Livewell Southwest

Blood Transfusion Policy & Procedure

Version No 1.6

Review: July 2019

Notice to staff using a paper copy of this guidance

The policies and procedures page of Intranet holds the most recent and procedural version of this guidance. Staff must ensure they are using the most recent guidance.

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Asset Number: **517**

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Associated documentation	• Risk Management Strategy • Health and Safety Policy • Incident Reporting Policy • Serious Untoward Incidents Policy • Patient Identification Protocol • Infection Control Manual • Clinical Record & Note Keeping Policy & Health Record Audit Tool

	• Aseptic Technique • Better Blood Transfusion (DoH 1998/224) • Better Blood Transfusion 2 (BBT2 DoH 002/009) • BCSH Guidelines on the administration of blood components and management of transfused patients (BCSH 1999) • Serious Hazards of Transfusion Reporting Scheme annual reports • Blood Quality and Safety Regulations (2005/50), including the additional requirements of the competent authority, the Medicines and Healthcare products Regulatory Authority (MHRA) • National Patient Safety Agency (NPSA Safer Practice Notice 14; Right Patient, Right Blood.
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Document review history

Version no.	Type of change	Date	Originator of change	Description of change
0.1	New document	16 Dec 2009	Matron, LCC	New Policy to meet current practice and NHSLA Risk Management Standard 1.3.7.
1	Ratified	February 2010		
1:1	Review	Feb 2012	PRG	Review date extended, no other changes made.
1:2	Review	June 2012	PRG	Review date extended, no other changes made.
1.3	review	July 2012	Matron LCC	Added guidance re blood tracking from Blood bank
1.4	Extended	July 2014	Matron LCC	Extended no changes.
1.5	Extended	May 2016	Information Governance, Records, Policies & Data Protection Lead.	Formatted to LSW and Extended
1.6	Review	June 2016	Professional Lead	Ensuring alignment within extended organisational geography, in line with PHNT policy.

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Blood Transfusion Policy and Procedure

1 Introduction

1.1 For many patients with certain disorders blood transfusion support is essential to maintain life and relieve symptoms. For many patients receiving blood transfusion, admission to acute hospital is not necessary and they are better supported in "out of acute hospital" environment. The rehabilitation inpatient units at Mount Gould, Kingsbridge and Tavistock Hospital fall under this description.

1.2 Appropriate blood transfusion is an essential support to many clinical treatments and may be life-saving. However donated blood is a limited resource which should only be transfused when the benefits to patients exceed the risks.

1.3 The Department of Health Circular HSC 2007/001, "Better Blood Transfusion" requires that every NHS Trust should have an assurance framework for blood transfusion including a Transfusion Committee and Transfusion Team. Livewell Southwest (LSW) has professional representation on the Committee, as part of a Service Level Agreement

1.4 LSW provide services to the public under the NHS umbrella and are, therefore still obliged to comply with this.

1.5 This clinical policy has been revised to clarify terminology, incorporates core standards in transfusion practice in adults This policy also reflects changes to legislation brought in 2005 by the European Directive 2002/98 EC as enacted by HM Government in the Blood Safety and Quality Regulations (50) 2005.

1.6 The National Patient Safety Agency (NPSA) Safer Practice Notice 14 "Right Patient – Right Blood" also requires that all staff involved in the administration of blood components should be trained and competency assessed every three years.

1.7 LSW has an obligation to ensure that the standard for transfusion practice meets the requirements of these regulations and recommendations and is in line with National Clinical Guidelines.

2 Purpose

2.1 Provide a clear framework and guidance for safe transfusion practice.

2.2 To ensure a consistent safe approach to the authorisation, handling and administration of blood and blood components throughout LSW.

2.3 To ensure that all members of staff involved in any stage of the process of transfusing blood and blood products are fully conversant with their role and the safety and legal aspects of this procedure.

2.4 To provide details of the requirement and provision of training and assessment/assurance of competence.

3 Definitions

3.1 **Blood Bank** – the department at Plymouth Hospitals NHS Trust dealing with issue and receipt of blood and blood products used for transfusion.

3.2 **Blood component** - red cells (blood), platelets, fresh frozen plasma or cryoprecipitate.

3.3 **Blood product** - human albumin solution, anti D immunoglobulins, Novoseven®, Beriplex®.

3.4 **CMV** – Cytomegalovirus

3.5 **HCA** - Healthcare Assistant

3.6 **Transfusion Request form**: LSW uses a specific Blood Transfusion Request Form designed, issued and approved by PHNT (ref: 20788).

