Safe Transfusion of Blood and Blood Components

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The latest approved version of this document is online.
If the review date has passed please contact the Author for advice.

Version Control

Version	Summary of Changes/Amendments	Issue Date
1	Initial Issue	May 2005
2	Second Issue - Reviewed	Aug 2005
3	Third Issue - Revised (Adapted from Gwent NHS Trust Blood Transfusion Policy 2006)	Aug 2008
4	Fourth Issue - Updated	May 2014
5	Fifth Issue - Change tHB to THB Advice added on assessing the risks of transfusion Introduced reminder of non-transfusion option for the treatment of anaemia Updated details of Powys consent policy Introduced statement on the need to have formal emergency planning documentation Refreshed link to patient transfusion information leaflet Advice on adverse reactions transferred to Guideline document Brecon hospital blood fridge guidelines added as supporting document Changes requested after scrutiny by Powys Executive team June 2017	May 2017

ENGAGEMENT & CONSULTATION

Key Individuals/Groups Involved in Developing this Document

Role / Designation
Members of the Powys Blood Transfusion Committee
Medical Director and Safety & Quality Improvement Manager

Circulated to the following for Consultation

Date	Role / Designation
15/03/17	Members of the Powys Blood Transfusion Committee

Evidence Base

National Guidelines, Legislation and Health and Care Standards relating to this subject area

1. The Blood Safety and Quality Regulations (2005) and subsequent amendments
2. Royal College of Nursing (Jan 2006) RCN Guidance for Improving Transfusion Practice
3. NHS National Patient Safety Agency (Nov 2006) Serious Hazards of Transfusion (SHOT) Right Patient, Right Blood; NPSA Note added 2012 http://www.nrls.npsa.nhs.uk/resources/collections/right-patient-right-blood/ including Competencies and Competency Assessment Frameworks
4. Welsh Health Circular (June 2007) 042 Blood Transfusion Procedures
5. Welsh Health Circular (Oct 2007) Use of the NHS number
6. NHS National Patient Safety Agency (Sept 2008) Use the NHS Number
7. British Committee for Standards in Haematology (2009)
8. Health and Care Standards (2015) : Standard 2.8 Blood Management
9. NICE Guidelines NG 24 (2015)

IMPACT ASSESSMENTS

Equality Impact Assessment Summary					
	No impact	**Adverse**	**Differential**	**Positive**	**Statement**
Age	X				Please remember policy documents are published to both the **intranet** and **internet.** The version on the internet must be translated to Welsh.
Disability	X				
Gender	X				
Race	X				
Religion/ Belief	X				
Sexual Orientation	X				
Welsh Language	X				
Human Rights	X				

Risk Assessment Summary

Have you identified any risks arising from the implementation of this policy / procedure / written control document?

The purpose of this policy is to provide a clear framework for all staff in relation to the legal and best practice requirements for the storage, handling and transfusion of blood and blood products to mitigate the risks associated with Blood transfusion.

Have you identified any Information Governance issues arising from the implementation of this policy / procedure / written control document?

No

Have you identified any training and / or resource implications as a result of implementing this?

National Patient Safety Agency (NPSA) (2008) Safer Practice Notice (SPN) 14 Right Patient Right Blood requires that personnel directly involved in the testing, storage and distribution of blood and blood components are qualified to perform these tasks and are provided with timely, relevant and regularly updated training.

1 Policy Statement / Introduction

This policy supports the safe transfusion of blood or blood products to adult patients cared for by Powys Teaching Health Board. The policy reflects recognised clinical standards and legal requirements.

2 Objective

The aims of this policy are to ensure that:

- All adult patients who are judged to need a transfusion are supported to make an informed choice about their care.
- When a patient consents to transfusion, he or she receives this treatment in a safe and timely manner and in accordance with national guidelines and legislation.

The policy is supported by separate but linked guidance covering Blood Fridges, Adverse Reactions and Training.

The outcomes to be achieved by the application of the clinical policy are that: -

- Patients receive the best possible care and attention throughout the blood transfusion procedure.
- All staff are aware of the legal requirements of the blood safety and quality regulations.
- Information on every stage of the transfusion process is available to all staff.
- Informed patient choice is supported
- Blood and blood components are used appropriately
- All staff are trained and competency assessed in that part of the transfusion process that is relevant to them.
- Risks are assessed and managed appropriately
- Systems are in place to ensure that any transfused (or discarded) blood component can be linked to the original donation an donor from which it was derived

3 Definitions

i) Transfusion

- Refers to the administration of blood or blood components.

ii) Allogeneic (donor) blood and components

- Red blood cells, leucocyte depleted in additive solution

- Fresh Frozen Plasma (FFP) – stored frozen and thawed by the Transfusion Laboratory prior to use

- Methylene Blue Treated Fresh Frozen Plasma (MBFFP) or solvent detergent treated Fresh Frozen Plasma (SDFFP) stored frozen and thawed by the Transfusion Laboratory prior to use for all patients born after 1st January 1996.

