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# 1. STATEMENT OF INTENT AND AIM OF EBMA

This document outlines the Emergency Blood Management plan (EBMP) for NHS Borders and exists to ensure best use of blood and blood components during periods of blood shortage. It complies with the HDL (2005) 25 and is aligned to the recent communications issued from the Scottish National Blood Transfusion Service (SNBTS) integrated blood shortage plan (2020) in response to COVID-19. The development of an emergency management plan is designed to:

- Optimise NHS Borders response to shortages of blood and platelets
- Improve blood stock management through appropriate use
- Decrease the risks associated with acute/chronic shortfall in supply
- Provide a framework for decision-making in the event of a limited supply

## BLOOD MANAGEMENT GROUPS WITHIN NHS BORDERS

**Transfusion Committee:** The NHS Borders Transfusion Committee (HTC) acts as the Steering Group for delivery of services in NHS Borders.

The Committee manages the day-to-day delivery of transfusion and the green phase of the EBMP.

Additionally, the Committee has executive power responsibility, actions on behalf of the Chief Executive for the EBMG.

The **Hospital Transfusion Team** manages the day-to-day delivery of transfusion and the green phase of the EBMP.

The **Emergency Blood Management Group** (EBMG) is responsible for:

1. Formulating the plan
2. Activating the plan
3. Ensuring NHS Borders meets the required reduction
4. Ensures 24/7 availability of themselves and deputies

## EBMA ADMINISTRATION

This document is distributed to internal stakeholders within NHS Borders. It is the responsibility of individual Departmental Managers to oversee the distribution within their own departments/services. The HTT of the EBMG will facilitate the co-ordination and maintenance of the content of Emergency Blood Management Plan by:

- Reviewing, updating, amending the plan biennially and following any actual or exercise blood shortage incident.
- Considering the impact on the arrangements of new guidance, procedures and recommended change as a consequence of national guidance, incident reports or judicial inquiries.
- Receiving and considering recommendations from the Scottish National Blood Transfusion Service and NHS Borders Transfusion Team following deliberation and debrief from training, exercising or experience of a live incident of blood shortage.
- Maintaining liaison with CG to update the IT Intranet version of the plan.

The plan may be activated in a variety of situations which may cause SNBTS and hospitals to activate their emergency planning arrangements including:

- Short-term shortages e.g. bad weather, influenza or disease outbreak (e.g. COVID-19 outbreak).
- Very acute shortages e.g. security issues which stop donors coming forward to donate blood.

- Prolonged shortage e.g. the introduction of further measures to reduce the risk of disease transmission by transfusion.
- Increased demand due to a mass casualty incident or disease pandemic.

These situations require reduction in usage, and wastage, of the hospital stock of the implicated blood component with the result that there is reduced pressure on national stocks and more of the national 'pool' is available for essential transfusions

The Emergency Blood Management Arrangements plan forms part of the overall Emergency Planning and Major Incident arrangements within NHS Borders.

Amendments to any part of the plan may only be made following review or testing of the plan in conjunction with the Resilience Manager.

## 2. BACKGROUND AND LEGISLATION

The Scottish Executive Health Department has prepared an integrated plan that lists actions to be taken by both the Scottish National Blood Transfusion Service (SNBTS) and NHS Scotland hospitals to maximise use of the available blood supply. In response to the recent COVID-19 situation, SNBTS have provided interim EBMA guidance for NHSS Boards. The main aims of the planning principles are to ensure:

- That the national pool of blood components is available for all essential transfusions to all patients equally across Scotland (logistical actions)
- That overall usage is reduced to ensure the most urgent cases and those with the greatest clinical need receive the supply that is available (clinical actions)

The plan has been developed and is to be integrated with NHS emergency planning arrangements and is consistent with the plans already issued in the remainder of the United Kingdom.

NHS Boards are required to produce written plans to ensure that hospitals and SNBTS can work within a consistent, integrated framework across NHS Scotland to ensure equal access for patients to available blood on the basis of need and to ensure that overall blood usage is reduced to ensure that the most urgent cases receive the supply that is available.

The development of Emergency Blood Management Arrangements is to ensure the effective use of available blood when blood stocks have fallen to very low levels is critical to ensuring transfusion support for patients on these occasions.

The Emergency Blood Management Plan follows the national integrated plan for blood shortage and describes three phases that apply to shortage of either red cells or platelets, and are defined by SNBTS stock levels – **GREEN, AMBER and RED**.

Shortage has been defined for red cells as follows, based on average daily issues from SNBTS during 'normal' demand:

<b>GREEN:</b>	<b>3 days or more SNBTS stock</b>
<b>AMBER:</b>	<b>2 days or less SNBTS stock</b>
<b>RED:</b>	<b>1 day or less SNBTS stock</b>

**NOTE:** There is no agreed definition for **AMBER** or **RED** platelet shortages due to the short shelf-life of this component.

There is now a concept of a **PRE-AMBER** state where hospitals receive a notification of a potential shortage of red cells or platelets which has not yet breached the **AMBER** threshold to encourage greater collaborative working between Hospital Transfusion Teams (HTTs),

Hospital Transfusion Committees (HTCs) and local clinical teams aimed at reducing the risk that the amber threshold is reached.

**The plan is now structured in four phases detailed below:**

<b>GREEN</b>	Normal circumstances where supply meets demand
<b>PRE-AMBER</b>	Anticipated shortage which does not reach the AMBER threshold
<b>AMBER</b>	Significantly reduced availability of blood and/or platelets
<b>RED</b>	Severe, prolonged shortage of blood and/or platelets

SNBTS has provided an SNBTS laboratory dashboard<sup>1</sup> and daily SNBTS issuable stock reports for red cells to provide information to hospital transfusion teams (HTTs) reviewing hospital transfusion laboratory stock management practice and clinical transfusion practice. Please contact a member of the HTT for review of local data.

[Appendix 1](#) provides a flowchart of the different phases and responsibilities of NHSS Boards and SNBTS.

