EMERGENCY PLANNING FOR THE MANAGEMENT OF BLOOD SHORTAGES POLICY

(Document 12, Blood Transfusion Policy)

POLICY

Reference	CPG-TW-EPftMoBSP
Approving Body	Hospital Transfusion Committee
Date Approved	v6.0, 13th January 2021
Issue Date	v6.0, 25th March 2021 v6.1, 13th December 2022
Version	v6.1 (no formal approval required as only minor amends)
Summary of Changes from Previous Version	• Addition to category 1- severe bone marrow failure. Transfusion dependant anaemia's including myelodysplasia.
Supersedes	6.0, CPG-Trans-EPftMoBSP, Emergency Planning for the Management of Blood Shortages: Policy and Procedure, Issued 25th March 2021 to Review Date January 2024
Document Category	• Clinical
Consultation Undertaken	HTC Haematology Consultants PSQB Divisional Governance groups COO Emergency Planning & Business Continuity Officer Head of Operations
Date of Completion of Equality Impact Assessment	24.07.2020
Legal and/or Accreditation Implications	To Be Confirmed
Target Audience	All staff involved in the blood transfusion process
Review Date	March 2024 (ext[1])
Sponsor (Position)	Medical Director
Author (Position & Name)	Specialist Transfusion Practitioner, Jane Walden
Lead Division/ Directorate	Diagnostic and Outpatients
Lead Specialty/ Service/ Department	Haematology (Transfusion Services)
Position of Person able to provide Further Guidance/Information	Clinical lead for transfusion Head of Haematology Services

Associated Documents/ Information	**Date Associated Documents/ Information was reviewed**
Not Applicable	Not Applicable

CONTENTS

1.0 INTRODUCTION

National Health Service Blood and Transplant (NHSBT) recommend that all Trusts should develop a contingency plan to be implemented in the event of a serious shortfall in National blood supplies

This will ensure

- Blood is available for all essential transfusions to patients equally across the country
- That the national pool of platelets is available for all essential transfusions to all patients equally across the country.
- Overall blood/platelet usage is reduced to ensure the most urgent cases receive the supply which is available.

Blood shortages are rare in the UK. However, there have been seasonal shortages of specific blood groups such as Group O RhD negative

The plan is designed to operate at all times even when there is no shortage.

Where there are modest reductions in the blood supply, for example <10% reduction, appropriate use /Patient blood management programme's may avoid the activation of formal blood shortages arrangements.

Clinical staff should be aware of its existence and be willing to implement and accept the recommendations made by the Trusts Emergency Blood Management Group (EBMG).

2.0 POLICY STATEMENT

a) Aim:

By establishing this Emergency Blood Management Plan, the Trust is confirming its commitment to the international initiative 'Patient Blood Management' supported by the Department of Health and NHSBT to ensure the appropriate use of blood and blood products throughout the Trust at all times, make effective use of alternatives that are available and prevent unnecessary blood transfusions

b) Objectives:

- The Trust responds promptly at the declaration of a national shortage of red cells or platelets or both
- The arrangements that are put in place have wide recognition amongst clinical staff

Scope

The Trust's Emergency Blood Management Policy may, depending on the circumstances, be co-dependent with the Major Incident Plan. This situation may occur if a Major Incident exhausts the available supply of blood for transfusion. In this situation the work of the EBMG should not duplicate or contradict the plans of the Major Incident Command and Control Team. The Chair of the EBMG should ensure good lines of communication with Command and Control centre. The EBMG should also refer to the Major Incident Plan for Blood Sciences.

'In the event of an infection outbreak, flu pandemic or major incident, the Trust recognises that it may not be possible to adhere to all aspects of this document. In such circumstances, staff should take advice from their manager and all possible action must be taken to maintain on-going patient and staff safety'

3.0 DEFINITIONS/ ABBREVIATIONS

Trust:	Sherwood Forest Hospitals NHS Foundation Trust.
Staff:	All employees of the Trust including those managed by a third party organisation on behalf of the Trust.
Patient:	All patients of Sherwood Forest Hospitals Foundation Trust and those of any organisation which commissions transfusion services from the Trust. This policy/procedure does not include patients who are cared for in their own homes by staff employed by Sherwood Forest Hospitals Foundation Trust.
EBMA	Emergency blood management arrangement
SHOT	Serious Hazards of Transfusion
MHRA	Medicines and Healthcare products Regulatory Authority

4.0 ROLES AND RESPONSIBILITIES

The EMBG are responsible for providing strategic guidance and formulating arrangements to manage appropriate use of blood in each operational phase. The group will have representation from the service leads and the Hospital Transfusion Team.

