

**Blood Transfusion Policy and Procedures**

<b>Category:</b>	Policy and Procedures
<b>Summary:</b>	A blood transfusion is a potentially hazardous procedure. Stringent procedures must be followed to ensure that the correct blood is given and that any adverse reactions are dealt with promptly and efficiently. A transfusion should only be given when the clinical benefits to the patient outweigh the potential risks. Patients' consent must be sought wherever possible following discussion about potential risks, benefits and possible alternatives.
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<b>Related Documents:</b>	Statutory and Mandatory Training Policy Patient Identification Policy Incident Reporting and Investigation Policy Injectables Policy Local Guidelines for Blood use in specialities and/or special circumstances Guidelines for the Treatment of Jehovah's Witnesses Guidelines for the Treatment Patients who do not wish to receive Blood or Blood Products (not Jehovah's Witnesses)
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**Lead Director:** Medical Director

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## Introduction

1. A blood transfusion is a potentially hazardous procedure which should only be given when the clinical benefits to the patient outweigh the potential risks, the most important of these being acute haemolytic reactions and transfusion-transmitted infections. Stringent procedures must be followed to ensure that the correct blood is given and that any adverse reactions are dealt with promptly and efficiently.
2. This policy on blood transfusion is supported by procedures on ordering, prescribing, administration of blood and the management of any complications. Procedures for the documentation of transfusions in nursing, medical and laboratory records are also provided, including the procedure for the reporting of any adverse incidents occurring in relation to transfusion.

## Policy Statement

3. It is the policy of the Trust that blood transfusions must be conducted according to procedures annexed to this policy and must only be conducted by staff who are trained and competent in the procedures.

## Scope

4. This policy applies to all areas of the Trust, and all employees of the Trust, including individuals employed by a third party, by external contractors, as voluntary workers, as students, as locums or as agency staff.

## Aim

5. The purpose of this policy is to: ensure that the correct blood is given and that any adverse reactions are dealt with promptly and efficiently. All staff involved in the process must be appropriately trained and aware of their responsibilities in relation to handling blood components and performing transfusion related tasks within their own competence and in accordance with procedures which are in place to reduce the risks to patients.

## Definitions

6. See below, link to Glossary of Handbook of Transfusion Medicine for clinical terms used (pp. 73-76):  
[http://www.transfusionguidelines.org.uk/docs/pdfs/htm\\_edition-4\\_all-pages.pdf](http://www.transfusionguidelines.org.uk/docs/pdfs/htm_edition-4_all-pages.pdf)
7. **Serious Hazards of Transfusion scheme (SHoT)** is the United Kingdom's independent, professionally- led haemovigilance scheme.
8. **Medicines and Healthcare products Regulatory Authority (MHRA)** is the government agency which is responsible for ensuring that medicines and medical devices work, and are acceptably safe.
9. The term **Blood Components** refers to units, paedipacks or pooled units of:
  - 9.1. Red cells
  - 9.2. Platelets
  - 9.3. Fresh Frozen Plasma
  - 9.4. Cryoprecipitate
  - 9.5. Granulocytes

10. Electronic systems:

- 10.1. **BloodTrack Tx** – (formerly known as ‘SafeTx’) refers to the software in use for prompting best practice and scanning bar codes on wristbands and blood component labels for the purpose of tracking blood components, recording transfusion-related activity and increasing the safety of patient identification throughout the transfusion process.
- 10.2. **BloodTrack ward enquiry** – software which enables clinical staff to view transfusion-related records, such as sample validity and blood availability for a patient.
- 10.3. **Electronic remote issue / remote issue** – the process whereby a patient who is eligible for electronic issue of red cells (this usually applies to patients who have no special requirements, have a negative antibody screen and a valid sample) is allocated and issued blood at the point of collection from a specially designed blood fridge in a clinical area.

11. Abbreviations Used:

- 11.1. BMS – Biomedical Scientist
- 11.2. BSACT – Blood Safety and Conservation Team
- 11.3. CMV – Cytomegalovirus
- 11.4. EPR – Electronic Patient Record
- 11.5. MRN – Medical Record Number
- 11.6. PDA – Personal Digital Assistant (refers to the handheld computers in use for scanning bar codes and prompting best practice using the BloodTrack Tx system)

## Responsibilities

12. The **Chief Executive** has overall responsibility for ensuring that there is a safe system for transfusion practice within the organisation.
13. The **Medical Director** has delegated authority for transfusion practice within the Trust.
14. The **Director of Clinical Services**, working with the Trust’s Blood Transfusion Committee, is responsible for ensuring that health care professionals and ancillary staff are informed of and follow the Trust policy.
15. The **Blood Safety and Conservation Team (BSACT)** is responsible for the implementation of the Blood Transfusion Committee’s objectives of promoting safe and appropriate transfusion practice, and providing training to all staff involved in the process of blood transfusion
16. The **Blood Transfusion Laboratories** are responsible for:
  - 16.1. Compatibility testing and issuing of blood products
  - 16.2. The ordering and management of blood product and component stocks including liaison with NHS Blood and Transplant
  - 16.3. Investigating adverse events and reporting them to Clinical Risk, the Serious Hazards of Transfusion scheme and the Medicines and Healthcare Products Regulatory Authority.
  - 16.4. Monitoring requests for products and usage
  - 16.5. Training and competence of staff involved in laboratory processes
  - 16.6. Regulatory compliance and the maintenance of a quality management system including the traceability of blood components

17. **Divisional Directors** are responsible for:

- 17.1. Ensuring that policies on patient identification are in place, implemented and monitored throughout the blood transfusion process from prescription, sampling, laboratory testing and issue of blood to collection and administration of blood transfusion
- 17.2. Ensuring that staff who are involved in the blood transfusion process are competent to follow these procedures (See Appendix 1 Blood transfusion training strategy and framework for competency assessment)
- 17.3. Ensuring that written information is made available to patients about the risks, benefits and potential alternatives to blood transfusion and that consent is documented
- 17.4. Ensuring that staff have the training and equipment to provide barcoded wristbands for all patients according to Trust policies
- 17.5. Ensuring that incidents are reported through the Trust Incident Reporting procedure, in line with the Incident Reporting and investigation Policy, and ensuring there is resultant organisational learning through the divisional structure and more widely across the trust.

18. **Matrons** are responsible for:

- 18.1. Working with **Ward Managers** to make it possible for staff who administer blood transfusions and take blood samples, to be trained and updated to the standards set out in Appendix 1 and to perform their duties competently (in accordance with the procedures set out in this document).
- 18.2. Implementing recommended actions arising from investigations of incidents and audits conducted to monitor compliance with this policy.

19. **Ward managers** are responsible for supplying details of transfusions which do not have an electronic record (via the use of BloodTrack Tx) and the reasons for non-compliance in their clinical area.