3.7 **Incident** - any untoward occurrence associated with the collection, testing, processing, storage and distribution, of blood components that might lead to death or life-threatening, disabling or incapacitating conditions for patients or which results in, or prolongs, hospitalisation or morbidity.

3.8 **Serious adverse Reaction** - an unintended response in a donor or in a patient that is fatal, life-threatening, disabling or incapacitating, or which results in or prolongs hospitalisation or morbidity.

3.9 **SHOT** – Serious Hazards of Transfusion reporting system.

3.10 **MHRA** – Medicines and Healthcare products Regulatory Authority – governmental agency with responsibility for standards of safety, quality and performance.

3.11 **SABRE** – Serious Adverse Blood Reactions & Events, a MHRA reporting scheme. The UK Blood Safety and Quality Regulations 2005 and the EU Blood Safety Directive require that serious adverse events and serious adverse reactions related to blood and blood components are reported to the MHRA, the UK Competent Authority for blood safety.

3.12 **Traceability tag** – the blue section of the compatibility sticker that accompanies each unit of blood or blood product. red and white tag attached to the blood component.

3.13 **Transfusion Team** - Transfusion Laboratory Manager, Consultant Haematologist and Transfusion Practitioner.

3.14 **Unit** - a bag of blood component.

3.15 **NPSA** – National Patient Safety Agency - leads and contributes to improved, safe patient care by informing, supporting and influencing the health sector.

3.16 **Registered Practitioner** – medically qualified personnel or nursing staff who have

specialist certification enabling them to request blood products.

3.17 "**Suitably trained**" - where the relevant staff can meet NPSA competency requirements, or any successor requirements.

3.18 **SABS** – Safety Alert Broadcast System – The Central Alerting System (CAS) brings together all safety alerts, drug alerts, Dear Doctor letters and Medical Devices alerts on one website, which are then issued on behalf of the MHRA, the NPSA and the Department of Health to all NHS organisations, and allows alerts and guidance to be accessed at any time.

4 Scope

4.1 This policy applies to all LSW staff involved in requesting, sampling, authorisation, storing, collecting, transporting and administering of human blood and blood components. This includes:

a) Medical staff, who assess patients, authorise and order the product.

b) Any clinical staff involved in the sampling of blood from patients.

c) Any LSW staff involved in the collection, transport, storage and handling of blood products.

d) Any clinical staff who carry out the appropriate checks prior to administering blood products and who observe the patient during and after the transfusion.

5 Duties

5.1 The **Chief Executive** is ultimately responsible for the content of this policy and its implementation.

5.2 **Locality Managers and Professional Leads** are responsible for identifying, producing and for implementing LSW policies relevant to their area.

5.3 The **Deputy Locality Managers** will support and enable the operational clinical leads and managers to fulfil their responsibilities and ensure the effective implementation of this policy within their speciality.

5.4 **Service Managers**, within appropriate clinical inpatient areas, are responsible for:

a) Defining the required transfusion competencies for each staff member and keeping records of achievement (locally and centrally on the Electronic Staff Record).

b) Designating appropriate personnel to assess staff competence within their service.

c) Monitoring and ensuring staff attendance at training sessions/completion of on-line training and/or completion of relevant competencies, whichever is most relevant.

d) The appropriate refrigerator for LSW is located in the Local Care Centre Outpatient Unit, and is monitored and managed by Plymouth Hospitals NHS Trust's Blood Bank (service-level agreement) to ensure compliance with the MHRA requirements.

5.5 **Medical staff** are responsible for:

a) Informing the patient about the need for transfusion, the potential benefits and risks.

b) Reviewing haemoglobin results.

c) Ensuring that patients have given verbal consent to receiving blood or blood products, before they are ordered. However, if a patient refuses a transfusion, the patient receives appropriate counselling. This consent conversation, must be documented in the medical records.

d) Authorising blood components taking into account any specialist components or any age-related requirements.

e) Ensuring that there is adequate information documented within the case notes to justify the authorising of blood.

f) Prescribing of any concomitant drugs.

g) Provide detailed information to the transfusion laboratory of any transfusion reaction of sufficient severity to cease transfusing that unit.

h) Documenting the date time and duration of the transfusion.

i) When administering blood to a patient, strictly following LSW Blood Transfusion Procedure (Appendix A).

j) Agreeing a maximum number of units to be transfused per episode, in line with the Patient Blood management algorithm.