The policy/procedure will be disseminated through the Services Directors, Directors of Nursing, Practice Development and Clinical Governance Forums.

Adherence to this policy is the duty of all staff employed by the Trust.

5.0 APPROVAL

This policy has been approved by the Hospital Transfusion Committee.

6.0 NARRATIVE

Introduction

The red cell and platelet shortage plans operate in similar ways describing three phases dependent on NHSBT stock levels

- Green: Normal circumstances where supply meets demand
- Amber: Reduced availability of blood for a short or prolonged period
- Red: Severe, prolonged shortages

NHSBT will actively strive to minimise the risk of blood shortages. However, if red cell stocks fall to a pre-determined level then NHSBT will activate shortage plans and communicate a move to Amber phase. This may apply to either a single blood group or all blood groups. However, should NHSBT identify a severe, imminent threat to the blood supply then, NHSBT may communicate a move directly to the Red phase. All initial communication will be via the Transfusion Laboratory Manager; this may include notification of a ‘pre-amber’ state when there is a potential shortage but the amber threshold has not yet been breached. This is to encourage

collaborative working between hospitals and NHSBT

6.1 RED CELLS

Hospitals are required to have EBMAs in order to respond to notifications from NHSBT. The response may require a reduction in both blood stocks and blood use. It is recommended that blood use should be prioritised according to the recommendations below
A prolonged shortage will inevitably have an impact on elective surgery and waiting lists.

Staff should report any patient adverse incidents due to the operation of the plan via DATIX

The HTT are responsible for reviewing these incidents and if appropriate report externally to the MHRA, SHOT and/or NHSBT.

The DOH and the National Blood Service have provided a table to simplify the management of patients based on 3 broad categories. (See below).

Category 1 **These patients will remain highest priority for transfusion**	Category 2 **These patients will be transfused in the Amber BUT NOT in the Red phase**	Category 3 **These patients WILL NOT be transfused in the Amber phase**
Active major bleeding		
Emergency surgery*	Urgent surgery**	Elective surgery with >20% chance of needing 2 or more units of red cells
Curative cancer surgery	Palliative cancer surgery	
Life-threatening anaemia including HDU and NICU patients, severe bone marrow failure. Transfusion dependant anaemia's including myelodysplasia.	Symptomatic anaemia	

* Emergency patient likely to die within 24 hours without surgery.
** Patients likely to have major morbidity if not operated on

It is recognised that clinical judgement is an essential part of decision–making for individual patients

6.1.1 Plan Structure (Red Cell Shortage)

- Green Phase

In this phase the management of blood stocks/usage requires the collaboration / communication between the following members to maintain adherence to the Trust's Maximum blood ordering schedule (MBOS) and appropriate use of blood based on a patient's clinical need