- Platelets – pooled or apheresis, leucocyte depleted

- Cryoprecipitate – pooled packs of fractionated plasma, enriched with factor VII and fibrinogen, stored frozen and thawed by the Transfusion Laboratory. Note not available from a number of Welsh Transfusion Laboratories.

iii) Autologous blood

- Patient's own blood that is salvaged peri-operatively, washed and the red cells suspended in a saline solution for re-infusion. Note that this product is no longer available from Welsh Transfusion Laboratories.

iv) Pre-transfusion testing

- Group and save
  The determination of the patients ABO and RhD group and screening of the patients' plasma for clinically significant blood group antibodies
- Cross match
  Ensuring that the donor blood is free of antigens that may react adversely with any blood group antibodies which the patient may have
- Electronic Issue
  The selection of red cell units on the basis of confirmed patient red cell group and in the absence of red cell antibodies in the patients' plasma. A minimum of two separate tests are required, one of which is current

v) Registered Practitioners

- Any qualified doctor who is registered with the General Medical Council

- Any Registered nurse or midwife whose name is held on an appropriate part of the Nursing and Midwifery Council register and whose registration is current

- Qualified perfusionists who are registered with the Society and College of Clinical Perfusion Scientists

- Qualified operating department practitioners who are registered with the Health and Care Professions Council

- Biomedical Scientists (BMS) who are registered with the Health and Care Professions Council

vi) Ancillary staff

- Phlebotomists, porters and health care support workers who are specifically trained to participate in limited aspects of transfusion

- Biomedical support workers who are specifically trained to participate in limited aspects of laboratory work

vii) Regulations

- The Blood Safety and Quality Regulations (2005) and subsequent amendments

viii) Transfusion Record

- A specific chart used to record transfusion documentation

ix) Traceability Documents

- The return portion of the compatibility label attached to every unit of blood and components or patient transfusion record issued by the transfusion laboratory

x) Blood Transfusion Laboratory

- Also commonly referred to as 'Blood Bank'

xi) Zero Tolerance

- This refers to the minimum sample acceptance criteria for requests and blood samples to the transfusion laboratory

4 Roles and Responsibilities

- **The Chief Executive** is responsible for the implementation of this policy and is legally responsible for compliance with the Regulations.
  Final approval of the Policy will be by the Executive Committee on the recommendation of the Blood Transfusion Committee.
- **The Blood Transfusion Committee** is a representative group of Powys THB and the Policy owner. The Committee is responsible for the production, review and approval of the Transfusion Policy . The Committee acts as a source of expert knowledge, making recommendations for best practice in transfusion.
- As a commissioning organisation, Powys THB commissions services from the Blood Transfusion Laboratories (BTL). **The commissioned organisation** will support a robust Quality Management System (QMS) which complies with the Blood Safety and Quality Regulations (SI 2005 No. 50 as amended).
- **The Medical Director** is responsible for ensuring that healthcare professionals employed by the organisation have access to the THB Policies on Blood Transfusion.
- **Managers** are responsible for ensuring awareness of the Policy, identifying the training requirements for staff involved in the delivery of transfusion, recording the

requirement in the Electronic Staff Record and ensuring that training is completed and skills are maintained.
- Individual **staff** are responsible for maintaining their personal training records and ensuring that they do not carry out any procedure for which they have not received timely, relevant and up to date training.
- **Transfusion Practitioners** promote safe and appropriate transfusion through education and training of clinical staff and assist in the investigation of serious adverse events and reactions and the reporting of these to the relevant bodies. In Powys the Transfusion Practitioners are staff from the Health Board or Trust contracted to supply the blood units.

4.1 Compliance

This policy applies to all staff and contractors whether permanent, temporary, agency or bank of Powys Teaching Health Board (Powys THB) who have a role in the transfusion process.

There is a requirement on all staff to comply with the provisions of this Policy and, where requested, to demonstrate such compliance. Non compliance will be managed through the formal THB processes.

5 Education and Training

The Blood Safety and Quality Regulations 2005 require that personnel directly involved in the testing, storage and distribution of blood and blood components are qualified to perform those tasks and are provided with timely, relevant and regularly updated training. It will be a requirement of the SLA's that Powys holds with those Blood Transfusion Laboratories commissioned by the organisation that these regulations are fully met.

Powys staff involved in the taking of blood samples and in undertaking blood transfusions must meet the competency requirements laid out in the National Patient Safety Agency's (NPSA) Safer Practice Notice 14 – Right Patient Right Blood (2006)

The main requirement of this Safer Practice Notice is that all relevant staff to have formal competency assessment in the following four key areas of transfusion practice:

- Obtaining a venous blood sample
- Organising the receipt of blood / blood components for transfusion
- Collecting blood / blood components for transfusion
- Preparation and administration of blood / blood components

Training
Managers should identify which roles require training and identify this in the Personal Development Review of the staff concerned.