5.6 **Registered Practitioners** are responsible for the management of transfusion episodes other than those being directly supervised by a doctor. In doing so they must:

a) Undertake training and observation based competency assessment in accordance with the NPSA requirements and as requested by the Service Managers, to perform the functions of collecting blood from designated refrigerators and administering blood transfusions.

b) At all times follow LSW Blood Transfusion Procedure (Appendix A) for patient identity checks prior to administering blood.

c) At all times complete the relevant documentation to provide a complete traceability of the transfusion, or where components are not transfused.

d) At all times monitor the patient in accordance with LSW Blood Transfusion Procedure, report all suspected transfusion reactions to a member of the medical staff and the Blood Bank, and take all appropriate action.

5.7 **Other "suitably trained" staff responsibilities** – ensuring that they have completed the appropriate competency assessment for their part in the blood and blood product transfusion procedure.

5.8 **Plymouth Hospitals NHS Trust**, via a Service Level agreement, are responsible for:

a) Delivering and collecting blood and blood products to and from the Mount Gould Local Care Centre in a MHRA Approved cold storage box, or to the Blood Refrigerator at Kingsbridge and Tavistock Hospitals.

b) Testing samples and for initiating and tracking the traceability documents.

c) Reporting SHOT / SABRE incidents.

d) Maintaining the electronic blood tracking system and training staff in its use

6. Electronic Blood Tracking System

a) The blood bank is implementing an electronic blood tracking system called 'BloodHound'. A computerised approach to collecting and administering blood is needed to further prevent incidents in the transfusion pathway.

b) Compliance with haemovigilance measures is a high priority for LSW as well as safe and appropriate use of blood and blood products. The NPSA's Safer Practice Notice 14, 'Right patient right blood', has made transfusion competency a major focus of attention. Staff in this organisation are required to undertake their transfusion competency assessments and must have them before access to the tracking system is allowed.

c) The LSW requires that all transfusions are recorded using the Electronic Blood Tracking System. All organisations are required by law to provide haemovigilance data (traceability) which is closely monitored by the Medicines and Healthcare Regulatory Authority (MHRA).

d) During this time of transition patient safety is a major priority.

e) LSW staff are issued with a new ID badge prior to their particular place of work receiving eBT training. The new card has a barcode and ID unique number to that staff member and is used for the eBT system. In itself this ID will not allow the user into the system unless they are specifically given access from within the software.

6.1 How Electronic Blood Tracking (eBT) works

The following is only a brief overview of how the system works.

'Using the blood tracking system is a requirement of LSW in order to comply with regulations on blood traceability. Once you have gone 'live' with the system in your area of work you are required to use it. Only in the event of a system down can the paper based system be resorted to.'

There are three main elements to the 'BloodHound' tracking system and they are:

6.2 The Blood Fridge Kiosk.

The blood fridge is controlled via a touch screen computer. The staff member uses a bar code, found on their new ID badge that identifies them to the system and a personal PIN number for security. The staff member then has to let the system know what patients blood is required again through a bar coded hospital number that also gets scanned in. The fridge will then open if all conditions are met correctly.

6.3 The Bedside Module.

a) Once you have extracted the correct unit from the blood fridge and taken it back to your ward. Using a handheld device the tracking system once again needs to know where the unit of blood has been taken and who is carrying out the transfusion, which bag of blood and which patient. Once all the correct information has been gathered by the system the transfusion can be started.

b) Once the transfusion has ended and, as part of haemovigilance and traceability, the staff member responsible for monitoring the transfusion must 'End the Transfusion' on the handheld device. This will time stamp the duration over which the unit of blood was transfused and therefore demonstrates compliance with traceability.

6.4 The Web Application

This part of the system gives the user the opportunity to track blood units by patient and by location. Once the blood bank issues units of blood into the blood fridge that information can be seen and the ward will know the blood is available and where to go to be able to collect the units.

6.5 Monitoring of eBT compliance.

a) Before staff can use the tracking system they must have their transfusion competencies. This is checked on the OLM system (replacing the spreadsheet currently running in tandem until OLM is finally in place). Access is granted by transfusion practitioners after this check.

b) Electronic Blood Tracking will be rolled out to the LSW over a period of 12 to 18 months from 2017. Each area will have key staff trained in using the system and those key staff will cascade the training to their colleagues in how to use the system.

c) The MHRA will closely monitor Haemovigilance and during this time of transition to the electronic blood system will be particularly concerned that traceability is maintained.

7 Training

7.1 The “British Committee in Standards for Haematology” clearly states the training needs analysis for all staff. It is that **all** staff involved in any part of the transfusion process **must** receive regular and adequate training (BCSH 1999).

7.2 As a result of training needs analysis, forming part of the individual member of staff’s annual appraisal, an in-house training programme is provided for all relevant staff involved in the collection of transfusion samples, administration of blood components, care and monitoring of the patient, and management of adverse reactions. 000 Blood transfusion 01: Safe Transfusion Practice and 000 Blood Transfusion 02: Blood components and indications for use (2 hours).