20. **Medical staff** are responsible for prescribing blood, blood components or blood products appropriate to the needs of the patient, and obtaining and documenting consent

21. **Medical and nursing staff** are responsible for

- 21.1. Requesting blood, clearly indicating the reason for transfusion and communicating the degree of urgency to the Blood Transfusion Laboratory
- 21.2. Providing full information on transfusion requests
- 21.3. Explaining to patients the risks, benefits and possible alternatives to blood transfusion and providing written information where appropriate
- 21.4. Requesting collection of blood including arranging urgent transportation if required
- 21.5. Obtaining red cells for transfusion via the electronic remote issue system, ensuring that the right blood unit is correctly labelled for the intended patient and that blood for only one patient is collected at each visit
- 21.6. Carrying out pre transfusion checks to ensure the right blood is transfused
- 21.7. Monitoring the patient during transfusion
- 21.8. Inclusion of medical staff in the management of the patient if a transfusion reaction should occur

- 21.9. Reporting of transfusion reactions or other incidents to the Blood Transfusion Laboratory
  - 21.10. Documentation of indications for transfusion, number of units administered and observations recorded in patients' medical records
  - 21.11. Keeping electronic equipment, such as PDAs and mobile printers, charged and in good working order, reporting faults immediately to the BSAC team (ext. 20444 – answerphone out of hours)
22. **Phlebotomists** and others taking blood samples are responsible for
- 22.1. Checking the identity of a patient before taking any blood samples
  - 22.2. Checking information on the request is complete
  - 22.3. Using safe techniques for obtaining blood
  - 22.4. Correct labelling of blood sample tubes in accordance with Trust procedures
  - 22.5. Reporting incidents.
23. **Porters** are responsible for
- 23.1. Collecting blood components using a pick up slip obtained from the clinical area and scanning the bar codes on pick up slips, blood components and compatibility labels when prompted to verify that the blood component is correct for the intended recipient
  - 23.2. Only collecting blood components for one patient at a time
  - 23.3. Informing the Hospital Transfusion laboratory immediately of any discrepancies between a pick up slip and compatibility label attached to a blood component removed from a blood fridge or platelet incubator
  - 23.4. Electronically recording the hand-over of the blood components to clinical staff by using the 'arrivals' function on the BloodTrack Tx PDA (except during an emergency, such as major haemorrhage)
  - 23.5. Returning blood components at the request of a clinical area or the Blood Transfusion Laboratory.
24. **All staff** involved in transfusion are responsible for maintaining and updating their training, knowledge, competence and practice.
25. The **Hospital Transfusion Committee** has delegated responsibility, on behalf of the Clinical Risk Management Committee, to oversee, develop and implement the Trust's policies and procedures related to blood transfusion.
26. The **Clinical Risk Management Committee** is also responsible for identifying and managing risks associated with transfusion.

## Blood Transfusion Procedures

### Introduction

27. All blood components are logged and recorded (electronically where possible) throughout the process of transfusion to provide 'vein to vein' traceability ensuring that each blood component is handled and stored correctly, given to the right patient for the right reasons and that records are retrievable in compliance with Blood Safety and Quality Regulations (2005).

### 1. Consent

28. The decision to transfuse and consent to transfusion should be made in advance with the patient, parent or carer as appropriate before any planned transfusion. Patients receiving a transfusion should be informed of the indication for the transfusion as well as the potential risks, benefits and alternatives. A record of this discussion should be documented in the patient's health records, which does not require the signature of the patient. In an emergency, this information should be provided after the transfusion.

29. Patient information leaflets are available to assist clinical staff in obtaining patient consent to transfusion. They can be obtained from the Blood Transfusion laboratories at the John Radcliffe and Horton Hospitals or from the Blood Transfusion section on the clinical intranet or via the link:

[http://hospital.blood.co.uk/library/patient\\_information\\_leaflets/leaflets/](http://hospital.blood.co.uk/library/patient_information_leaflets/leaflets/)

30. If the patient or parent/guardian refuses to consent to a transfusion, the matter should be referred firstly to a senior doctor, Registrar or above, within that patient's primary treatment team. For further information, refer to the *Policy on Consent to Treatment or Investigation* and the *Guidelines for the Treatment of Jehovah's Witnesses* and *Guidelines for the Treatment Patients who do not wish to receive Blood or Blood Products*. Where consent is not possible, for example in emergency situations, where the patient has no capacity to consent, it is a matter of clinical judgement of what is in the patient's best interests and full documentation of this decision must be made in the patient record and using Consent Form 4. Further advice can be obtained from Legal Services.

### 2. Identification of the patient

31. Accurate identification of patients at all stages of the blood transfusion process is essential.

32. All patients having a sample taken for a blood transfusion or receiving any blood product must be identified with an OUH wristband which is compliant with the Trust *Patient Identification Policy*. Positive patient identification must be used to ensure the correct wristband is attached to the patient prior to blood sampling or blood administration. In certain circumstances (for instance in pre-operative assessment) it is acceptable for the patient to simply hold/be in possession of the wristband. It is NOT acceptable for the wristband to be other than on the patient (such as in/on patient record folder) when the bar code is scanned.

33. If the patient is unconscious and unknown, it is acceptable to use "Unknown male/female" in place of the surname and forename in combination with the Medical record number, which is assigned to the patient on arrival. DO NOT use any other substitute details for



example 'John Doe', as these can be mistaken for real patient details and can cause confusion.

### **3. Prescribing blood**

34. Blood may only be transfused on prescription by a doctor.
35. Blood transfusions should ordinarily be prescribed using the blood transfusion section of the Trust prescription folder.
36. The reason for blood transfusion must be included in all requests and documented in the patient's medical records.
37. Some patients require special blood components e.g. gamma irradiated (some examples are shown in Appendix 3). Special requirements should be included on the prescription to allow the member of staff carrying out the final bedside identification checks to ensure that the blood component to be transfused complies with any special requirements.

### **4. Taking blood samples and requesting pre-transfusion compatibility testing**

38. A sample is required prior to a transfusion to ensure compatibility of blood groups between donor and recipient and, (for red cell transfusion) to screen patients for atypical red cell antibodies which can potentially cause reactions
39. To determine whether a new sample is required for crossmatching prior to a transfusion, the BloodTrack ward enquiry software, available on PCs in all clinical areas, can be used by typing in the patient's MRN
40. Blood samples for transfusion may be taken by clinical staff who have been trained in the procedure and are competent in the use of BloodTrack Tx for sample labelling. Particular attention must be paid to the following:
  - 40.1. Transfusion samples must be labelled using BloodTrack Tx
  - 40.2. Positive patient identification based on asking the patient (where possible) to state their surname, first name and date of birth and checking these details match with the same details on the patient's wristband and the request.
  - 40.3. The wristband used for bar code scanning must be attached to (or in the possession of) the patient at the moment the blood sample is taken and when it is verbally confirmed and checked against the request
41. The staff member who bleeds the patient is responsible for correctly labelling the blood sample, using BloodTrack Tx. Under no circumstances must any member of staff label a sample on behalf of another staff member or lend his/her ID badge to someone else.
42. Only one patient MUST be bled at a time and the sample tube must be labelled immediately after the blood has been added. Sample tubes MUST NEVER be pre-labelled or labelled after the blood sample has left the patient's side.
43. The sample tube must be labelled with the following details, all of which automatically appear on a BloodTrack Tx label when correctly used:
  - 43.1. Medical record number
  - 43.2. Surname
  - 43.3. First name

- 43.4. Date of birth
  - 43.5. Sex
  - 43.6. Ward/Clinic
  - 43.7. Date and time sample was taken
  - 43.8. Identification of the person taking the blood
44. If the patient is unconscious and unknown, it is acceptable to use “Unknown male/female” in place of the surname and forename in combination with the Medical record number.

## 5. Requesting blood

45. Transfusions of all blood components must be requested from the Blood Transfusion laboratory on an individual named patient basis. Requests for blood will normally be made by medical staff, but it may be appropriate for non-medical staff to request blood in some circumstances. However only medical staff may prescribe blood, blood components or blood products.
46. All requests must contain the following details:
- Medical record number (MRN)
  - Surname
  - First name (initials not sufficient)
  - Sex
  - Date of birth (age not sufficient)
  - Specific location of patient (Hospital and Ward/clinic) and where blood required
  - Patient’s diagnosis
  - Reason for transfusion
  - Date blood required
  - Number of units, product type and special requirements
  - Date of request
  - Identification of the member of staff making the request
47. If the patient is unconscious and unknown, MRN and sex are the minimum requirements. It is acceptable to use “Unknown male/female” in place of the surname and forename. DO NOT use any other substitute details for example ‘John Doe’, as these can be mistaken for real patient details and cause confusion.
48. Blood transfusion requests must provide adequate clinical information including the patient’s diagnosis and any relevant procedure. This information is essential to enable Blood Transfusion Laboratory to provide the correct quantity and type of blood and to audit blood usage. The Blood Transfusion laboratory will not process requests for blood with inadequate clinical information.

