

Reference Number: UHB285 Version Number: 2	Date of Next Review: 20/03/2023 Previous Trust/LHB Reference Number: T311
Blood and Platelet Shortage Planning Procedure.	
<p>Introduction and Aim</p> <p>This document is a response to the Welsh Blood Service (WBS) (2020) Red Cell Shortage Plan⁽¹⁾, and builds on work undertaken by the National Blood Transfusion Committee (NBTC) (2019) Platelet shortage plan January 2019⁽²⁾, the NBTC (2016) Red cell shortage plan August 2016⁽³⁾ and Government's documents outlining plans for Blood and Platelet shortages, last updated in May 2009⁽⁴⁾.</p> <p>These documents seek to set out a framework for the use of these blood components in times of shortages. It draws upon the work done to ensure appropriate use of Blood components as detailed in HSC 2007/001 Better Blood Transfusion – Safe and Appropriate Use of Blood⁽⁵⁾ and Welsh Health Service Circular (2007) 042 Blood Transfusion Procedures⁽⁶⁾.</p> <p>This procedure aims at ensuring that shortages of both blood and platelets are handled in an effective way.</p>	
<p>Objectives</p> <p>The objectives of this procedure are to provide a rational and practical framework on which to optimise the use of blood and platelets in a period of shortage. This will be achieved by assisting clinical staff to minimise usage of blood components and providing a framework to instruct and support staff in their decision-making process in times of shortage.</p>	
<p>Scope</p> <p>This procedure covers all transfusions supplied by the Cardiff and Vale University Health Board (UHB) Blood Transfusion Laboratories. This document relates to all staff involved in the transfusion process.</p>	
<p>Equality Impact Assessment</p>	<p><i>An Equality Impact Assessment has not been completed. Where it has not been completed indicate why e.g. 'This is because a procedure has been written to support the implementation Blood Transfusion Policy and Procedure. There has been no Equality Impact Assessment completed for the policy as this is only to be used in times of shortage.'</i></p>
<p>Health Impact Assessment</p>	<p>A Health Impact Assessment (HIA) has not been completed.</p>

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Documents to read alongside this Procedure	Blood and Component Transfusion Policy and Procedure Provision of Intra-operative Cell Salvage Policy (UHB030) Procedure for the Nurse Coordinator when the Massive Haemorrhage Protocol is requested by the Senior Clinician. Obstetric Massive Haemorrhage Protocol Cardiff and Vale UHB Laboratory and Transfusion Response.
Approved by	Cardiff and Vale Transfusion Group.

Accountable Executive or Clinical Board Director	Medical Director
Author(s)	Dr Andrew Goringe – Consultant Haematologist.

Disclaimer
If the review date of this document has passed please ensure that the version you are using is the most up to date either by contacting the document author or the [Governance Directorate](#).

Summary of reviews/amendments			
Version Number	Date of Review Approved	Date Published	Summary of Amendments
1	27/01/2016	07/04/2016	This procedure supersedes the Trust Blood Shortage Planning Procedure.
2	20/03/2020	12/06/2020	Updated following COVID 19 and new information from the Welsh Blood Service.

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1 BACKGROUND - RISKS TO THE BLOOD SUPPLY

Donated blood is a limited resource and significant future risks may cause severe prolonged shortages which may also affect the supply of red blood cells and platelets.

2 PLAN STRUCTURE

2.1 A 'Traffic Light' system of identifying levels of blood and platelet supply (**Green**, **Blue**, **Amber** and **Red**) has been implemented by the Welsh Blood Service (WBS)

- **Green** - Normal stock levels.
- **Blue** - stocks are reduced however, supply meets demand.
- **Amber** - Reduced availability of blood/platelets.
- **Red** - Severe/prolonged shortages.

2.2 If stocks are falling and the WBS has concerns over supply, they will communicate this by issuing a situation report which will be disseminated as per the Communication Strategy (see Appendix 2).

2.3 If WBS stocks fall to a pre-determined level then they will communicate that they have moved to **Amber** or **Red** Phase alert as per the Communication Strategy (see Appendix 2). This may apply to either a single blood group, or all blood groups, or platelets. In WBS **Amber** and **Red** Phases, they will advise, on a daily basis, group by group, the rationing/issue criteria (% allocation) which will apply to individual UHB'S.