### **GREEN PHASE – sufficient blood stocks and current blood management**

The Hospital Transfusion Team (HTT) has a specific remit to review blood and blood component usage and wastage using the SNBTS blood bank dashboard and other local sources of information.

The HTT, with the support of members of the HTC, should implement and monitor measures to reduce inappropriate and unnecessary transfusion using patient blood management principles as outlined below:

- Implement agreed protocols and thresholds for all transfusions.
- Ensure pre-operative assessment - Hb optimisation including iron therapy and bleeding assessment, including peri-operative adjustment of anti-thrombotic treatment.
- Use tranexamic acid for management of acute blood loss
- Annual revision of the maximum/agreed surgical blood ordering schedule.
- Implementation of single-unit issue of red cells where appropriate.
- Review of and reduction of the de-reservation period of allocated red cells and platelets to better manage stocks.
- SNBTS will continue to monitor stocks and communicate as appropriate

Actions in this phase could include:

- Ensuring audit is undertaken so that blood usage figures for surgical procedures are available to advise which elective surgical procedures can be undertaken at amber and red shortage phases.
- Clinical audit of the use of blood against agreed guidelines.
- Ensure that every request for transfusion clearly states the indication for transfusion.
- Implementation of agreed transfusion protocols/ transfusion thresholds for all transfusions.
- Ensuring pre-operative assessment and action to correct anaemia and defects in haemostasis, including adjustment of anti-thrombotic treatment prior to surgery.
- Pharmacological blood-sparing interventions, e.g. use of anti-fibrinolytics in surgery.

- Annual revision (or more frequently if indicated) of the maximum surgical blood ordering schedule, (MSBOS), for routine surgery.
- Use of I.V. iron therapy.
- Use of erythropoietin for agreed indications.
- Education/training sessions for staff of all levels, including induction and regular updates.
- Transfusion Guidelines formulated and included in the Junior Medical Staff induction.
- Hospital wide education of existence of Emergency Blood Management Arrangements.
- Review of component usage and discards via the SNBTS blood bank dashboard
- Advance notification to the Transfusion Laboratory and subsequently to SNBTS of any waiting list initiatives that could impact on the blood supply.

As part of the '**green phase**' contingency planning for a national blood shortage is key to service delivery and it may be necessary to restrict transfusions to those groups of patients in most need. In order to simplify the management of prioritisation of patients needs, it is suggested that patients be divided into three broad categories detailed below:

- **Category 1:** Critical/Emergency
- **Category 2:** Essential/Urgent
- **Category 3:** Planned/Elective

Examples are given in [Appendix 2](#) (red cells) and [Appendix 3](#) (platelets).

The SNBTS continually monitors blood stocks and takes appropriate action to maintain these. Should blood stocks fall, SNBTS will take action (as it does now) to increase collections from donors. If these actions prove to be unsuccessful, SNBTS will declare a blood shortage and communicate a move to the Amber Phase.

#### What clinicians need to know:

- Pre-op anaemia and low body weight are strongly predictive of need for allogeneic red cell transfusion during surgery. Hb levels and BMI should therefore be included on all transfusion request forms wherever possible during the red / amber phase to facilitate decision making by the local EBMP Group
- Full and relevant clinical detail must be provided on transfusion request forms during red /amber phase to facilitate decision making by the local EBMG
- In order to conserve D negative supplies, blood group compatible D positive red cells may be given to the following groups:
  - adult male patients if they require uncrossmatched blood in an emergency
  - adult male patients with known blood group D negative
  - female patients older than 50 years with known blood group D negative

#### PRE-AMBER PHASE - anticipated reduced blood stocks

SNBTS may issue an alert (**PRE-AMBER**) asking for short term measures to reduce demand in hospitals and indicating actions they will be implementing to recover to acceptable stock levels. **This does NOT require activation of the EMBA or cancellation of any treatment but may result in some delay to transfusion**, however submission of a SITREP ([Appendix 4](#)) may be requested to ensure SNBTS remain informed of services and potential changes in demand.

## AMBER PHASE - reduced blood stocks

Stocks at hospital level to be reduced and appropriate stock management principles apply. Should stocks begin to fall, SNBTS will take action to increase collections from donors. If these actions prove to be unsuccessful, SNBTS will declare a shortage and communicate a move to the **AMBER** phase.

However, should SNBTS identify a severe, imminent threat to the blood supply or less than one days' blood supply of red cells SNBTS may communicate a move directly to the **RED** phase of the plan.

The pre-determined **AMBER** level for red cells of a single critical blood group (or all blood groups) is set at approximately two days' stock. In the **AMBER** phase **the EBMA should be activated.**

If the shortage is caused by a short-term reduction in the availability of donors (such as severe bad weather or an influenza or COVID 19 outbreak), the implementation of actions by hospitals to minimise any avoidable blood component wastage review and potentially reduce stockholding may prove sufficient to manage the shortage. The SNBTS Hospital Blood Bank dashboard can provide local data to inform decision making. Please contact a member of the HTT for further information.

The Amber phase of the plan applies to circumstances where there is significantly reduced availability of blood for a short or prolonged period of time. The SNBTS trigger point for amber is currently set at approximately **two days stock**. This may apply to a single blood group or to all blood groups.

**NOTE: There is, as yet, no critical stock level defined for platelets.**

If blood shortage is considered by SNBTS to be likely to be more prolonged, it will be necessary to reduce the usage of blood. SNBTS will communicate details of the percentage reduction in usage required for each hospital. The postponement of procedures as defined in NHS Borders local plan will need to be considered by the Emergency Blood Management Group.

## ACTIVATION OF THE EBMA – AMBER PHASE

Should a national shortage occur SNBTS will send an e-mail or make a telephone call informing the Transfusion Laboratory that the national blood stocks have reduced to the level where hospitals should implement their **AMBER** status contingency plan.

The Biomedical Scientist will immediately inform the Clinical Director for the Laboratory or Department Manager who will contact Medical Director, Consultant Haematologist for Transfusion and Chief Executive to inform activation of the **AMBER** plan.