All staff involved in the transfusion of blood should undertake the following training:

i) The NHS Scotland *Learnbloodtransfusion* e-learning blood transfusion training course

This may be accessed on the following link www.learnbloodtransfusion.org.uk
Staff should undertake this e-learning and assessment every 2 years

ii) Face to face competency assessment.
Staff competency must be assessed at least once before the staff member is permitted to undertake a transfusion. It is recommended that **refresher training is undertaken every two years**. A possible training pattern therefore would be to undertake the e-learning training course and refresher face to face training in alternate years.

A dedicated blood training database is currently held. Systems will be developed to ensure that all training requirements are identified in the Electronic Staff Record (ESR) and that completion of training and competency assessment is recorded.

This will be considered **Role Specific Mandatory Training**

6 Governance

Blood fridges
Sites with a blood fridge must meet all local and national governance requirements for the safe storage of blood and appropriate calibration and testing of equipment.

For Brecon please see the **Brecon Blood Fridge Guidelines Document**.

7 Contingency Planning

There may be times when blood and blood components have to be rationed. Should there be a significant shortage the Welsh Blood Service will advise on the required actions.

8 Transfusion Management

Process Overview

The Blood Transfusion process, from donor to patient, is a multi-disciplinary, multi-procedural, multi-site process. The Serious Hazards Of Transfusion (SHOT), Safer Practice Note 14 (2006) highlighted that: -

"Blood Transfusions involve a complex sequence of activities and, to ensure the right patient receives the right blood, there must be strict checking procedures in place at each stage".

Blood components and products supplied by UK Transfusion Centres are subject to stringent screening for infectious agents and other quality measures which guarantee minimal risk to the recipient from a defective product.

However, the Medicines and Healthcare Products Agency (MHRA) has identified that errors in the handling, storage, issuing, collection and administration of these components within hospitals/health care settings constitute avoidable risks to transfused patients.

In addition, the inappropriate requesting, avoidable wastage and loss of traceability of blood components are elements of poor blood management which constitute failure to meet the requirements of the Health and Care Standards (2015) (Standard 2.8:Blood Management).

Safe and Appropriate Blood Transfusion requires trained and competent staff supported by policies based on evidence based best practice. This Policy describes the principles to be followed by all Powys THB staff who have a role in the transfusion process and is informed by and subject to regulations and national guidance.

Staff involved in the process of blood transfusion must adhere to this policy. By doing so, they will be aware of the legal requirements of the Blood Safety and Quality Regulations (2005) and the subsequent amendment to the regulations in April 2005.
All staff must be trained and assessed as competent in that part of the transfusion process that is relevant to them.

Staff involved will be able to access information on every stage of the blood transfusion process.

Staff must be proficient and competent to recognise when the use of blood and blood components is appropriate. Informed patient choice must be ensured.

A continuous, innovative programme of education, training and competence assessment should support all staff involved in the transfusion process.

There must be processes in place to enhance the safety of blood transfusion and support the recognition and reporting of all incidents, adverse blood events and reactions.
Full traceability of blood components is a legal requirement and staff must be vigilant in the return of documentation.

Learning from incidents, near misses and concerns should be shared. All incidents must be reported to the relevant internal and external competent authorities who are:

- Powys THB Concerns Team via Datix reporting- Senior Manager to be informed
- Medicines and Healthcare Product Regulatory Agency (MHRA)
- Serious Hazards of Transfusion (SHOT)

Compliance with this policy will be monitored through clinical audit and incident reporting.

Blood Transfusion Pathway

Decision to Treat, Informed patient choice
&
Consent Taken

Transfusion authorised
Doctor or Non-Medical Authorised Practitioner

Sample
Request Form completed
Doctor/ Nurse

Taken
Doctor/ Nurse

Send to Lab (van)
Driver

Supplying hospital Lab (Test Process)
Meeting the Blood Safety Quality Regulations 2005

Transport to local facility
Meeting the Blood Safety Quality Regulations 2005
Handover with local nurse

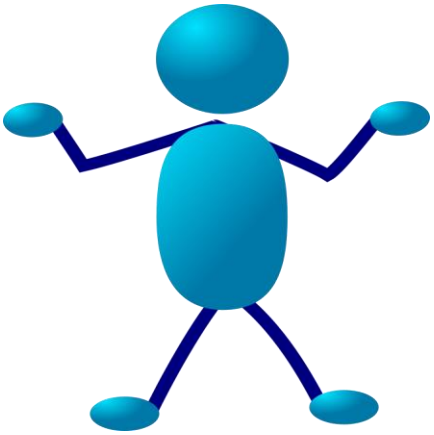
Collection from Local Facility
Check prescription and consent (nurse)
Documentation to Porter

Collection from Box and Receipt

Receipt on Ward
Checked by nurse
Patient and Product checks completed

Admin
Bedside check
Patient ID
Component checking quality of
Observation
Documentation
Check for adverse reaction

Evaluation
Was it effective?
Doctor/Nurse evaluation
Patient experience



Decision to Transfuse

- Before requesting a transfusion of blood or other blood components practitioners should be certain that there is a clear indication for the transfusion. In particular it should be considered whether patients with low HB, MCV and ferritin might benefit from other treatments rather than a transfusion.
- The decision to transfuse must be based on a thorough clinical assessment of the patients needs and should be documented in the patient's clinical record.