2.4 The Hospital Transfusion Team (HTT) will meet to review current stock levels, possible duration of alert and implication for the UHB. If minor action is deemed necessary, the rationale and required actions will be communicated as per the Communication Strategy (see Appendix 2). If necessary, the HTT will activate the Emergency Blood Management Group (EBMG).

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- 2.5 The UHB's response to a prolonged **Amber** or **Red** Phase blood and/or platelet shortage will be managed through the EBMG. Its membership reflects the clinical diversity of the UHB (see Appendix 3). The group will be required make the decision whether to activate the UHB **Amber** or **Red** Phase alert. In such shortages the Consultant Haematologist with responsibility for transfusion will be required to monitor transfusion stocks and liaise with the Medical Director (or representative) who supported by the Consultant Haematologist and EBMG will act as the final authority regarding the release of blood products in clinical situations. The EBMG will meet in emergency session if a prolonged **Amber** or **Red** Phase alert be notified

3 ROLES AND RESPONSIBILITIES

The Welsh Blood Service (WBS) will be responsible for:

- 3.1.1 Informing key personnel in Cardiff and Vale University Health Board, according to an agreed communication strategy, of blood and platelet shortages.
- 3.1.2 Informing the UHB of the extent and anticipated duration of the shortage.
- 3.1.3 Standing the UHB down on resolution of the shortage.

3.2 The UHB Blood Transfusion Laboratory (BTL) will be responsible for:

- 3.2.1 Regular communication with WBS regarding UHB stock levels and ongoing requirements.
- 3.2.2 In periods of prolonged UHB **Amber/Red** Phase shortage providing daily updates on stock levels to the Emergency Blood Management Group (EBMG).
- 3.2.3 Moving stock as appropriate between sites within the UHB

3.3 The Hospital Transfusion Team will be responsible for:

- 3.3.1 Recommending the initial UHB response to the Medical Director (or representative). If the WBS **Amber** Phase shortage is deemed short term and local stocks are sufficient the initial stages of the shortage may be managed by the Hospital Transfusion Team without activating the UHB **Amber** Phase alert.
- 3.3.2 Activating the Emergency Blood Management Group (EBMG) after discussion with medical director (or representative) if required.
- 3.3.3 Acting as liaison between the EBMG and Clinical areas.

3.4 The Emergency Blood Management Group (EBMG) will be responsible for:

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- 3.4.1 Reviewing the shortage and its impact on patient care as regularly as required by the situation.
- 3.4.2 Discussing and deciding whether the situation requires a move to a Cardiff and Vale (C&V) **Amber/Red** Phase alert.
- 3.4.3 Communicating the decision to move to C&V **Amber/Red** Phase alert and the actions required to all relevant personnel within the Health Board.
- 3.4.4 Managing the appropriate use of blood/platelets in each operation phase ensuring that the limited resource is used as outlined within the procedure.
- 3.4.5 Acting as the final authority regarding the release of blood products in specific clinical situations.

3.5 The Clinical Boards and Clinical Service Managers will be responsible for:

- 3.5.1 Disseminating the information regarding the blood or platelet shortages appropriately.
- 3.5.2 Ensuring this information is acted on according to the framework laid out in this policy.
- 3.5.3 Communicating clinical situations where clarification is required to the EBMG for guidance.

3.6 The UHB Transfusion Group will be responsible for:

- 3.6.1 Discussing the UHB's response to the blood/platelet shortage with a view to making recommendations for future improvements.
- 3.6.2 Reviewing any incidents that have arisen as a result of the implementation of the Blood and Platelet Shortage Procedure.

4 BLOOD SHORTAGE

- 4.1 This system is primarily intended to inform on total blood stocks. However, there may be occasions when certain blood groups are more severely affected than others (Group O D negative) and therefore carry a higher warning level.
- 4.2 The WBS will also indicate the estimated duration of the shortage and potential for further risk escalation.
- 4.3 To simplify the management of patients in blood shortage three broad adult patient categories have been defined below by the NBTC (2016)³:

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To simplify the management of patients in a general red cell shortage a traffic light system has been created using three broad patient categories. This is to assist hospitals with prioritising patients to achieve the required reduction in red cell usage. It is recognised that clinical judgement is an essential part of decision-making for individual patients.

