Implementation of the Emergency Blood Management Plan (EBMP)

### Actions for Green Phase

- 4.1. No shortage of blood components or blood products exists.
- 4.2. NHS Blood and Transplant service (NHSBT) is able to provide optimal inventory service according to requests received.
- 4.3. Maintain appropriate membership and functioning of the Patient Blood Management Group (PBMG) and Hospital Transfusion Team (HTT).
- 4.4. Ensure that blood transfusion policies and guidance for the effective use of donor blood are in place, implemented and monitored.
- 4.5. Strategies to reduce wastage and ensure that red cells and platelets are used appropriately.
- 4.6. Provision of education and training to all staff involved in the process of blood transfusion.

### Actions for Amber Phase

- 4.7. NHSBT will contact the Blood Transfusion Manager / Laboratory staff informing that there is a shortage in red cell or platelet stocks.
- 4.8. NHSBT will take action to maximise production and increase collection of red cells and platelets during this time.

- 4.9. Transfusion Laboratory staff to alert relevant clinical staff promptly upon notification of a blood shortage.
- 4.10. Transfusion Laboratory staff to instigate contingency to review blood stock levels.
- 4.11. All clinical areas to strictly apply guidelines on blood component use and reduce transfusion triggers where possible.
- 4.12. In cases of actual or potential massive blood loss, a Consultant Haematologist must be contacted by the referring team to allow planning of blood component provision and give advice about blood conserving measures.

### **Actions for Red Phase**

- 4.13. NHSBT will contact the Blood Transfusion Manager / Transfusion Laboratory staff to report that national red cell or platelet stocks have fallen to levels requiring implementation of the Emergency Blood Management Plan.
- 4.14. Transfusion Laboratory staff to instigate contingency to reduce blood stockholding to pre-defined levels.
- 4.15. EBMG to confirm the situation regarding blood use target achievement and maintain communication of red phase throughout the Trust.
- 4.16. Prioritise transfusion based on clinical need to protect stocks (section 5).
- 4.17. In major bleeding cases, involve a Consultant Haematologist immediately to plan blood component use, consider alternative haemostatic agents and discuss when blood component support should be stopped.
- 4.18. EBMG to review blood shortage and impact on patient care daily and as necessary to review further actions to be taken and consider issues raised.

### **Actions for Recovery Phase**

- 4.19. The NHSBT will inform the Transfusion Laboratory Manager / Laboratory staff that stocks have risen to a level where hospitals can move to Amber or Green status.
- 4.20. The Haematology Consultant will authorise the change to the appropriate phase of the Emergency Blood Management Plan.
- 4.21. Return to normal activity levels should be phased so as not to return the national stocks to below critical levels.

## 5. Indication for transfusion

- 5.1. Three broad patient categories have been created to simplify the management of patients in a general red cell shortage. This is to assist hospitals with prioritising patients to achieve the required reduction in red cell usage. It is recognised that clinical judgement and context of the shortage are essential parts of decision-making.

Category 1	Category 2	Category 3
<i>These patients will remain highest priority of transfusion</i>	<i>These patients will be transfused in the Amber but not the Red phase</i>	<i>These patients will not be transfused in the Amber phase</i>
<b>Resuscitation</b> <ul style="list-style-type: none"> <li>Resuscitation of life-threatening / on-going blood loss including trauma.</li> </ul>		
<b>Surgical support</b> <ul style="list-style-type: none"> <li>Emergency surgery* including cardiac and vascular surgery** and organ transplantation.</li> <li>Cancer surgery with the intention of cure.</li> </ul>	<b>Surgery/Obstetrics</b> <ul style="list-style-type: none"> <li>Cancer surgery (palliative).</li> <li>Symptomatic but not life-threatening post-operative or post-partum anaemia.</li> <li>Urgent*** surgery.</li> </ul>	<b>Surgery</b> <ul style="list-style-type: none"> <li>Elective surgery which is likely to require donor blood support</li> </ul>
<b>Non-surgical anaemias</b> <ul style="list-style-type: none"> <li>Life-threatening anaemia including patients requiring in-utero support and high dependency care/SCBU. Stem cell transplantation, or chemotherapy ****</li> <li>Severe bone marrow failure.</li> <li>Transfusion-dependent anaemias including thalassaemia and myelodysplasia.</li> <li>Sickle cell disease (SCD) patients on regular transfusion programmes for prevention of complications of SCD.</li> <li>Organ transplant</li> </ul>	<b>Non-surgical anaemias</b> <ul style="list-style-type: none"> <li>Symptomatic but not life-threatening anaemia</li> </ul>	

\* Emergency – patient likely to die within 24 hours without surgery.

\*\* With the exception of poor risk aortic aneurysm patients who rarely survive but who may require large volumes of blood.

\*\*\* Urgent – patient likely to have major morbidity if surgery not carried out.

\*\*\*\* Planned stem cell transplant or chemotherapy may be deferred if possible.

## 6. References

- [National Blood Transfusion Committee \(2020\) A Plan for NHS Blood and Transplant and Hospitals to Address Red Cell Shortages](#)

## 7. Associated Documentation

- NDHT Blood Transfusion Policy
- NDHT Emergency Blood Management Group Terms of Reference
- NDHT Laboratory Emergency Blood Management SOP