- When considering a transfusion of blood the benefits and risks of transfusion must be considered, including an evaluation of the medical conditions that may predispose to Transfusion Associated Circulatory Overload (TACO) as illustrated below.

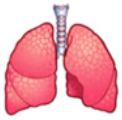
TACO Checklist	Red Cell Transfusion for Non Bleeding Patients
	Does the patient have a diagnosis of 'heart failure' congestive cardiac failure, severe aortic stenosis, or moderate – severe left ventricular dysfunction? Is the patient on regular diuretic?
	Is the patient known to have pulmonary oedema? Does the patient have respiratory symptoms of undiagnosed cause?
	Is the fluid balance clinically significant? Is the patient on concomitant fluids (or has been in last 24hrs)? Is there any peripheral oedema?
	If YES to any of the above
1	Review the need for transfusion (do the benefits outweigh the risks)?
2	Can the transfusion be safely deferred until the issue can be investigated, treated or resolved?
3	- Consider body weight dosing of red cells, esp. low body weight - Transfuse one unit at a time and review symptoms of anaemia - Measure fluid balance - Consider giving prophylactic diuretic - Monitor vital signs closely, including O2 saturations

Diagram courtesy of Wye Valley NHS Trust

- These factors should be documented in the clinical record and considered when prescribing the volume and rate of the transfusion.
- For patients at risk of TACO a written request should be made for specific attention to be given, during the administration of blood components, to monitor for signs of circulatory overload, including fluid balance.
- The medical practitioner must discuss the need for transfusion with the patient.

- Supporting written information should be provided to the patient. Patient information leaflets are available from the transfusion laboratory or the transfusion practitioners.

- Agreement should be obtained in accordance with Powys THB M&NP 002 Consent to Treatment and Examination policy. For elective transfusions **written consent** must be obtained using the standard consent to treatment form.

- The Advisory Committee on the Safety of Blood, Tissues and Organs has produced guidance for clinical staff to support patient consent for blood transfusion (Appendix A)
- Indication for transfusion must be clearly documented in the medical notes and on the transfusion record.

Refusing Transfusion

- Every patient with capacity has a right to refuse treatment as outlined in the Powys THB Consent to Treatment policy. The wishes of an adult with capacity who has refused treatment with blood components must be respected. Treatment of an adult patient with blood and/or blood components in the face of a refusal to consent to such treatment either verbally or in writing is unlawful and may lead to criminal and/or civil proceedings.

- A common occurrence where consent is refused involves patients of the Jehovah's Witness faith. The clinician responsible for initiating the proposed blood transfusion process must provide advice on alternative treatments.

- If the patient lacks capacity to grant consent staff should check whether a valid Advanced Decision has been made concerning transfusions. An Advanced Decision may make it clear that the patient does not wish to be treated with blood components even if life is at risk.

- Relatives with Lasting Power of Attorney (Health and Welfare) must also to be consulted.

- If there is neither an Advanced Decision or a Health and Welfare Attorney in place then it is for the clinician with overall care of the patient to assess the patient's "best interests". Regard must be made to the medical, social and religious best interests of the patient. Consideration must also be given to the psychological effect of any decision on the patient. Input from the patient's family and friends may be of assistance in reaching a decision. The rationale for proceeding with a transfusion without patient consent must be thoroughly documented in the clinical record.
- If there is doubt as to what is in the patient's best interests, legal advice should be sought and consideration given to obtaining a court order. Staff should refer to the Mental Capacity Act 2005 for further guidance.

Authorisation of Blood Transfusion

- To prevent communication or transcription errors, authorisation should be documented by the registered practitioner making the decision to transfuse

- The All Wales Transfusion Record (Appendix B) should be used as a checklist and for recording administration unless arrangements have been made to use documentation supplied by the English partner organization.

Pre-transfusion Sampling
Blood samples must be taken by appropriately trained staff. Positive patient identification must be achieved and all documentation completed to the required standard.

For further details see the **Guidelines for the taking of blood samples and the undertaking of Blood Transfusions**
Locate and follow the pre-administration check list in the All Wales Transfusion Record.

The pre-administration checks and administration procedures must all be completed at the patient's bedside as one continuous uninterrupted process.