Category 1	Category 2	Category 3
These patients will remain highest priority of transfusion	These patients will be transfused in the Amber but not the Red phase	These patients will not be transfused in the Amber phase
Resuscitation Resuscitation of life-threatening /on-going blood loss including trauma.		
Surgical support Emergency surgery* including cardiac and vascular surgery**, and organ transplantation. Cancer surgery with the intention of cure.	Surgery/Obstetrics Cancer surgery (palliative). Symptomatic but not life-threatening post-operative or post-partum anaemia. Urgent*** (but not emergency) surgery.	Surgery Elective surgery which is likely to require donor blood support (Patients with > 20% chance of needing 2 or more units of blood during or after surgery).
Non-surgical anaemias Life-threatening anaemia including patients requiring in-utero support and high dependency care/SCBU. Stem cell transplantation or chemotherapy **** Severe bone marrow failure. Thalassaemias (but consider lower threshold). Sickle cell disease crises affecting organs. Sickle cell patients aged ≤ 16 with past history of CVA.	Non-surgical anaemias Symptomatic but not life-threatening anaemia.	

- * 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 should be deferred if possible.

From NBTC (2016)³

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4.4 When activating the Cardiff and Vale UHB Amber/Red Phase alert the EBMG should consider the following actions:

4.4.1 Amber Light:

- **Treatment/transfusion of category 1 & 2 patients only.**
- Operation by blood group depending on stock levels.
- In the absence of Ischaemic Heart Disease, the transfusion trigger should be reduced to 8g/L.
- Transfusion of minimum number of units required to alleviate symptoms.
- 24-hour access to emergency cell salvage.
- In cases of actual or potential massive blood loss a Consultant Haematologist and the Medical Director (or representative) must be contacted by the referring clinical team to allow discussion and planning of patient management.
- All cases which are deemed to require transfusion outside of the indication codes for category 1 & 2 patients should be referred to the Medical Director (or representative).
- Medical patients requiring transfusion must be assessed by a senior clinician.
- Oncology patients with a moderate/high probability of requiring transfusion should be considered for erythropoietin therapy.
- The C&V UHB Blood Transfusion Laboratories will liaise with the Welsh Blood Service (WBS) regarding their blood stock levels / estimated days of stock and reduce these on-site stock levels if required.
- Cross matched units will be issued with a 24-hour de-reservation time period (usually 48 hours).

4.4.2 Red Light (the above measures as well as):

- **Treatment/transfusion of patients in category 1 only:**
- Surgery that is not expected to require blood may proceed with individual risk assessment and the full knowledge and consent of patient.
- Medical assessment of all requests by the Medical director (or representative).
- Daily review of the blood shortage and its impact on patient care by the EBMG.
- An order of priority based on clinical need.
- Transfusion of transfusion dependant patients only when symptomatic (and minimum units to alleviate symptoms).

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- The enactment of emergency blood shortage major bleeding policy (see Appendix 4).

5 PLATELET SHORTAGE

- 5.1 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 however the shorter shelf life of platelets makes their stock levels potentially more volatile.
- 5.2 To simplify the management of patients in a platelet shortage three broad categories have been identified by the Welsh Government's document 'Contingency Planning - An Integrated Plan for the Management of Platelet Shortages (May 2009)², NBTC (2016)⁽³⁾, NBTC (2019)⁽²⁾, BSH (2016)⁽⁷⁾.

Category 1 (Patients to be treated in Red Phase)	Category 2 (Patients to be treated in Red and Amber Phases)	Category 3
<p>Massive haemorrhage and Critical Care</p> <p>Massive transfusion for any condition including obstetrics, emergency surgery and trauma, with on-going bleeding, maintain platelet count $>50 \times 10^9/L$</p> <p>Aim for platelet count $>100 \times 10^9/L$ if multiple trauma or CNS trauma.</p> <p>Bleeding in the presence of sepsis/acute DIC, maintain platelet count $>50 \times 10^9/L$.</p>	<p>Critical Care</p> <p>Patients resuscitated following massive transfusion with no on-going active bleeding, maintain platelet count $>50 \times 10^9/L$.</p> <p>Surgery</p> <p>Urgent but not emergency surgery for a patient requiring platelet support</p> <p>Transfusion triggers for invasive procedures According to the BSH guidelines ⁽⁷⁾</p>	<p>Surgery</p> <p>Elective, non-urgent surgery likely to require platelet support for thrombocytopenia or congenital/acquired platelet defects</p>