### Urgent and out of hours requests

49. The Blood Transfusion Laboratory should be informed by telephone (bleep out of hours), this is essential in the event of a major or life-threatening haemorrhage.
50. Requests must be completed and samples labelled in the same way as for non-urgent samples.

51. Inform the Blood Transfusion Laboratory if there is a possibility that the laboratory might already have a valid blood sample from the patient (details of a patient's sample validity is obtainable via ward PCs using BloodTrack ward enquiry software. Alternatively, the patient may have a BloodTrack Tx sticker indicating the time and date of the sample in the history sheet). Use of a sample which is already in the laboratory will save time.
52. Contact the Blood Transfusion Laboratory (**x 20339 - John Radcliffe; x29236 - Horton**) or if it is 'out-of-hours' (any time other than 8.30 am–5.00 pm Monday to Friday) contact the on-call Biomedical Scientist (**bleep 1719—John Radcliffe, Churchill or NOC; via the hospital switchboard—Horton**).
53. You will be asked to provide the following information (the request will not be processed without this information):
  - 53.1. The identity of the person making the request
  - 53.2. The patient's surname, first name, gender and medical record number; for unconscious patients, gender and medical record number
  - 53.3. Current location of patient (If the patient is about to be transferred to a different location, provide the location of where the blood will be needed)
  - 53.4. The point of contact (bleep or telephone extension number) for the laboratory for queries and to inform when the blood is ready for collection
  - 53.5. The number and type of blood or blood components required, including any special requirements
  - 53.6. The reason for the request
  - 53.7. The urgency of the requirement, which should be one of the following options:

**Blood required immediately (no valid sample available in the laboratory):**

54. 'Emergency stock' blood should be used. Units of O RhD negative blood are kept in the blood fridges in: JR1 Delivery Suite, Churchill porters lodge, Churchill transfusion laboratory, Cardio-Thoracic Critical Care Unit, JR2 West Wing and NOC Theatres and Pathology at the Horton.
  - 54.1. Units of O RhD positive blood are also kept in delivery suite and West Wing theatres at the John Radcliffe and the Churchill porters lodge, and must be used in preference to O RhD negative blood if the patient is known to be RhD positive. It is acceptable to give O RhD positive blood to males and females with an unknown blood group over the age of 60 years.
  - 54.2. Before 'emergency stock' blood is used, the Blood Transfusion laboratory must be informed and provided with the identity of the patient. After the incident, it is essential that the laboratory is notified which units were used by completing the patient's details on the labels attached to the units of blood and returning them to the Blood Transfusion Laboratory.
  - 54.3. It is essential that a blood sample is collected for blood grouping and crossmatching before 'emergency stock' blood is transfused. Ensure this sample is transported to the laboratory immediately.
  - 54.4. At the Nuffield Orthopaedic Hospital (at all times) and at The Churchill Hospital when the Churchill laboratory is shut (20:00 - 08:00 weekdays and after 13:00 weekends) it may be necessary to request more 'emergency stock' blood, particularly for patients with rapid blood loss.

**For blood required in 15–60 minutes from receipt of sample in the laboratory**

55. The Blood Transfusion laboratory will provide uncrossmatched blood of the same ABO and RhD group as the patient.

**For blood required in 60 minutes or longer from receipt of sample in the laboratory**

56. The Blood Transfusion laboratory will provide fully crossmatched blood.

**Important points:**

57. Provide the laboratory with the time blood is required so that the request may be prioritised. Failure to alert the laboratory that an urgent sample is being sent will delay the availability of crossmatched blood.

58. The Blood Transfusion laboratory will phone the clinical area to confirm the receipt of the sample.

59. The Blood Transfusion laboratory or on-call BMS will inform the relevant clinical area when the blood is ready for collection for all urgent requests.

60. Each transfusion must be clearly documented in the medical records including the date and time of transfusion, the clinical indication for transfusion, the type of component or product used, and any transfusion reaction and its management.

**6. Preparation of the patient and arranging blood collection**

61. An appropriate-sized cannula should be inserted in accordance with the *Injectables Policy*. The connection of the cannula should be visible and secured. The procedure for setting up an intravenous infusion should be followed and the usual care for intravenous lines should be applied.

62. Details of red cell units currently available for the patient can be found by typing the patient's MRN into the BloodTrack ward enquiry software, available on PCs in all clinical areas.

63. In the majority of adult cases, a gravity blood giving set is required. Infusion pumps or blood warmers may be required for some transfusions. They must be used according to the manufacturer's instructions and only blood giving sets approved for use with the pump must be used.

64. Take and record baseline observations of temperature, pulse, respiration and blood pressure prior to the transfusion.

65. In order to minimise the risk of wasting blood components due to breaching time limits, ensure that the patient is ready for the transfusion to go ahead without delays (such as requiring new venous access or shift handover) prior to contacting the porters.

66. Contact the porters and ask them to collect a blood component, stating the degree of urgency:

- Immediately
- Within 15 minutes
- Within one hour

67. Generate a pick up slip using the BloodTrack Tx system for collection by the porter.

## 7. Collecting blood components to be transfused

68. Staff may only collect blood components if they have been trained to do so (access to the blood fridge is denied to staff who have not been trained to collect blood via the BloodTrack system, which controls the fridge door lock).
69. The collection of blood must be carried out using the BloodTrack system, which requires the use of a bar coded pick up slip generated using the BloodTrack Tx 'pick up' function.
70. General principles include:
  - 70.1. When collecting the blood from a blood refrigerator, the patient details must be carefully checked visually in addition to bar code scanning between the compatibility label, the blood component and the pick up slip to ensure that details are matched identically.
  - 70.2. Blood components must be collected for one patient at a time in all circumstances.
  - 70.3. One unit of red cells should be collected at a time unless extremely rapid transfusion of large quantities of blood is needed.
  - 70.4. The blood should be delivered to the relevant clinical area without delay. The clinical staff accepting the blood must check that the blood received is for the correct patient. The time of removal of the blood from the blood fridge is recorded in BloodTrack records.
  - 70.5. Clinical staff must scan the blood component on arrival to a clinical area using the BloodTrack Tx 'arrivals' function.
  - 70.6. Blood not used within half an hour on the ward should be returned to the Blood Transfusion Laboratory if there is no prospect of it being transfused within 4 hours.
  - 70.7. 'Remote issue' of blood is the electronic system to allocate and issue blood components to suitable patients at blood fridges remote from a Blood Transfusion Laboratory (see Appendix 6). This is only available to those staff who have been trained in the process.
  - 70.8. If more than one unit of red cells are collected for a patient at one visit, or if blood is being transported between hospitals, they should be transported in an approved blood transport box with the correct use of cool packs, as this will extend the time allowed out of the fridge prior to transfusion (usually to 4 hours). This is usually only available from issue fridges located next to the Blood Transfusion laboratories.