The Clinical Director for the Laboratory or Department Manager will alert the EBMG and recommend the introduction of the hospital's **AMBER** EBMA. Lead consultants and directorate managers will be informed immediately that the **AMBER** plan has been implemented and the information will be cascaded to all medical staff.

The EBMG will prepare to actively manage the shortage. As with any major incident or emergency plan, cover arrangements should be clear. Usually the Consultant Haematologist for Transfusion will assume a lead role.

The EBMG will meet to review the actions to be taken as outlined below. This may include a review of theatre lists to ensure that patients in Category 3 who will require blood transfusion support are deferred to ensure the hospital will reach the required reduction in overall usage.

Where reductions do not reach the required reduction in stockholding, action may need to be taken which may impact on patients in Category 2. Other measures should include:

- Review stockholding with the aim of reducing usage and avoidable wastage to increase the central 'pool' of blood components.
- Consideration should be given to reducing the transfusion trigger/threshold for all transfusions and using single-unit issue in non-bleeding patients.
- In cases of actual or potential massive blood loss a consultant haematologist must be contacted by the referring clinical team to allow discussion and planning of patient management and blood component provision.
- All cases which are deemed to require transfusion by their clinical teams should be referred to a Consultant Haematologist or deputy.
- Reduction of the reservation period for blood components to 12 hours or less wherever possible.

Any shortage and its impact on patient care should to be reviewed daily by a group of key staff and a situation report (SITREP) produced ([Appendix 4](#)).

### **Red Phase – Severe Stock shortage - Stock at hospitals reduced to 40%.**

The Red phase of the plan applies to circumstances where there is or anticipated to be a severe, prolonged shortage of blood. The stockholding of blood in hospitals will be immediately reduced to 40% of the average stockholding and will be accompanied by a further reduction in usage from that applied in the amber phase.

It is likely that only patients listed in Category 1 will be treated with Blood Transfusion.

**Restrictions on blood transfusions will come in to force within 24 hours from the time of upgrading to amber or red status.**

### **RED PHASE – ACTIVATION OF THE EBMA**

Should a **RED** national shortage occur, this will either be an escalation of **AMBER** or a direct notification of **RED** shortage.

SNBTS will send an e-mail or make a telephone call informing the Hospital Transfusion Laboratory that the national blood stocks have reduced to the level where hospitals should implement their **RED** status contingency plan.

The Biomedical Scientist will immediately inform the Clinical Director for the Laboratory or Department Manager who will contact Medical Director, Consultant Haematologist for Transfusion and Chief Executive to inform activation of the **RED** plan.

The communication will indicate that red cell stockholding should be 40% of target level.

Lead consultants and Directorate Managers will be informed immediately that the **RED** plan has been implemented and the information will be cascaded to all medical staff.

The EBMG will meet and implement the **RED** status contingency plan and to review the actions to be taken as outlined below.

- Reduce red cell stockholding to 40% of target levels.
- Daily review of the blood shortage and its impact on patient care by the EBMG.
- Medical assessment of all requests by a Consultant Haematologist or deputy.
- An order of priority based on clinical need.
- The enactment of a predetermined policy on dealing with major bleeding that should include guidance on when to stop blood component support.

Any shortage and its impact on patient care should to be reviewed daily by a group of key staff and a situation report (SITREP) produced ([Appendix 4](#)).

### **3. TRAINING AND EXERCISE**

The principles outlined in the Major Incident Procedure will be applied. The Resilience Officer has overall responsibility for NHS Borders.



## 4. NHS BORDERS ACTION PLAN

### GREEN Phase Action Plan

#### Sufficient Blood Stocks

- Normal circumstance where supply meets demand.
- Continuous audit of use and wastage managed by NHS Borders Transfusion Team.
- Transfusion will continue in all categories identified in [appendix 2](#).
- Reservation period for blood post operatively now 24 hours.
- Implement the recommendations of the SNBTS Integrated blood shortage plan.
- Continuous audit of quality of request forms.
- Provide clinical teams of any restrictions of specific blood groups which are managed by SNBTS Transfusion Team.
- Two sample group check policy will enable patients to be eligible for electronic release.

### AMBER Phase Action Plan

#### Reduced Stocks

- Review stockholding in compliance with minimum and maximum stockholding criteria and reduce stockholding as appropriate
- Operation by group for elective surgery dependent on stock levels.
- Consideration of transfusion triggers for all transfusion.
- Biomedical Scientists in Transfusion will monitor all request for transfusion Hb  $\geq 70\text{g/L}$  based on information provided on request form and completion of laboratory checklist
- Any request for transfusion with Hb  $\geq 70\text{g/L}$  will be referred to Duty Consultant Haematologist for further action if appropriate
- Reduce reservation period for blood to 12 hours.
- Transfusion will be prioritised to category 1 & 2 as identified in [appendix 2](#)
- **ALL** platelet requests will be reviewed for appropriate transfusion in [appendix 3](#)
- Refer to Business Continuity Plan to maintain service delivery.
- All electronic crossmatches will be issued on demand on a single unit basis.

### RED Phase Action Plan

#### Severe Stock Shortage

- Reduce usage and stockholding as notified by SNBTS to ~40%.
- Only emergency surgery to continue as per [appendix 2](#).
- Review daily position regarding blood stocks.
- Medical assessment of **ALL** requests for blood and platelets by Duty Consultant Haematologist.
- Priority based on clinical need.
- Trauma/Medical/ITU transfusion support will attract high priority.
- Movement of blood between hospitals as required.
- Transfusion will be prioritised to category 1 as identified in [appendix 2](#).
- **ALL** platelet requests will be reviewed for appropriate transfusion in [appendix 3](#)
- Refer to Business Continuity Plan to maintain service delivery.
- All electronic crossmatches will be issued on demand on a single unit basis.
- **In the unlikely event of extreme priority decisions being required, NHS Borders Major Incident Triage principles will be applied and final decisions will be made by the Chair of the Group.**

## ACTIVATION OF NHS BORDERS ARRANGEMENTS

The Biomedical Scientist will immediately inform the Clinical Director for the Laboratory or Department Manager who will contact Medical Director, Consultant Haematologist for Transfusion and Chief Executive to inform activation of the plan.