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Expert coagulation advice is essential in these clinical settings		
Bone Marrow failure Active bleeding associated with severe thrombocytopenia or functional platelet defects Immune thrombocytopenia If severe/life threatening bleeding	Bone marrow Failure All other indications except those in category 1 or 3	* Bone marrow Failure Prophylactic transfusion of stable patients following autologous stem cell transplant
Neonates For preterm neonates with very severe thrombocytopenia or severe thrombocytopenia (platelet count below $25 \times 10^9/L$) platelet transfusions should be administered in addition to treating the underlying cause of the thrombocytopenia. Suggested threshold counts for platelet transfusions in other situations are given in the BSH guidelines		
* prophylactic transfusion category should include WHO grade 1 bleeding (as in TOPPS trial). Exclusions – previous WHO \geq grade 3 bleed, inherited haemostatic or thrombotic disorder, requirement for therapeutic doses of anticoagulation, acute promyelocytic leukaemia, prior to surgery/invasive procedure		

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5.3 When activating the C&V UHB **Amber/Red** Phase alert the EBMG should consider the following actions:

5.3.1 **Amber** light:

- **Treatment/transfusion of category 1 and 2 patients only.**
- Ensure, wherever possible, that aspirin and clopidogrel are stopped prior to surgery in time to allow platelet function to recover.
- The UHB will stop stockholding of platelets.
- The use of available platelets will be maximised through:
 - The interchangeable use of apheresis and pooled platelets (except for HLA/HPA matched platelets).
 - Not requesting long dated platelets.
 - Accepting platelets of a different ABO group (in line with BCSH guidelines⁵).
 - Accepting group D positive platelets where group D negative are not available and administering anti-D where applicable.
 - All requests are made by a senior clinician.
- Expert coagulation advice is obtained in the setting of major haemorrhage.
- Clinical outcome of platelet transfusion are monitored to inform whether further transfusion support is required.

5.3.2 **Red** light (the above measures as well as):

- **Treatment/transfusion of category 1 patients only.**
- Medical assessment of all platelet requests by emergency director or deputy.
- Daily review of the blood shortage and its impact on patient care by the medical director (or representative).
- The enactment of emergency blood shortage major bleeding policy (see Appendix 4).

6 RECOVERY

- 6.1 When Welsh Blood Service (WBS) stocks have risen to a level where they are able to move to an **Amber** or **Blue** Phase alert, they will alert by email and fax informing the key members of staff in the Communication Strategy (Appendix 2). This information will be forwarded to the members of the EBMG, who will decide whether C&V UHB can move to an Amber or Blue Phase alert. This decision will be disseminated to all Clinical Boards as per Communication Strategy.

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- 6.2 The Health Board must ensure that immediate demand does not cause a return of national stocks to below critical level by using a phased return to normal stock levels.
- 6.3 The return to normal activity should be similarly phased. In particular, elective surgery backlogs should not be compressed into the immediate post recovery period.

7 RESOURCES

Issues will arise which will require resource should there be a prolonged C&V UHB **Amber** or **Red** Phase alert. Areas of increased resource are likely to centre around the delivery of 24/7 cell salvage to cover theatres, obstetrics and the emergency unit, and the increased use of Erythropoietin / I.V iron.

8 TRAINING AND EXERCISING

There is guidance from the former NPSA, stating that there should be regular transfusion training and assessment for clinical staff involved in the transfusion process. This should continue to be included the UHBs response to potential blood/platelet shortages to ensure staff are adequately trained and assessed for all aspects of the transfusion process. Individual directorates should ensure that their own responses are cascaded to the appropriate members of staff.

9 IMPLEMENTATION

In addition to making a procedure available via intranet and internet. It will also be disseminated through the UHB Transfusion Group to the Clinical Board Directors and Directors of Nursing for them to distribute and monitor via their quality and safety meetings. All major blood/platelet using Clinical Boards should consider the impact of Cardiff and Vale UHB **Amber** or **Red** Phase shortages to their local practice.

10 CLINICAL DOCUMENTS

In the event of a Cardiff and Vale UHB **Amber** or **Red** Phase alert, any change in clinical decision regarding transfusion should be clearly documented in the patient's notes.

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11 AUDIT

Audits of the UHB response during **Amber** or **Red** Phase alerts will be undertaken by the Hospital Transfusion Team. Major areas of non-compliance will be reported through the appropriate clinical governance routes.