### Acceptance of blood products from a different hospital

71. Blood arriving from another hospital should ordinarily be returned to the Blood Transfusion Laboratory in the original transportation box (unopened) unless the patient is in need of immediate transfusion
72. If the blood is to be used immediately, the Blood Transfusion Laboratory must be informed of its arrival, and provided with details of the blood component(s) and the patient. Any paperwork included with the products must be completed and sent to the laboratory. The laboratory will ensure the paperwork is returned to the sending hospital.
  - 72.1. The patient must be issued with a OUH wristband and MRN and a new sample (taken prior to the commencement of the transfusion if possible) will be required for crossmatching

73. Blood arriving at the NOC may be stored in the blood fridge providing it is scanned into the fridge using the BloodTrack system, and that it has not been out of temperature control for longer than the designated time.
74. If more blood is required for the patient, please contact the Blood Transfusion Laboratory and send a sample for grouping and crossmatching. (Patients being transferred from the NOC will not usually require a new sample, please check with the laboratory.)
75. Units which arrive in the Trust which have been incorrectly stored or transported without a validated cool box must be marked as unsuitable for transfusion and returned to the Blood Transfusion Laboratory for disposal.

## **8. Identifying the patient immediately prior to commencing transfusion (bedside check)**

76. Any staff undertaking this procedure must be competent in the administration of intravenous drugs, have been trained in safe transfusion practice and have passed the required eLearning modules in accordance with the mandatory training and competence framework for blood transfusion (appendix 1).
77. BloodTrack Tx must be used for checking every blood component immediately prior to the transfusion ('begin transfusion' or 'emergency transfusion' function) as it supports and promotes the correct procedure, which includes key visual and verbal checks of patient identification and the scanning of bar codes to ensure an exact match between blood compatibility label and patient.
78. Transfusions must not take place without a wristband attached and verified as correct for the patient which matches identically with the patient identification on the blood compatibility label.
79. The 'begin transfusion' (bedside) check must always be performed at the patient's side immediately prior to commencement of the transfusion. Once the check has been successfully completed, the blood component should be used to prime the blood giving set (if necessary) at the bedside and the transfusion commenced without delay. If the blood component leaves the patient's side after the bedside check, or if another member of staff performed the check but did not commence the transfusion, a repeat 'begin transfusion' (bedside) check will be required immediately prior to commencement of the transfusion.
80. One member of staff, identified by scanning his/her ID badge bar code, is accountable for carrying out an identity check of the patient and the blood component at the patient's bedside. The person must be a healthcare practitioner who is currently registered with the Nursing and Midwifery Council (NMC) the General Medical Council (GMC) or the Health Professions Council (HPC).
81. Any discrepancy in the identity checks of the patient and the blood component must be reported to the Blood Transfusion laboratory immediately and the blood must not be transfused until the discrepancy has been resolved, either by re-taking a blood sample for crossmatching or by sending the blood back to the Blood Transfusion Laboratory to correct a mistake, depending on the cause of the mismatch. The incident must be reported in line with the *Incident Reporting and Investigation Policy*.
  - 81.1. If the need for blood transfusion is very urgent (blood needed within 5 minutes) and no more crossmatched blood is available, use of emergency stocks may be considered in preference to the mislabelled blood.

82. Positively identify the patient by asking his/her surname, first name and date of birth (whenever possible) and make sure that these patient identification details are the same as on the patient's wristband. It is essential that any patient having a blood transfusion has a wristband attached. If the wristband is removed, for example to take a blood test, the person removing it or finding that it has been removed is responsible for ensuring that a correct replacement wristband is attached immediately.
83. For all patients, including unconscious patients, check that the following details (surname, first name, date of birth, medical record number and gender) are the same on:
  - 83.1. The patient's wristband
  - 83.2. The compatibility label attached to the blood component
  - 83.3. The prescription and / or medical records
84. Check that the blood group and unit number on the blood bag are identical to those on the compatibility label attached to the blood bag (see Appendix 4 which provides a photograph of a red cell unit, indicating the labels attached by the NHS Blood and Transplant and the Blood Transfusion laboratory).
85. Also check that:
  - 85.1. The blood has not passed its expiry date.
  - 85.2. The blood bag shows no sign of damage and that there is no evidence of leakage
  - 85.3. The blood component complies with any special requirements. If a patient has special requirements, such as irradiated blood components, the requirement must be noted on the patient's medical records and on the prescription.
  - 85.4. The prescription is updated with the time and date of administration
86. The previous seven steps are completed and verified as part of the 'begin transfusion' process in BloodTrack Tx, which produces an electronic record (which is held on a secure database for 30 years) and a sticky label at the bedside with details of the bedside check, which should be placed on a history sheet in the patient's medical record.
87. Any transfusions taking place without the BloodTrack Tx begin transfusion checks must be fully documented, including blood unit number, recipient details and reasons for non-compliance, in the patient's health record and in response to follow-up documents which are sent in retrospect to ward managers in these circumstances.

## 9. How Transfusions are Administered

### Starting the transfusion

88. Before starting the transfusion, the patient must be positively identified in accordance with the processes set out in procedure 8. Transfusions must not take place without a wristband attached and verified as correct for the patient which matches identically with the patient identification on the blood compatibility label.
89. Blood for more than one patient awaiting transfusion, for example in a treatment room or at the nurses' station, is extremely hazardous, as one of them may be ABO incompatible with your patient. This must be avoided by arranging for collection and commencement of the transfusion of blood components one patient at a time.
90. The practitioner must wash his/her hands before starting the transfusion and utilise a no-touch technique for the connection of the transfusion. Disposable, non-sterile gloves should be worn.
91. All blood components require the use of standard blood giving sets.
92. Start the transfusion as soon as possible after the blood component's arrival in the clinical area. If a delay in starting the transfusion is likely, the blood should immediately be returned to the Blood Transfusion Laboratory refrigerator (within 30 minutes of removal) until just prior to the transfusion.
93. The transfusion of each unit of red cells should normally be completed within 4 hours of removal of the blood from the Blood Transfusion Laboratory refrigerator (for other blood components, see table below). Blood components must never be stored in drug or domestic refrigerators.
94. If a unit of red cells has been out of the refrigerator for more than half an hour and there is no prospect of it being transfused, it must be returned to the Blood Transfusion laboratory, explaining that it has been un-refrigerated for more than half an hour.
95. Commence the transfusion adjusting the regulation clamp (or pump settings) to ensure the prescribed rate of blood flow.
96. Medication must never be added to a unit of blood.

### Monitoring and Care of Patients Receiving Transfusion

97. The patient should be asked to report any potential adverse effects including shivering, rashes, flushing, shortness of breath or pain in the extremities or loins.
98. Schedule of observations:
  - 98.1. Record temperature, pulse, respiration rate and blood pressure before the start of each unit as part of the BloodTrack Tx 'begin transfusion' (bedside) check
  - 98.2. Patients who are not under continual monitoring or observation must have their observations recorded using the 'vital signs' function in BloodTrack Tx. This will prompt the user to enter further details if a reaction is suspected. The first such observation should be recorded at 15 minutes and must be within 30 minutes after the begin transfusion
  - 98.3. Record temperature, pulse, respiration rate and blood pressure at the end of each unit.



99. Local guidelines should be established for further observations. The patient's regular observations must be continued.
100. Note that signs of a severe transfusion reaction are most likely to become apparent during the first half hour of transfusion of each component.

### **Changing the giving set**

101. In order to prevent bacterial growth, change the giving set if the transfusion episode is to run for more than 12 hours or if there is an interruption to the closed system or if there is a delay between the end of one unit and the start of another.

### **Transfusion reactions**

102. If a transfusion reaction is suspected, contact a doctor immediately, and record temperature, pulse, respiration rate and blood pressure. Further management depends on the type and severity of the reaction.
  - 102.1. A comprehensive list of non-infectious transfusion reactions can be found via this link: <http://www.ihn-org.com/wp-content/uploads/2011/06/ISBT-definitions-for-non-infectious-transfusion-reactions.pdf>
  - 102.2. A guide to the management of transfusion reactions is via this link: <http://www.transfusionguidelines.org.uk/Index.aspx?Publication=HTM&Section=9&pageid=1143>
103. If a severe reaction is suspected:
  - 103.1. Stop the transfusion and seek urgent medical advice
  - 103.2. Change the giving set and maintain venous access
  - 103.3. The reaction MUST be reported to the Blood Transfusion Laboratory. The laboratory will request the return of the implicated unit and further blood samples from the patient
  - 103.4. Record the volume and colour of any urine passed. If there are signs of haemolysis the urine should be saved for analysis
  - 103.5. Observe the patient until haemodynamically stable, recording vital signs as per the trust Track and Trigger protocol.