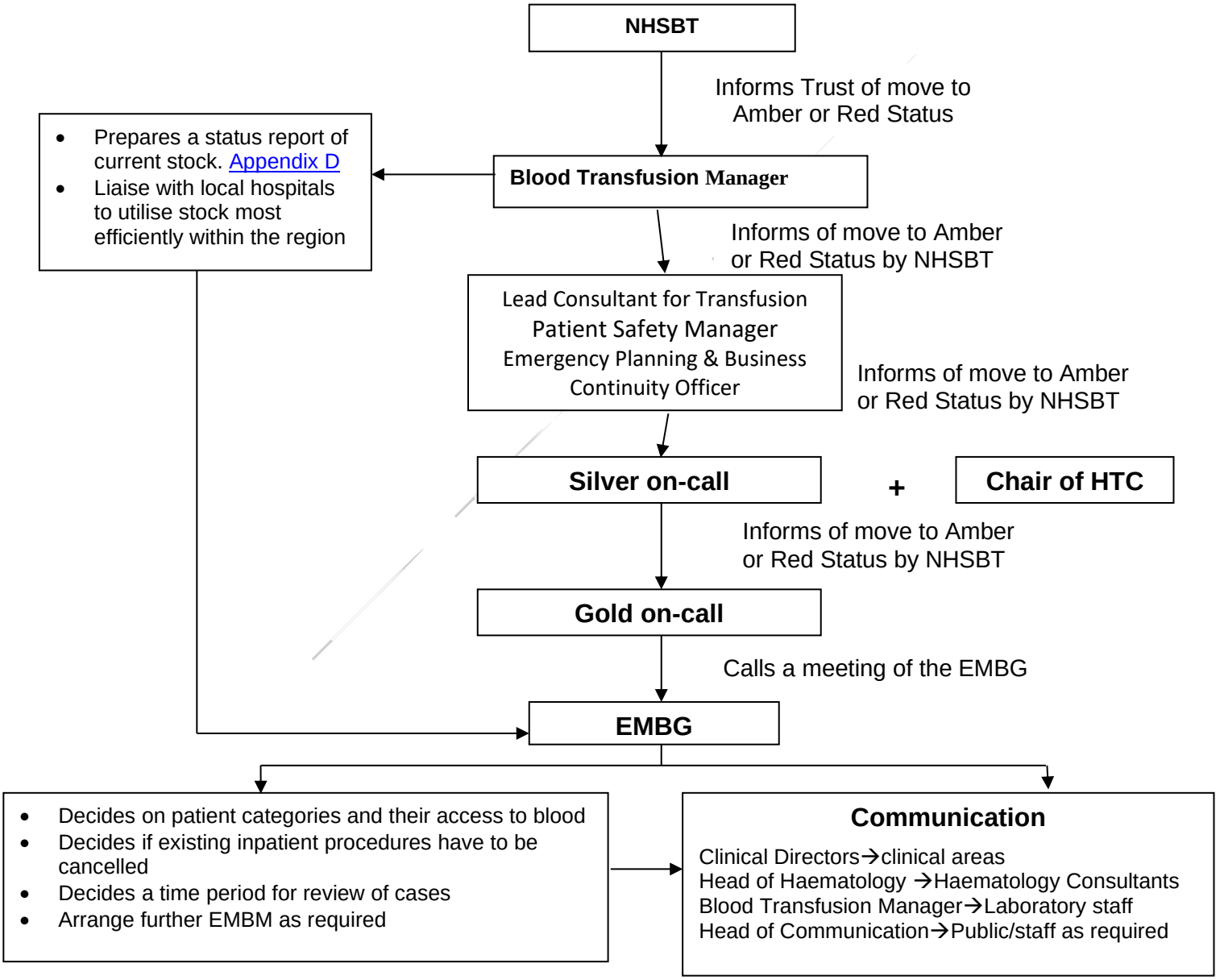
1. Hospital Transfusion Team (HTT)
   (HTC Chair-non Haematologist, Consultant Haematologist, Blood Transfusion Laboratory Manager, Transfusion Practitioner).
2. Clinical Directors which cover all specialities

The HTT recommends the EBMG meet electronically at least annually during the Green phase. The HTT and relevant co-opted Committees will work towards developing protocols for ensuring appropriate use of blood in all phases.

- Amber Phase and Red Phase

If the National blood stocks fall to less than 2 days or there is an imminent threat to the blood supply NHSBT will communicate a move to the Amber or Red phase directly to the Hospital Blood Transfusion Laboratory at KMH. This may apply to a single blood group or to all blood groups. NHSBT will include the nature of the shortage and any actions which need to be taken by the hospitals. In these phases the EBMG must meet to plan activity in the hospital according to the categories outlined above.