Before undertaking the transfusion, the patient's details **MUST** be found to be identical between; their wristband, the blood collection slip and the blood collection slip compatibility tag
Patient details should include;

First name
Last name
Gender
First line of address
Date of Birth
Hospital Number
Location (e.g. ward)

If ANY details do not match stop the procedure immediately, inform the Blood Transfusion Laboratory and return the unit

Transfusion

Transfusion should only take place if there are sufficient staff available to support a safe transfusion and the Transfusion Record is completed and signed.
Record baseline observations of temperature, pulse, blood pressure, respirations and O2 saturations on the Transfusion Record. This should be no longer than one hour before the start of the transfusion.

The transfusion should take place in a clinical area where the patient can be closely observed by clinical staff. The patient should not be left unobserved for the first 15 minutes of each transfusion and particular care must be taken in monitoring unconscious patients.

A registered nurse must record the temperature, pulse, blood pressure, respiratory rate and O_2 saturations on the observation chart/blood transfusion documentation record no longer than one hour before the first unit of blood is transfused, fifteen minutes after the

start of transfusion of each unit, and at the end of each transfused unit (within 15 minutes). Further observations are only required if the patient is unwell or has a transfusion reaction.

Recovery and discharge

Patients who are receiving blood on an out-patient basis should be observed for 15 minutes after the transfusion is completed to monitor for any signs of adverse reaction. They should then be discharged with written advice (Appendix C) on what to do if a later transfusion-related adverse reaction is suspected or experienced.

Emergencies (See Adverse Event Guidelines)

A clearly communicated written plan should available on the ward/unit outlining the actions that should be taken in the event of an emergency.

This plan must include:

- what immediate actions should be undertaken
- the contact details of the authorizing clinician, who does not need to remain on site but should be available by phone during the transfusion,
- the contact details of any external agencies such as blood banks or transfusion clinicians available to provide advice

Adverse Events

If any of these occur the transfusion should be **stopped immediately** and the severity of the reaction assessed using the table below.

The most common signs of an reaction are: Fever, Rash, Itching, Feelings of apprehension or "something wrong", pain, agitation, hypertension, changes to respiratory rate or pulse, nausea or new bleeding

Temperature	Temperature ≥ 38°C **AND** Rise in temperature from baseline of 1 to 2°C	Rise in temperature from baseline of 2°C or more **OR** temperature ≥ 39°C	Any new, unexplained pyrexia in addition to features below
Rigors/shaking	None	Mild chills	Obvious shaking/rigors
Pulse	Minimal/no change from baseline	Rise in heart rate from baseline of 10 bpm or more	Rise in heart rate from baseline of 20 bpm or more
Respirations	Minimal/no change from baseline	Rise in respiratory rate from baseline of 10 or more	Rise in respiratory rate from baseline of 10 or more accompanied by dyspnoea
Blood Pressure (Hypo/hypertension)	Minor/no change to systolic or diastolic pressure	Change in systolic or diastolic pressure of up to 20 mm/Hg	Change in systolic or diastolic pressure of over 20 mm/Hg
Skin	Rash, pruritis	Facial flushing, rash Urticaria, pruritis	Peri-orbital oedema Conjunctivitis
Pain	None	General discomfort or myalgia Pain at drip site	Acute pain in chest, abdomen, back
Urine	Clear Normal output		Haematuria / haemoglobinuria Oliguria, Anuria
Bleeding	No new bleeding		Uncontrolled oozing
Nausea	None		Nausea
All Green	**Restart the transfusion slowly for the next 30 minutes**, inform doctor. If all well resume at prescribed rate. Consider symptomatic treatment (paracetamol, hydrocortisone, chlorpheniramine as appropriate). Continue to monitor the patient carefully. If symptoms or signs worsen, manage as moderate/severe reaction (see below). Document on Patient Transfusion Record.		
1 or more Amber	**STOP the transfusion BUT leave connected**, request clinical review. If symptoms consistent with patient's underlying condition, consider restarting the unit at a slower rate and appropriate symptomatic treatment. If not, treat as for red below. Inform Blood Transfusion Laboratory.		
1 or more Red	**STOP the transfusion AND disconnect,** but maintain venous access. Request **immediate** clinical review. Initiate resuscitation – ABC. Monitor patient. Inform Blood Transfusion Laboratory and contact the Consultant Haematologist.		
NOTE: In all cases where a transfusion reaction is suspected and the transfusion is stopped and disconnected, the implicated unit, complete with giving set, must be returned to the laboratory for further investigation. Contact Blood Transfusion Laboratory for further instructions			

Actions

a. Stop the transfusion immediately
b. Confirm the identification of the unit and check for damage
c. Contact the Medical Officer urgently
d. Keep the IV line open with 0.9% saline slow infusion

e. In the event of a severe reaction call 999
f. Inform the Transfusion Laboratory

In the case of suspected transfusion reaction, return the implicated unit with the giving set attached and contact the transfusion laboratory to discuss samples required for investigation.