### **Documenting the transfusion**

104. Each transfusion must be documented in the patient's medical records by the medical team responsible for the patient including the following information:
  - Consent to the transfusion
  - Date and time of transfusion
  - Clinical indication for the transfusion
  - Type of blood component and the number of units transfused
  - The unit numbers of each blood component transfused
  - Transfusion reactions and their management
105. It is good practice for the assessment of the effectiveness of the transfusion to be documented in the health record, including clinical effectiveness e.g. arrest of haemorrhage due to a platelet transfusion in a bleeding thrombocytopenic patient or relief of symptoms of anaemia after a red cell transfusion, or improvement in laboratory tests e.g. increase in post-transfusion haemoglobin, coagulation tests or platelet count.

## 10. Special considerations

### Platelet concentrates

- 106. Platelet concentrates MUST not be refrigerated.
- 107. Standard blood giving sets are used.
  - 107.1. Platelets should not be transfused through giving sets which have previously been used for a red cell transfusion.
- 108. The transfusion of platelets should be completed within half an hour.
- 109. The standard adult dose is 1 adult unit.

### Fresh frozen plasma (FFP) / Cryoprecipitate

- 110. Thawed products should normally be administered as soon as possible to avoid loss of activity of coagulation factors.
  - 110.1. Any unused units of FFP or Cryoprecipitate must be returned to the Blood Transfusion Laboratory
- 111. Standard blood giving sets are used.
- 112. Observations during administration of FFP/cryoprecipitate should include pulse, blood pressure and temperature before the transfusion. If a reaction is suspected or has occurred, additional observations should be carried out.
- 113. FFP is available in neonatal and adult sized units. The standard dose for FFP is 15mls/kg of body weight. For an 80kg adult this equates to 4 adult units.
- 114. Cryoprecipitate is available as a pooled product containing the equivalent of 5 standard donations. A standard adult dose is 2 pooled products (10 units).

## Reporting Incidents

- 115. Any unexpected event that has an actual or potential short-term or long-term detrimental effect on a patient must be reported according to the Trust's *Incident Reporting and Investigation Policy* and to the Blood Transfusion laboratory.
- 116. Incident reporting should include 'near miss' episodes involving procedural errors which were detected in time to prevent a serious complication of blood transfusion, for example taking the blood sample for compatibility testing from the wrong patient or labelling the blood sample with another patient's details.

### Root cause analysis

- 117. The Blood Safety and Conservation Team works with clinical areas to establish 'root causes' of incidents where there is potential for recurrence or adverse outcomes for patients or if there is an opportunity to address process or system faults. The root cause analysis approach allows for a wide range of issues and contributory factors to be taken into consideration in an objective framework, which subsequently informs the clinical areas of the relevant learning points and actions necessary to improve safety. Active participation of clinical areas in this process produces the best results.

## Risk, audit and assessment

- 118. It is good practice for each clinical area to audit their own performance in compliance with these procedures. Templates for self-assessment can be provided by the Blood Safety and Conservation Team.

119. Regular (quarterly) reports on compliance with the training of staff (e.g. ELearning) and use of BloodTrack Tx to demonstrate competent practice are sent to Matrons and Senior nursing staff with comparative data as an aid to Ward Managers and Matrons in determining what further action is required.
120. In addition to local audit, a regular series of 'live audits' involving small sample sizes in each clinical area is planned in order to monitor the fundamental principles of safe transfusion practice, including the use of wristbands attached to patients. The Hospital Transfusion Committee supports an audit schedule, which includes participation in national comparative audits of transfusion practice and blood use in specialities in relation to their own guidelines for appropriate use and the use of alternatives such as cell salvage and iron therapies.

## **Training**

121. Training required to fulfil this policy will be provided in accordance with the Trust's Training Needs Analysis. Management and monitoring of training will be in accordance with the *Statutory and Mandatory Training Policy*. This information can be accessed via the Learning and Development pages on the Trust intranet.

## **How the organisation assesses the competency of all staff involved in the transfusion process**

122. The Blood Safety and Conservation Team continually monitor safe practice through the electronic transfusion management system and the competence of each individual who administers transfusions is formally assessed at least once every three years (See Appendix 1), in accordance with the Statutory and Mandatory Training Policy.

## Monitoring Compliance:

123. All Directorates and Clinical Units should ensure that they undertake audits of this policy (or the accompanying procedures) as part of their annual audit programme (see Appendix 2).

124. Compliance with the document will be monitored in the following ways:

Aspect of compliance or effectiveness being monitored	Monitoring method	Responsibility for monitoring (job title)	Frequency of monitoring	Group or Committee that will review the findings and monitor completion of any resulting action plan
How blood samples are requested for pre-transfusion compatibility testing	Blood transfusion laboratory data, audits	Blood Transfusion Laboratory Manager	At least once every three years	Hospital Transfusion Committee
How transfusions are administered, including patient identification	Audit of the process using the BloodTrack Tx software Live audits of positive patient identification at the bedside are conducted	Manager, Blood Safety and Conservation Team	On going feedback provided.  Formal reports provided at least once every three years	Hospital Transfusion Committee
Care of patients receiving a transfusion	Audit of the process using the BloodTrack Tx software  Live audits of bedside practice are conducted	Manager, Blood Safety and Conservation Team	At least once every three years	Hospital Transfusion Committee
How the organisation trains staff, in line with the training needs analysis (appendix 1)	In line with the Statutory and Mandatory Training Policy.  The Blood Transfusion Committee receives additional supplementary information			
How the organisation assesses the competency of all staff involved in the transfusion process	In line with the Statutory and Mandatory Training Policy. The Blood Transfusion Committee receives additional supplementary information			
	Users of BloodTrack Tx are identified through the barcode from Trust's security ID database. The ELearning records and assessment of competency criteria are cross-referenced with these staff and a formal assessment is produced	Manager, Blood Safety and Conservation Team	At least once every three years	Hospital Transfusion Committee

## Review of this Policy

125. This policy will be reviewed in 3 years as set out in the *Policy for the Development and Implementation of Procedural Documents*.

## References

126. Better Blood Transfusion - Safe and Appropriate Use of Blood. Health Service Circular 2007/001 Department of Health <http://www.transfusionguidelines.org.uk/> see Better Blood Transfusion section
127. British Committee for Standards in Haematology. Guideline on the administration of blood components 2009  
[http://www.bcshguidelines.com/4\\_HAEMATOLOGY\\_GUIDELINES.html?dp\\_age=0&dtype=Transfusion&sspage=0&ipage=0](http://www.bcshguidelines.com/4_HAEMATOLOGY_GUIDELINES.html?dp_age=0&dtype=Transfusion&sspage=0&ipage=0)
128. British Committee for Standards in Haematology. Guidelines for pre-transfusion compatibility procedures in blood transfusion laboratories. *Transfusion Medicine*, 2004, 14, 59–73
129. Cytomegalovirus Tested Blood Components Position Statement (2012) *Advisory Committee on the Safety of Blood Tissues and Organs (SaBTO)*  
[http://www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/@dh/@en/documents/digitalasset/dh\\_132967.pdf](http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_132967.pdf)
130. Handbook of Transfusion Medicine. 2007. 4th edition. Blood Transfusion Services of the United Kingdom. Ed. B. McClelland. <http://www.transfusionguidelines.org.uk/>
131. How do we monitor hospital transfusion practice using an end-to-end electronic transfusion management system? *Transfusion* (2012) *Michael F. Murphy et al.*
132. Right patient, right blood: advice for safer blood transfusions (2006) *National Patient Safety Agency*
133. The Serious Hazards of Transfusion Report (SHOT) 2010
134. Blood Safety and Quality Regulations (2005)  
<http://www.legislation.gov.uk/ukxi/2005/50/contents/made>

## Equality Impact Assessment

135. As part of its development, this policy and its impact on equality has been reviewed. The purpose of the assessment is to minimise and if possible remove any disproportionate impact on the grounds of race, gender, disability, age, sexual orientation or religious belief. No detriment was identified.