7.3 The National Safety Patient Agency (NPSA 2006) state that all staff who are involved in the procedures **must** be assessed as competent every third year. Since the number of transfusions at community sites, is relatively low, LSW assesses the competency of their staff every two years. These procedures are:

a) Pre-transfusion venous blood sampling;
b) Collection and delivery of blood products;
c) Safe administration of blood and blood products.

7.4 Service Managers are responsible for ensuring that relevant staff members receive appropriate training and one-to-one competency assessments every two years, with on-line learning as a refresher on an annual basis. This information should be fed back to the managers of the Electronic Staff Record (ESR) for central recording, and held locally on managers’ personal records for staff.

7.5 These assessments may be completed by simulation if necessary.

7.6 Records will available via ESR if required by the Transfusion Team.

7.7 Failure to gain competency following three attempts will result in clinicians being unable to participate in the transfusion process.

8 Monitoring Compliance and Effectiveness

8.1 Regular review, by Service Managers and the Risk Management Team, of all incidents involving any part of the blood transfusion process, including:

a) Incidents related to deviations from the correct procedure for the collection and administration of blood.
b) Incidents related to duplicate or inadequate patient identifiers.
c) Inappropriate requests and authorisations for blood components noted by the laboratories.
d) Incidents related to failure to maintain the correct storage conditions of blood components.

e) Blood wastage in clinical areas.
f) The proportions of staff who have in-date competency assessments for blood transfusion.

8.2 In line with the Blood Quality and Safety Regulations, Service Managers must monitor and review:

a) All serious untoward incidents related to adverse reactions related to blood transfusion, and subject them to root cause and trend analysis with monitoring of the timeliness and effectiveness of corrective and preventative actions. Significant risks and trends are also discussed at the Provider Risk Management Group meetings and recorded on local Risk Registers.
b) The effectiveness of the traceability of every blood component from donor to recipient.

8.3 Incidents are reported to SHOT / SABRE as required, via Plymouth Hospitals Trust's Blood Bank / Transfusion Team (Service Level Agreement).

8.4 Annual audit of clinical records to demonstrate compliance with policy standards, the results of which are reported to relevant Service Managers, and noted on local Risk Registers appropriately.

8.5 Three-yearly update of the policy with amendments made as necessary and communicated to staff.

8.6 LSW should participate in all national comparative audits commissioned by the NHS Blood and Tissue Authority.

8.7 NPSA and MHRA alerts are acted upon accordingly via the SABS route within LSW

8.8 There is LSW representation on the Plymouth Hospitals NHS Trust's Transfusion Committee,

8.9 Cases of suspected transfusion-transmitted infection or transfusion related acute lung injury must also be reported to the National Health Service Blood and Tissue Authority by the Transfusion Team.

8.10 All serious incidents/reactions and trends of incidents are reviewed at the Plymouth Hospital Transfusion Committee, for which there is LSW representation.

8.11 **Transfusion of an incompatible blood component is now designated as a Never Event, regardless of the outcome to the patient. In the event of this occurring, the procedure described in the Serious Incident Requiring Investigation (SIRI) Policy should be followed**

All policies are required to be electronically signed by the Lead Director. Proof of the electronic signature is stored in the policies database.

The Lead Director approves this document and any attached appendices. For operational policies this will be the Locality Manager.

The Executive signature is subject to the understanding that the policy owner has followed the organisation process for policy Ratification.

Signed: Director of Operations

Date: 20th July 2016

Blood Transfusion Procedure

Important Notice

All staff involved in the authorisation of blood products and those with medical or nursing responsibility for patients receiving transfusions must be familiar with guidelines concerning the recognition and management of transfusion reaction.

Staff who are not satisfied that they are both familiar with and capable of carrying out these guidelines should not authorise blood products or have responsibility for patients receiving blood products.

1 Pre-Transfusion Management

1.1 The decision to transfuse is only made after considering the potential benefits and risks to the patient; alternatives to transfusion of blood components are used whenever available and appropriate (i.e. for Jehovah's Witnesses and other patients who do not wish to receive blood and blood components; treatment of iron deficiency anaemia). Where possible the proposed treatment is discussed between the medical staff and the patient (or relative) in advance.

1.2 The reason for the transfusion and the patient's agreement to transfusion should be documented in the patient's notes.

1.3 Patients must also be given the Patient Information leaflet as soon as possible prior to the transfusion commencing. Patient information leaflets relating to blood transfusion are available to download or order from the following NHS website, http://hospital.blood.co.uk/patient-services/patient-blood-management/patient-information-leaflets/training which include:

- Will I need a blood transfusion?
- Information for patients needing irradiated blood.
- Receiving a plasma transfusion.