6.1.2 Activation (Red Cell Shortage) - Roles and Responsibilities of the EBMG

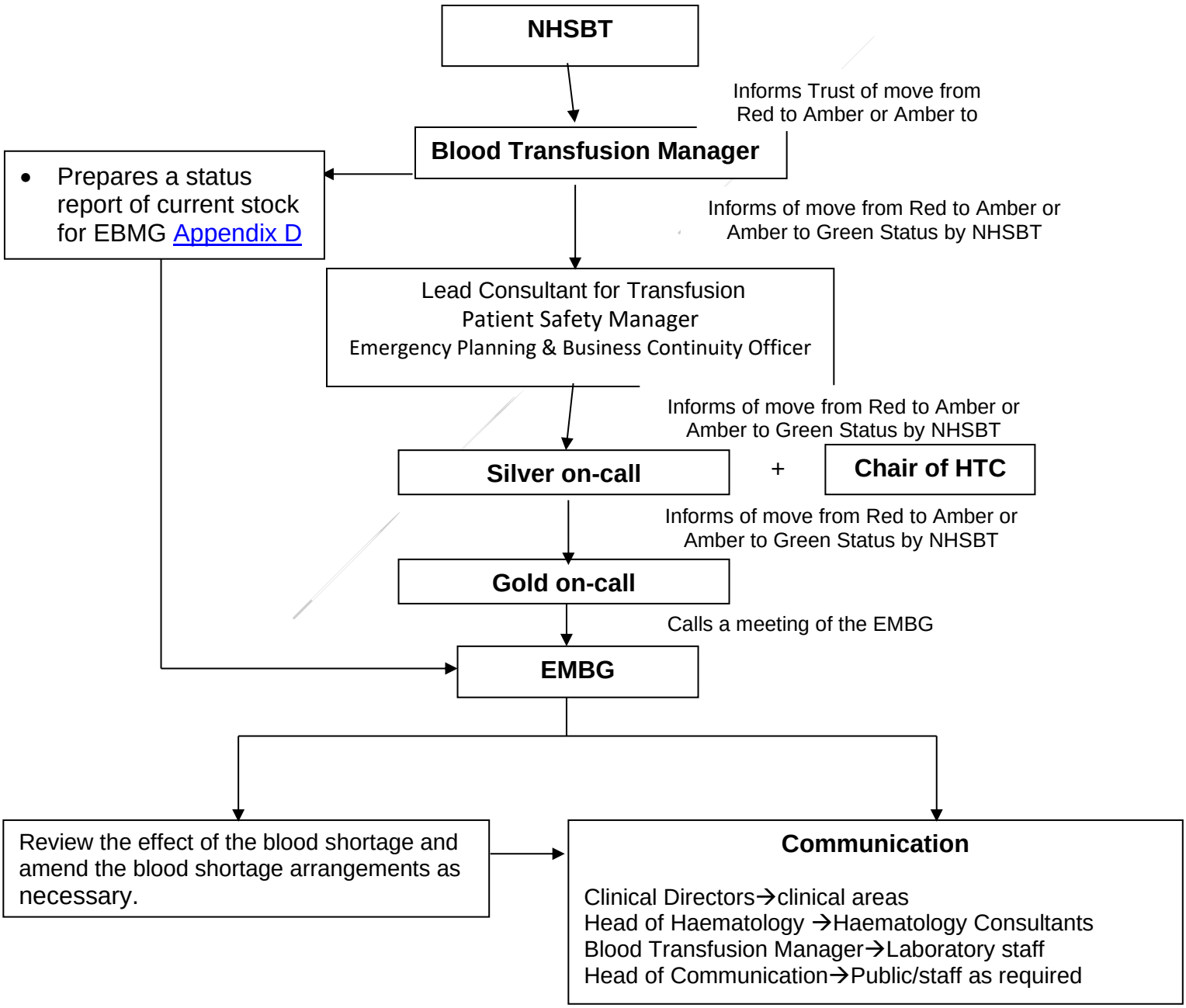


Blood will only be reserved for 12 hours in the AMBER/RED Phases
Transfusion laboratory staff will have the initial responsibility for screening transfusion requests to ensure patients fall into the permitted categories**.**

Requests for transfusion outside the permitted categories will be referred to the Lead Consultant for Transfusion or a Consultant Haematologist for further discussion with the responsible clinicians. The Transfusion Practitioners will support the medical and laboratory staff as required.

6.1.3 Stand down (Red Cell Shortage)

Roles and Responsibilities of the EBMG if there is a move from Red to Amber or Amber to Green



N.B. There should be a phased return to normal activity (Green) to aid the post recovery period.
The Clinical Director of planned care and surgery will help coordinate arrangements to clear the elective surgery backlog.
Transfusion laboratory staff will continue to monitor requests for blood/blood products. Any inappropriate requests will be referred to the Lead Consultant for Transfusion or a Consultant Haematologist for further discussion with the responsible clinicians.

6.1.4 Massive Haemorrhages (Red Cell Shortage)

Transfusion laboratory staff will be required to immediately notify the Lead Consultant for Transfusion or the Consultant Haematologist on call
Transfusion support will be provided initially without question, but transfusion resources should not be exhausted in ongoing transfusion support when the outlook is very poor. Appropriate transfusion alternatives should be considered at an early stage and staff mobilised to support this if needed. Close liaison between haematology medical staff and the responsible clinicians will be needed if bleeding continues despite definitive treatment.

6.2 PLATELETS

Most requests made of NHSBT are for specific patients. Consequently, this plan focuses on restricting supplies according to the urgency of treatment required by patient type, rather than a generic reduction in supply and stockholding, as defined for red cell shortages.
Platelet shortages may or may not occur at the same time as red cell shortages. Platelet shortages that occur when there are sufficient blood stocks are only likely to be short-term in nature

As with red cells the management of patients based on 3 broad categories. Category 1 is those patients with the greatest clinical need (See below).