## Document History

Date of revision	Version number	Reason for review or update
March 2012	4	Integration of NOC and ORH policies Removal of the need to use CMV negative blood components Mandatory use of BloodTrack Tx Inclusion of down time procedures Addition of respiration rate as a vital sign before Tx Changes to electronic patient record and medical record number

**Oxford University Hospitals**

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**Appendix 1: The Oxford University Hospitals NHS Trust Blood Transfusion Mandatory Training and Competency Assessment Framework**

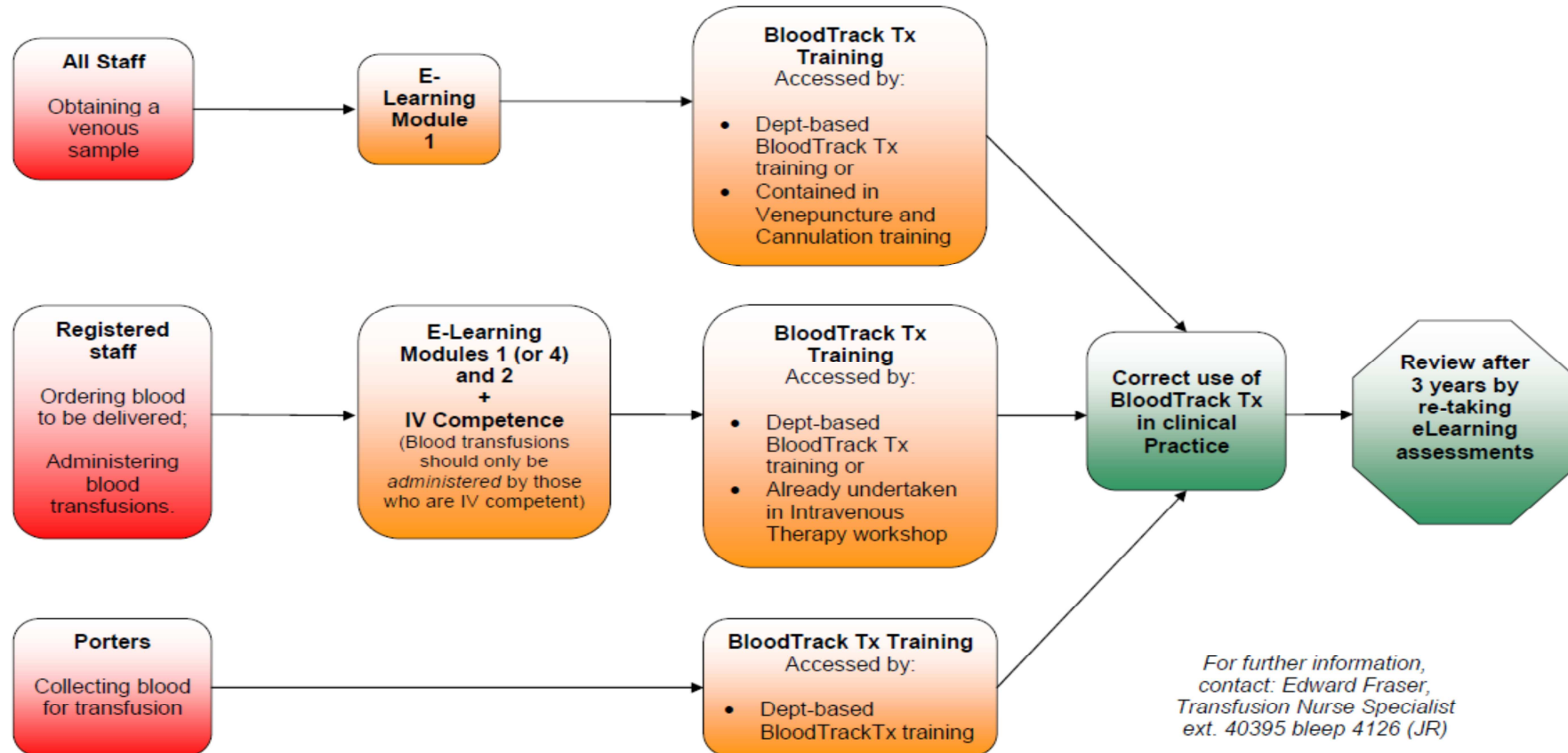
<b>Staff group</b>	<b>Task</b>	<b>3 yearly training required by staff who already perform the task</b>	<b>Training required for staff new to the task</b>	<b>ELearning modules required every three years</b>	<b>Assessment of BloodTrack Tx use required every three years</b>	<b>Record of competency retrievable from</b>
Registered Nurse Midwife Student midwife Medical student ODP Health care Assistant/support worker	Obtaining a venous sample	N/A	Practical training BloodTrack Tx training	Module 1 or 4*	'Collect samples' function	BloodTrack Tx and ELearning systems: <ul style="list-style-type: none"> <li>• LearnPro</li> <li>• National Learning Management system</li> </ul>
Doctors	Obtaining a venous sample	N/A	BloodTrack Tx and induction eLearning	N/A	'Collect samples' function	BloodTrack Tx trainers
Registered Nurse Midwife ODP	Ordering blood to be delivered to the clinical area	N/A		Module 1 or 4*	'Arrivals' function	BloodTrack Tx and ELearning systems: <ul style="list-style-type: none"> <li>• LearnPro</li> <li>• National Learning Management system</li> </ul>
Registered Nurse Midwife ODP Porter Health Care Assistant/Support Worker	Collect blood for transfusion	BloodTrack training	BloodTrack Courier training		N/A	BloodTrack Tx Evaluation of training
Registered Nurse Midwife ODP Clinical Perfusionist	Administer blood transfusions	N/A	IV study day (including blood transfusion session)	Modules 1 (or 4*) and 2	All functions in the 'transfuse' menu	BloodTrack Tx and ELearning systems: <ul style="list-style-type: none"> <li>• LearnPro</li> <li>• National Learning Management system</li> </ul>
Anaesthetist	Administer blood transfusions	N/A	Practical training and induction eLearning		All functions in the 'transfuse' menu	BloodTrack Tx

\* Module 4 is designed for the paediatric setting and covers the same topics as module 1

**Version 4.0 - June 2012**

### Right Patient Right Blood Competency Flowchart

Safe knowledge in transfusion is demonstrated via E-learning and Safe practice is demonstrated via BloodTrack Tx