1.4 Rationale – signed consent is not required but patients should be advised of the risks and benefits of transfusion and they do have the right to refuse. Where appropriate, patients should be advised of alternatives to transfusion and this should be documented within the patient's health record when there is a possibility that transfusion may be required.

2 Written Instruction for (Prescribing) Blood and Blood Products

2.1 Officially, blood and blood products are not prescribable because they do not appear in the British National Formulary (BNF). Only items that are in the BNF can be prescribed. The term “written instruction” is used to describe the act of authorisation of blood and blood products.

2.2 Blood and blood products may only be authorised by a doctor or an authorised clinical nurse specialist with the appropriate training.

2.3 It must be authorised on a drug chart. The instruction **must** specify:

a) The patient’s full identity details.
b) The product to be administered.
c) Any additional requirements (see 2.3 below).
d) Quantity and duration (see 2.4, 2.5 and 2.6 below).
e) Date and signature of requestor.

2.4 It is the responsibility of the authorising doctor to ensure they have checked whether the patient should have irradiated or CMV or HEV negative blood.

2.5 Red cell concentrate usually two-three hours for each unit; no longer than four hours. Slow infusion causes bacterial growth. Unless the patient has an underlying cardiac or respiratory condition, transfusion should be two hours – be aware of the volume you are giving.

2.6 Platelets usually given immediately and once only (stat).

2.7 Fresh frozen plasma (FFP) usually 30 minutes for one adult dose

2.8 There must be a clear entry in the case notes detailing:

a) The indication for the use of blood/components (to include current Hb result).
b) Number of components to be transfused.
c) Date to be transfused.

3 Requesting Blood and/or Blood Products

3.1 Blood is requested using the Transfusion Request Form. It is important to complete **all** details on this form correctly and in full. A transfusion code must be entered – these can be found on the reverse of the request form. The request form must be signed by the clinician requesting the blood/blood products.

3.2 The person taking the sample completes the details on the sample tube at the patient’s bedside.

3.3 **Incomplete or incorrectly labelled samples or request forms will be discarded** and new correctly completed samples and forms will be requested.

3.4 Requests should have been presented on the morning of the day before the blood is required, to enable the sample to be grouped and antibody screened for atypical red cell antibodies. If extreme problems are encountered the sample may be referred to the National Blood Service in Bristol and a minimum delay of 72 hours is

usual. Samples received after 19:00 hours will not be processed until 08:00 hours the following day.

3.5 Rationale - precise information at the time of requesting units is essential if the patient is to receive the right blood at the right time.

4 Collection of Blood Samples for Pre-Transfusion Testing

4.1 Suitably trained and competent staff may take blood for samples for cross matching. They must use an aseptic no touch technique (see Aseptic Technique on Plymouth Intranet).

4.2 In the absence of an identity bracelet **no** sample should be taken, until rectified.

4.3 Blood should only be taken from patients who are either able to reliably identify themselves, **and** are wearing an identity bracelet the information from which matches the detail on transfusion request form.

4.4 Inpatients should be asked to identify themselves verbally. Do not ask closed questions such as "Are you Mrs Smith?" Ask the patient to state their surname, first name and date of birth. This information **must** be verified against the t patient's identity bracelets and the Transfusion Request Form.

4.5 Samples must be taken from **one** patient at a time and, for each patient, blood should be taken, containers filled and labelled in one uninterrupted operation. Do not use pre-label sample tubes. The sample must be labelled, by hand, at the patient's bedside.

4.6 When taking samples from patients unable to verbally identify themselves, it is vital to match the identity bracelet with the Transfusion Request Form information to check that it is the right person, and that all details are correct. A relative or carer may also be asked to confirm identity.

4.7 Rationale - Correct patient identification is vital for patient safety. The Serious Hazards of Transfusion (SHOT) reporting scheme has demonstrated most transfusion errors are related to failure to correctly identify patients.

5 Labelling the Sample

5.1 The person taking the sample must state date and time sample taken and sign the sample bottle and request form.

5.2 The sample must be taken into an EDTA tube (pink top) immediately labelled (by person taking sample). All of this must be done at the side of the patient – **do not walk away.**

5.3 Inadequately labelled samples and forms will be rejected completely and the requesting doctor or ward will be notified, whenever possible. LSW staff must complete an incident form for each request that has been rejected and the service manager must ensure a full investigation is undertaken as to the reason why the request was rejected. The laboratory will keep a record of such incidents and

present them to the Transfusion Committee for investigation, as it deems necessary.