Category 1 (Patients to be treated in the Red phase)	Category 2 (Patients to be treated in the Red and Amber phase)	Category 3
Massive Haemorrhage & Critical care Maintain >50x10^9/l. For multiple/CNS trauma >100x10^9/l **Bone Marrow Failure and immune ITP** Actively bleeding with severe thrombocytopenia **Neonates** For neonatal alloimmune thrombocytopenia or thrombocytopenia in an otherwise healthy neonate maintain platelets >30 x10^9/l Higher levels should be maintain if of extremely low birth weight, bleeding or intracranial haemorrhage suspected	**Critical Care** Following resuscitation by massive transfusion with no on-going active bleeding maintain platelets >50 x 10^9/l **Surgery** Urgent but not emergency support maintain platelets >50 x 10^9/l. For operations in critical sites maintain >100 x 10^9/l **Bone Marrow Failure** Maintain >10 x 10 ^{9}/l if haemodynamically stable but infected. For patients at higher risk of bleeding maintain at >20 x 10 ^{9}/l	**Surgery.** Elective, requiring platelet support for thrombocytopenia or a congenital /acquired platelet defect.

6.2.1 Plan Structure (Platelet Shortage)

- Green Phase

In this phase the Hospital Transfusion Team will audit the safe and appropriate use of platelets by ensuring wherever possible, aspirin and other drugs affecting platelet function are stopped prior to surgery in time to allow platelet function to recover.
If stocks fall at one or more centres but the national stock situation is above the pre-determined level then NHSBT may ask hospitals to delay platelet transfusions or accept units of platelets of different groups where possible (in line with BSH Adult and Paediactric guidelines)[4]. This will allow NHSBT to initiate stock transfers to balance the platelet stocks rather than declaring an amber shortage

- Amber Phase and Red Phase

If the National blood stocks fall to a predetermined level NHSBT will communicate a move to the Amber or Red phase directly to the Hospital Blood Transfusion Laboratory at KMH. This may apply to a single blood group or to all blood groups. Should NHSBT identify a severe, imminent threat to the platelet supply then NHSBT may communicate a move directly to the Red phase of the plan and request that only patients in category 1 are treated. At this point all requests for units of platelets must be made directly to NHSBT by a Consultant Hematologist. Hospitals will be requested to track closely the fate of each platelet unit and if it is not used NHSBT may retrieve the unit to deliver to an alternative location. This will ensure that wastage is kept to a minimum and the most urgent cases are supported.

6.2.2 Activation (Platelet shortage)- Roles and Responsibilities of the EBMG

Blood Transfusion Manager (KMH)

- Immediately notify the Lead Consultant for Transfusion of the move to Amber or Red phase

Lead Consultant for Transfusion

- As the need for platelets is less likely to impact on elective cases the lead consultant will inform the EBMG of the situation and advise on which elective procedures should be postponed.

Silver/Gold on call

- Immediately call a meeting of the EBMG

<u>Action once the EBMG have met: -</u>
Each Clinical Director/Service Director will be responsible for communicating the information to their clinical area.

6.2.3 Stand down (Platelet Shortage)

Blood Transfusion Manager-KMH

- Immediately notify the Lead Consultant for Transfusion of the move to Amber or Green phase

Lead Consultant for Transfusion

- Immediately notify Silver on call of the move to Amber or Green phase
- Continue to advise on specific patient basis

Silver/Gold on call

- Immediately notify each Clinical Director who is responsible for communicating the stand down to other medical staff

7.0 MONITORING COMPLIANCE AND EFFECTIVENESS

If there is a need to enact the Amber or Red phases of the plan then a review meeting of the EBMG will take place after the emergency is over to see if there are any lessons to be learned.

Monitoring the Green phases of the plan will take place through the remit of the HTC and HTT, by ensuring participation in regular national audits of transfusion and local audits in the laboratory and in clinical areas to ensure good transfusion practise.

The HTC reports to the Trust Patient Safety and Quality Board quarterly

If the EBMG recommends any action after an Amber or Red phase then they will report this to the HTC and the Trust Patient Safety and Quality Board. The EBMG will direct the HTT / HTC or other appropriate groups to act on their behalf.

Change in practice and lessons to be earned will be circulated as appropriate through the Team brief and via the intranet.

It is not possible to be prescriptive about how this policy can be monitored in full as the likelihood of any event requiring its use cannot be predicted.

8.0 TRAINING AND IMPLEMENTATION

No specific training is required for Clinicians and staff in general, but advice can always be sought from members of the HTT, HTC or NHSBT as appropriate.