Flowchart outlining the hospital plan is shown in [Appendix 5](#). Arrangements must be in place for this to operate in and out of regular hours. **The process is the same for both Amber and Red.**

**The critical difference between amber and red is the clinical prioritisation of patients.** In order to simplify the management of this process, national guidance has been provided which suggests dividing patients into three broad categories. The categories for red cells are outlined in [Appendix 2](#). It is advised that senior clinicians be involved in the decision to use blood during shortages and provide guidance to their staff. In the **red** phase all requests will require approval by Consultant staff.

## REVIEW OF REQUESTS FOR BLOOD COMPONENTS

All requests for blood components will be reviewed by Blood Bank Biomedical Scientists and assessed using the information given on the request form.

Transfusion Biomedical Scientists will review the request and prioritise the issue of blood taking into consideration:

- The Maximum Surgical Blood Order Schedule (MSBOS)
- Patient category
- Blood group of the patient and availability of compatible blood
- Presence of antibodies
- Need for additional platelet and plasma support
- Referral to Haematologist as required

Blood Transfusion will advise the requesting staff/Consultant if blood may be restricted for an individual request. In the event of difficulties in decision-making, the Consultant Haematologist and the Chair of the EBMG (if required) will be the final arbiter.

## 5. ROLES AND RESPONSIBILITIES

STAFF GROUP	SUMMARY OF ROLES AND RESPONSIBILITIES
<b>SNBTS</b>	<ul style="list-style-type: none"> <li>Provide relevant and timely information of shortage status to blood bank and hospital switchboard via email/telephone.</li> </ul>
<b>Clinical Director for Laboratory or Department Manager</b>	<ul style="list-style-type: none"> <li>Inform Consultant Haematologist and Chair of EBMG of shortage status.</li> <li>Send pre-determined e-mail informing all Heads of Clinical Services and all members of EBMG of the blood shortage status.</li> </ul>
<b>Consultant Haematologist</b>	<ul style="list-style-type: none"> <li>Initially (i.e. before the EBMG sits) review and restrict outstanding requests for transfusion in conjunction with the Blood Bank Manager/Deputy and with input from the Chair of the EBMG, if required.</li> <li>Liaise with Medical Director at 9am each morning to provide an update and determine actions.</li> <li><b>In the event of out of hours support, the Consultant Anaesthetist on call will take over roles and responsibility with support from NHS Lothian.</b></li> </ul>
<b>Chair/Deputy of the EBMG</b>	<ul style="list-style-type: none"> <li>Chair the EBMG and liaise with secretary to confirm date, time and venue of EBMG meeting. This has been agreed by EBMG there is a <b>priority for a daily meeting at 4pm on Teams or in person as appropriate.</b></li> <li><b>Prioritise</b> workload of Consultant Haematologist and liaising with them daily at 9am.</li> <li>Monitor the integrity of the plan and act as an advisor in the formulation and maintenance of the plan.</li> <li>Make the final decision where areas of conflict exist - even before the EBMG have had the opportunity to meet.</li> <li>Address any press issues and contact the Communications Department to agree an external communications strategy.</li> <li>Liaise with Medical Director of external NHS Boards as required.</li> <li>Maintain communications with NHS Borders Clinical Executive Group, Newstead.</li> </ul>
<b>Associate Director of Nursing and Midwifery</b>	<ul style="list-style-type: none"> <li>Inform on call Site Bleep holder, and all staff (via the safety brief and huddle process) of the activation of the plan which will impact on the delivery of clinical services.</li> <li>Support the Chair of the Group in the decision making process and sustainability of service delivery.</li> </ul>
<b>Operational Manager for Planned Care / Information Analyst for Waiting Lists</b>	<ul style="list-style-type: none"> <li>Collate any surgical procedures and waiting lists as a priority.</li> <li>Liaise and communicate with EBMG as a priority.</li> <li>Action the deferral of planned care as agreed.</li> </ul>
<b>Blood Transfusion Biomedical Scientists</b>	<ul style="list-style-type: none"> <li>Inform the Clinical Director or Department Manager of activation of the AMBER plan and communications from SNBTS.</li> <li>Produce, maintain and control a current log of bloodstocks, detailing group and age of units, and provide this information to the EBMG.</li> <li>Collate blood requirements as received in the laboratory prior to the EBMG and prioritise these with reference to time required. For requests required prior to the EBMG meeting, provide supporting evidence of appropriateness of request, i.e. whether patient is bleeding, Hb level etc., and present this information to the Consultant Haematologist.</li> </ul>
<b>Transfusion Practitioner</b>	<ul style="list-style-type: none"> <li>Liaise with SNBTS and provide subject matter expertise on blood stock availability, and facilitate the Situation Reports (SitRep) to SNBTS as required.</li> <li>Support the EBMG in the clinical decision making process and appropriate actions.</li> <li>Provide local and national data from SNBTS HBB dashboard to inform the decision making process.</li> </ul>
<b>Secretary</b>	<ul style="list-style-type: none"> <li>Communicate date, time and venue of EBMG meeting. This has been agreed as a <b>priority for EBMG to convene daily at 4pm Room</b> (liaise with Laboratory secretaries to re-organise pre-booked meetings in the room).</li> <li>Clearly document clinical decisions made, in alignment with the NHS Borders Business Continuity plan.</li> <li>Transcribe and disseminate minutes from EBMG meeting, and tape all meetings due to potential for publicity.</li> </ul>

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PLEASE REFER TO [APPENDIX 8](#) FOR A QUICK REFERENCE GUIDE TO THE ACTION PLAN FOR NHS BORDERS

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## 6. RECOVERY FROM SHORTAGE

On recovery from shortage, SNBTS will e-mail and/or telephone informing the Transfusion Laboratory that stocks have risen to a level where hospitals can move to **Amber** or **Green** status.