5.4 A completed EDTA must accompany the Transfusion Request Form.

5.5 Requests for Group and Save may be made by medical staff only.

5.6 Requests for cross match may be made by medical staff only.

5.7 Request Forms – Patient Identity Request forms must contain **four** points of identification – surname, forename, date of birth and NHS number. If there is no patient number available the first line of the patient's address can be used as the fourth point of identification with the postcode and house number.

6 Storage and Collection of Blood from Blood Refrigerator

6.1 NPSA report that Collection of blood is identified as a major source of errors leading to the transfusion of the wrong blood.

6.2 Blood is to be stored only in designated blood refrigerators or blood box, and **never** placed in a ward or domestic refrigerators.

6.3 The blood refrigerator must be secured to prevent unauthorised access and it must be alarmed to the Blood Bank in the event of malfunction

6.4 Blood is stored between 2 -8c, temperatures in domestic and drug refrigerators are not suitable for correct storage of products.

6.5 Only suitably trained and assessed nursing staff are authorised to collect blood.

6.6 Before collecting blood, suitably trained staff should ensure:

a) Patient is wearing correct identity bracelet.
b) Patient is still consenting to the transfusion.
c) Patient has a patent cannula of the right size.
d) Patients pre transfusion observations are satisfactory

The following points (6.7 and 6.8) apply until such time as electronic blood tracking is fully in place OR when electronic tracking is unavailable (system malfunction, fridge unavailability for instance).

6.7 The staff member collecting blood must bring to the blood refrigerator documentation (drug chart) bearing full patient identification details – forename, surname, date of birth, NHS and/or hospital number.

6.8 The person collecting blood must check the patient identification details on the documentation against the unit(s) being collected.

6.9 Only one unit of blood should be removed at any one time.

6.10 Do not remove blood from the refrigerator if the alarm sounds; inform the Blood

Transfusion Laboratory immediately (telephone number is in the refrigerator log book located on top of the refrigerator).

6.11 The delivery of blood to a ward should be brought to the attention of a senior member of staff to avoid undue delay in starting the transfusion. A unit of blood should not be left out of the refrigerator or blood box for more than 30 minutes. Blood must **never** be stored in a ward refrigerator.

6.12 Platelet concentrates should be kept at room temperature at all times. Do not place in a blood refrigerator. Platelets must be transfused immediately on arrival.

6.13 Fresh frozen plasma should be collected and transfused as soon as possible (or within four hours) after thawing by the Blood Transfusion Laboratory (if not used, return to the issuing Blood bank for disposal).

6.14 If there is no blood refrigerator available blood can only be stored in a blood box with cool packs for a maximum four hours.

7 Administration of Blood and Blood Products

7.1 The final identity check must be done next to the patient, by matching the bag of blood or blood product with the patient's identity bracelet. It is mandatory for all patients receiving a transfusion to be fitted with a fully completed hospital identity bracelet or recognised alternative. **No** Identity Band - **no** transfusion.

7.2 ID details must be identical in the:
- a) Patient's notes
- b) Blood collection slip
- c) Drug chart
- d) ID wristband
- e) Compatibility label

7.3 Also check that the:
- a) unit number matches the Blood bag
- b) expiry date matches the Compatibility label
- c) blood product matches Compatibility form

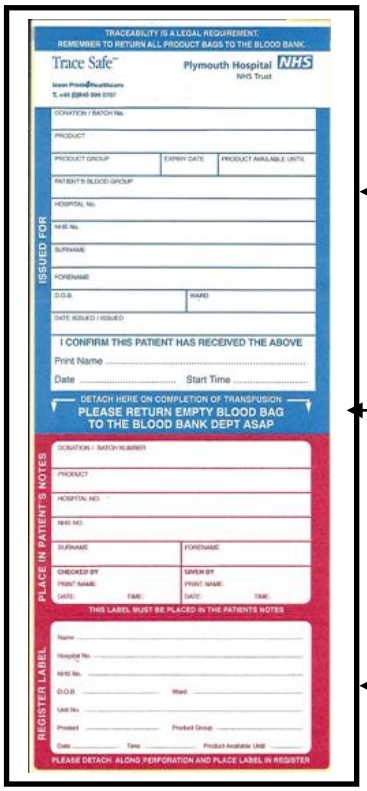
7.4 Also check the bag of blood for:
- a) Integrity of the bag
- b) Haemolysis or plasma interface
- c) Large clots
- d) Turbidity or discolouration
- e) Special transfusion requirements are met

7.5 When these checks have been completed, the drug chart should be signed immediately by both checkers, timed and dated, as should both the Blue section on the accompanying form. The first red section should be completed and peeled off, and then placed in the patient's record as indicated below.