It is a requirement of the Blood Safety and Quality regulations (SI 2005, 50) that all transfusion reactions must be fully investigated and reported to the Medicines and Healthcare products Regulatory Agency (MHRA).

All suspected transfusion reactions must be reported to the supplying Blood Bank and a Datix incident form completed.

Further details of the types of possible adverse events are given the Adverse Event Management Guideline document.

Reporting of Adverse Events

- All personnel involved in the transfusion process are responsible for reporting any adverse events or reactions to the Powys clinical practitioner who authorised the treatment, the supplying blood transfusion laboratory and the transfusion practitioner who is the liaison with the supplying laboratory.

- Any adverse event must also be reported on the Datix Incident reporting system.

The supplying hospital transfusion practitioner is responsible for reporting events and reactions to the appropriate authorities in accordance with the Blood Safety and Quality Regulations (S1 2005, SO).

Disposal of used Blood Bags and Equipment

- **If there is any suspicion of a transfusion reaction the component pack with the attached sealed giving set must be returned to the blood transfusion laboratory with full clinical details.**

- Keep all empty blood component bags in the clinical area until the transfusions are completed uneventfully. They can be discarded immediately provided the patient is well at the end of the transfusion. It is only necessary to return them to the Blood Bank if an adverse reaction has occurred.
- Remove the administration set and discard into a large sharps box. The used empty blood component pack should be placed in a small orange bag (Infectious waste Category B). The orange waste bag must be sealed and a patient label adhered, details must include date and time as well as patient DOB + identifying information. On disposal, the sealed orange waste bag, containing the inner used blood component bag, should then be placed in a second Orange Waste Bag, so it is double wrapped before disposal in the clinical waste.

Traceability

- The recording of traceability is a legal requirement

- There must be a documented system in place to ensure that any transfused (or discarded) blood component can be linked to the original donation and donor from which it was derived.

9 Monitoring Compliance, Audit & Review

The organisation will support participation in local audit activity and related clinical audit identified on the all-Wales National Clinical Audit and Outcome Review Programme.

10 References / Bibliography

- Better Blood Transfusion Team (2016) All Wales Transfusion assessment package. Welsh Education Subgroup
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- Safe transfusion of Blood and Blood Components (2011). The Shrewsbury and Telford Hospital NHS Trust
- Welsh Health Circular – Better Blood Transfusion 2 (2002) 137
- Welsh Health Circular – Blood Transfusion Procedures (2007) 042
- Welsh Health Circular – Use of the NHS number (2007)
- Wye Valley NUS Trust – Blood Transfusion Policy 2012
- Blood Transfusion Services of the United Kingdom: Hand book of Transfusion Medicine. 5th Edition(2013)

Appendix A Guidance for clinical staff to support patient consent for blood transfusion produced by the Advisory Committee on the Safety of Blood, Tissues and Organs (SaBTO)

SaBTO
Advisory Committee on the Safety of Blood, Tissues and Organs

GUIDANCE FOR CLINICAL STAFF

TO SUPPORT PATIENT CONSENT FOR BLOOD TRANSFUSION

Patient may require Blood / Blood Component Transfusion

Patients receiving a blood transfusion (red cells, platelets or plasma) whether for a medical or surgical cause should be informed of the indication for the transfusion including risks, benefits and alternatives. A record of this discussion should be documented in the patient's clinical records.

Ideally the decision to transfuse should be made with the patient or parent/carer in advance of any planned transfusion.

In the emergency setting, the information will need to be given retrospectively.

Prospective Information

Valid consent* should be obtained prior to any planned transfusion and documented in the patient's clinical record.

*Valid consent entails the provision of information on risks, benefits and alternatives available before asking the patient to give consent. This does not have to include a signature from the patient.

Retrospective Information

Patients treated in emergency setting where it was not possible to obtain valid consent pre-transfusion.

Patients who were told pre-procedure (e.g. pre-operatively) that they *might* require a transfusion then need to be informed whether they did/did not receive a transfusion.

Key issues to be discussed when obtaining valid consent

1. The following information should be discussed:
   - Type of blood / blood component
   - Indication for transfusion
   - Benefits of the transfusion
   - Risks of transfusion
   - Possible alternatives to transfusion
   - How the transfusion is administered and the importance of correct patient identification
   - Inform patient that following a blood transfusion they can no longer be a blood donor.
2. Provide written information.
3. Check if patient needs time to consider or requires further information.
4. Document the discussion in the patient's clinical records.

At discharge

1. If patient has had a transfusion, ensure that they have been informed.
2. Record information about the transfusion in the discharge summary, also stating that the patient has been informed.

Version 1.1 December 2011

Resources

This guidance applies to the transfusion of all blood components **(red cells, white cells, platelets, fresh frozen plasma & cryoprecipitate**) and should be used by healthcare organisations to strengthen the consent processes already in place.