NHS Borders will adopt a phased return to normal activity levels; in particular, elective surgery backlogs should not be compressed into the immediate post recovery period.

The Emergency Blood Management Group will convene within two weeks for review and reflection on operational implementation and to review the effect of the blood shortage and amend the Emergency Blood Management Arrangements as necessary.

The Medical Director is responsible for the preparation and submission of a review report to the Clinical Governance Committee.

## 7. REFERENCES

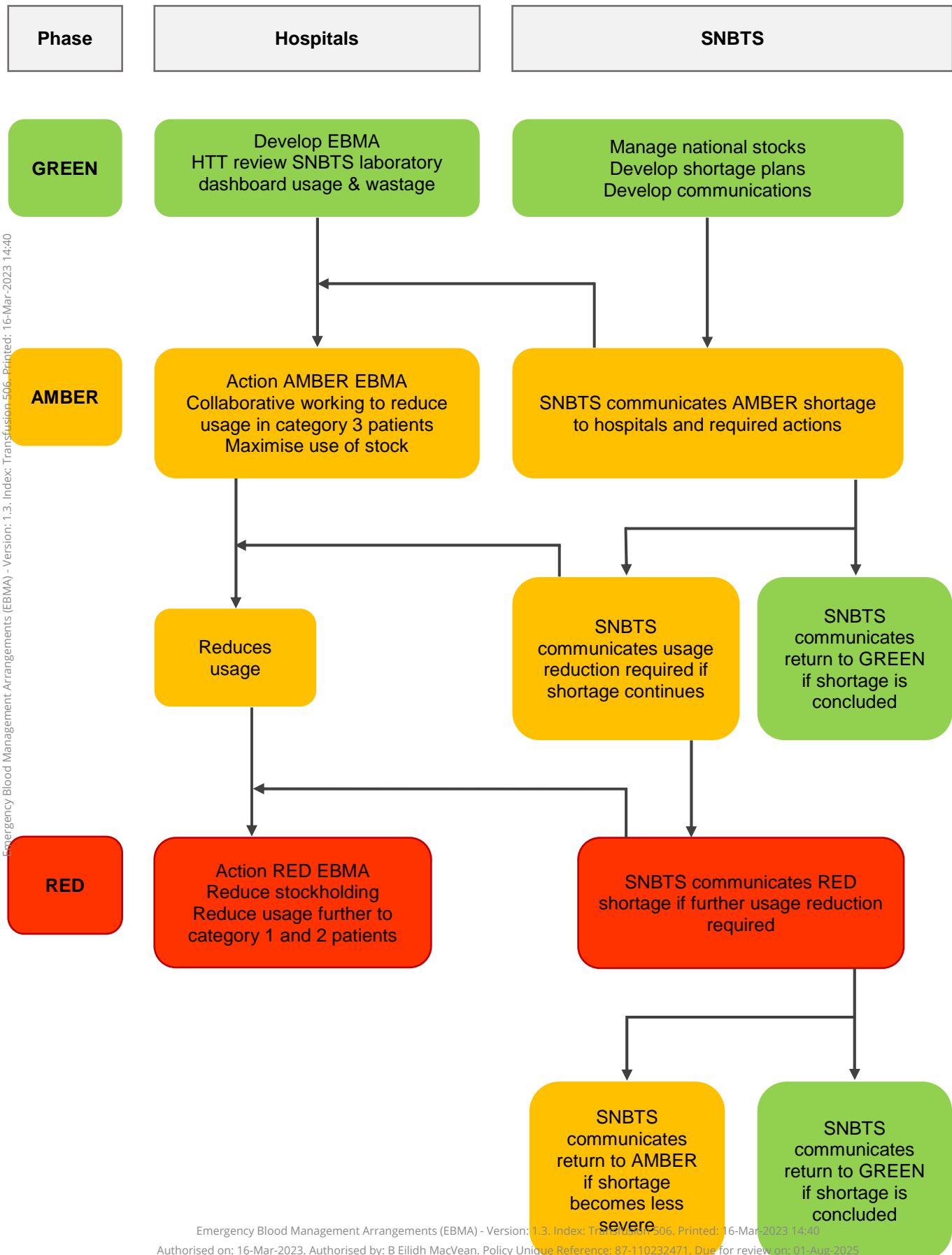
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### Appendix 1: Flowchart for EBMA Red Cells and Platelets (SNBTS 2020)

AN UPDATED INTEGRATED BLOOD SHORTAGE PLAN FOR SNBTS AND NHSS HOSPITALS



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## Appendix 2: Suggested patient categories for red cell usage (SNBTS 2020) adapted

Suggested patient categories for red cell usage		
Category 1* <i>These patients are the highest priority for transfusion</i>	Category 2* <i>Patients to be transfused in the Amber but not the Red phase</i>	Category 3 <i>Patients will not be transfused in the Amber phase</i>
Resuscitation of life-threatening/on-going blood loss including trauma.		
<b>Surgical Support</b> Emergency surgery due to obstetrics, trauma, massive blood loss or any other life threatening surgery	<b>Surgery/Obstetrics</b> Palliative cancer surgery Symptomatic but not life-threatening post-operative or post-partum anaemia. Urgent (but not emergency) surgery.	<b>Surgery</b> All elective surgery requiring transfusion support will be cancelled
<b>Non-Surgical Anaemia</b> Life-threatening anaemia including patients requiring high dependency care/SCBU. Transfusion dependant patients due to bone marrow failure or chemotherapy	<b>Non-Surgical Anaemias</b> Symptomatic but not life-threatening anaemia*. Transfusion dependant patients due to bone marrow failure or chemotherapy Severe renal anaemia. Neonates	
<p>Emergency – patient likely to die within 24 hours without surgery. Urgent – patient likely to have major morbidity if surgery not carried out. Chemotherapy should be deferred if possible. *Transfusion in the presence of a correctable haematinic deficiency (iron, B<sub>12</sub> or folate) will be declined</p> <p><b>Chronic anaemia will only be considered for transfusion if HB &lt;70g/L</b></p> <p><b>IF you are wanting to discuss transfusion issues in any patient group please contact Consultant Hematologists</b></p>		

## Appendix 3: Suggested patient categories for platelet EBMA (SNBTS 2020)

The following table provides general guidance for the use of platelet transfusions in the context of reduced availability of all platelet groups.