The policy/procedure will be placed on the Trusts intranet system to ensure it is available to all staff

9.0 IMPACT ASSESSMENTS

- This document has been subject to an Equality Impact Assessment, see completed form at Appendix E
- This document is not subject to an Environmental Impact Assessment

10.0 EVIDENCE BASE (Relevant Legislation/ National Guidance) AND RELATED SFHFT DOCUMENTS

Evidence Base:

1. Emergency Planning-development of an integrated plan for the management of Blood Shortages. NHS Department of Health Gateway (ref 3344), 2004.
2. Chief Medical Officers report on behalf of the National Blood Transfusion Committee Contingency Planning Group, Dec 2004.
3. Patient Blood Management 2012 (Available at:-www.transfusionguidelines.org/uk-transfusion-committees/national-blood-transfusion-committee/patient-blood-management)
4. *British Committee for Standards in Haematology (2004) Transfusion guidelines for neonates and older children.* British Journal of Haematology **124***:433-453.*
5. A plan for NHS Blood and Transplant and Hospitals to address Red Cell Shortages. Updated March 2020
6. A plan for NHS Blood and Transplant and Hospitals to address Platelet shortages. Updated November 2020

Related SFHFT Documents:

- Blood Transfusion Policy
- Use of red cells in adult patients guideline
- Platelet transfusions in adult patients guideline

11.0 KEYWORDS

And procedure, blood transfusion policy

12.0 APPENDICES

Appendix A – Members of the SFH NHS Trust Emergency Blood Management Group
Appendix B – Summary of Integrated Red Cell Shortages plan for NHSBT and Hospitals
Appendix C – Summary of Integrated Platelet Shortages plan for NHSBT and Hospitals
Appendix D – SFH NHS Trust status report for blood shortages
Appendix E – Equality Impact Assessment

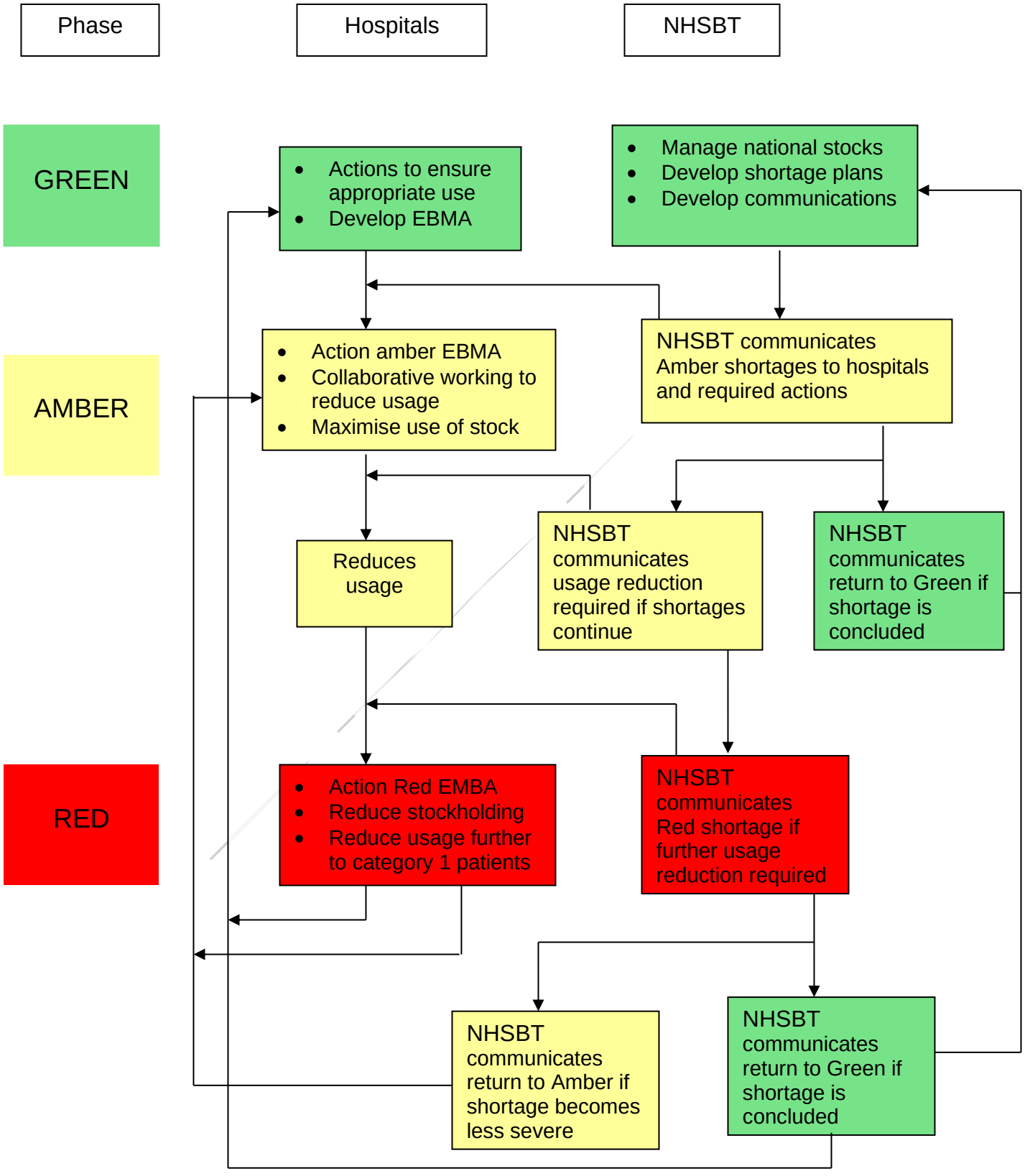
APPENDIX A.