Specific guidance should also be used to ensure that alternatives have been considered for blood and blood components e.g. pre-operative iron therapy, intra-operative cell salvage where appropriate for avoidance of red cell transfusion and prothrombin complex concentrate in place of FFP for warfarin reversal.

Adverse events
Clinical teams involved with the prescribing and administration of blood and components must be aware of adverse events that can be associated with transfusion including prompt recognition and management (www.shotuk.org). These include:

Incorrect Blood Component Transfused (IBCT)

Inappropriate, Unnecessary, Under/Delayed Transfusion (IandU)

Acute and Haemolytic Transfusion Reactions (ATR and HTR)

Transfusion-Transmitted Infection (TTI)

Transfusion-Associated Circulatory Overload (TACO)

Transfusion Associated Acute Lung Injury (TRALI)

Transfusion-Associated Dyspnoea (TAD)

Transfusion Associated Graft-versus-Host Disease (TA-GvHD)

Post Transfusion Purpura (PTP)

Clinicians should refer to the HPA website (www.hpa.org.uk) to get the latest information on the risks of transmissible infections. Current guidance from the HPA states that the risk of getting hepatitis from a blood transfusion in the UK is currently (January 2011) about 1 in 670,000 for hepatitis B and 1 in 83 million for hepatitis C. The chance of getting HIV (Human Immunodeficiency Virus) infection is about 1 in 5 million or HTLV (Human T-Lymphotropic Virus) infection is about 1 in 18 million.

Although the risk of getting variant Creutzfeldt-Jakob Disease (vCJD) from a blood transfusion is probably very low with a single blood transfusion, the risk of any infection will increase with each additional blood component.

Long-term transfusion-dependent patients
Long-term transfusion-dependent patients will need modified consent. This should where possible include an initial discussion at the start of a transfusion regime with a regular update including appropriate information regarding the benefits and risks of transfusion and specific relevant issues e.g. iron overload, risk of allo-immunisation including haemolysis risks (red cells) and platelet refractoriness (HLA antibodies), infective risks and other transfusion reactions.

Other information
Where needed, patients should be provided with contact details of key specialists for further discussion around blood transfusion issues relevant to their specific clinical diagnosis e.g. hospital transfusion practitioner, local haematologist or other clinician such as anaesthetist, surgeon or obstetrician.
The Trust website can be used to provide information for patients about consent and safe blood transfusion.

Useful websites	www.transfusionguidelines.org.uk	www.blood.co.uk
www.nhs.uk/conditions/blood-transfusion	www.nhshealthquality.org	www.shotuk.org
www.hpa.org.uk	www.bcshguidelines.co.uk	www.sign.ac.uk/guidelines/

Patient information leaflets are available from : www.hospital.blood.co.uk

Appendix B. The All Wales Transfusion Record

ALL WALES TRANSFUSION RECORD

1. PATIENT DETAILS *(Addressograph may be used)*

Full Name: ..... NHS/Hospital Nº .....

Address: ..... Hospital: .....

..... Ward: .....

Date of Birth: ..... Consultant: .....

2. PRE-AUTHORISATION CHECKLIST: ***To be completed by the person authorising the transfusion***	***Circle below***
Are the indications for transfusion clearly documented in the medical notes?	YES / NO
Has the patient given valid consent? *(Includes provision of verbal **AND** written information, and the opportunity to discuss.* *If not possible at time of transfusion, retrospective information **must** be given)*	YES / Not Possible
Does the patient have special transfusion requirements? YES / NO **If yes please indicate.**	Irradiated ☐ CMV Negative ☐ HLA Matched ☐ HEV Neg ☐

CONCOMITANT MEDICATION (e.g. diuretic/antihistamine) – circle YES or NO below against each unit, and if required prescribe on the once only section of the In-Patient Medication Administration Record

3. AUTHORISATION: ***Must be completed by the person authorising the transfusion, ONE UNIT PER LINE***

Date	Component or product	Amount (Adult – unit) (Paeds – mls)	Rate / Duration	Concomitant medication required?	Authoriser Print Name	Authoriser Signature	Unit Given
				YES / NO			
				YES / NO			
				YES / NO			
				YES / NO			
				YES / NO			
				YES / NO			

4. PRE-ADMINISTRATION CHECKLIST: ***Must be completed for EACH UNIT by the person administering the transfusion***
DO NOT PROCEED IF DISCREPANCIES ARE DETECTED

- Pre-authorisation checklist and written authorisation fully completed and correct
- Check for concomitant medication (if indicated) and administer as prescribed
- Special requirements met if specified (Irradiated, CMV Neg)
- Valid expiry date
- Visual check - leaks/discolouration/clumping
- Blood group printed on compatibility label checked with blood group on front of bag
- Unique donation number on compatibility label matches donation number on front of bag