Suggested patient categories for platelet usage		
Category 1 <i>These patients are the highest priority for transfusion</i>	Category 2 <i>Patients to be transfused in the Amber but not the Red phase</i>	Category 3 <i>Patients will not be transfused in the Amber phase</i>
<b>ALL PLATELET REQUESTS WILL BE REVIEWED</b>	<b>ALL PLATELET REQUESTS WILL BE REVIEWED</b>	
<p><b>Massive haemorrhage</b> Massive transfusion for any condition including obstetrics, neonates, emergency surgery and trauma, with on-going bleeding, maintain <math>&gt; 50 \times 10^9/L</math>. Aim for <math>&gt;100 \times 10^9/L</math> if multiple trauma or CNS trauma</p> <p>Priority will be given to patients with active bleeding and platelets <math>&lt;10 \times 10^9/L</math> or who have been on antiplatelet agents (aspirin or clopidogrel) and are bleeding.</p> <p>Haematology platelet transfusion dependent patients with platelets <math>&lt;10 \times 10^9/L</math> who are not actively bleeding</p>	<p><b>Massive haemorrhage</b> Patients resuscitated following massive transfusion with no on-going active bleeding, maintain <math>&gt; 50 \times 10^9/L</math></p> <p>Priority will be given to patients with active bleeding and platelets <math>&lt;20 \times 10^9/L</math> or who have been on antiplatelet agents (aspirin or clopidogrel) and are bleeding.</p> <p>Haematology platelet transfusion dependent patients with platelets <math>&lt;20 \times 10^9/L</math> who are not actively bleeding</p>	<p><b>Surgery</b> Elective, non-urgent surgery likely to require platelet support</p> <p><b>(currently cancelled due to COVID-19)</b></p>
<p><b>Critical Care</b> Bleeding in the presence of sepsis/acute DIC, maintain <math>&gt;50 \times 10^9/L</math>.</p>	<p><b>Critical Care and Surgery</b> Urgent but not emergency surgery for a patient requiring platelet support</p>	

## Appendix 4: Situation Report

Emergency Blood Management Arrangement: Situation Report			
Completion and submission of the SITREP is the responsibility of the Hospital Transfusion Team (HTT).			
<b>Blood Bank</b>			
<b>SITREP completed by:</b>			
<b>Contact details of reporter:</b>	Phone:	Email:	
<b>Period covered by SITREP</b>	From: DD/MM/YYYY	To: DD/MM/YYYY	
<b>EBMA status</b>	<input type="checkbox"/> EBMA NOT ACTIVATED	<input type="checkbox"/> AMBER	<input type="checkbox"/> RED
<b>1.0 SITUATION</b>			
Hospital activity (reduced, increased, no change) – <i>detail if relevant</i>			
Specific information re: red cells stock levels/demand/usage/wastage			
Specific information re: platelets demand/usage/wastage			
<b>2.0 ACTIONS TAKEN AND ACTIONS PLANNED</b>			
Actions implemented/agreed re stockholding – <i>give completion/target dates</i>			
Actions implemented/agreed re restrictive transfusion practice - <i>give completion/target dates</i>			
<b>3.0 ISSUES</b>			
Any reportable incidents or complaints directly as a result of blood shortages – <i>do not use patient identifiable info</i>			
Any other information to report			
Please complete all fields. If there is nothing to report, or the information request is not applicable, please insert 'no change since last SITREP'			
Email this SITREP to <a href="mailto:NSS.SNBTS-COVID19-Sitrep@nhs.net">NSS.SNBTS-COVID19-Sitrep@nhs.net</a> and save a copy for your EBMG and HTT records			
Use the filename YYYY-MM-DD EBMA SITREP <YOUR HOSPITAL or HEALTHBOARD> <YOUR INITIALS>			



## Instructions for use

This situation report (SITREP) provides a mechanism for recording and reporting information about the activities and issues during blood shortage. It can also be used when blood shortage is anticipated to gather information about predicted changes in clinical service delivery. The SITREP template is to provide a quick, clear and concise understanding of the current situation focusing on *context*, in addition to the facts. Below is guidance to complete the form.

### 1.0 Situation to date (what has happened?)

- Brief summary of “hospital activity” – has transfusion activity, increased, decreased? Or is there no change? Add specific detail if relevant. Use this section to record changes to clinical service delivery which might impact on demand for blood components even if the EBMA has not been activated\*.
- Summary of information relating to red cells, has stockholding/demand/ usage/ wastage increased or decreased. Is there a specific reason for this change?
- Summary of information relating to platelets has demand/ usage/ wastage increased or decreased? Is there a specific reason for this change?

### 2.0 Actions taken and actions planned (what has been done/what will be done?)

- Brief reporting of actions completed to date - typically for the period covered by the sitrep
- Brief reporting of scheduled/planned actions.