MEMBERS OF THE SFH NHS TRUST EMERGENCY BLOOD MANAGEMENT GROUP

Chief Operating Officer	3396
Executive Medical Director	3247
Clinical Director of Planned care and Surgery	4175
Clinical Director of Urgent and Emergency Care	6403
Clinical Director Medicine	6050
Clinical Director of Women's and Children	4286
Clinical Director of CSTO	6218
Lead Consultant for Transfusion	6415
Head of Services for Haematology	3602
Blood Transfusion Manager	3398
Transfusion Practitioner	6314
Emergency Planning Officer	3551
Head of Communications	2717
Pharmacy Representative	3167

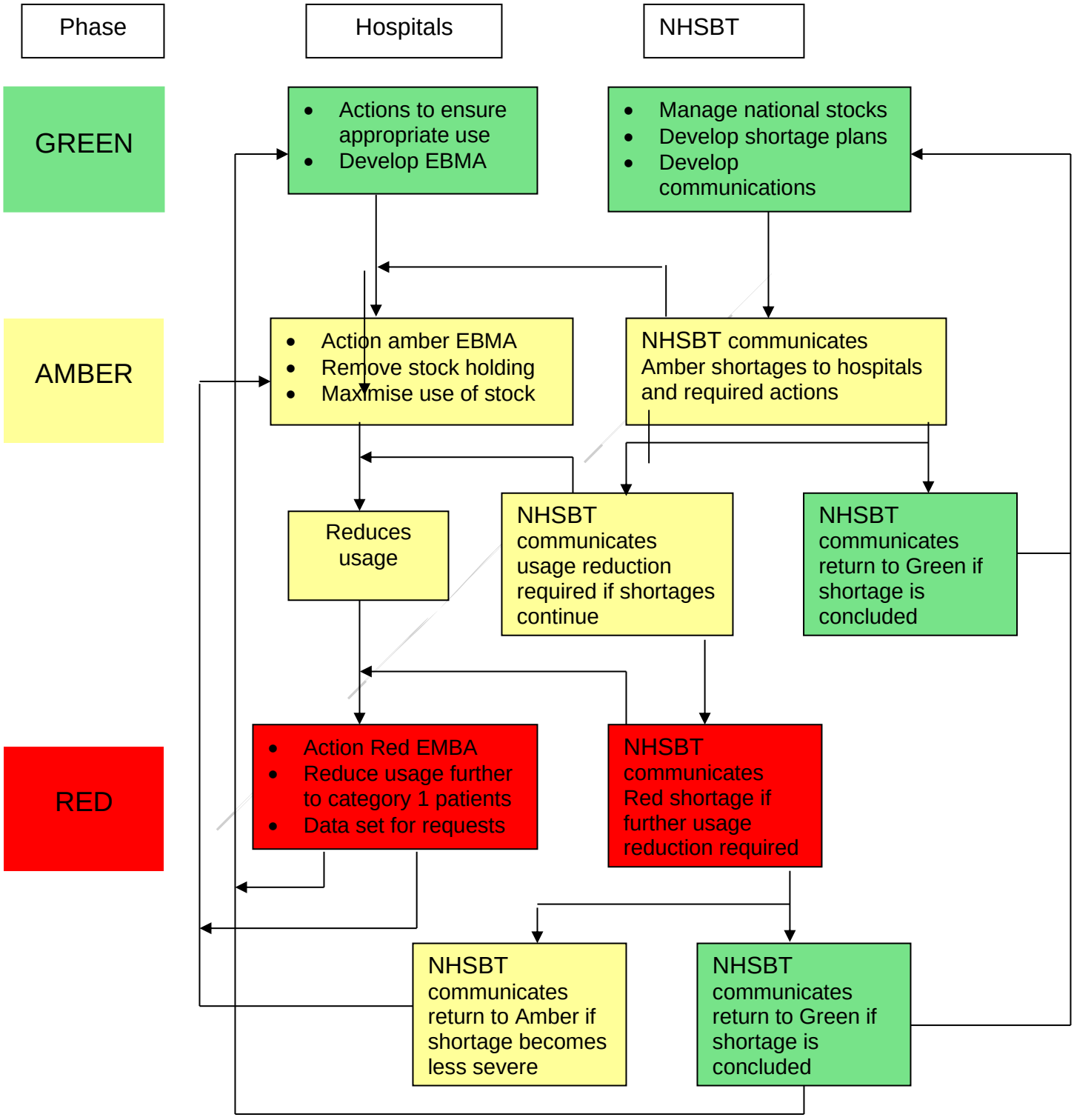
In his/her absence each member MUST nominate a deputy.