Change Notice from Blood Bank: affecting all wards and departments in Derriford Hospital
New label replacing the *Compatibility Form* and the *Luggage type label* currently used with blood products issued from Blood Bank.
The new label will come into use on the 22nd November 2011.

1. The *' Compatibility Form and the 'Luggage' type label are no longer in use.*

2. Printed below is the new label that replaces both the compatibility form and the luggage label. It has three parts to it. One blue section and two red sections and are used as described below.



The **BLUE** section replaces the luggage label and is signed and dated in the same way as the luggage label was **and returned with the used bag of RBC's, Platelets , FFP or Cryo**

This **RED** label replaces the compatibility form and peels away from its backing and is placed in the patient's notes.

This label will be used to in the issue of Batched blood products e.g HAS Anti-D ,IVIG

This will be stuck to the product's box together with the red label above. When batched products are issue only

3. Any queries please contact:

7.6 The blood is now ready to be administered.

7.7 All blood should be administered via an administration set containing a 200 micron filter.

7.8 No other medication may be added to blood or administered through the same cannula. The red cell administration set should be changed after two units, and must be changed if blood of a different group is to be transfused, i.e. homologous blood following the transfusion of emergency O Rh D negative blood.

7.9 If the blood is not set up within 30 minutes of leaving the refrigerator it must be considered unsafe. It should be labelled as "**Dangerous to Patient**" and returned to the blood bank for disposal and an LSW incident report form completed. The transfusion must be completed within four hours of blood leaving the refrigerator.

7.10 If the transfusion cannot start within 30 minutes the unit should be returned to the

blood refrigerator before the 30 minutes is exceeded. The unit of red cells must be signed back into the refrigerator on the refrigerator log form (located on top of the refrigerator), giving a clear indication of the date and time returned.

7.11 An FFP transfusion should be commenced as soon as possible after it is received. If there is any delay in transfusion, FFP should be returned to blood bank immediately. It may be available for re-issue for up to 24 hours.

7.12 A transfusion of platelets should be commenced immediately after it is received. If there is any delay in transfusion, platelets should be returned to blood bank. Platelet packs must **not** be refrigerated. Platelets must be kept in continuous motion (agitation) to prevent clotting within the bag.

7.13 If there are any discrepancies found in the checking procedure, the **blood should not be transfused**. Blood bank must be informed and the unit and the blood transfusion compatibility report form returned to the blood bank. Inform blood bank of the error on 52465 or bleep the Transfusion Practitioner on 604.

7.14 Empty bags must be plugged and will be collected from the blood refrigerators by the blood bank drivers. **Please do not discard**. Sign and date the **blue** section of the form and return with the used bag/product to confirm that the correct patient was transfused.

8 Care and Monitoring of Patients during Transfusion

8.1 The responsibility for monitoring the patient during transfusion normally rests with the registered nurse responsible for the patient's care. An HCA or student nurse may carry out this part of the process under the supervision of the registered nurse who will retain absolute personal accountability for the delegated task.

8.2 Patients should be alerted by the nurse to the importance of reporting immediately any adverse effects.

8.3 Patients receiving a transfusion should be cared for in an area where they can be easily observed.

8.4 The date, start and finish time of each unit should be clearly indicated on the drug chart and the blood issue note.

8.5 The following vital signs should be recorded separately on an Observation Chart immediately prior to and 15 minutes after the start of each unit of blood:

a) Temperature
b) Pulse rate
c) Respiration rate
d) Blood pressure
e) Oxygen saturation level
f) Modified Early Warning score

8.6 These clinical observations must be completed at least at hourly intervals during the transfusion.

8.7 Most severe reaction occurs within 15 minutes from the start of each unit and patients should be closely monitored in this period. Further close monitoring is needed is needed in unconscious patients or those unable to alert staff to problems.

8.8 **If any of these signs occur stop the transfusion immediately:**

a) Patient in distress
b) Loin pain
c) Back ache
d) Rise in temperature
e) Shivering
f) Shortness of breath and feeling of constriction in chest
g) Urticaria
h) Flushing
i) Headaches
j) Rash
k) Pain at or near transfusion site
l) Haemoglobinuria / Haematuria
m) Tachycardia
n) Hypotension

8.9 Unconscious patients and those with communication difficulties require particular attention. Transfusion reactions should be suspected if the patient's condition deteriorates.