### 3.0 Issues (what has gone wrong/might go wrong?)

- Brief description of issue(s)/ complaints that are known/reasonably expected to arise directly as a result of the blood shortages, before the next SITREP is issued. Patient identifiable information **MUST NEVER** be used but DATIX, Q-Pulse or other incident reference would be helpful where available.
- If there is any other information to report please use this section. This could include changes to clinical service delivery which might impact on the demand for blood components\* (see section 1.0)

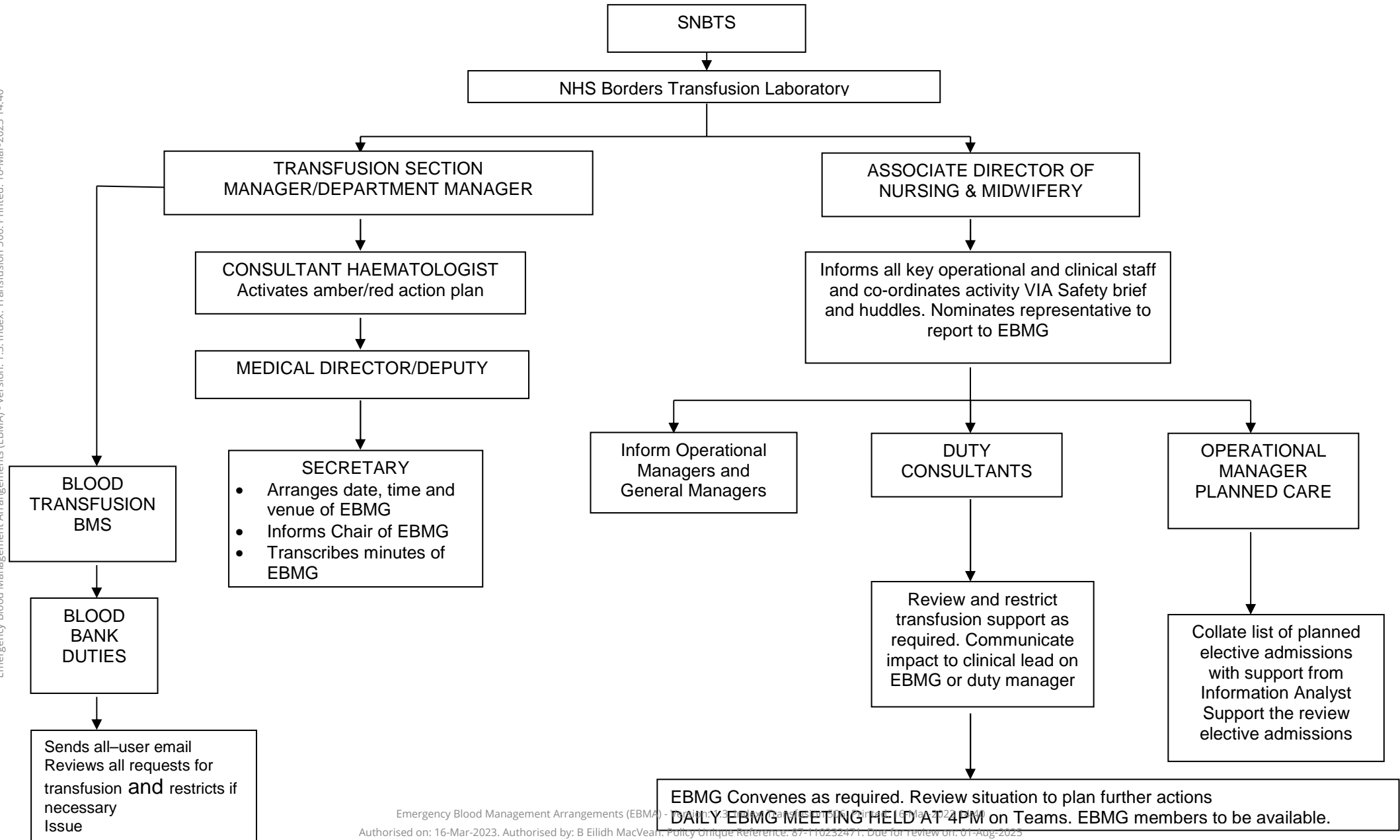
#### NOTE:

- Information should be factual and largely without interpretation and conjecture.
- Information should cover the period between the last SITREP and the next SITREP
- SITREPs should be brief and not a narrative.
- Do not leave fields blank - If there is no change since the last SITREP please state – Nil or N/A
- Ensure old information is deleted, and do not just add new/additional info.

# Emergency Blood Management Arrangement (EBMA)

## Appendix 5: Flowchart on communication structure for NHS Borders

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 Authorised on: 16-Mar-2023. Authorised by: B Eilidh MacVean. Policy Unique Reference: 87-110232471. Due for review on: 01-Aug-2025

Author(s): B Eilidh MacVean

## Appendix 6: Members of the EBMG

Role	Lead (Name & Contact Details)	Deputy (Name & Contact Details)
Chair & Medical Director	Dr Lynn McCallum <a href="mailto:lynn.mccallum@borders.scot.nhs.uk">lynn.mccallum@borders.scot.nhs.uk</a>	On Call Medical Director for BGH
Chair of NHS Borders Transfusion Committee	Dr Katie Stewart, Ext. 26000 <a href="mailto:katie.stewart@borders.scot.nhs.uk">katie.stewart@borders.scot.nhs.uk</a>	
Consultant in Critical Care	Dr Katie Stewart, Ext. 26000 <a href="mailto:katie.stewart@borders.scot.nhs.uk">katie.stewart@borders.scot.nhs.uk</a>	On Call Consultant for Critical Care
Consultant Haematologist	Dr Jean Leong, Ext. 26234 <a href="mailto:jean.leong@borders.scot.nhs.uk">jean.leong@borders.scot.nhs.uk</a>	SNBTS Consultant on Call (out of hours) or Dr Jean Leong (within hours) but for local operational issues Consultant for Critical Care (out of hours)
Associate Director of Nursing	Elaine Dickson, Ext. 26704 <a href="mailto:elaine.dickson2@borders.scot.nhs.uk">elaine.dickson2@borders.scot.nhs.uk</a>	On call senior nurse for BGH via Switchboard
Blood Transfusion Section Manager	Gavin Wight, Ext. 26248 <a href="mailto:gavin.wight@borders.scot.nhs.uk">gavin.wight@borders.scot.nhs.uk</a>	Blood Transfusion BMS, Ext. 26248 <a href="mailto:bts.labs@borders.scot.nhs.uk">bts.labs@borders.scot.nhs.uk</a>
Blood Transfusion Section Manager	Michelle Hewitson, Ext. 26248 <a href="mailto:michelle.hewitson@borders.scot.nhs.uk">michelle.hewitson@borders.scot.nhs.uk</a>	As above
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Department Manager Blood Sciences	Jackie Scott, Ext. 26248 <a href="mailto:jackie.scott@borders.scot.nhs.uk">jackie.scott@borders.scot.nhs.uk</a>	Debbie Hughes Quality Manager <a href="mailto:deborah.hughes@borders.scot.nhs.uk">deborah.hughes@borders.scot.nhs.uk</a>
Laboratory Quality Manager	Debbie Hughes <a href="mailto:deborah.hughes@borders.scot.nhs.uk">deborah.hughes@borders.scot.nhs.uk</a>	BTS Section Manager(s), as above
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General Manager for Planned Care & Commissioning	Gareth Clinkscale, Ext. 27473 <a href="mailto:gareth.clinkscale@borders.scot.nhs.uk">gareth.clinkscale@borders.scot.nhs.uk</a>	On-call senior manager for BGH via Switchboard
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## Appendix 7: EBMA Contact List