APPENDIX B
SUMMARY OF INTEGRATED RED CELL SHORTAGES PLAN FOR NHSBT AND HOSPITALS



APPENDIX C

SUMMARY OF INTEGRATED PLATELET SHORTAGES PLAN FOR THE NHSBT AND HOSPITALS



APPENDIX D: SFH NHS TRUST STATUS REPORT FOR BLOOD SHORTAGES

On behalf of SFH NHS Trust Emergency Blood Management Group

Date of Report:

Duration of these Arrangements:

Blood Group	O Pos	O Neg	A Pos	A Neg	B Pos
Number of packs available					
% Stock reduction from normal					
Patient categories supported for transfusion					

Status levels:

- Green phase: normal circumstances
- Amber phase: reduced availability of blood for short or prolonged period
- Red phase: severe, prolonged shortages

Patient Categories:

Category 1	Category 2	Category 3
Active major bleeding		
Emergency surgery	Urgent surgery	Elective surgery with >20% chance of 2 unit transfusion
Curative cancer surgery	Palliative cancer surgery	
Life-threatening anaemia	Symptomatic anaemia	

- **All blood transfusion requests must include clinical details and contact details (preferably bleep number) of the requesting doctor.**
- **All cases of massive blood loss should be notified to the Transfusion Laboratory immediately.**

APPENDIX E – EQUALITY IMPACT ASSESSMENT FORM (EQIA)

Name of service/policy/procedure being reviewed: Emergency Planning for the Management of Blood Shortages Policy			
New or existing service/policy/procedure: EXISITNG POLICY			
Date of Assessment:24.07.2020			
For the service/policy/procedure and its implementation answer the questions a – c below against each characteristic (if relevant consider breaking the policy or implementation down into areas)			
Protected Characteristic	**a) Using data and supporting information, what issues, needs or barriers could the protected characteristic groups' experience? For example, are there any known health inequality or access issues to consider?**	**b) What is already in place in the policy or its implementation to address any inequalities or barriers to access including under representation at clinics, screening?**	**c) Please state any barriers that still need to be addressed and any proposed actions to eliminate inequality**
The area of policy or its implementation being assessed:			
Race and Ethnicity	None	N/A	None
Gender	None	N/A	None
Age	None	N/A	None
Religion	None	N/A	None
Disability	None	N/A	None
Sexuality	None	N/A	None
Pregnancy and Maternity	None	N/A	None
Gender Reassignment	None	N/A	None
Marriage and Civil Partnership	None	N/A	None
Socio-Economic Factors (i.e. living in a poorer neighbourhood / social deprivation)	None	N/A	None

What consultation with protected characteristic groups including patient groups have you carried out? • None
What data or information did you use in support of this EqIA? • Emergency Planning-development of an integrated plan for the management of Blood Shortages. NHS Department of Health Gateway (ref 3344), 2004.
As far as you are aware are there any Human Rights issues be taken into account such as arising from surveys, questionnaires, comments, concerns, complaints or compliments? • No
Level of impact From the information provided above and following EQIA guidance document Guidance on how to complete an EIA (click here), please indicate the perceived level of impact: Low Level of Impact
Name of Responsible Person undertaking this assessment: Jane Walden
Signature:
Date: 24.07.2020