8.10 Rationale - monitoring the patient ensures that transfusion reactions can be detected quickly and action taken promptly. The mostly likely time for a transfusion reaction to occur is during the first 15 minutes. Monitoring and documenting the patient's response to transfusion contributes to audit and research.

9 Management of Adverse Reaction to Administrations of Blood or Blood Products

9.1 A severe acute reaction will usually occur within the first 15 minutes of the commencement of blood or blood components. A patient with a severe reaction can deteriorate very quickly with hypotension, respiratory distress, collapse and possible death.

9.2 If a transfusion reaction is suspected:

a) **Stop** the transfusion and summon a doctor immediately.
b) Change administration set and maintain venous access with normal saline.
c) Do and accurately record a set of observations and continue every 15 minutes.
d) Check identity of the patient against the unit of blood.
e) Inform the Blood Bank (52465) and return the affected unit **and administration set** immediately.
f) Inform the Transfusion Practitioner (bleep 604).
g) Assess volume and colour of urine – take a sample.
h) Complete an NHS Plymouth Incident Report Form – copy **must** be sent to

the Transfusion Practitioner.

9.3 **Medical Staff**:

a) See Appendix A – Table of Common Transfusion Reactions
b) Take a sample for repeat cross-match from the opposite arm.
c) Discuss with Blood Bank; the following samples may be needed:
   i) urea and electrolytes (U's and E's)
   ii) Full blood count (FBC)
   iii) Blood cultures
   iv) Clotting screen

10 Reporting an Adverse Reaction to Administrations of Blood or Blood Products

10.1 It should be noted that there is now a legal requirement to report severe transfusion reactions and events to the Medicines and Healthcare Products Regulatory Agency under "The Blood Safety and Quality Regulations 2005 No 50".

10.2 **Process for Reporting Adverse Events – Near Miss and Clinical Incidents**

a) Verbally notify incident immediately to line/senior manager.
b) Record event and action taken in patient's notes – accuracy is vital (see 10.4 below).
c) Complete an LSW Incident Report Form – include any witness statements, in line with the Incident Reporting Policy, send a **copy** to the Transfusion Practitioner, with the **original** being sent to the Risk Management Team and green copy held on the patient's notes, **and**
d) Complete a Serious Untoward Incident Form (Appendix A of the Serious Untoward Incident Policy) and send it to the Risk Management Team (see 10.4 below).

10.3 SHOT/SABRE reporting on behalf of LSW is undertaken by the blood bank / Plymouth Hospitals Transfusion Committee (inter-Trust agreement) and must be completed as soon as possible once incident reported, follow up and actions documented and reports made available to the Transfusion Committee.

10.4 The following blood transfusion related events should trigger a SHOT Incident Report.

a) Incorrect blood component transfused (IBCT): this should be investigated as a Never Event
b) Anti-D administration
c) Acute non-haemolytic transfusion reaction (ATR)
d) Haemolytic transfusion reaction: acute and delayed (HTR)
e) Transfusion associated graft-versus-host-disease (TA-GVHD)
f) Transfusion-related acute lung injury (TRALI)
g) Post-transfusion purpura (PTP)
h) Transfusion transmitted infection (TTI)
i) Transfusion associated circulatory overload
j) Near miss events

Table of Common Transfusion Reactions

Type of Reaction	Why	Symptoms	Action
Acute intra-vascular haemolysis	ABO incompatibility red cell antibodies	Shock, acute renal failure, disseminated intra-vascular coagulopathy Fever above 38°C	ABC resuscitation. Check patient ID. Re-cross match antiglobulin test
Fevers	Interleukins HLA antibodies	Temp 1.5°C above normal baseline	Slow transfusion, give paracetamol 1g, hydrocortisone 100mg and chlorpheniramine 10m IV (adult)
Anaphylaxis		Urticaria, itching, cardiovascular collapse	Chlorpheniramine 10mg IV (adult) Adrenaline protocol
Viral contamination	From donated blood, risk 1:900,000 for Hep B. HIV, Hep A & C, CJD. CMV		All plasma coagulation factor patients vaccinated against HBV
TRALI (transfusion related lung injury)	Donor plasma containing anti-bodies	As per Acute Respiratory Distress Syndrome	→ ITU
Fluid overload		Acute cardiac failure SOB, dyspnoea. Pulmonary Oedema	Transfuse slowly and give diuretics. Stop blood. Give oxygen
Delayed transfusion reactions	Haemolytic anti-bodies to foreign blood groups	Anaemia, fever and jaundice	Antiglobulin identification test
Alloimmunisation	Antibodies to white cell and platelet antigens	Febrile reactions 2-14 days post transfusion. Post transfusion purpura.	
Bacterial contamination		Profound collapse	Antibiotics