13 REFERENCES

- 1 Welsh Blood Service (WBS) (2020) Welsh Blood Service (WBS) Red Cell Shortage Plan
- 2 NBTC (2019) NBTC Platelet shortage plan January 2019 retrieved from <https://www.transfusionguidelines.org/document-library/documents/nbtc-platelet-shortage-plan-january-2019-26-04-19-pdf>
- 3 NBTC (2016) Red cell shortage plan August 2016 retrieved from <https://www.transfusionguidelines.org/document-library/documents/nbtc-red-cell-shortage-plan-august-2016>
- 4 Welsh Government (updated 2009) 'Contingency Planning - An Integrated Plan for the Management of Blood Shortages. Welsh Government (2009) 'Contingency Planning - An Integrated Plan for the Management of Blood Shortages.
- 5 Department of Health, Health Service Circular HSC2007/001 Better Blood Transfusion – Safe and Appropriate Use of Blood.
- 6 Welsh Health Circular (2007) 042 Blood Transfusion Procedure
- 7 British Standards for Haematology (2016) Guidelines for the use of platelet transfusions retrieved from <https://onlinelibrary.wiley.com/doi/full/10.1111/bjh.14423>

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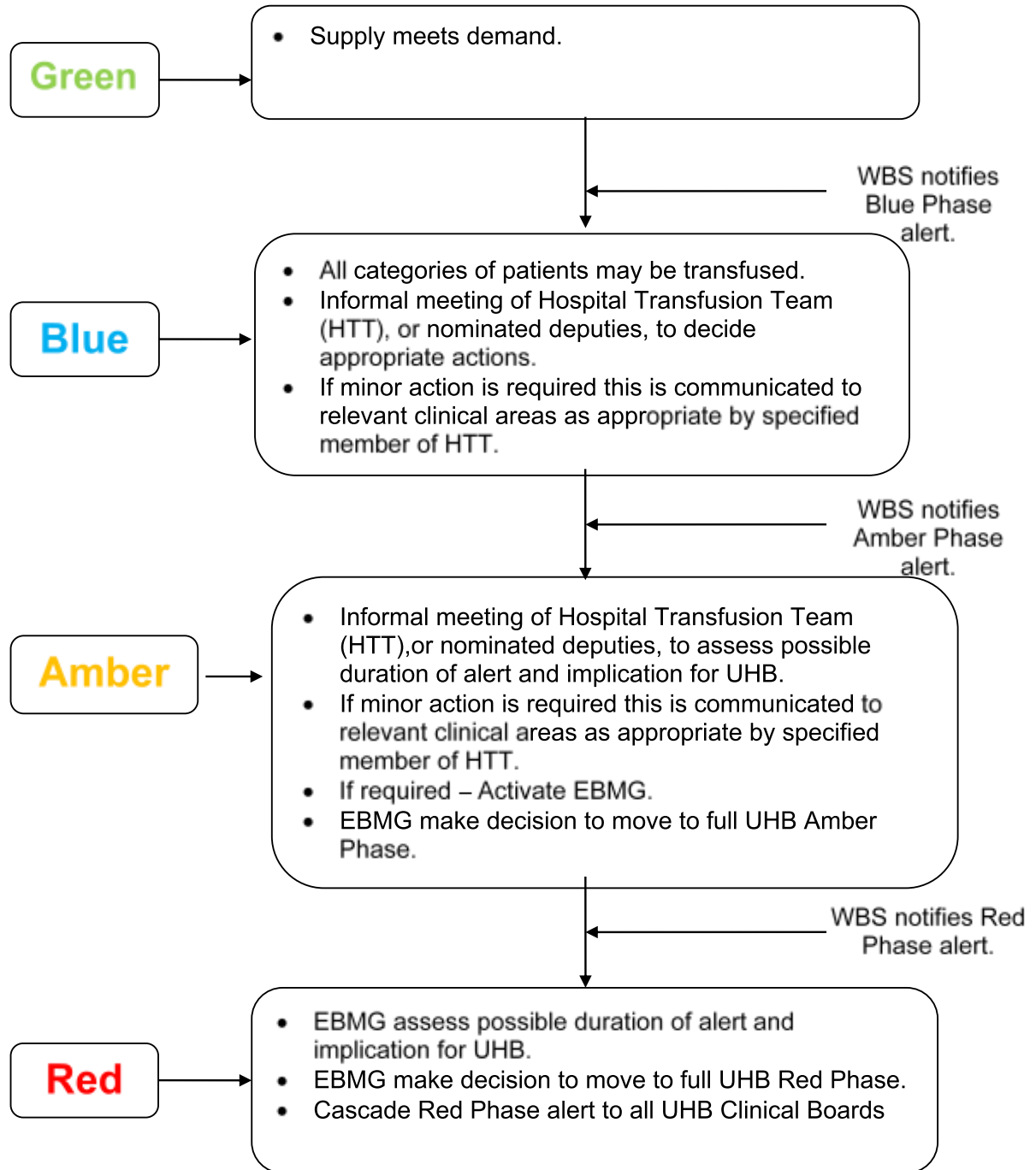
14 LIST OF ABBREVIATIONS