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## Emergency Blood Management Arrangement (EBMA)

### Appendix 8: NHS Borders Action Plan – Quick Reference Guide

#### Emergency Blood Management Plan

In the event of a national blood shortage, the Scottish National Blood Transfusion Service has issued guidance for NHS Scotland Boards, to maximise the use of the available blood supply. The SNBTS Hospital Dashboard<sup>1</sup> provides local data to support the process.

This will support decision-making and the prioritisation of patient care, thus ensuring the effective and efficient use of blood.

#### Emergency Blood Management Group (EBMG)

During the COVID-19 pandemic the Hospital Transfusion Team will convene on behalf of the EBMG with direct reporting channel to the NHS Borders Medical Director.

In the event of withholding blood or platelets for a patient, the clinical decision will be clearly documented in SBAR appendix 9

In the event of a national blood shortage the EBMG will convene on a daily basis at 4pm in the laboratory seminar room.

Any adverse events associated with a national blood shortage must be reported on Datix.

**Restrictions on blood transfusions will come in to force within 24 hours from the time of upgrading to amber or red status.**

<sup>1</sup> SNBTS Laboratory dashboard (logon and password required)

<https://viz.nhs.uk/scot.nhs.uk/#/site/NSS/views/Bloodbankdashboard/DashboardOverview?iid=1>

#### GREEN Phase Action Plan

##### Sufficient Blood Stocks

- Normal circumstance where supply meets demand.
- Continuous audit of use and wastage managed by NHS Borders Transfusion Team.
- Transfusion will continue in all categories identified in [appendix 2](#).
- Reservation period for blood post operatively now 24 hours.
- Implement the recommendations of the SNBTS Integrated blood shortage plan.
- Continuous audit of quality of request forms.
- Provide clinical teams of any restrictions of specific blood groups which are managed by SNBTS Transfusion Team.
- Two sample group check policy will enable patients to be eligible for electronic release.

#### AMBER Phase Action Plan

##### Reduced Stocks

- Review stockholding in compliance with minimum and maximum stockholding criteria and reduce stockholding as appropriate
- Operation by group for elective surgery dependent on stock levels.
- Consideration of transfusion triggers for all transfusion.
- Biomedical Scientists in Transfusion will monitor all request for transfusion Hb  $\geq 70\text{g/L}$  based on information provided on request form and completion of laboratory checklist
- Any request for transfusion with Hb  $\geq 70\text{g/L}$  will be referred to Duty Consultant Haematologist for further action if appropriate
- Reduce reservation period for blood to 12 hours.
- Transfusion will be prioritised to category 1 & 2 as identified in [appendix 2](#).
- **ALL** platelet requests will be reviewed for appropriate transfusion in [appendix 3](#)
- Refer to Business Continuity Plan to maintain service delivery.
- All electronic crossmatches will be issued on demand on a single unit basis.

#### RED Phase Action Plan

##### Severe Stock Shortage

- Reduce usage and stockholding as notified by SNBTS to **~40%**.
- Only emergency surgery to continue as per [appendix 2](#).
- Review daily position regarding blood stocks.
- Medical assessment of ALL requests for blood and platelets by Duty Consultant Haematologist.
- Priority based on clinical need.
- Trauma/Medical/ITU transfusion support will attract high priority.
- Movement of blood between hospitals as required.
- Transfusion will be prioritised to category 1 as identified in [appendix 2](#).
- **ALL** platelet requests will be reviewed for appropriate transfusion in [appendix 3](#)
- Refer to Business Continuity Plan to maintain service delivery.
- All electronic crossmatches will be issued on demand on a single unit basis.
- **In the unlikely event of extreme priority decisions being required, NHS Borders Major Incident Triage principles will be applied and final decisions will be made by the Chair of the Group.**

# Emergency Blood Management Arrangement (EBMA)

## Appendix 9: Communication and clinical decision making tool based on SBAR

Situation	
The Scottish National Blood Transfusion Service (SNBTS) has requested all NHS Boards in Scotland activate the Emergency Blood Management Plan.	
Please select as appropriate: <input type="checkbox"/> Amber Phase <input type="checkbox"/> Red Phase	
Background	
The NHS Borders Emergency Blood Management Plan has been updated with the interim guidance issued from SNBTS (MARCH 2020). The plan encompasses the operational aspects of managing service delivery and delivery of patient care in the event of a national blood shortage. Prioritisation of the requirement for transfusion is based on clinical need.	
Assessment	
Patient's Surname:	Patient's Forename:
Patient's CHI:	Patient's DOB:
Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female	Ward:
Diagnosis:	
Reason for request for transfusion:	
Type of request:	<input type="checkbox"/> G&S <input type="checkbox"/> XM
	If XM how many units:
Antibodies present:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Hb level (if available):	<input type="checkbox"/> Yes <input type="checkbox"/> No
What was the root cause(s) of this event?	
Recommendation	
Please detail below all clinical decisions made by the EBMG which may impact on transfusion and patient care.	
Signature	
Name (please print)	<i>Chair/Medical Director for EMBG</i>
Signature	
Name (please print)	<i>Lead Clinician/Consultant Haematologist</i>

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