## Appendix 2: Audit and Assessment Schedule – Safe Transfusion Practice and Competency

A	Positive Patient ID	Blood Sampling	Blood Collection	Administration of Blood components
<b>Minimum criteria</b>	<p>Transfusions never take place without a correct ID band attached to the patient</p> <p>100% compliance in each clinical area</p>	<p>Staff in clinical areas failing on wristband compliance will not be deemed competent until improvements are made</p> <p>Module 1 (or 4) pass – Learnbloodtransfusion eLearning package Positive patient ID (use of open questioning where possible to establish correct patient ID) Correct use of BloodTrack Tx to label the sample</p>	<p>Correct use of BloodTrack including the notification to the laboratory of any units which give an alert.</p>	<p>Staff in clinical areas failing on wristband compliance will not be deemed competent until improvements are made</p> <p>Module 1 (or 4) and module 2 passes – Learnbloodtransfusion eLearning package Vital signs entered on BloodTrack Tx as baseline, Observation after starting the transfusion (within 30 minutes) and at end of transfusion (at least 50% of the time – in relation to ‘begin transfusion’ records) The ‘begin transfusion’ module in BloodTrack Tx used correctly</p>
<b>Assessment of BloodTrack Tx use (previous 12 months) using BloodTrack Manager Database</b>	N/A	✓	✓	✓
<b>Live audit in clinical areas</b>	✓			
<b>Frequency of assessment /audit</b>	At least once / 3 years	3 yearly	3 yearly	3 yearly
<b>Reporting Method</b>	Audit results sent to matrons with quarterly compliance reports	Via ward managers	Via Portering management	Via ward managers



### Appendix 3: An example of indications for 'special' blood components (in adult haematology patients)

Irradiated red cells and platelets

***Indefinitely***

Allogeneic haemopoietic cell transplant recipients from time of conditioning therapy

Patients with Hodgkin's disease

Patients treated with purine analogue drugs such as fludarabine

Patients with congenital immunodeficiency states

***Other indications***

Allogeneic bone marrow donors (from 7 days before harvest until harvest is completed)

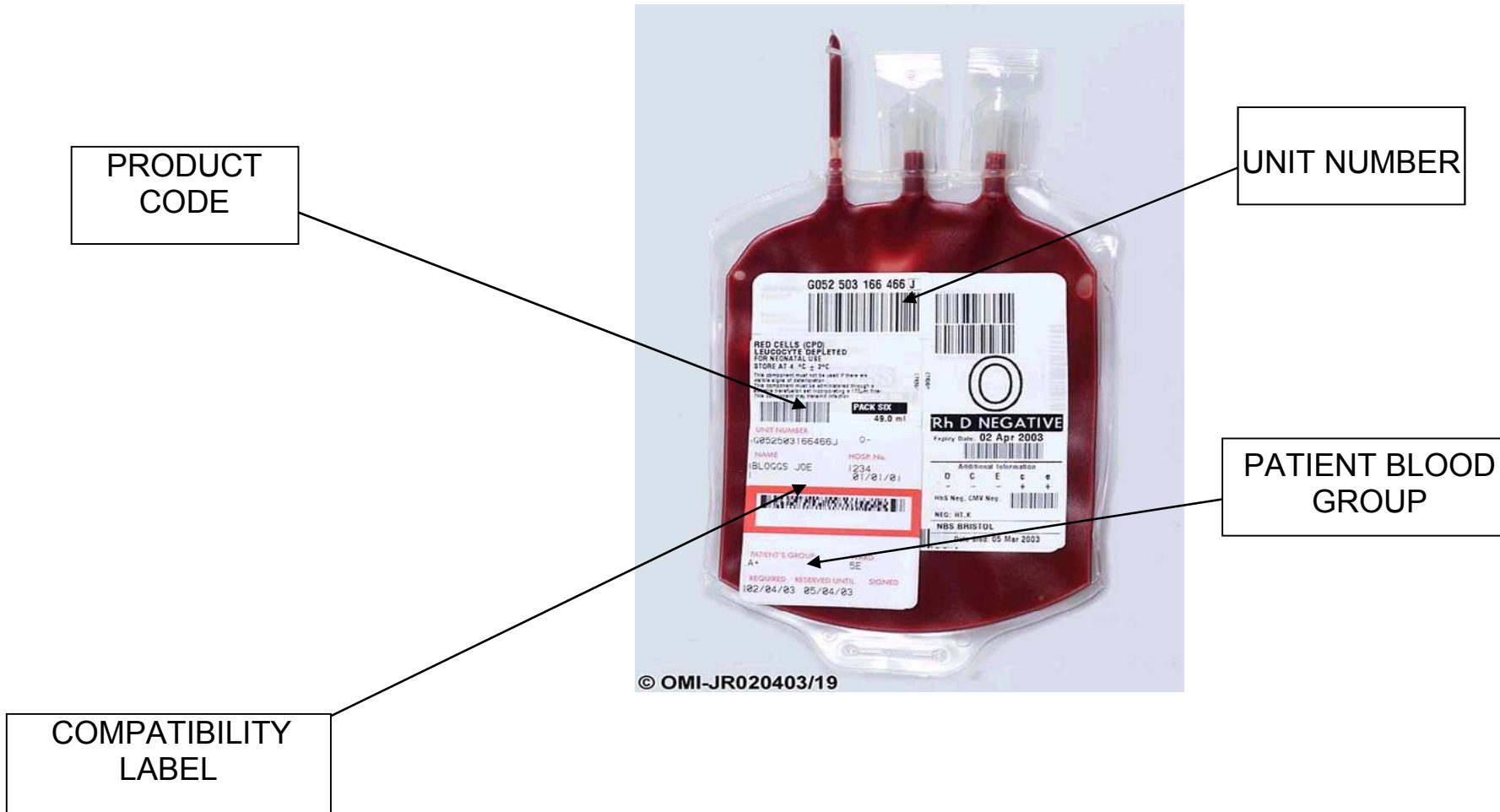
Autologous bone marrow or peripheral blood stem cell recipients:

From 7 days before harvest until the harvest is completed

From the initiation of conditioning therapy until 3 months post-transplant (6 months if TBI is used)

All donations from HLA-matched donors or first or second degree relatives

### Appendix 4: Photograph of a red cell unit, indicating the labels attached by the NHS Blood and Transplant and the Blood Transfusion Laboratory



### Appendix 5: A photograph of the BloodTrack Tx PDA



## Appendix 6: Instructions for the Remote Issue of Red Cells

136. Only staff who have received Remote issue training will be eligible to use the system to allocate and issue blood components to suitable patients at blood fridges remote from a Blood Transfusion laboratory. Refresher training will be provided on a 2 yearly basis and failure to attend refresher training will mean the staff member will be blocked from using the system.
137. A patient is deemed suitable for the remote issue of blood if the following criteria are met:
  - 137.1. The laboratory has received and finished processing a suitably labelled sample
  - 137.2. The patient has a negative antibody screen with no history of clinically significant atypical red cell antibodies
  - 137.3. The patient has not received a bone marrow/stem cell transplant
  - 137.4. The patient has no special requirements for blood e.g. irradiated/ Antigen typed
  - 137.5. The patient is over 1 year of age
138. The procedure is as follows:
  - 138.1. Blood component(s) requested by Doctor.
  - 138.2. Using BloodTrack Tx, generate a blood a 'pick up' slip from the patient wristband.
  - 138.3. Take the pick up slip to the BloodTrack Courier Kiosk.
  - 138.4. Scan the barcode on your personal ID badge.
  - 138.5. Press 'Taking out' on the screen.
  - 138.6. Scan the pdf barcode situated at bottom of pick up slip.
  - 138.7. A message box tells you if the patient is suitable for remote issue.
  - 138.8. Check the identity of the patient displayed corresponds with the patient who requires blood.
  - 138.9. If suitable blood is available, the green message box will confirm that the patient is eligible, the patient's blood group and how many units are available.
  - 138.10. If no suitable blood is available a RED box will appear and you will need to contact Blood Transfusion laboratory giving the appropriate patient information to request blood. The Blood Transfusion laboratory will then provide an estimated time when blood will be available.
  - 138.11. You will be asked if you want to issue a unit of blood. Select 'Yes' or 'No'.
  - 138.12. If 'Yes' you will be advised to remove a unit of identified group specific blood from the fridge. Only the drawer containing the appropriate group of blood will be able to be opened, this is indicated by the light next to the drawer.
  - 138.13. Open the fridge and select the oldest unit of the specified group – this will normally be the unit at the front of the drawer.
  - 138.14. You will then be prompted to scan the unit number.
  - 138.15. Scan the unit number at the top middle of the unit – usually beginning G052
  - 138.16. You may be asked to scan the product code, in which case scan the product code barcode which is situated on the middle of the left hand side of the unit.