BSH – British Committee for Standards in Haematology
 BTL – Blood Transfusion Laboratory
 C&V – Cardiff and Vale
 CVA – Cerebral Vascular Accident
 DIC – Disseminated Intravascular Coagulation
 EBMG – Emergency Blood Management Group
 HLA – Human Leukocyte Antigen
 HPA – Human Platelet Antigen
 HSC – Health Service Circular
 HTT – Hospital Transfusion Team
 IV - Intravenous
 D – Rhesus D
 SCBU – Special Care Baby Unit
 UHB – University Health Board
 WBS – Welsh Blood Service
 NPSA – National Patient Safety Agency

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Appendix 1

Escalation Procedure for Blood Shortage



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Appendix 2

Communication Strategy

- It is imperative that clear lines of communication are established within the UHB should the need arise to activate the 'Blood and Platelet Shortage Planning Procedure'.

Welsh Blood Service Communication with Cardiff and Vale UHB:

- When Welsh Blood Service (WBS) stocks fall to a **Blue** or **Amber** Phase, they will alert by email and fax informing the designated personnel within the UHB.

Consultant Haematologist with responsibility for transfusion
Laboratory Services Manager (for information)
Blood Bank Manager
Senior BMS team
Transfusion Quality Manager
Transfusion Practitioner team

- In the case of a move to **Amber** (where there is a UK wide issue) or Red Phase at the WBS, they will alert by email and fax, or phone informing them of the blood/platelet shortage:
 - All of the above
 - UHB CEO
 - Medical Director
 - Nursing Director
 - Chair of UHB Transfusion Group
- **If changes are required to the list of contacts held by the Welsh Blood Service, they must be communicated to Andrew.Moore@wbs.wales.nhs.uk (Business Continuity & Risk Manager at the Welsh Blood Service). The list will be reviewed following each communication exercise by the Hospital Transfusion Practitioner Team**

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Suggested Format for Action Required following WBS Amber Phase Alerts Not Requiring full UHB Escalation

**From: Hospital Transfusion Team
Cardiff & Vale UHB**

If you require further information please contact:

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

or

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

**Urgent Communication
(Insert Blood Group/s) Blood/Platelet Shortage**

The Welsh Blood Service (WBS) declared an **AMBER** alert on the (insert date) for **(insert blood group/s)** red blood cells/platelets (delete as appropriate). Stocks of (insert blood group/platelets) throughout the U.K are under pressure.

We have been asked to apply measures to reduce usage of (insert blood group/s) red blood cells/platelets (delete as appropriate).

Therefore please note the following actions for–

- (insert patient groups as appropriate)

Insert Actions here. For example:

- 1) Major trauma/transfusion in patients where ABO D group is unknown patients will be issued with **O D positive** red blood cells.
- 2) Major trauma/transfusion in patients where ABO D group is known to be O D negative that have no evidence of pre-existing Anti-D antibodies will be issued **O D positive** red blood cells.
- 3) For routine surgery that carries a high risk of multiple red blood cell transfusion, for patients where ABO D group is known to be O D negative, the transfusion episode may be supported by **O D positive** red blood cells).

This stock position is being monitored daily and you will be advised of any changes at the first opportunity.