5. FINAL BEDSIDE CHECK: ***Must be completed AT BEDSIDE for EACH UNIT by the person administering the transfusion***
DO NOT PROCEED IF DISCREPANCIES ARE DETECTED

- Legible identification band (or approved alternative) attached to patient
- **CONFIRM**: **ALL** patient identifiers are correct and **identical** (verbal ID, wristband and blood label)

By signing below I confirm that I have completed the required pre-administration and final bedside checks

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Sign						

All Wales Transfusion Record (AWBTR12) JB 78811 Dec 2015 Version 3.1

PATIENT NAME:		NHS/Hosp N°						
Complete this chart for each unit transfused. Use the National Early Warning Score (NEWS) Chart if deviations from baseline are noted								
Unit 1	*Where used, attach adhesive portion of blood label here* *If not available record the unique 14 digit donation number*	**Date:** ..... **Start Time:** ..... **End Time:**	**Observation Interval**	**Temp**	**Pulse**	**Resps**	**BP**	**Time**	**Initial**
			Pre-transfusion						
			15 minutes						
			End						
Unit 2	*Where used, attach adhesive portion of blood label here* *If not available record the unique 14 digit donation number*	**Date:** ..... **Start Time:** ..... **End Time:**	**Observation Interval**	**Temp**	**Pulse**	**Resps**	**BP**	**Time**	**Initial**
			Pre-transfusion						
			15 minutes						
			End						
Unit 3	*Where used, attach adhesive portion of blood label here* *If not available record the unique 14 digit donation number*	**Date:** ..... **Start Time:** ..... **End Time:**	**Observation Interval**	**Temp**	**Pulse**	**Resps**	**BP**	**Time**	**Initial**
			Pre-transfusion						
			15 minutes						
			End						
Unit 4	*Where used, attach adhesive portion of blood label here* *If not available record the unique 14 digit donation number*	**Date:** ..... **Start Time:** ..... **End Time:**	**Observation Interval**	**Temp**	**Pulse**	**Resps**	**BP**	**Time**	**Initial**
			Pre-transfusion						
			15 minutes						
			End						
Unit 5	*Where used, attach adhesive portion of blood label here* *If not available record the unique 14 digit donation number*	**Date:** ..... **Start Time:** ..... **End Time:**	**Observation Interval**	**Temp**	**Pulse**	**Resps**	**BP**	**Time**	**Initial**
			Pre-transfusion						
			15 minutes						
			End						
Unit 6	*Where used, attach adhesive portion of blood label here* *If not available record the unique 14 digit donation number*	**Date:** ..... **Start Time:** ..... **End Time:**	**Observation Interval**	**Temp**	**Pulse**	**Resps**	**BP**	**Time**	**Initial**
			Pre-transfusion						
			15 minutes						
			End						

Adverse Reactions: In the event of an adverse reaction or any adverse symptoms associated with the transfusion please complete below	
Was the adverse reaction documented in the patient's medical notes?	YES / NO
Have you reported the reaction to the transfusion laboratory / practitioner?	YES / NO
Write down the donation number of the unit being transfused at the time (if known)	

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Appendix C Advice leaflets for patients.

Affix patient details here
(including name of patient's consultant / doctor).

GIG CYMRU NHS WALES
Bwrdd Iechyd Addysgu Powys
Powys Teaching Health Board

Most blood transfusions take place without problems but having a blood transfusion carries with it a very small risk of developing side effects. These may develop within several hours, or in some cases may happen days or weeks later.

These side effects are often mild, but it is still important to report any unusual or unexpected symptoms to a doctor or nurse (or midwife if your transfusion was related to pregnancy/childbirth).

Please contact the hospital for advice if you experience any of the following after having a blood transfusion:

- A high temperature – feeling feverish, hot and clammy
- Shivering or 'cold chills'
- Breathing problems
- Extreme tiredness
- Passing blood in your urine
- Passing much less, or very dark, urine
- Itchy skin rash
- Pain in the lower back (loin pain)
- Unexpected or unexplained bruising
- Jaundice (yellow colour of the white of your eyes or your skin)

When contacting the hospital for advice, please inform the hospital staff that you have recently had a blood transfusion.

This section to be completed by staff on discharge. Explain to the patient how to obtain assistance in the event of a problem (both 'in hours' and 'out of hours'), and then give the leaflet to the patient: before they leave the ward/clinic.

Ward/Department:.....
Contact telephone number(s):

Daytime:.....
Night time/weekends.....

Date and time of last transfusion .....

If you are unable to make contact with the hospital where you had your transfusion, then please contact your GP as soon as possible.

In the rare event of an emergency (life threatening problems, for example difficulty with breathing), call 999 for an ambulance and bring this leaflet into hospital with you.

Transfusion patients are reminded that they are no longer permitted to be a blood donor after receiving a transfusion even if they have been a regular donor in the past.

If you would like further information or advice about this, or other aspects of blood transfusion, please discuss this with your hospital doctor, nurse or midwife.