- 138.17. A compatibility label will be printed.
  - 138.18. A message box will ask if the compatibility label printed 'OK' – if the compatibility label is 'OK' select 'YES' otherwise select 'NO' and another label will be printed.
  - 138.19. Place the compatibility label on the bag/unit of blood firmly and in the correct place, below the product barcode (see diagram for correct placement). Do NOT cover the product code, placing the label below it.
  - 138.20. You will then be prompted to scan the unit number followed by the compatibility label barcode. This is a time sensitive step and is vital to confirm that the correct compatibility label is attached to the unit. Failure to complete this step will mean the unit is not allocated to the patient. The unit should be returned to the fridge and process repeated.
  - 138.21. Scan the unit number followed by the pdf barcode on the previously attached compatibility label.
  - 138.22. A message box will tell you if you have been successful, and will ask if want to issue another unit. If 'YES' select and continue the procedure from Step No. 10. If 'NO', the screen will return to its original start page.
  - 138.23. When complete, press 'DONE' to log out.
  - 138.24. Take unit(s) to patient and proceed with checks for blood administration using the BloodTrack Tx 'TRANSFUSE' program (follow procedure 8 'Identifying the patient immediately prior to commencing transfusion').
139. If unit (s) are no longer required, they can be returned to the fridge only if they have been out of the fridge less then 30 mins. Units out of the fridge for more then 30 mins with no imminent prospect of use must be returned to the Blood Transfusion Laboratory with an explanation for disposal. All movements in and out of the fridge must be performed using BloodTrack Courier.

## Appendix 7: Procedures for Transfusion During Periods of IT Failure (down time)

### Definition:

140. These procedures only apply in circumstances when is not possible to use BloodTrack Tx because of:
  - 140.1. A patient being admitted during a period of hospital-wide wristband printing failure
  - 140.2. Compatibility label printer failure in the laboratory (this will result in the issue of blood components with handwritten compatibility labels without bar codes)
  - 140.3. A clinical area awaiting the installation of BloodTrack Tx
  - 140.4. Blood fridge kiosk breakdown (applies only to collection or remote issue of blood)
  - 140.5. Unforeseen circumstance leading to the withdrawal of BloodTrack Tx throughout the Trust

### General principles relating to the use of alternatives to BloodTrack Tx:

141. When problems arise in a local area, for example due to a PDA or printer failure, BloodTrack Tx equipment from a neighbouring ward must be used. Faults must be reported immediately to the Blood Safety and Conservation team via extension 20444 (answerphone out of hours)
142. It is the responsibility of all staff to keep their areas' BloodTrack Tx equipment in good working order and to charge the PDA and printer batteries when not in use
143. BloodTrack Tx must be used if a bar coded wristband is printable, even if the compatibility label contains a red label number and the patient has a red labelled wristband
144. Staff, including locums and agency staff who are new to the Trust need to be shown how to use BloodTrack Tx, provided they meet the OUH mandatory training and competency criteria for the task they are performing. Any staff who do not meet these criteria or who are not happy to use BloodTrack Tx must not take transfusion samples or administer blood components
  - 144.1. Under no circumstances must another staff member's name badge be used for BloodTrack Tx functions
  - 144.2. Staff must always refuse requests to label samples which they did not take themselves
  - 144.3. Agency staff who can demonstrate that they have met the OUH mandatory training and competency criteria and who do not possess an OUH ID badge can apply for a BloodTrack Tx enabled bar code to be issued by the Blood Transfusion Laboratory
145. If it is not possible to use BloodTrack Tx because of a problem with a blood compatibility label bar code or patient identification mismatch, the blood component must be sent back to the Blood Transfusion Laboratory who will correct the problem if possible, enabling the use of BloodTrack Tx.
  - 145.1. Emergency situations, such as major haemorrhage can have a higher risk of incompatible transfusions. It is therefore essential that BloodTrack Tx is used for

checking every blood component prior to transfusion, using the 'emergency transfusion' function if necessary.

146. As soon as the fault is corrected, BloodTrack Tx must be used. If the patient was given a handwritten or addressograph labelled wristband, this must be replaced immediately with a printed bar coded wristband.

### **Red label system**

147. Strips of sticky red labels are available in the Blood Transfusion Laboratory and in the emergency department and must be used if it is not possible to use BloodTrack Tx. Transfusion samples which have neither a BloodTrack Tx generated label or a red label are not processed by the Blood Transfusion Laboratory. The red label number assigned to the transfusion sample is then stated on the compatibility label and checked against the patient's red labelled wristband immediately prior to transfusion as an additional safety check
148. Each strip consists of 10 red labels with the same number
149. A red label from the strip of 10 is applied to:
- 149.1. The blood sample tube
  - 149.2. The request card
  - 149.3. A blank wristband attached to the patient (or, in the outpatient setting, given to the patient to bring in on the day of the procedure)
  - 149.4. The patient's drug chart
  - 149.5. The patient's medical record
150. The remaining red labels must be sent with the blood sample to the Blood Transfusion Laboratory

### **Requesting blood components and sending transfusion samples**

151. For red cell transfusions, a request card should be fully completed (including clinical details, transfusion history, special requirements, location, degree of urgency, date and time blood is required or of procedure requiring blood cover, reason for request and the identity and contact details of the staff making the request) and have addressograph (if available) and red labels attached
- 151.1. FFP, platelets and cryoprecipitate are requested by phone to the Blood Transfusion Laboratory once the patient's blood group is known
152. A new sample is required if the patient does not have either a red label on a wristband relating to a valid sample or a bar coded wristband with a valid sample in the laboratory.

### **Pick up slips**

153. Written (preferably printed) patient ID, including first name, surname, gender and date of birth must be used for the collection of blood components for comparison with the details on the compatibility label.

### **Collection and arrival of blood components**

154. If the generation of a bar coded pick up slip is not possible during a period of wristband printing down time, the patient's MRN is typed into the blood fridge kiosk (using 'search patient' function) instead of bar code scanning of the pick up slip.
- 154.1. The alternative patient identification details must be visually checked and verified as being identical to the details on the blood compatibility label

155. If the BloodTrack fridge kiosk is out of order, blood will be issued either direct from the Blood Transfusion Laboratory or from another blood fridge (if the problem relates to only one kiosk).
156. The 'arrivals' function in BloodTrack Tx must be used, even when there is no bar coded wristband available because this function, essential for the tracking of blood components, does not require a wristband scan

### **Bedside checking immediately prior to the transfusion**

157. The procedures, described in sections 73 – 94 must be followed in all circumstances
- 157.1. In addition to the bedside checking procedures, a red label check must be performed, ensuring that the red label number, as stated on the blood compatibility label, matches exactly with the red label number on the patient's wristband and prescription chart.

### **Documentation**

158. The requirements for documentation are described in procedures 8 and 9.
- 158.1. In addition, all transfusions which are given without an electronic record on BloodTrack Tx are followed up retrospectively by the blood safety and conservation team, who will request details of the transfusion including recipient details, unit number, date, time and location and the reason why a BloodTrack Tx 'begin transfusion' check was not performed.

### **Quick reference guide to how and when to use red labels**

159. A step-by step guide for use in the clinical areas is available on the intranet:

<http://orh.oxnet.nhs.uk/BloodTransfusion/Document%20Library/Policies%20and%20Procedures/How%20and%20when%20to%20use%20red%20labels.pdf>