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We request you disseminate this information to colleagues as appropriate

Suggested Format for Cardiff and Vale Amber/Red Phase Email Alerts

**From: Emergency Blood Management Group
Cardiff & Vale UHB**

If you require further information please contact:

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

or

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

URGENT COMMUNICATION
(Insert Blood Group/s) Blood/Platelet Shortage

Following the Welsh Blood Service (WBS) Amber Phase alert that was received on (add date), the Cardiff and Vale Emergency Blood Management Group has met and declared a Cardiff and Vale **AMBER** Phase alert on the (add date) for **(insert blood group/s)** red blood cells/platelets (delete as appropriate). Please refer to the Blood and Platelet Shortage Planning Procedure. Stocks of **(insert blood group/platelets)** throughout the U.K are under severe pressure.

We have been asked to apply measures to reduce usage of **(insert blood group/s)** red blood cells/platelets (delete as appropriate). The WBS has attempted to import **(insert blood group/platelet)** stock from the other UK Blood Services to no avail.

Therefore, please note the following actions:

(add agreed actions here)

This stock position is being monitored daily and you will be advised of any changes at the first opportunity.

This information must be disseminated to colleagues urgently as appropriate.

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Suggested Content for Intranet Alert (adapt as appropriate)

**URGENT COMMUNICATION
(insert blood group/s) Blood/Platelet Shortage**

Following the Welsh Blood Service Amber alert that was received on (add date), the Cardiff and Vale Emergency Blood Planning Group has met and declared a Cardiff and Vale **AMBER** Phase alert on the (add date) for **(insert blood group/s)** red blood cells/platelets (delete as appropriate). Please refer to the Blood and Platelet Shortage Planning Procedure. Stocks of **(insert blood group/platelets)** throughout the U.K are under severe pressure.

We have been asked to apply measures to reduce usage of **(insert blood group/s)** red blood cells/platelets (delete as appropriate). The WBS has attempted to import **(insert blood group/platelet)** stock from the other UK Blood Services to no avail.

Therefore, please note the following actions:

(add agreed actions here)

This stock position is being monitored daily and you will be advised of any changes at the first opportunity.

This information must be disseminated to colleagues urgently as appropriate.

**From: Emergency Blood Planning Group
Cardiff & Vale UHB**

If you require further information please contact:

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Or

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Appendix 3

Emergency Blood Management Group

Membership

Member of the Executive team, which may include Chief Executive, Medical Director, Director of Nursing, Chief Operating Officer, Communication Lead
Consultant Haematologist responsible for Transfusion

Blood Transfusion Manager

Laboratory Services Manager

Chair of UHB Transfusion Group

Representative from Velindre Cancer Centre

Clinical Board Directors from

- Surgery
- Medicine
- Specialist Services
- Woman and Children's
- Major Trauma Lead

Transfusion Practitioner

Member of the Patient Safety Team

(Any job title holder may appoint a designated deputy to represent them when required)

Role and Terms of Reference

The primary role of the Emergency Blood Management Group is to:

- Review the shortage and its impact on patient care as regularly as required by the situation.
- Discuss and decide whether the situation requires a move to a Cardiff and Vale (C&V) **Amber/Red** Phase alert.
- Communicate the decision to move to C&V **Amber/Red** Phase alert to all relevant personnel within the Health Board.
- Communicate the actions required of clinical teams to all relevant personnel within the Health Board.
- Manage the appropriate use of blood/platelets in each operation phase ensuring that the limited resource is used as outlined within the procedure.
- Review and confirm actions taken as part of the **Amber/Red** Phase alert.

The Medical Director (or representative) supported by the Consultant Haematologist and EBMG will act as the final authority regarding the release of blood products in clinical situations including the decision to withhold further transfusion in a case of massive haemorrhage (see appendix 4).

Quorate must include the Medical Director, Consultant Haematologist and Blood Transfusion Manager or representative.

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Appendix 4

Emergency Blood Shortage Major Bleeding Policy

The decision to withhold transfusion in a patient with major bleeding in the setting of a severe blood shortage is an extremely difficult one. This can only be made on an individual case by case basis after discussion between the clinical team managing the patient and the Medical Director (or representative).

In the event of a major bleed occurring during a severe (**Red** Phase alert) blood shortage there must be immediate liaison with the Medical Director (or representative) and the Consultant Haematologist responsible for transfusion.

Early liaison with Coagulation Experts is essential to ensure that all non-surgical means are employed to reduce blood loss

The Medical Director (or representative) supported by the Consultant Haematologist and EBMG will have the authority to prevent further transfusion if failure to do so would cause the death of other patients within the Health Board. This decision will be based on the Health Board stock levels, WBS stock levels and the present case mix within the UHB.

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